

Where we are today

The oil and gas sector is no stranger to turbulence. From the low price era at the turn of the twentieth century, to 2014's brutal oil price crash, cyclical downturns and upturns have defined the industry in recent times.











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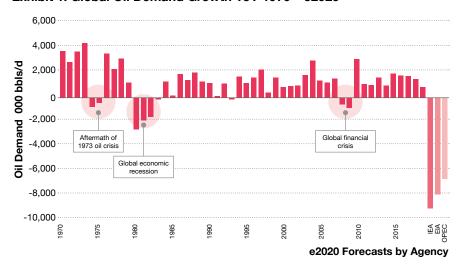
Crisis after crisis, the sector has recovered and reinvented itself through innovation. But as the extent of damage wrought by COVID-19 becomes apparent, things look very different this time.

What makes this crisis unique is not just the combination of the immediate demand and early supply shocks, resulting in extreme volatility. It is also how the crisis may accelerate underlying trends, such as the growing momentum of environmental, social and governance (ESG) themes, and energy transition. As a result, this is changing the way investors perceive the risk profile of returns in the various components of the energy sector.

The spread of COVID-19, resulting in global lockdowns and dramatically reduced economic activity, has led to a tumble in demand for oil. This demand shock, according to analysts, represented a 30% decline in April alone. As illustrated (Exhibit 1), several agencies now anticipate that for the whole of 2020, oil demand will decline by about seven to nine million barrels per day. During the global financial crisis, demand decreased by 1.4 million barrels per day.

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Exhibit 1. Global Oil Demand Growth YoY 1970 - e2020



Note: 1970 – 2018 is data from BP Statistical Review of World Energy. 2019 based on IEA April 2020 Oil Market Report

Source: BP Statistical Review of World Energy 2019, IEA Oil Market Report, EIA, OPEC, PwC Strategy& research

The volatility in the market was symbolised by West Texas Intermediate (WTI) oil futures contracts for May entering negative territory. While negative pricing is a common feature in some power markets, this was an historic first in the oil market. As illustrated (Exhibit 2), contracts dropped to -\$37 per barrel, effectively meaning sellers had to pay their buyers. But perhaps more saliently the high-profile development illustrated just how volatile the market has become.





Source: Bloomberg, PwC Strategy& research

With global oil storage nearing capacity, countries and operators have implemented production shut-ins. ExxonMobil, Chevron and ConocoPhillips are among those to have announced production cuts and some countries outside of OPEC+ are taking similar actions. Norway announced it would cut crude oil output in June by 250,000 barrels per day and by 134,000 barrels per day in the second half of 2020.

But COVID-19 is having a profound impact on the sector in other ways too.

Many office staff are working from home, while the numbers working on offshore platforms have been cut to allow for social distancing. North Sea staffing levels are down 40% to 7,000 according to trade association Oil & Gas UK, while in the face of reduced demand, refiners are scaling back processing runs or even shutting down refineries altogether.

Dividend policies - the holy grail for some integrated oil majors - are being reduced with both Equinor and Shell cutting shareholder payouts.

As for capex cuts, global upstream capex in 2020 will be down 27% on 2019 spend, of \$479bn, according to Rystad Energy. And there will be unintended consequences. The economics of field development plans will be impacted, bringing forward, in some cases, cessation of production, altering security requirements and hastening the demise of some fields.

What are we learning?

At the outset of the pandemic, companies were primarily concerned with operational issues and liquidity - protecting workers' health, while ensuring business continuity and preservation of cash.

But as the extent of the crisis becomes clearer, the companies we are helping are considering how the industry might fundamentally reshape right across the value chain.

Upstream

COVID-19 reinforces the volatility of oil prices and highlights the scale of the downside risk. The uncertainty over returns now clearly presents a challenge to oil companies as they allocate capital investment across core hydrocarbons and low carbon businesses, while keeping an eye on their dividends policy. Juggling these priorities is proving more difficult. Developing a compelling narrative to attract investors has become more complex, yet more important than ever. But it is being complicated by a series of themes:

The risk profile for integrated oil and gas companies is changing

In the past the integrated model of having an upstream and downstream business served well to hedge companies against supply or demand shocks. When there was excess supply, as in the 2014 oil price collapse, earnings in refining were robust. When there were demand shocks as in 2007/08, upstream delivered healthy margins. This crisis has seen both segments battered.

It is also worth highlighting the difference between oil and gas. While Brent has declined 70% since the beginning of the year, the fall in regional gas prices has been more modest. Moreover, while there are concerns around fugitive methane emissions in gas infrastructure, the fuel may have a more optimistic demand outlook given its role as a bridging fuel to a low carbon economy.

A weaker returns profile is plaguing oil and gas

According to industry analysts, internal rates of return (IRR) have historically been higher in upstream than in renewables. They've generally exceeded 20% for upstream and have been around 5% for renewables. The current lower oil price, increased volatility (and therefore risk), and greater investor focus on sustainable investments, all serve to reduce that returns gap.

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Uncertain oil demand

It is unclear if global demand will ever fully bounce back. Anecdotally, industry commentators expect demand to improve to an extent - but slowly. Remote working will result in less commuting and reduced international business travel, as illustrated by British Airways recently, indicating that a return to 2019 passenger levels will take several years. Bernard Looney, CEO of BP, has also questioned whether the pandemic accelerates the onset of peak oil demand.

The pathway out of this crisis is unclear

The current focus of funding is on price volatility, but the ability of companies to raise capital will be additionally complicated by a number of factors, in particular with ESG trends and government policy driving capital towards investments with stronger sustainability narratives.

Refining

The crisis has hit refining hard, resulting in urgent operational pressures, such as reducing processing runs, or contemplating plant idling or closure, and cash pressures, including losses and the huge drop in liquidity from lower prices and volumes.

Given the high costs of running and maintaining operations, refiners will need to make major decisions around their capital expenditure requirements and when to schedule turnarounds.

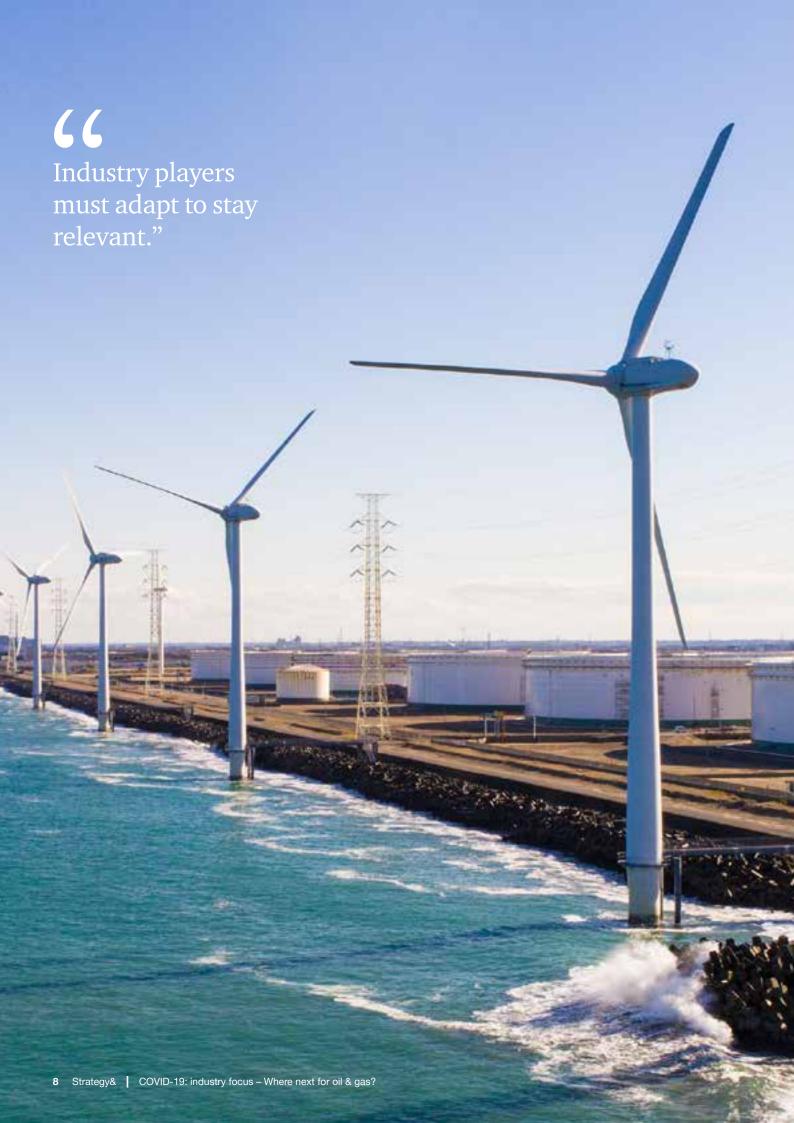
These short term decisions will be complicated by longer term uncertainties around oil demand and the extent and timing of a recovery. This in turn will make the investor narrative, for some refiners, challenging.

Oil Services

Many oil service companies were still nursing their wounds from the last oil price downturn in 2014 and have been saddled with high debt and thin margins.

Project pipelines that existed pre-COVID-19 for many companies have now been eroded.

As operators reduce capital expenditure, cut costs and, in some cases, seek price reductions from the supply chain, a huge financial burden will be placed on oil service companies.



How do we respond?

Get ready for a greener, more complex future

The energy transition and a move to ESG investing have been underway for some time, but COVID-19 may provide the impetus to accelerate these trends, led by regions such as Europe. Industry players must adapt to stay relevant.

Some governments are assessing economic stimuli with a greener focus, or even tying sustainability commitments to rescue packages. The French government provided Air France with €7bn in loans and loan guarantees but with sustainability targets including a 50% reduction in carbon emissions on domestic flights by 2024 and investment in more fuel-efficient planes.

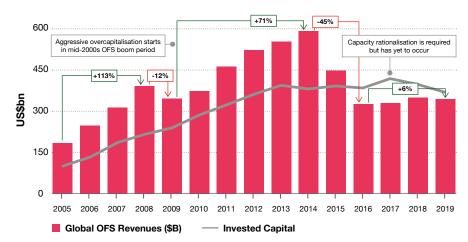
However, the energy transition must be viewed through a geographic lens. Given the strain on governments to rebuild economies, lower fossil fuel prices will be seen in some regions as an attractive option to stimulate economic growth.

Anticipate consolidation

This crisis has highlighted how fragmented the energy market remains, and this is particularly true in oil services. Whether as a result of distress or outright failure, we will see consolidation in the market.

As illustrated (Exhibit 3), global upstream Oil Field Services (OFS) revenue never recovered from the last oil price downturn but invested capital levels have remained elevated, further reinforcing the need for capacity rationalisation.

Exhibit 3: Global OFS Upstream Revenue and Invested Capital, 2005 - 2019



Source: Rystad Energy, S&P Capital IQ

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In OFS, consolidation will be primarily defensive, aimed at gaining scale, reducing costs and developing capabilities, such as technology.

There will likely be mergers, with Tier 2 and 3 companies looking to combine to survive. Tier 1 players may continue to divest but may also become aggregators, acquiring smaller companies to build specific capabilities.

Across all these segments also expect OFS companies to develop strategies to increase their exposure to low carbon plays, such as offshore wind, hydrogen and carbon capture, utilisation and storage (CCUS).

Alternatively, OFS players may consider strategic investments in selective geographies and product or service lines which will prove resilient through cycles and generate cash flow in the future. They may also streamline their portfolio. Many larger OFS companies have subscale business in sub-scale geographies. These tend to destroy the economic value. Therefore, divestitures are in order and may result in the emergence of larger regional OFS companies.

As for other segments, there is a similar rationale for consolidation among smaller exploration and production companies. However, given liquidity constraints, other players might consider buying back their own debt and strengthening their balance sheets rather than making a more risky acquisition of a distressed competitor.

Pick a path

As disruption reshapes the landscape, oil and gas companies face two distinct choices:

- Become an 'energy' company These companies will provide integrated energy services, combining multiple fuel/power sources to meet consumers' needs. To do this they will need to integrate across the power value chain and invest in an array of low carbon sources. They will also need to partner with technology players to transform their operating model, with a focus on consumer insight. There will be less scope for 'hedging' strategies whereby oil majors make only small and selected investments in low carbon. Moreover, setting a 'net zero' target will reinforce the societal licence to operate.
- Become an oil and gas specialist These companies will need to access and extract resources in an economic way, adding value through refining, petrochemicals and distribution. They will achieve this by vertically integrating along the oil and gas value chain, divesting non-core assets and implementing digital-led cost and value chain optimisation. Equally some of these characteristics could apply to pure play exploration and production companies. These companies will focus on operating in an extremely efficient manner using technologies to become ultra competitive. Needless to say, they will need to deliver broader efficiency gains in terms of financial and emissions performance (addressing scope 1 and 2 emissions).



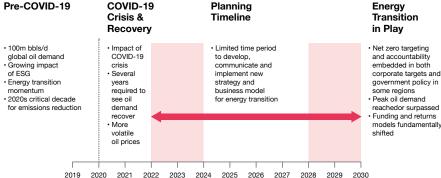
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Act now

Businesses operating in the oil and gas sector must act now to develop strategies, business plans and investor narratives. Actions must include:

- For all players, assess strategies and business models now and pick the appropriate path. As illustrated (Exhibit 4), the time to act is limited.
- For all players, understand the unintended consequences of this crisis. Review how actions taken on capex reduction and management of the workforce for example, impact the economics of the business.
- For energy companies, review the capabilities required to build successful and sustainable value chain plays. From offshore wind and hydrogen to gas and CCUS, what are the partnerships and technology required to make these plays work?

Exhibit 4: Potential Energy Transition Timeline Pre-COVID-19 COVID-19 **Planning**



Source: PwC Strategy& research

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Who to talk to

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