ALTERNATIVES RESEARCH

Energy Markets & Conventional Energy Investing Update

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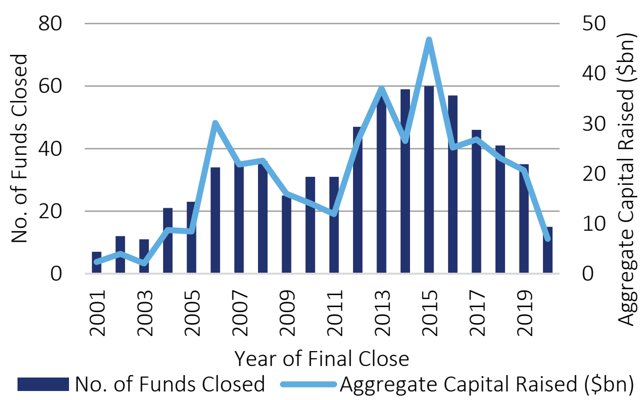
Traditional energy markets have been characterized by volatility in recent years, leading to inconsistent historical returns that have plagued conventional energy funds. The magnitude of this volatility was illustrated last year, as West Texas Intermediate (WTI) dipped negative for the first time ever. This article is meant to help identify where energy markets stand today, how other investors are viewing conventional energy funds, potential future risks, whether to invest in traditional energy investments, and if so, which part of the energy transition value chain may be the most attractive.

Capital Supply

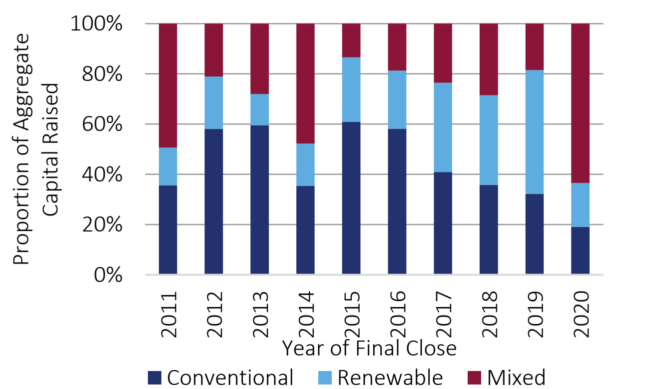
Fundraising within oil & gas private equity funds peaked in 2015 and has steadily declined every year since. Capital commitments have fallen by approximately 75% since 2015. This decline in capital fundraising is largely due to a combination of the importance of ESG considerations to investors and the inconsistency of realized returns over the past decade across conventional private equity energy funds. Today, hydrocarbon investments appear less attractive in the long term, as the focus on decarbonization becomes more prevalent. Investors also have questions as to whether the global community has reached "peak oil". With new climate change challenges, concerns remain that global production has reached a max point. However, according to the IEA's World Energy Outlook for 2021, "the era of growth in global oil demand comes to an end within ten years [but] in the absence of a larger shift in policies, it is still too early to foresee a rapid decline in oil demand." These concerns have led to historic fundraising efforts in renewable and energy transition funds over the past several years, as seen in Exhibit 1 below. In 2020, 63% of capital raised employed a mixed strategy of conventional and renewable energy. Interestingly, conventional energy managers have begun raising energy transition or even renewable energy funds alongside their traditional conventional energy funds, signaling the shift in current investor appetite. Wilshire's energy forward calendar includes a fund that is dedicating nearly 50% of its upcoming fund to zero and low-carbon investments.

Exhibit 1 – Global Unlisted Oil & Gas Focused Fundraising (2001-2020)



Source: 2021 Preqin Global Natural Resources Report. Data as of February 2021.

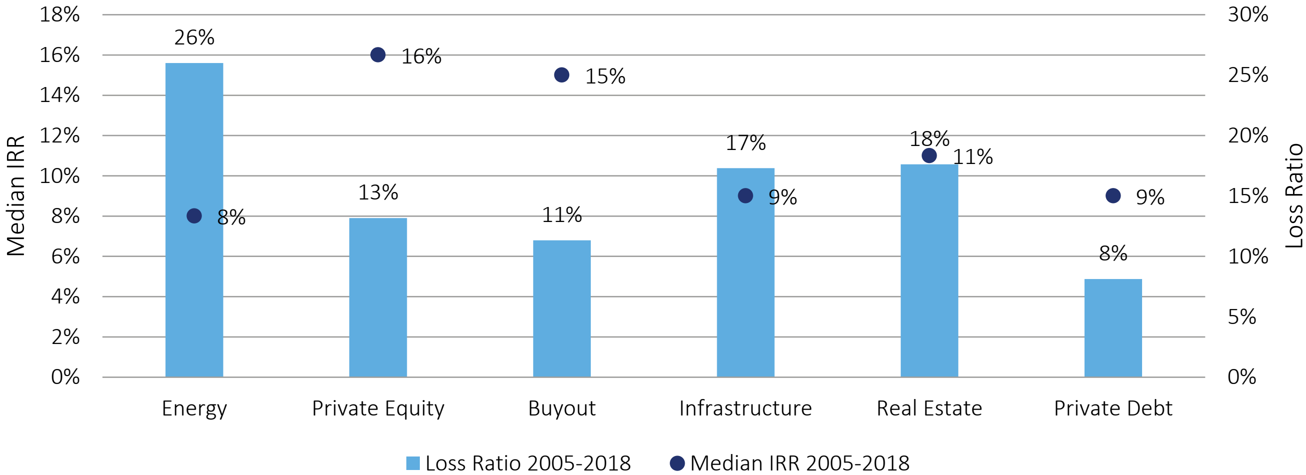
Exhibit 2 – Aggregate Capital Raised by Unlisted Energy Funds Closed by Type (2011 – 2020)



Source: 2021 Preqin Global Natural Resources Report. Data as of February 2021.

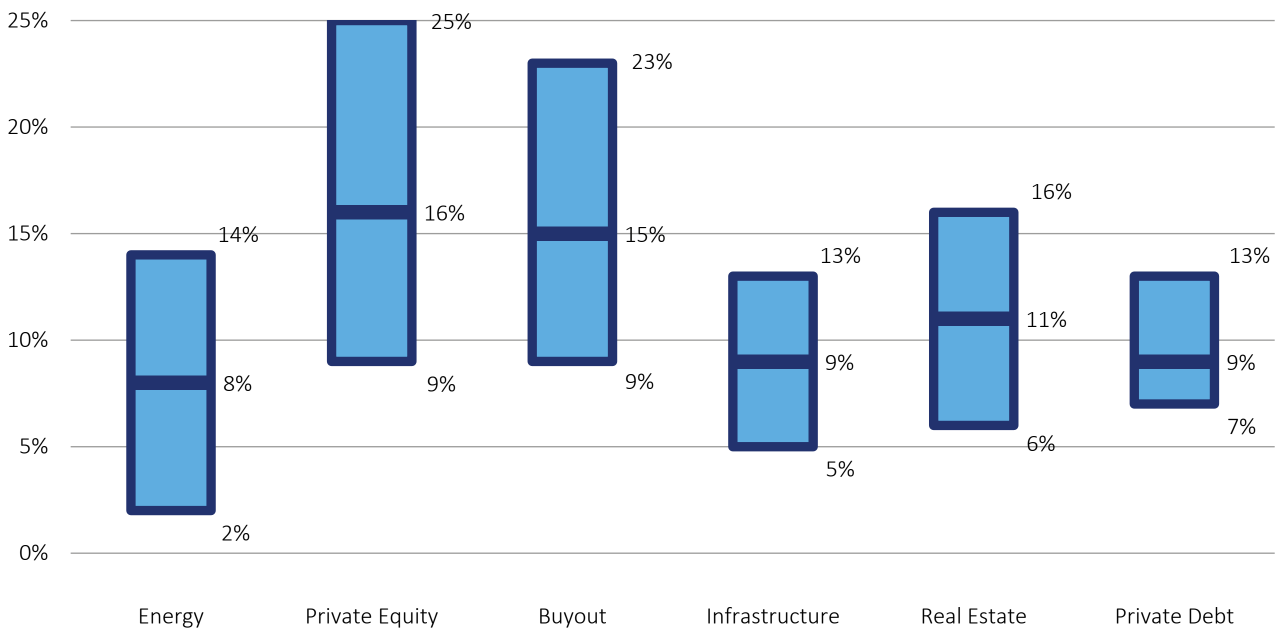
Additionally, inconsistent historical returns have led to investors shying away from conventional energy funds. Fund impairment ratios have been high, relative to other asset classes, and median returns have been underwhelming. While median returns for energy funds were strong on an absolute basis in the early 2000s, they have since been modest and have hovered near mid-to-high single digit net IRRs. Further, loss ratios have been elevated across vintages for conventional energy funds. Relative to other private asset classes, traditional energy funds have experienced the highest impairment ratio. Energy funds have a 9% higher impairment ratio compared to the asset class with the next highest loss ratio - growth & venture funds. Conventional energy funds' loss ratio from 2005 to 2015, which should only include funds that are well out of the J-curve, is 30%.

Exhibit 3 – Fund IRRs & Loss Ratios across Private Asset Classes (2005 to 2018)



Source: Preqin as of November 2021. Wilshire analysis.

Exhibit 4 – Fund IRR Quartile Boundaries across Private Asset Classes (2005 to 2018)



Source: Preqin as of November 2021. Wilshire analysis.

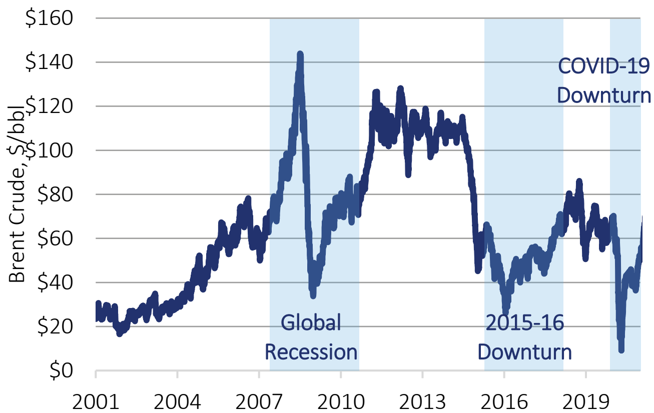
Banks have also made a concerted effort to reduce their energy exposure since the last downturn as a result of significant losses, the uncertain prospect of future capital market fees, and ESG considerations. Since the end of 2014, energy funded loans as a percent of total loans decreased for large-cap and mid-cap/regional banks. Further, the largest lenders in energy have aggressively reduced their energy exposure, with significant reduction in aggregate exposure from Q1 2020 to Q1 2021.

Energy Outlook

Crude oil and natural gas prices have seen significant volatility over the past several years. Prior to 2020, leading drivers of crude oil price volatility were Middle East tensions arising from attacks on Saudi facilities in September 2019 and conflict between the U.S. and Iran (supply risk), along with the ongoing trade war between the U.S. and China (demand risk). Then in the Spring of 2020, COVID-19 demand destruction negatively impacted oil with prices going negative for the first time in history. Material uncertainty remained throughout most of 2020 before firming up into 2021 with the rollout of vaccines and re-openings. Oil consumption still remains integral to society, as the world currently consumes approximately 100 million barrels of oil per day[1]. However, ongoing virus outbreaks and global spare capacity continue to cause market unease.

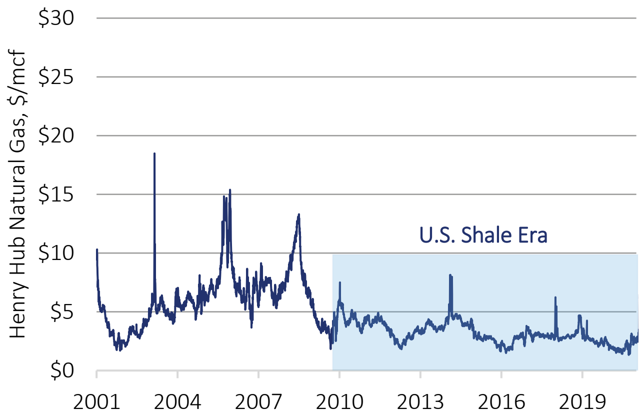
Regarding natural gas prices, 2020 prices were softer with demand down, but have largely recovered to pre-pandemic levels. Since the U.S. Shale era, Henry Hub pricing has traded largely between $2.00 to $3.50/mcf. However, natural gas demand forecasts are encouraging as lockdowns subside and society looks to a lower carbon future. There is a strong consensus across numerous entities and agencies for increasing global gas demand over the coming decades. The average 5, 10, and 20-year CAGR for global gas production according to forecasts from the Energy Information Administration, Equinor, BP, and the International Energy Agency is 1.1%, 1.2%, and 1.1%, respectively.

Exhibit 5 – Historical Brent Pricing



Source: Tudor, Pickering, Holt & Co. as of January 2021.

Exhibit 6 – Historical Henry Hub Pricing



Source: Tudor, Pickering, Holt & Co. as of January 2021.

Exhibit 7 – OPEC Global Oil Demand Prediction (2019-2045)

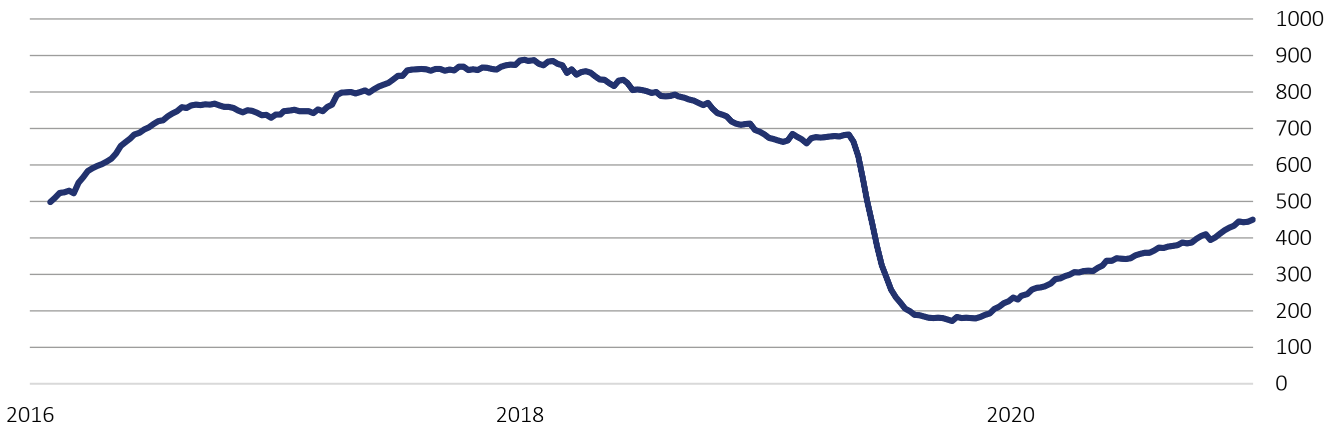
	2019	2020	2025	2030	2035	2040	2045	Growth 2019-2045
OCED	47.9	43.0	46.8	44.6	41.5	38.0	34.8	-13.1%
Non-OCED	51.8	47.8	56.9	62.6	67.4	71.2	74.3	22.5
World	99.7	90.7	103.7	107.2	108.9	109.3	109.1	9.4%

Source: 2021 Preqin Global Natural Resources Report. Data as of February 2021.

[1] *International Energy Agency March 2021 Oil Market Report. Estimated global demand of 99.2 million barrels per day in Q4 2021.*

From a production perspective, U.S. rig count is up nearly 100% from the trough following COVID-19, but still approximately 40% below pre-COVID levels. Producers are highly focused on capital discipline, free cash flow overgrowth, balance sheet improvements, and shareholder distributions. Pre-COVID, oil-focused U.S. E&P operators utilized cash on hand and asset sales to cover debt obligations. Significant cash flow from operations funded CapEx. Post-COVID, much less cash flow from operations is funding CapEx, leaving more capital to de-lever and pay dividends to shareholders.

Exhibit 8 –Crude Oil Rig Count



Source: Baker Hughes as of November 2021.

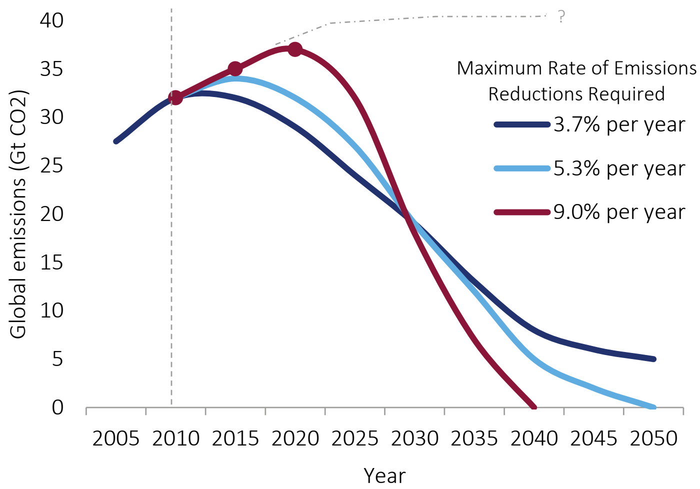
Consolidation is also a core theme at the moment within the E&P sector. Many operators have struggled to find capital for new drilling programs, as private equity capital allocated to the sector has continued to decline and banks have been conservative with lending to the space. This capital scarcity has led to operators selling “non-core” assets at attractive discounts to fund new projects. However, the question remains whether these non-core assets being sold are actually high-quality.

Further, some of the world’s largest energy majors (Exxon, Chevron, etc.) have materially reduced funding for large upstream projects in order to (i) reduce carbon emissions, (ii) pay dividends to shareholders, and (iii) divert investments into renewables. Energy transition projects are a key focus for majors as well.

Decarbonization Trends

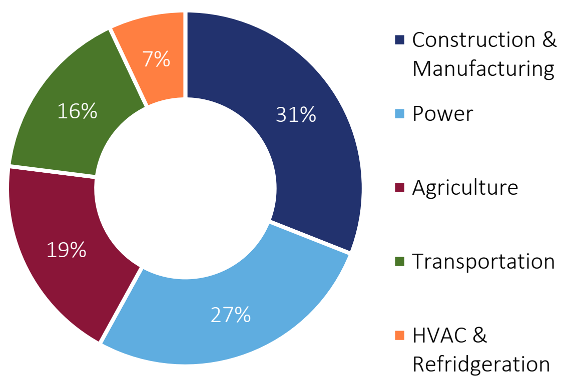
There are significant consumer pressures currently forcing oil & gas companies to focus on responsibly sourced production and, ultimately, drive towards “net-zero” from an emissions perspective. The pressures of climate change are mounting, as current trends suggest the world will warm by 3.5 degrees Celsius by 2050, well above the 2-degree Celsius target set in the 2015 Paris Agreement. The ongoing uncertainty of climate change and actions society will need to take to mitigate the worst effects of climate change presents a real risk to new fossil fuel investments. Operators will need to find a way to drill in a cleaner manner. Carbon capture technologies are expected to play an important role as well moving forward.

Exhibit 9 – Emission Reduction Rates Required to Limit Warming to 2-Degrees Celsius



Source: IPCC as of August 2021.

Exhibit 10 – Sources of Global Emissions



Source: Bill Gates, How to Avoid a Climate Disaster (2021).

Looking Ahead

Inconsistent historical returns in the private equity energy sector, commodity price volatility, and new risks associated with decarbonization and climate change, have led to a flight of capital away from the conventional energy sector. However, there may potentially be a unique opportunity at the moment within the upstream space, as little capital is being raised and non-core assets are being sold by operators at attractive discounts. Oil & gas investing as only a part of a broader energy strategy could be compelling. Manager selection is extremely important within this asset class, as return dispersion is historically wide.

Within the clean energy space, tailwinds are stronger than ever as the energy transition has formally begun. The space is crowded, but capital required for this activity is significant. Compelling investment opportunities remain, specifically outside of traditional renewable investments. Decarbonization outside of the power sector should present compelling returns for investors moving forward.

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