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Cryptocurrency vs. Central Bank Money: Does the Future of Digital Currency Lie with Central Banks?

As cryptocurrencies such as Bitcoin become an increasingly established part of the financial landscape, central bankers have begun to explore the broader potential of digital currency more seriously. With a flood of white papers, task forces, and workshops, central banks in New Zealand, the UK, Hong Kong, the EU, the US, and elsewhere are asking whether it makes sense to create their own digital money. Sovereign digital money may have many benefits but is not without its risks. As cash transforms into strings of ones and zeroes, what does the future hold for consumers and businesses?

These days, central bankers worldwide are fired up about the idea of digital currency. Specifically, they are increasingly intrigued by the idea of central bank digital currencies (CBDCs), which are essentially digital versions of traditional fiat currencies – think digital dollars. Some central banks, such as the People's Bank of China (PBoC), are already piloting CBDCs while others, such as the Bank of England, are still in the exploratory phase.

But what is a CBDC and what would it mean for our everyday financial lives?

Defining CBDCs

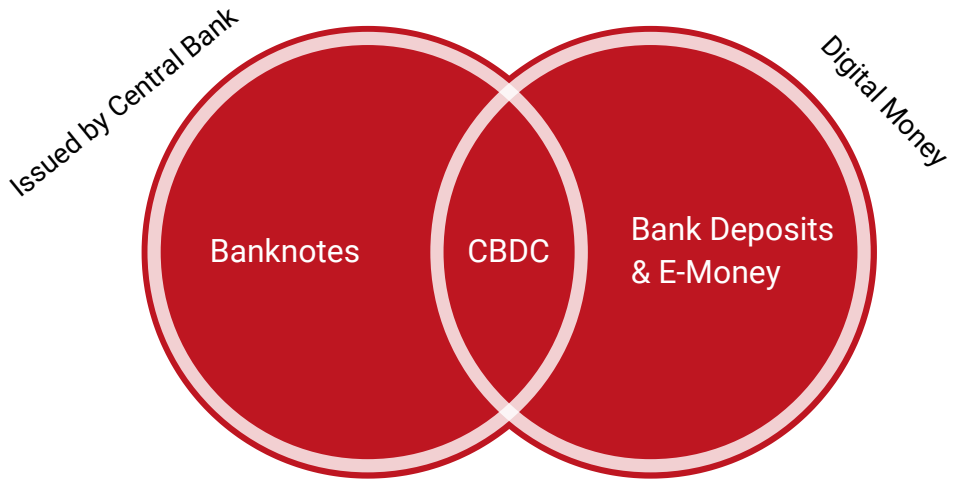
CBDCs can be confusing because most fiat currency – dollars, pounds, euro, yen, and so on – already exists primarily in electronic form. While the US Federal Reserve reports a global dollar supply of almost $20 trillion, only around $2 trillion takes the form of physical cash. The rest is simply numbers on electronic balance sheets – digital dollars. However, this money is not what central banks are talking about when they talk about CBDCs. To understand why, we must understand where money comes from.

Existing dollars (or pounds or euro or yen) are generally created by commercial bank lending within fractional reserve banking systems, and the assets and liabilities involved are held on the balance sheets of these banks and their clients. Central banks play a key role in this process through the reserves that banks must hold on account with them and through their open market operations, but it is commercial banks that create the lion's share of the money supply.

In contrast, in the case of a CBDC, the liability would be held by the central bank, which would directly issue the digital token. The central bank – rather than a commercial bank – would then need to maintain reserves to back that liability. In theory, a CBDC could disintermediate banks entirely – individual citizens could hold their CBDC savings on account with the central bank directly, eliminating the role of banks as depository institutions.

In practice, however, this is extremely unlikely as it would seriously destabilize the banking system. Instead, we can think about CBDCs as a digital replacement for bank notes – hypothetical digital dollars would be likely to flow through the economy via financial intermediaries in the same way as traditional cash.

This approach to "minting" money is not unprecedented – central banks already create electronic money in exactly this way. However, this digital money is made available exclusively to banks and other financial institutions. A CBDC would entail making central bank electronic money available to everyone.



Bank of England. Central Bank Digital Currencies. June 2021.

This is not crypto

Importantly, CBDCs should not be confused with cryptocurrencies, such as Bitcoin, which are digital tokens created by a distributed network or blockchain using cryptographic tools.

While cryptocurrencies are decentralized, CBDCs are centralized; while cryptocurrencies offer anonymity, CBDCs would allow central banks to know exactly who holds what. While cryptocurrencies are generally created using blockchain, CBDCs would likely run on different technological platforms (although the use of blockchain is not impossible).

CBDCs are also not stablecoins, which are a form of cryptocurrency that is pegged to another asset – a popular example is Tether, which is pegged to the US dollar one-to-one and backed by dollar reserves. A CBDC would not be pegged to a fiat currency; it would *be* the fiat currency. A CBDC version of a dollar would be the same as a dollar bill.

So, why do it?

If CBDCs are, essentially, conceptually equivalent to traditional notes, what is the advantage of creating them?

The answer, of course, is that these would be truly digital forms of currency. Theoretically, they could be exchanged instantaneously and could cross borders seamlessly and rapidly. CBDC payments could be processed instantly through central bank infrastructure, dramatically reducing the cost of transactions. CBDCs could also be a way for governments to control the flow of money more directly – in the next crisis, for example, instant stimulus payments could be issued directly to citizens using CBDC.

The downside

As noted, despite their potential benefits, CBDCs also have their risks.

One of the biggest would be the destabilization of the existing financial order, which relies on a very specific relationship between central banks and commercial banks. For this reason, central banks are approaching CBDCs cautiously.

In China, for example, where the PBoC is piloting a digital yuan in various cities, the state has been careful to involve financial intermediaries – including banks and tech companies with major payment operations like WeChat – to ensure a smooth transition. A European CBDC pilot project between Switzerland and France has been similarly cautious – it is focused on the wholesale lending market and is intended as a proof-of-concept and technology test.

CBDCs may also have unanticipated consequences for FX markets. China's CBDC, for example, is intended in part to challenge the dominance of the dollar – if the digital yuan becomes the primary payment tool in China, foreign companies will have to adopt it to do business, which could impact the role of the dollar.

Other worries include privacy concerns, money laundering and fraud issues, cybersecurity, and more. Governments – particularly in democratic countries – will have to involve the public and the financial sector in any plans for CBDCs, and it could take years before digital money becomes a regular part of the monetary system. However, given heightened interest in the area, the future may be closer than we think.

Intuition Know-How has a number of tutorials that are relevant to digital money and cryptocurrency:

- Banking – Primer
- Cryptography
- Blockchain – Primer
- Crypto Assets
- Payments – An Introduction
- Payments Systems
- Digital Money & Mobile Payments
- Monetary Policy Analysis

Big Oil, Big Problems: Listed Oil Majors Are Under Fire, But Oil Production Is Rising

During just a few days in May, three of the world's largest listed oil companies were dealt powerful public blows by climate activists. In the face of shareholder revolts and legal challenges, energy supermajors including Chevron, Exxon Mobil, and Royal Dutch Shell now appear to be bowing to the inevitable on climate change and preparing to embrace a low carbon future. Yet it's too soon to claim victory for green activists – global oil production is on the rise as national oil champions move to pick up the slack left by the retreat of the supermajors. Is it a case of "Big Oil is dead, long live Big Oil" or is the shift to renewables finally taking hold?

May 2021 will be remembered – in the boardrooms of listed energy companies, at least – as a time of reckoning on climate change. Global energy supermajors Chevron and Exxon Mobil faced dramatic climate-related shareholder rebukes in the US, while in Europe, a Dutch court ruled that Royal Dutch Shell must accelerate its greenhouse gas (GHG) emissions cuts. Climate activists hailed these victories as a sign that the global tide is shifting, and a greener future is at hand. This triumphant narrative is, however, subject to some caveats.

Boardroom drama

At Exxon, the climate reckoning came in the form of a contentious shareholder vote.

Shareholder dissatisfaction had been growing after several projects – including investments in Canadian oil sands – failed to pay off. Some shareholders were also critical of the company's apparent reluctance to invest in green growth areas such as solar and hydrogen.

Against this backdrop, activist investors led by a small hedge fund named Engine No. 1 nominated four pro-environmental candidates to the Exxon board in a bid to shift the company's strategic direction.

Exxon campaigned vigorously against these candidates, flooding shareholders with materials urging them to vote for its own nominees. Many observers doubted that Engine No. 1 could win in the face of Exxon's resistance, especially as it is a minority shareholder with just a 0.02% stake. However, the hedge fund was able to gain the support of major Exxon shareholders such as BlackRock and Vanguard, which are vocal proponents of incorporating environmental, social, and governance (ESG) issues in investment decisions.

With the backing of these big players, Engine No. 1 unexpectedly won seats for three of its four board candidates in what is widely seen as a major rebuke to Exxon management (the vote has yet to be certified and reported to the SEC, but Exxon has indicated that this is the final tally).

A similar drama played out at Chevron, where 61% of shareholders rebelled against the board to vote in favor of a proposal to force the company to cut its carbon emissions.

The proposal came from climate campaign group Follow This, which had already successfully pushed through similar resolutions at ConocoPhillips and others. The proposal targets so-called “Scope 3” emissions – GHG emissions caused by the burning of the company’s product by customers. Scope 3 emissions account for most of oil majors’ GHG emissions – over 90% in the case of Chevron.

Chevron’s board had instructed shareholders not to vote for the proposal, but investors defied management to register their unhappiness with the slow pace of change at the energy giant.

Courtroom drama

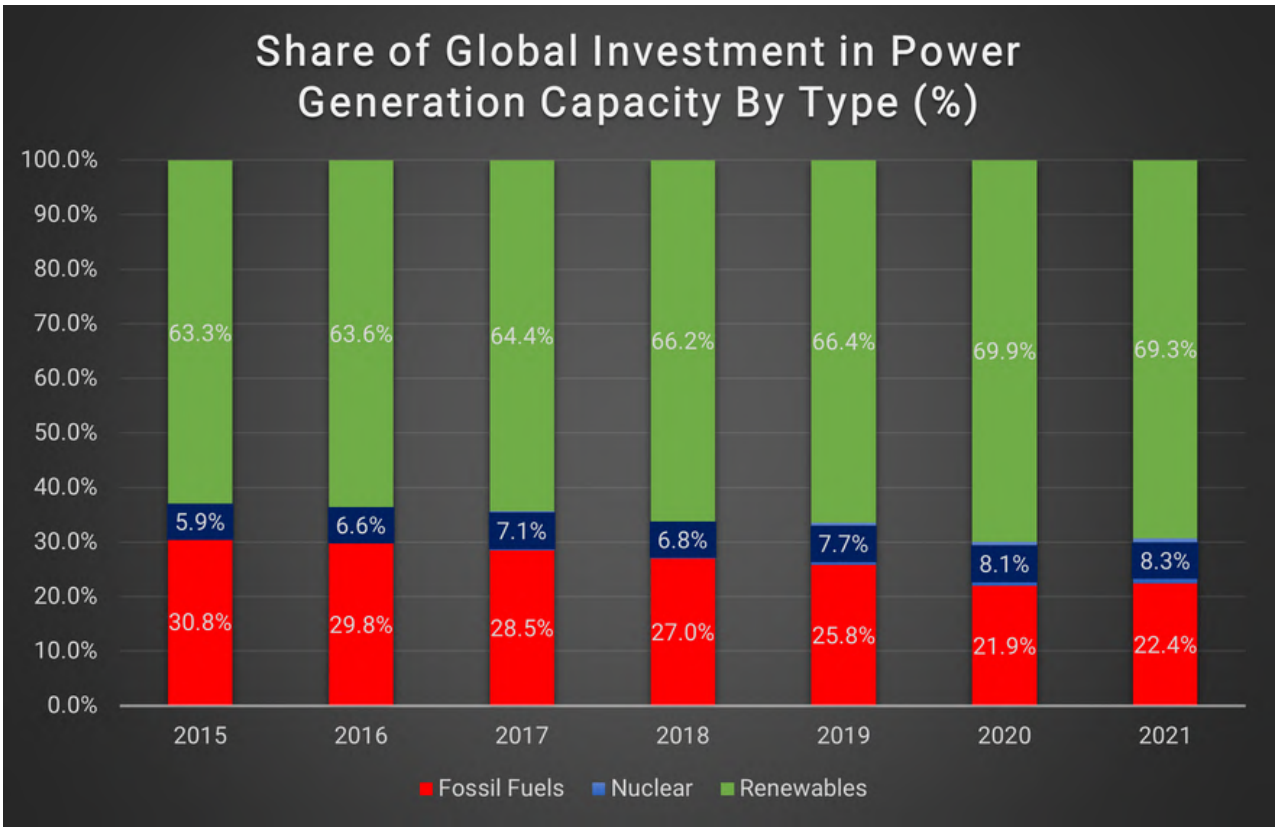
Meanwhile, in Europe, Royal Dutch Shell faced a different type of reckoning in the courtroom. In a case brought by climate campaigners, a Dutch court ruled that Shell’s existing climate strategy was insufficient and that the company had a human rights obligation to cut its net carbon emissions 45% by 2030 compared to its 2019 levels.

The ruling applies immediately, with no delay for appeal. Therefore, Shell CEO Ben van Beurden has said that the company will fast track plans to slash emissions in what plaintiffs hailed as a significant victory for the environment.

Broader transformation

While these events have grabbed headlines, campaigners can also point to other indicators that the climate message is finally being heard in the boardrooms of the world's energy businesses.

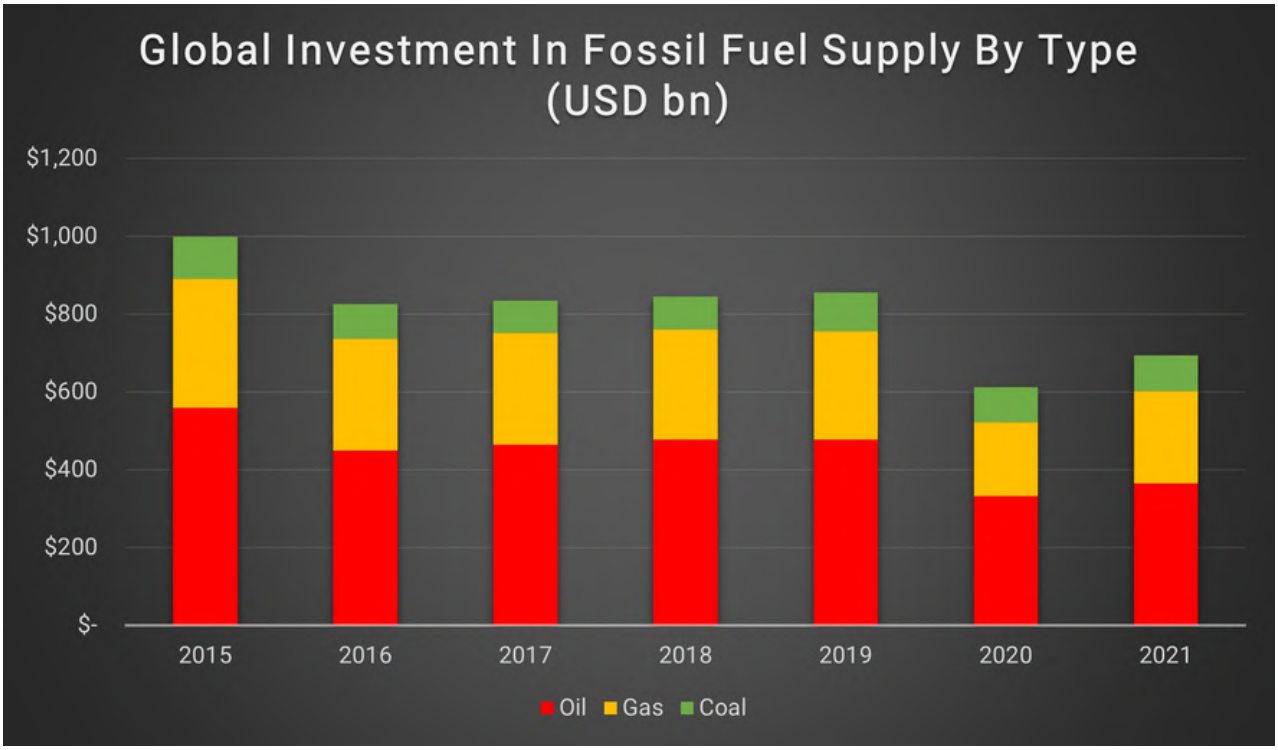
Data from the IEA, for example, shows that investment in renewable power generation capacity – including bioenergy, hydropower, wind, geothermal, solar, and marine energy – dominates global spending (see chart) on generation capacity.



IEA. International Energy Agency World Energy Investment 2021. June 2021. 2021 figures are an estimate.

At the same time, spending on fossil fuel supply – which includes upstream activities such as prospecting, as well as midstream infrastructure such as pipelines, and activities such as refining – has been falling over the last few years (see chart).

This suggests a lack of appetite for investing in new fossil fuel sources and power generation capacity, which may indicate that the industry is in the process of transitioning away from carbon-intensive energy – although it is important to note that fossil fuels continue to dominate existing infrastructure.



IEA. International Energy Agency World Energy Investment 2021. June 2021. 2021 figures are an estimate.

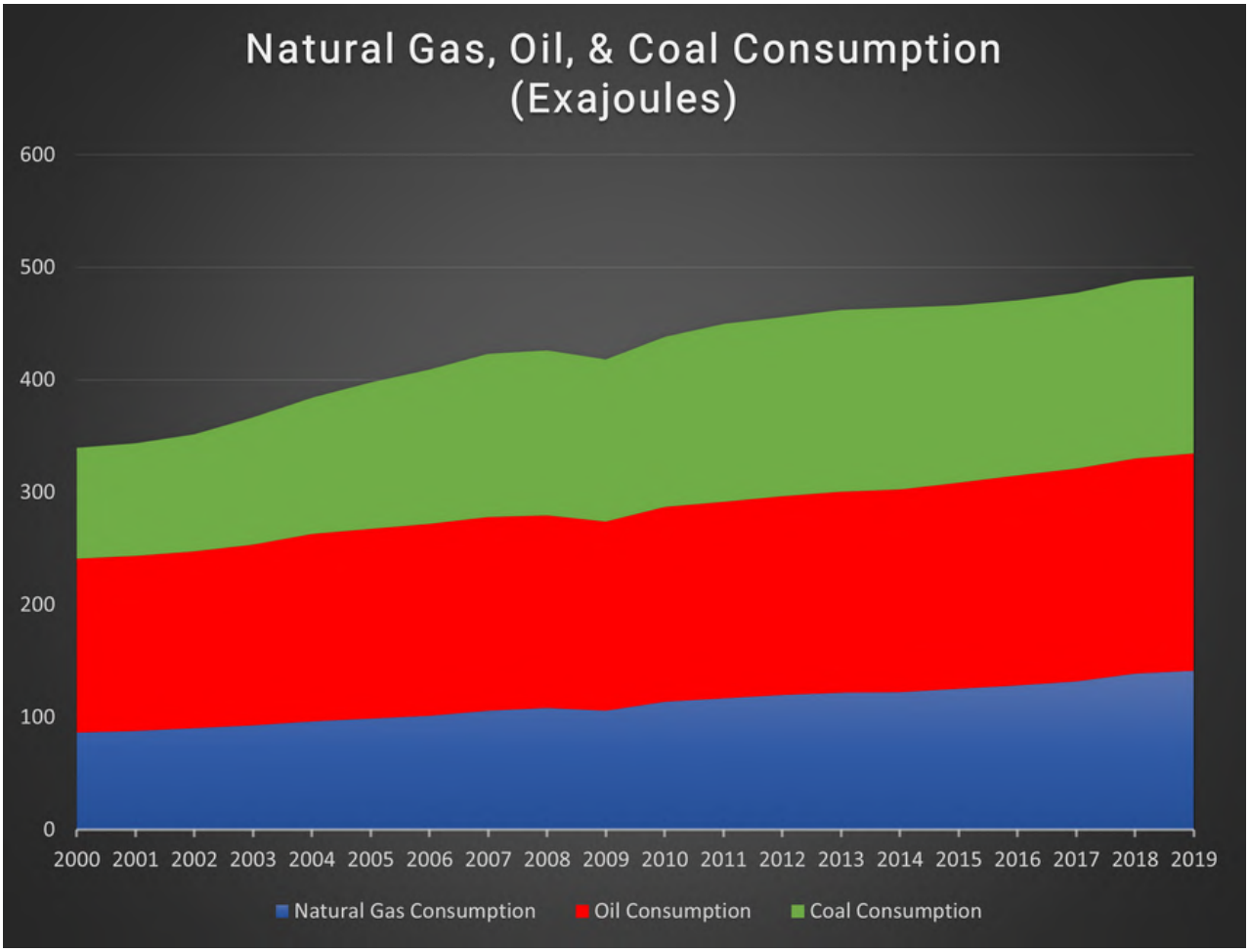
All of this is encouraging news for those concerned about fossil fuels' impact on the climate. However, there is reason to suspect that the situation is not as clear-cut as it seems.

Fossil fuel dominance

Demand for fossil fuels remains robust despite decades of climate activism. After falling during the pandemic, oil demand is roaring back and – according to oil cartel OPEC – is expected to hit 96% of its 2019 level this year. Similarly, demand for natural gas has risen steadily over the last few years and is resurgent this year after a slower 2020.

Overall, global consumption of fossil fuels as measured in units of energy consumed rose 45% between 2000 and 2019, according to BP's latest Statistical Review of World Energy (see chart).

In other words, while a growing number of voices are calling for a low carbon future, human activity is driving ever-rising fossil fuel consumption.



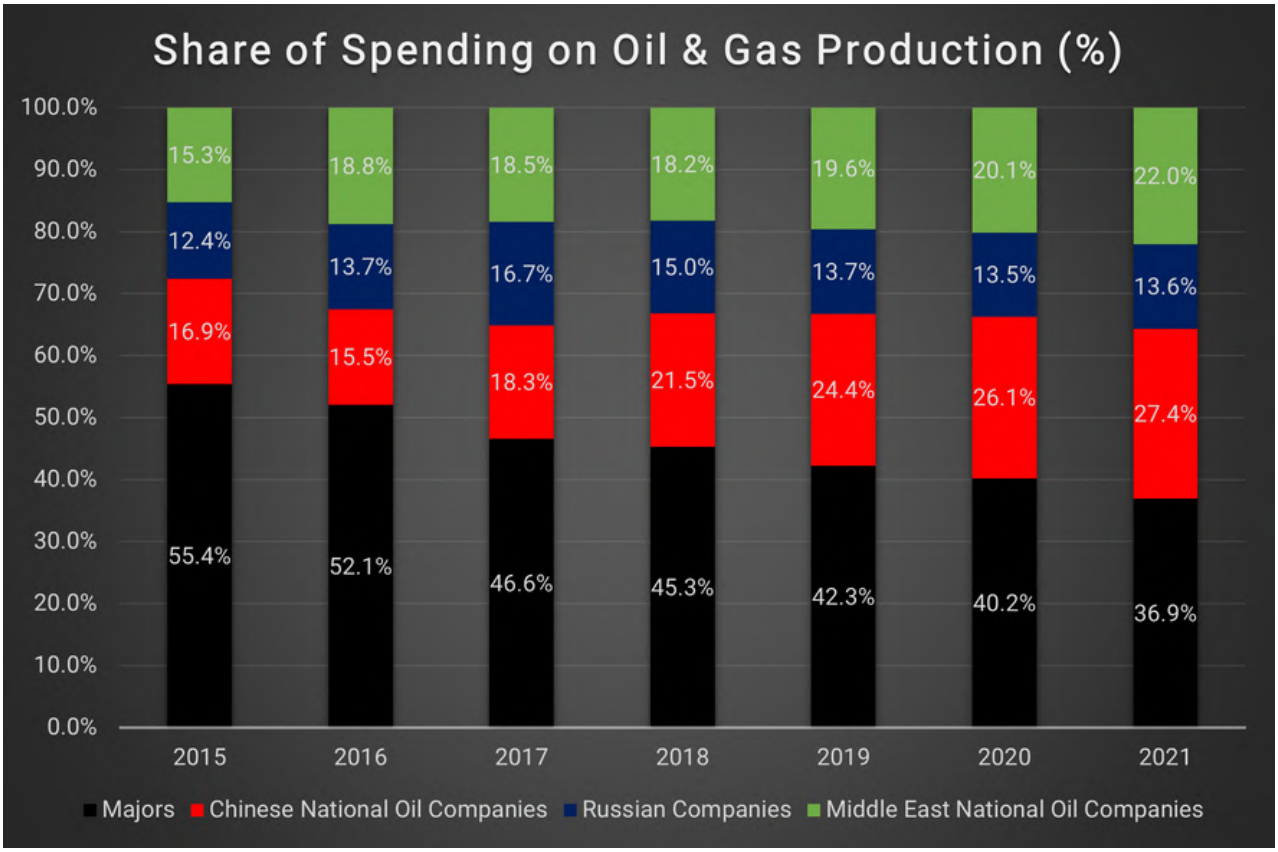
BP. Statistical Review of World Energy 2020. June 2020.

The rise of NOCs

How do we square this circle of falling investment in fossil fuels with rising demand and consumption?

Part of the explanation is that, even though new investment in fossil fuel supplies and power generation is falling, prior decades of strong investment mean that there are plenty of reserves on oil companies' balance sheets and plenty of fossil fuel power plants that require maintenance spending only.

Another part of the explanation has to do with national oil companies (NOCs). While listed entities such as Exxon and Shell must worry about activist shareholders and dissident board members, state-owned oil companies such as Qatar Petroleum, Saudi Aramco (which is partially listed), and Abu Dhabi National Oil Co., are largely insulated from such pressures. As the listed oil majors have cut their investment spending in the oil & gas sector, Middle Eastern and Chinese NOCs have increased theirs (see chart). This suggests that in the future NOCs, which currently produce about 50% of the world's oil, will account for a rising share of global production.



IEA. International Energy Agency World Energy Investment 2021. June 2021. 2021 figures are an estimate.

The growing role of NOCs in world energy markets suggests that a climate strategy that exclusively targets listed oil majors is insufficient. As long as demand for oil and other fossil fuels remains high, businesses will meet that demand. Climate campaigners must, therefore, look beyond listed oil majors if they want to reduce our dependence on carbon-emitting fuels.

Intuition Know-How has a number of tutorials that are relevant to ESG issues and the oil industry:

- ESG & SRI – Primer
- ESG & SRI – An Introduction
- ESG & SRI – Investing
- ESG Factors
- Green Assets
- Commodities – An Introduction
- Commodities – Trading
- Commodities – Oil
- Commodities – Natural Gas
- Commodities – Emissions