

A Work Project, presented as part of the requirements for the Award of a Master Degree in Finance from the
NOVA – School of Business and Economics.

TechnipFMC Equity Research – Oilfield Services in a
Decarbonised Economy

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Abstract

In today's world there persist an ever-increasing focus on environmental science and the impact the burning of fossil fuels and the resulting carbon emission have on climate. Therefore, there is a push by government as well as citizens to find cleaner energy alternatives such as Liquefied Natural Gas (LNG) and Renewable energy sources. For many organizations operating in oil & gas related fields, such as Oilfield services this creates dim future prospects. Therefore, in the following text the implications of the increased attention of carbon emissions and the resulting energy transition are examined with focus on the Oilfield services company TechnipFMC.

Keywords: Energy Transition, Oil & Gas, Oilfield Services, TechnipFMC

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This report is part of the ... report (annexed) and should be read as an integral part of it.

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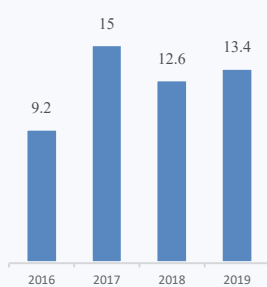
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Company Overview



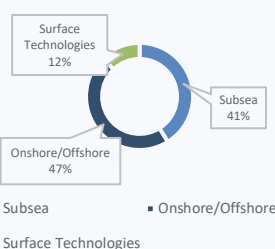
The merged entity of TechnipFMC created one of the largest oilfield services companies globally

Exhibit 1: Revenue Development (USD Bn)



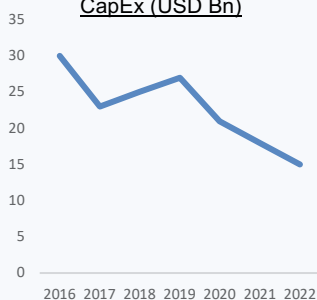
Source: TechnipFMC annual report

Exhibit 2: Revenue Segment Splits



Source: TechnipFMC annual report

Exhibit 3: European Oil & Gas CapEx (USD Bn)



Source: Bloomberg Terminal

TechnipFMC plc is a globally operated oilfield services company (OFS). Created through the merger of the French Technip and the American FMC Technologies on the 17th of January 2017 (hereafter “the Merger”). The decision to merge was driven by anticipated synergies on revenue and cost. Following suppressed oil prices two years prior to the merger, consolidation was necessary for a strict reassessment of the cost structure of both firms. It was estimated that the combination would achieve annual cost savings in excess of USD 550 million¹. Consequently, in 2018 the company attributed USD 100 million of pre-tax income to realised revenue synergies². The offerings by the company are stretching across the Oil and Gas vertical, reaching from Up to Downstream projects. The official organisation headquarters are based in London, United Kingdom. Whereas, the operational headquarters are located in Houston, Texas. Enabling the organisation to service both European and American markets directly. In 2019 the company generated 13.400 million USD in revenue. A year on year growth of 6.8%. Furthermore, the company’s backlog rose 66.6% from 14,500 million USD to USD 22,200 million. Whilst globally employing 37,000 individuals³. The company’s performance has been volatile over the last three years but on a general upward trend growing from USD 9,199.6 million in 2016 to USD 12,599.9 million in 2018, and finally reaching the above mentioned USD 13,426.2 million. Gross Margins also improved from USD 1,870.1 million to USD 2,839.6 million in 2019. The operations are split into three business segments – Subsea, Surface Technologies, and Technip Energies⁴.

Subsea

The Subsea segment focuses on the optimisation of subsea oil & gas fields, operating across the project lifecycle from concept to delivery. Providing integrated design, engineering, procurement, manufacturing, installation and life of field services for subsea systems⁵. Through the merger mentioned above Technip FMC created a market leader in subsea production systems and risers and flowlines, offering a full water column solution. Creating a competitive advantage as clients are seeking integrated solutions in optimised subsea architecture. However, the business segment is volatile, in the North Sea Brent fields harsh conditions throughout the winter generally subdue drilling activity, reducing vessel utilisation and the demand for subsea exploration. Therefore, the Q1 performance of the segment is impacted adversely every year. Additionally, the volatile and generally suppressed crude oil price reduced capital spending across the industry putting further strain on the segment as it typically requires highly engineered, tailor made solutions which require sizeable capital investments. Further declines in capital spending were fuelled by the demise in demand for downstream oil and gas products such as petrol and kerosine in the light of the COVID-19 pandemic⁶, briefly sending crude futures into negative territory throughout March 2020. Regardless of adverse market conditions in the sector in 2019 the segment accounted for 41.00% of revenues and continued to generate strong revenues throughout 2020.

¹ <https://investors.technipfmc.com/static-files/1ae7902a-8ac7-4338-b2bf-5d93852a800c>

² <https://www.energyvoice.com/oilandgas/171095/merger-synergies-boost-profits-at-technipfmc/>

³ <https://investors.technipfmc.com/news-releases/news-release-details/technipfmc-announces-fourth-quarter-2019-results/>

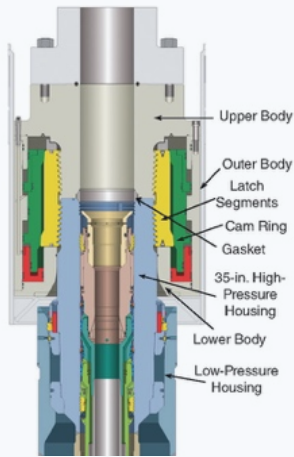
⁴ <https://www.technipfmc.com/en/about-us>

⁵ <https://investors.technipfmc.com/static-files/58ab6aa0-1182-46c1-8732-fba934662034>

⁶ <https://www.offshorewind.biz/2020/06/08/european-offshore-wind-capex-to-top-upstream-oil-gas-in-2022-rystad-energy/>

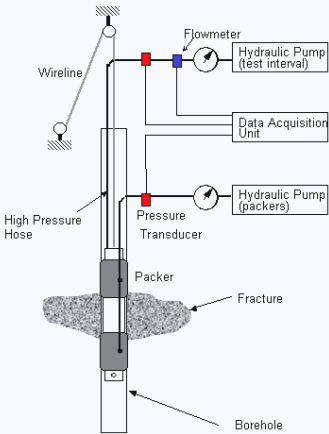
Surface Technologies

Exhibit 5: Wellhead systems



Source: Fundamentals of Oil & Gas

Exhibit 6: Hydraulic fracturing systems



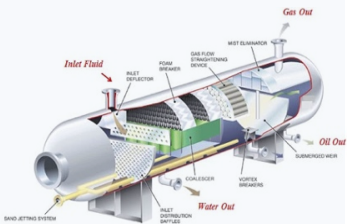
Source: Fundamentals of Oil & Gas

Surface focuses on the exploration of onshore and shallow water hydrocarbons. The segment can be further broken down into upstream, and midstream and downstream transportation. The products and systems include wellhead systems, hydraulic fracturing systems and flow processing systems. The segment gained a large uplift in demand with the advancements in exploring shale deposits in the Midwest of America. The advancement of shale caused global rig counts to rise from 400 in 1,996 to a peak of 3,578 in 2014⁷. In subsequent years, well shut-ins caused by declining oil prices became more common, recently dwindling to lows of 1,404 in 2020, caused by the enforced economic shutdown during the COVID-19 pandemic. Flow processing systems focus on the transportation and storage of hydrocarbons, including the planning and provision of pipelines, liquified-natural-gas (LNG) storage facilities, as well as measurement solutions along the hydrocarbon supply chain to enhance mission-critical inventory transactions and minimise waste⁸. This segment contributes a large proportion, 49%, of TechnipFMC's fixed asset base, as Surface technologies manufactures its products almost entirely inhouse, specialised production locations around the globe are required. The revenue streams of the segment are well diversified with no client accounting for more than 10.00% of revenues. Activity is typically driven by the North American shale market sensitivity to oil price fluctuations. Which declined approximately 12.00% in 2019 from 2018. However, this is partially offset by less cyclical drilling activities in Europe and Asia. In 2019 Surface contributed 12.00% of total firm revenue.

Onshore/Offshore (Technip Energies)

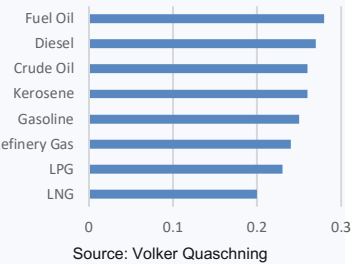
Technip Energies offers global clients extensive experience, technologies, and project management capabilities in downstream onshore and offshore businesses. The delivery of turnkey projects is an instrumental part of this business segment, reducing the capital intensity as contracts are based on a lump-sum or reimbursable model. Advanced payments are received from customers to fund initial development and working capital requirements. Dependence on key customers is moving with deal activity, due to project size and complexity it often occurs that one particular customer represents a large driver of revenue⁹. This segment is of particular importance to TechnipFMC as the firm is a market leader in the delivery of onshore Liquefied Natural Gas (LNG) storage and liquification plants. LNG compared to other fossil is less carbon dense, meaning its usage emits significantly less Co2 compared to oil, traditional gas, and coal (Exhibit 8). These properties make it in the eyes of many scientists a critical transition fuel¹⁰. Therefore, Technip finds itself well positioned for future endeavours in the sector¹¹. Accounting for 47.00% of total firm revenue in 2019 it represents TechnipFMC's most profitable segment and the firm's CEO is expecting its importance to grow with accelerating energy transition timelines¹².

Exhibit 7: Flow processing systems



Source: Fundamentals of Oil & Gas

Exhibit 8: kg Co2/kWh



Source: Volker Quaschnig

Spin-Off

In 2019 TechnipFMC announced its plans to separate its engineering and construction activities

⁷ <https://rigcount.bakerhughes.com/intl-rig-count/>

⁸ Kahn, M.R. Advances in clean hydrocarbon fuel processing: Science and technology

⁹ <https://investors.technipfmc.com/static-files/58ab6aa0-1182-46c1-8732-fba934662034>

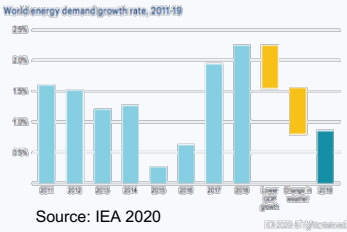
¹⁰ https://www.volker-quaschnig.de/datserv/CO2-spez/index_e.php

¹¹ <https://www.gtai.de/gtai-en/invest/industries/energy/natural-gas-liquid-natural-gas-Ing-energy-transition-105884>

¹² <https://www.spglobal.com/ratings/en/research/articles/200924-the-energy-transition-and-covid-19-a-pivotal-moment-for-climate-policies-and-energy-companies-11651888>

Liquefied Natural Gas (LNG) requires highly specialised processing plants due to the stress caused by the sub-zero temperatures required for the gas to remain in liquid state. TechnipFMC has pioneered the engineering of such plants and subsequently emerged as market leader.

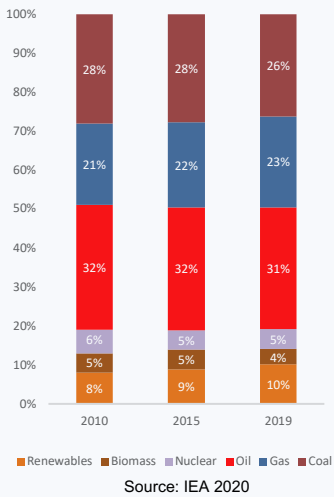
Exhibit 10: World Energy Demand Growth (%)



Deepwater offshore refers to hydrocarbon reservoirs of the continental shelf in depths below 1500m.

Unconventional exploration & production refers to onshore hydraulic fracturing and oil sands.

Exhibit 11: Global Energy Mix



(Subsea and Surface) from its downstream oil services (Offshore/Onshore)¹³. The decision was driven by the operational motive to maintain RemainCo as a fully integrated technology services provider, which continues to drive energy development, whilst SpinCo develops into a leading downstream project player to capitalise on the energy transition and TechnipFMC's expertise in LNG¹⁴. However, these plans were put on hold until at least H2 2021 due to the material change in market conditions caused by Covid-19. Namely, the sharp decline in commodity prices, and the heightened volatility in global equity markets¹⁵.

Macroeconomic and Industry Outlook

Macroeconomic Overview

- Pre – COVID-19

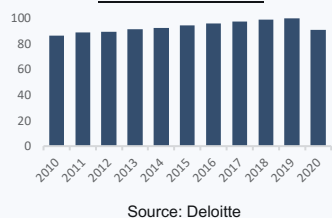
In 2019, the OFS sector regained much of its stock market losses in 2018, delivering total shareholder returns of 17.00%¹⁶. The industry was supported by a generally favourable investment environment across the global economy, as sector specific financial performance was impacted by lower oil prices and reduced rig counts. Industry invested capital declined by 2.00% in 2019, accompanied with an average, risk adjusted profitability (ROIC – WACC) of -14.00%. Only two companies managed to earn their cost of capital¹⁷. Before the COVID-19 pandemic hit global energy markets, OFS as a sector was on a steady upward trend in terms of global value. Reaching a global market value of USD 267.8 billion¹⁸ by the end of 2019, representing an annual compounded growth rate (CAGR) of 11.90% between 2014 and 2019. This growth was driven by growing energy demands, Exhibit 10 shows the positive demand development in global energy markets for the trailing nine years. From 2018 to 2019 demand increased by 0.9% or 120 million metric tonnes of oil equivalent¹⁹. However, this was only 40.00% the rate of growth observed in 2018, caused by slower economic growth and adverse global weather conditions. Increased energy demand led to greater capital spending on deepwater offshore and unconventional exploration and production as traditional production of hydrocarbons was approaching peak output²⁰. This paired with the fact that Oil & Gas remains a primary energy source in the global economy, providing 31.00% and 23.00% of the global energy mix respectively (Exhibit 11²¹) led to an accelerated pace of capital spending in the sector of oilfield services. Capital spending rose by 4.60% from 2018 to 2019, during the same period of time TechnipFMC's revenue rose from USD 12,599 million to USD 13,462 million. Indicating oil & gas capex to be a relevant value driver for OFS.

- During/Post – COVID-19

The adverse effects of the pandemic on the sector were and to this day are, expansive. As countries entered lockdowns and enforced travel bans from March 2020 onwards, demand for downstream oil & gas products plummeted to lows never seen before in global energy markets. Daily demand, in million barrels per day dropped to a projected 91.3. A low that had not been

¹³ <https://de.reuters.com/article/technipfmc-divestiture-postponement/technipfmc-puts-spin-off-on-hold-due-to-market-turmoil-idINL8N2B814I>
¹⁴ <https://www.bloomberg.com/press-releases/2019-08-27/technipfmc-technipfmc-intends-to-create-two-industry-leading-independent-publicly-traded-companies>
¹⁵ <https://de.reuters.com/article/technipfmc-divestiture-postponement/technipfmc-puts-spin-off-on-hold-due-to-market-turmoil-idINL8N2B814I>
¹⁶ <https://www.rolandberger.com/en/Insights/Publications/Oilfield-Services-Winners-2019.html>
¹⁷ <https://www.rolandberger.com/en/Insights/Publications/Oilfield-Services-Winners-2019.html>
¹⁸ <https://www.fortunebusinessinsights.com/industry-reports/oilfield-service-market-100174>
¹⁹ IEA – Global Energy Review 2019
²⁰ <https://www.britannica.com/topic/peak-oil-theory>
²¹ IEA – Global Energy Review 2019

Exhibit 12: Daily Oil Demand in Millions of barrels



broken since 2013 (Exhibit 12)²². With national and international travel grinding to a halt demand for Kerosine, Petrol and Diesel was hit hardest, dropping to their lowest levels in two decades²³. Exhibit 13 illustrates the steep retreat in implied price level for selected petroleum products, with Gasoline and Kerosine (jet fuel) dropping more than 60.00%²⁴. Exhibit 14 illustrates that a combined 65.80% (road transport + aviation + shipping + other transport) of oil consumption is attributable to transportation in one way or another²⁵. Baker Hughes research indicates that Oil demand will not return to pre-pandemic levels before H2 of 2022²⁶. However, they also state that peak oil will not be reached this decade painting a rather less dim picture for the sector. Regardless, with falling prices and demand, expenditure by oil & gas companies was slashed drastically. The nine largest Oil majors cut 2020 spending by 22.00%, with British Petroleum leading the charge and reducing spending by 25.00%²⁷. Putting many projects on hold or terminating them all together, creating a negative knock-on effect on the oilfield services sector.

Exhibit 13: Implied price level for selected petroleum products

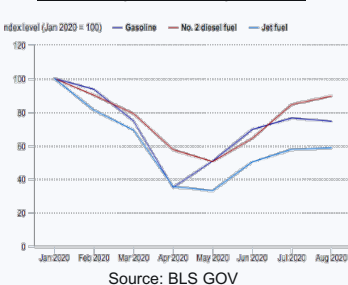
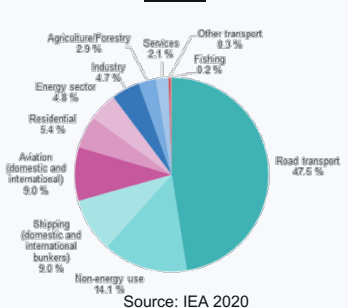


Exhibit 14: Oil Consumption by Sector



The Relevance of Crude Oil Price

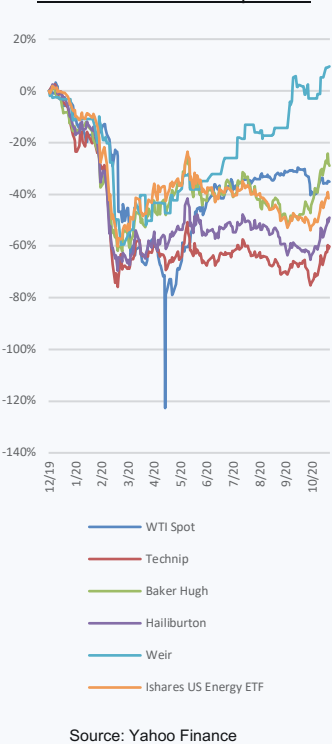
Exhibit 15 shows the short-term relationship between WTI spot prices and the share price performance of TechnipFMC and some of its largest competitors in the sector rebased to 0 for the year to date. It appears that no significant short-term correlation between oil price and share price exists in the sector.

However, whilst this result may appear to be surprising it can be explained by the following factors. There is the existence of significant time-lag when it comes to the impact of lower oil prices. Whilst Oil & Gas companies may slash CapEx immediately, oilfield services are typically on a long-term contractual basis with an average leadtime of 5.7 years²⁸. Therefore, oilfield services companies have sizeable revenue backlogs, although there exists a lag of 4-6 quarters from leadtime to revenue realisation. Hence, the impact on their revenue is not felt immediately, and traditionally oil prices recovered before the backlog reserves were depleted. Further, as evident in the above graph, short term drops in the price of oil do not significantly affect the share price performance of oil & gas companies themselves depicted through the IShares US Energy ETF. This gives relevance to the second driving factor; the short-term volatility of oil prices is typically already priced into the share price of companies in related and depending sectors²⁹.

Exhibit 16 shows the long-term relationship between WTI prices and two ETF's tracking oil & gas companies and oilfield services companies. It is evident that over the long run, there exists a correlation between the price movements of oil and the implied share price for oil & gas and oilfield services companies. Falling oil prices is impacting the share price performance of oilfield services more significantly, whilst simultaneously less upside participation in price gains is observable.

One explanatory variable of this is the diverging demand structure for the products offered by

Exhibit 15: TechnipFMC vs Oilfield Services Competitors



²² <https://www2.deloitte.com/us/en/pages/energy-and-resources/articles/oil-and-gas-industry-outlook.html>

²³ <https://www.cbs.nl/en-gb/news/2020/19/kerosene-consumption-to-lowest-level-in-two-decades>

²⁴ <https://www.bls.gov/opub/mlr/2020/article/from-the-barrel-to-the-pump.htm>

²⁵ <https://ec.europa.eu/eurostat/statistics-explained/pdfscache/43212.pdf>

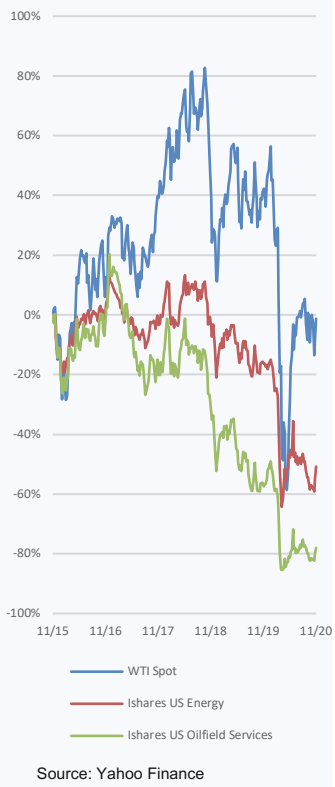
²⁶ <https://www.cnbc.com/2020/07/02/goldman-sachs-oil-demand-to-return-to-pre-pandemic-levels-by-2022.html#:~:text=Menu-,Oil%20demand%20to%20return%20to%20pre%2Dpandemic%20levels%20by%202022,unlikely%20to%20peak%20this%20decade&text=In%20a%20research%20note%20published,pre%2Dcoronavirus%20levels%20by%202022.>

²⁷ <https://www.reuters.com/article/us-global-oil-majors-capex-graphic-idUSKBN21J516>

²⁸ http://www.des.ucdavis.edu/faculty/Lin/service_contracts_review_paper.pdf

²⁹ Oil Volatility Risk and Expected Stock Returns, Peter Christoffersen and Xuhui Jan, Journal of Banking & Finance

Exhibit 16: TechnipFMC vs Oilfield Services ETF



each sector. Oilfield services experience quite an elastic demand for their products and services due to the high costs associated³⁰. On the other hand, oil & gas demand is much more inelastic due to the diversified customer base. The product offering of integrated oil companies reaches from downstream petrol station, to kerosine for airlines to heavier residual oil which can be used for asphalt and hard plastics³¹. Additionally, oil & gas companies are dominant participants in the commodities markets, many firms set up their own trading businesses to hedge their core business exposure to oil price fluctuations through derivatives. A practice which is less common in oilfield services³².

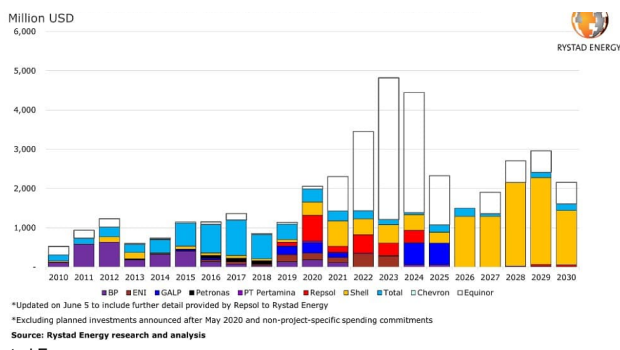
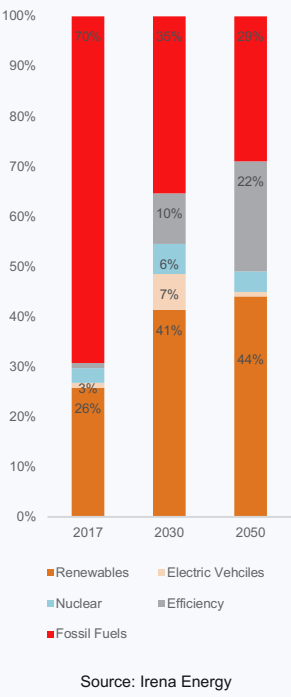
Hence, it can be concluded that short term extreme price fluctuations, as observed in March 2020 during the Covid-19 pandemic have little impact on the share price of oilfield services companies. Largely driven by the assumption that markets have priced in short term volatility risk into the stock of companies. However, if a longer time horizon is examined it becomes evident that a long term suppressed price of oil is indeed affecting the share price of oilfield services companies negatively. However, the CapEx of oil & gas companies is affected directly by long-term suppression in oil price and, as mentioned in the forecast, indicates an even stronger revenue driver than oil prices in the long-term. Hence, the effect of oil prices is encapsulated in the capex of oil & gas as a driver.

Energy Transition

The energy transition is the single most significant catalyst for the oilfield services sector. Rising governmental and public awareness about climate change, growing populations and rising standards of living drive demand for energy with lower emissions. Prompting the oil & gas sector to shift towards two dominant approaches to transform their business model. Firstly, shifting towards renewable energy, predominately pursued by the European Majors. Secondly, a focus on carbon-capture and storage technologies, a strategy focused on reducing Co2 in the atmosphere rather the prohibiting its creation, a strategy dominantly followed by the American Majors.

The Energy transition can broadly be defined as the process whereby economies are shifting their consumed energy from carbon heavy to carbon zero.

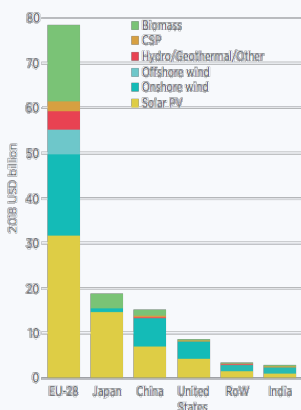
Exhibit 17: Government Subsidies – Global



The above graphic shows investments into renewable energy, clearly being illustrative of the diverging philosophies as the majority of investments are coming from European Majors like Shell, Equinor, Total and Repsol. Whilst American Majors such as Exxon aren't represented. A driving factor is the engaged government support in Europe through subsidies, which has been largely absent in the United States. Exhibit 17³³ shows planned global subsidies across the universe of primary energy sources, of which the share for renewables is said to grow from

³⁰ Financial Impact of Price Volatility on the Oilfield Services Sector of the Petroleum Industry, Andreas Michael
³¹ <https://www.eia.gov/energyexplained/oil-and-petroleum-products/prices-and-outlook.php>
³² Commodities Trading – A guide to trading and the global supply chain
³³ https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2020/Apr/IRENA_Energy_subsidies_2020.pdf

Exhibit 18: Government Subsidies – Renewables Country Level USD Bn



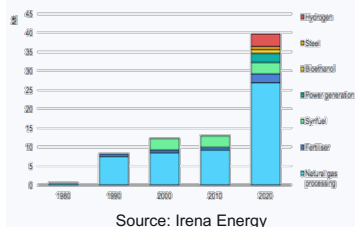
Source: Shell

26.00% in 2017 to 44.00% in 2050, whilst simultaneously subsidies to oil & gas are diminishing from 70.00% to 29.00%. At the moment the largest driver of subsidies to oil & gas are corporate tax breaks, particularly in the United States, where domestically produced oil is experiencing more favourable tax rates and carbon duties compared to imported products³⁴. Additionally, the US allows for accounting methods to further benefit oil & gas firms, through percentage depletion firms can depreciate their oil fields and gas reservoirs similar to traditional PP&E assets, a practice which is under tighter regulation in the European Union³⁵, as under conventional finance land is an asset which cannot be depreciated (with the exemption of mines). However, these practices are coming under increased pressure as it is estimated that since 2015 fossil fuels created negative externalities valued at USD 5.3 trillion. Therefore, the approach to subsidies has been shifted in Europe Exhibit 18 clearly shows the rate at which the EU-28 outpaced the rest of the world in terms of subsidies for renewable energy in 2019.

On the other hand, carbon capture and storage (“CCUS”) (Appendix 1) zooms in on processes that enable corporation to extract Co2 from the atmosphere to either reuse or store in Offshore/Onshore facilities. An approach driven by the argument that it will allow oil & gas companies to maintain their current business model, which has been perfected over the last decades. The growth in CCUS has been staggering over the last decade. Exhibit 19 shows an increase of 25 million metric tonnes in installed capacity.

It is clear that the shift towards renewables is hurtful to TechnipFMC and the oilfield services sector as a whole as oil & gas CapEx is shifted from products and services delivered by TechnipFMC to providers of renewable energy services. Whereas CCUS impacts TechnipFMC’s business marginally as its clients have the capability to operate normally and explore further hydrocarbon deposits whilst maintaining current exploratory sites.

Exhibit 19: Growth of Installed CCUS Capacity

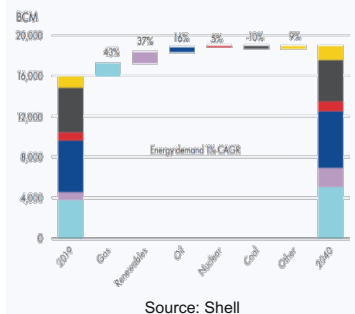


Source: Irena Energy

Opportunity in the Transition

Whilst the change in global energy market poses a risk to TechnipFMC, there is also the opportunity to explore significant upside potential. An alternative source of energy that is being explored increasingly is natural gas/liquified natural gas. The long-term outlook for LNG is brighter than that of other fossil fuels because of the comparatively lower cost and lower emissions from production and combustion³⁶. With oil and coal slowly being phased out of the global energy mix a gap that needs to be filled emerges. A logical substitute will be natural gas. Exhibit 20 shows Shell’s estimate that LNG demand will grow by 43.00% over the next two decades, making it the dominant primary energy source³⁷. TechnipFMC has established itself as the dominant provider of services for LNG exploration as well as treatment, storage and transportation facilities. TechnipFMC pioneered base-load LNG plant construction by building the first ever facility in Algeria³⁸. Currently the company is building the Yamal LNG facility in the Russian Arctic, the largest processing plant globally once completed, with an output capacity of around 16.5 million tonnes per annum. The field’s proven and probable reserves, by PRMS standards, are estimated at 926 billion cubic metres, making it the world’s largest natural gas

Exhibit 20: Global Energy Demand Growth by Fuel Type



Source: Shell

³⁴ <https://www.eesi.org/papers/view/fact-sheet-fossil-fuel-subsidies-a-closer-look-at-tax-breaks-and-societal-costs>

³⁵ https://www.irs.gov/irm/part4/irm_04-041-001

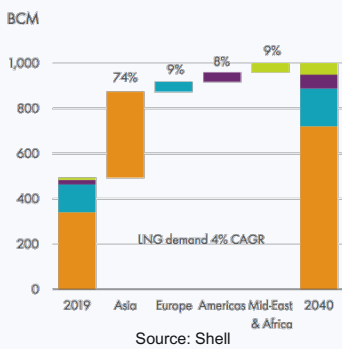
³⁶ <https://www.mckinsey.com/industries/oil-and-gas/our-insights/the-future-of-liquefied-natural-gas-opportunities-for-growth#>

³⁷ https://www.shell.com/promos/overview-shell-lng-2020/_jcr_content.stream/1584588383363/7dbc91b9f9734be8019c850f005542e00cf8ae1e/shell-lng-outlook-2020-march.pdf

³⁸ <https://www.technipfmc.com/lng/orange.html>

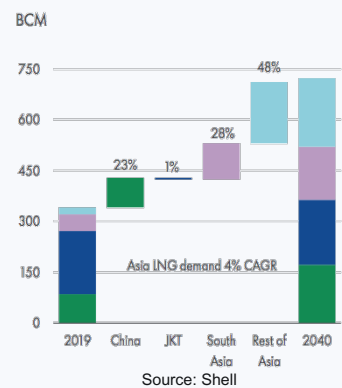
reservoir to date³⁹. Three LNG trains of 5.5 Mtpa each will be provided by TechnipFMC. This being the first LNG plant to be built on permafrost with temperatures reaching negative 57 degrees Celsius, TechnipFMC was able to secure a long-term servicing contract, worth USD 4.97 billion in the current backlog allocation, as frequent repairs and module updates are expected. Throughout 2019 and 2020 orders grew by over 80% compared to 2018 driven by USD 8 billion in LNG awards from the Yamal field and Artic LNG 2⁴⁰. Furthermore, the backlog in the business segment covering LNG is USD 15.3 billion, significantly outperforming other business segments. Looking at the market holistically, TechnipFMC delivered 9.00% of the world LNG production capacity⁴¹. Whilst the largest player is the European super major Royal Dutch Shell with 17.00%⁴². Exhibit 21 illustrates the expected 4% global LNG demand CAGR until 2040. Strong growth from Asia is expected to fuel long term potential in the LNG market in particular, with 74.00% of total demand growth (Exhibit 22) as many economies in the continent are transforming into developed status, energy demand is rising drastically across the region.

Exhibit 21: LNG Imports by Region



However, whilst LNG offers a viable lifeline to TechnipFMC throughout the energy transition, the opportunity must be examined with some caution. LNG has long CapEx cycles and therefore offers a volatile revenue environment for oilfield services companies⁴³. Currently, an expansionary CapEx cycle of five years has been halted by the Covid-19 pandemic, IHS Markit predicts a stern contraction in the development of new LNG projects (Exhibit 23). Over the last year, a surplus has emerged and global spot prices for both gas and LNG have more than halved⁴⁴. Looking past the usual disclaimers of the market, this weakness is largely expected to continue throughout 2020 and beyond fuelled by Covid-19 concerns. However, producers appear to be unphased. Quite the opposite, they show the willingness to look beyond the current cycle and invest for the medium-term future⁴⁵ with the believe that the underlying long-term demand for their product is sound and will show robust growth throughout the energy transition. The year 2019 pushed levels of LNG capacity reaching Final Investment Decision ("FID") to all-time highs. This decry of short-termism and allocation of capital spending is extraordinary in a time where current earnings are under huge pressure and focus is on capital discipline and CapEx reductions in other areas of the business. This is driven by the fact that it takes roughly four to six years to build a new LNG train from FID to project completion.

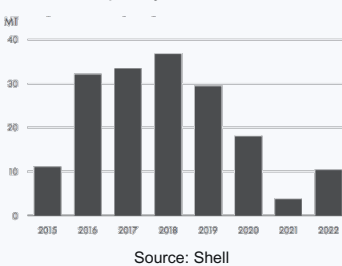
Exhibit 22: LNG Imports Asia Focused



Therefore, it is undoubtedly correct that the current market environment should have little impact upon investment decisions. Whilst the environment at the moment is suboptimal, we must invest now to remain competitive once this pandemic has been defeated the CEO of Cheniere Energy said⁴⁶.

Future performance and business success will depend on resilience and firms' capabilities to read and write the cycles, cost during construction and subsequently when in operations price cycles. Historically, LNG has been able to sidestep or manage excessive price cycles due to the reliance on rigid long-term contracts. CapEx investments traditionally were only made after a 15-20 year purchasing agreement with customers was reached. Hence, demand effectively

Exhibit 23: LNG Liquefaction Capacity Additions



³⁹ <https://www.hydrocarbons-technology.com/features/feature-the-worlds-biggest-natural-gas-reserves/#:~:text=Qatar%20is%20also%20the%20single,largest%20non%2Dassociated%20gas%20field.>

⁴⁰ TechnipFMC annual report 2019, page 5, Technip Q3 2020

⁴¹ <https://www.technipfmc.com/en/what-we-do/technip-energies/our-markets/lng-and-gas-monetization>

⁴² <https://www.prnewswire.com/news-releases/the-top-20-lng-infrastructure-companies-2019-300860936.html>

⁴³ <https://ihsmarkit.com/research-analysis/lng-the-counter-cyclical-build.html>

⁴⁴ Bloomberg

⁴⁵ <https://de.reuters.com/article/us-lng-exports-investment-analysis/lng-investments-vanish-in-2020-as-coronavirus-slashes-oil-and-gas-prices-idUSKBN25Z2D7>

⁴⁶ <https://www.bloomberg.com/news/articles/2020-12-08/cheniere-sees-biden-following-trump-in-support-of-lng-industry>

rationed supply. This in turn provided a more stable cash flow to oilfield services as well. With PPA's in place the price risk of the end commodity is hedged to a greater extent allowing for stable and sustained capital expenditure on LNG, which in turn is revenue for oilfield services.

However, as the industry commoditises, speculative investments have been increasing, and many proprietary trading and investment banking commodity desks established LNG teams. Hence, it is likely that cyclicalities will increase in the future, more closely mimicking the crude oil and petrochemical markets.

Valuation

WACC, terminal growth and shares outstanding

For the intrinsic valuation models the Weighted Average Cost of Capital (WACC) was computed. Firstly, the risk-free rate was estimated as 0.62%⁴⁷, based on the 10-Year U.S. Treasury yield. The treasuries are valued in the same currency as TechnipFMC's cash flows and generally serve as a soiled proxy for risk free investments. For the market risk premium, a BlackRock historical estimate was used, indicating an MRP of 5.60%⁴⁸. As TechnipFMC is required to meet its tax obligations in the United States the applicable statutory tax rate of 19% was applied. To compute the beta a universe of comparable companies and their according debt and equity market values was established. Subsequently, the D/E ratios for the universe of Comparables was computed and the levered equity betas were sourced from Capital IQs 5-year stock betas. The betas were then unlevered at the computed D/E ratios and the previously established statutory tax rate of 19%. Lastly, the mean/median unlevered beta was relevered at the mean/median market D/E ratio, computing an implied beta of 2.23 (mean) and 2.04 (median). Appendix 4 shows in-depth calculations. Through the Capital Asset Pricing Model (CAPM) a levered cost of equity of 13.10% was estimated.

Cost of debt was calculated by computing the yield to maturity of TechnipFMC's long-term bonds. The yield to maturity of the bonds was then weighted by the bonds book value to compute an average weighted YTM of 2.75%. The probability of default⁴⁹ was sourced from S&P for the according BBB+ credit rating of TechnipFMC. The bonds loss given default was estimated by utilising the Bloomberg Recovery Rate model, and the results imply a loss given default of 6.90%. The results were placed in the $Kd = YTM - Probability\ of\ Default * Expected\ Loss\ Given\ Default$ formula to estimate a cost of long-term borrowing of 2.59%.

The estimated cost of equity and debt are used in the WACC formula with the industry mean D/(D+E) ratio, giving a 51.10% equity and 48.90% debt capital structure. Ultimately computing a WACC of 8.20%.

Regarding the terminal growth rate, it was calculated by multiplying the return on net invested capital (RONIC) of 10.00% with the reinvestment rate (RR) of 18.00% in the year 2031 as this was the point in time identified where the growth rate could be considered as stable, establishing a terminal growth rate of 1.85% under the base case scenario assumption.

Exhibit 24: TechnipFMC Cost of Debt calculations

Bond	Annual YTM (Cost of Debt)	Book Value	WA YTM
Bond 2025	2.78%	110.4000	0.745%
Bond 2027	2.22%	84.2000	0.453%
Bond 2032	2.88%	108.6000	0.757%
Bond 2033	3.01%	109.2000	0.797%
	2.722%		2.75%

10 Year Average default rate S&P BBB+	2.30%
TechnipFMC bond loss given default	6.90%
Implied Recovery Rate	93.10%

Cost of Debt 2.59%

Source: TechnipFMC 2019 Annual Report
Analyst Estimates

⁴⁷ Data from Treasury.gov (Source: <https://www.treasury.gov/resource-center/data-chart-center/interest-rates/pages/TextView.aspx?data=yieldYear&year=2020>)

⁴⁸ Source: <https://www.blackrock.com/corporate/literature/whitepaper/bii-capital-market-assumptions.pdf>

⁴⁹ <https://www.livewiremarkets.com/wires/quantifying-the-risk-of-bonds-with-s-p-credit-ratings#:~:text=For%20example%2C%20an%20A%2D%20rated,rises%20as%20credit%20ratings%20decline.>

Exhibit 25: TechnipFMC Diluted Share count calculations

Treasury Stock Method Calculations	
<i>CEO Stock Options</i>	
Number of Options	343,727.00
Strike Price	20.98
Share Price	9.37
Treasury Method	0
<i>Options Tranch 1</i>	
Number of Options	4,330,000.00
Average Strike Price	26.55
Share Price	9.37
Treasury Method	0
<i>Options Tranch 2</i>	
Number of Options	33,000.00
Average Strike Price	45.49
Share Price	9.37
Treasury Method	0
<i>Options Tranch 3</i>	
Number of Options	479,000.00
Average Strike Price	56.93
Share Price	9.37
Treasury Method	0
Total Dillutive effect of options	0
Current Shares Outstanding	447
Total Dilluted Shares Outsanding	447

Source: TechnipFMC 2019 Annual Report Analyst Estimates

Furthermore, WACC can be seen as the hurdle rate required to achieve a positive return on investment, as shareholder returns are the proportion above the cost of funding. Hence, the fact that ROIC exceeds WACC by 4.80% (13.00% - 8.20%) is indicative of the positive shareholder return potential of TechnipFMC.

Diluted shares outstanding were calculated using the treasury stock method (Exhibit 25). The company has four relevant tranches of stock options on their books: CEO stock options (includes the management board as well), and option tranches 1-3 with different strike prices. As evident in Exhibit 52 no dilutive effect of the stock options will occur to shares outstanding as they are significantly out of the money with strike prices between USD 20.98 and USD 56.93. Most options were granted at a time before coronavirus, when TechnipFMC's stock was trading at USD 36.45. Additionally, there is a synthetic bond on the books of the company. However, this bond is non-dilutive as it is cash settled. Therefore, the diluted share count remains at 447,000,000.

EBITDA Analysis

Before commencing in further analysis of the company, TechnipFMC's EBITDA is dissected to ensure a reliable measure is used in comparing margins, forecasting and relative valuation. Firstly, EBITDA is reformulated to discard (one-off) events that are unrelated to the performance of the business, thereby adjusting EBITDA in such a manner that a more generic indicator of performance is established that allows for a comparison to other companies.

Operating EBITDA

Negative cash flows in the financial statements are mainly driven by one-off events that can be normalized. Examples include the USD 2.4bn of restructuring, impairment and other expenses in 2019, driven by USD 2.0 billion of goodwill impairment and USD 411.3 million of property, plant and equipment impairment. Goodwill was impaired as the company's market capitalization has declined significantly when compared to the prior year, driven in part by greater geopolitical uncertainty and lower commodity prices. Therefore, USD 1,347.7 million and USD 671 million of goodwill impairments were charged to the Subsea and Surface Technologies operating segments.⁵⁰ The PP&E impairment was driven by the prolonged downturn in energy markets and its corresponding impact on TechnipFMC's business outlook. Therefore, the carrying amount of certain assets held in the subsea segment (mainly Vessels) exceeded their recoverable amount and were impaired.⁵¹ TechnipFMC recorded USD 125.1 million and USD 267.8 million impairment loss on vessels in our Subsea segment during the years ended December 31, 2019 and 2018, respectively. Additionally, in 2019 an impairment charge of USD 168.9 million related to flexible pipe and umbilical manufacturing facilities was recorded by the Subsea segment.⁵² Additionally, there was the USD 72.1m associated with the preparation of the separation during 2019; and, the merger transaction and integration costs of USD 31.2 million during the first half of 2019 stemming from the continuation of the integration activities pertaining to combining the two legacy companies. For valuation purposes, as an EBITDA multiple is utilized in the DCF as well as relative valuation, these costs are considered non-recurring and are therefore estimated to be 0 for the projection horizon. In other words, we use

Exhibit 26: EBITDA map

EBITDA map	2019
Reported EBITDA	(838.8)
<i>Normalizations</i>	
Impairment	2,436.6
M&A costs	31.2
Income from equity affiliates	(12.3)
Separation costs	72.1
Operating EBITDA	1,688.8

Created by analysts for clarification

⁵⁰ Technip Annual Report 2019 Page 220

⁵¹ <https://investors.technipfmc.com/static-files/58ab6aa0-1182-46c1-8732-fba934662034>

⁵² Annual Report 2019 Page 2018

the reformulated operating EBITDA in further analysis.

Operating EBITDA Development

In order to analyze how year-on-year developments in operating EBITDA occur, an EBITDA bridge is presented in Exhibit 27. Here, it becomes evident that historically the company did not manage to consistently increase their revenues and or purchasing efficiency; whereas between 2017 and 2018, the revenue effect⁵³ and the gross margin effect⁵⁴ had negative impacts on EBITDA, these effects showed an opposing performance the year after. Fluctuating results indicate an unstable trajectory for the future, increasing the risk of the company.

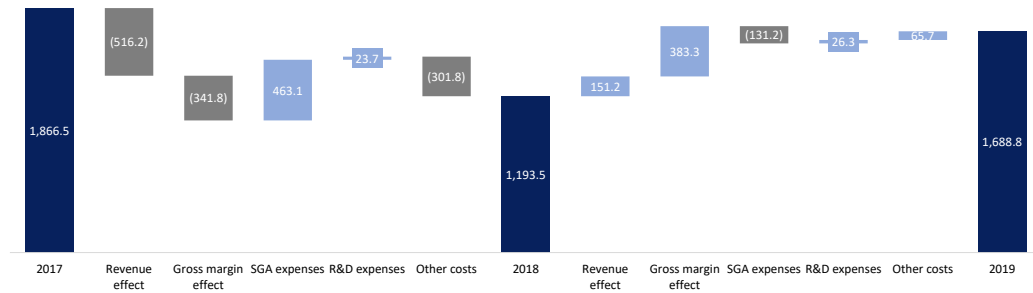


Exhibit 27: EBITDA Bridge

Created by analysts for clarification

Valuation Outcomes

Intrinsic Valuation

Exhibit 29: TechnipFMC Enterprise to Equity Value Bridge (USD Mn)

Current Equity Value:	\$ 4,157.1
(-) Cash & Cash-Equivalents:	5,111.9
(-) Equity Investments:	300.4
(-) Other Non-Core Assets, Net:	-
(-) Net Operating Losses:	-
(+) Total Debt:	2,591.0
(+) Preferred Stock:	-
(+) Noncontrolling Interests:	69.9
(+) Unfunded Pension Obligations:	(386.8)
(+) Capital Leases:	956.8
(+) Restructuring & Other Liabilities:	-
Current Enterprise Value:	1,975.6

Source: Analyst Estimates

For the DCF valuation the unlevered free cash flow up until 2031 is utilised, the cash flows are discounted at WACC. Additionally, a mid-year convention was utilised in the discounting process to adjust for the non-uniform occurrence of cash flows throughout the year. To estimate the terminal value beyond the projection period both an EBITDA multiple as well as perpetuity growth approach was used. Assuming a base case revenue forecast the EBITDA-multiple approach estimates an Enterprise Value (EV) of USD 11,099.7 million. Whereas the perpetuity growth method computes and EV of USD 5,845.8 million. To arrive at equity value the adjustments in Exhibit 29 were made. Giving an EBITDA multiple equity value of USD 13,298.2 million and a perpetuity growth equity value of USD 8,044.3 million. Implying a share price of USD 29.75 (211.00% premium) and USD 18.00 (92.10% premium) respectively. The fact that equity value exceeds enterprise value is driven by the large cash balance TechnipFMC carries on its books, reducing enterprise value as cash reduces the implied purchase price of the company.

Exhibit 30: TechnipFMC Enterprise to Equity Value Bridge (USD Mn)

Implied Enterprise Value:	\$ 6,418.3
% of Implied EV from Terminal Value:	
(+) Cash & Cash-Equivalents:	\$ 5,109.7
(+) Equity Investments:	\$ 300.4
(+) Other Non-Core Assets, Net:	\$ -
(+) Net Operating Losses:	\$ -
(-) Total Debt:	\$ (2,571.6)
(-) Preferred Stock:	\$ -
(-) Noncontrolling Interests:	\$ (69.9)
(-) Unfunded Pension Obligations:	\$ (386.8)
(-) Capital Leases:	\$ (956.8)
(-) Restructuring & Other Liabilities:	\$ -
Implied Equity Value:	7,843.2

Diluted Shares Outstanding:	447
Implied Share Price from DCF:	\$ 17.55
Premium / (Discount) to Current:	88.7%

Source: Analyst Estimates

Relative Valuation

■ Comparable Transactions

It was concluded that precedent transaction must be considered with caution and hence were not utilised as a major valuation driver for TechnipFMC. In recent history, with depressed oil prices, an ending expansionary cycle of the sector, and even more recent the Covid-19 pandemic, many deals were driven by company distress rather than a sound underlying value

⁵³ $(\text{Revenue}_t - \text{revenue}_{t-1}) * \text{Gross margin}_{t-1}$

⁵⁴ $(\text{Gross margin}_t - \text{Gross margin}_{t-1}) * \text{Revenue}_t$

proposition. Many of which were later absorbed at fire sale prices. Therefore, there is a large variety of driving factors behind transactions making a true apples-to-apples comparison challenging.

- Comparable Companies⁵⁵

By examining a universe of comparable companies in the oilfield services sector a valuation range was computed. We examined the min, 25th percentile, mean, 75th percentile, and maximum Enterprise Value valuations through revenue, EBITDA, and EBIT multiples over an LTM, 1-year forecast, 2-year forecast, and 3-year forecast time horizon. Subsequently, the same adjustments for the enterprise value – equity value bridge (Exhibit 30) were made. A base case valuation of USD 6,418.3 million (EV) and USD 7,843.2 million equity value utilising the mean 2021E EV/EVBITDA multiple of 9.8x was computed. Overall, when examining Exhibit 56 we determined TechnipFMC to currently be undervalued. This was driven by the share devaluation during the Covid-19 pandemic as well as EBITDA suppression due to aforementioned restructuring and impairment charges.

Overall, the universe of valuation methods implied a mean estimated share price of USD 28.33 which is utilised as our price target for TechnipFMC and indicates a total shareholder return of 196.00% as of 01/01/2021.

Exhibit 31: Comparable Companies Multiples

	EV/Sales	EV/EBITDA	EV/EBIT
	2021E	2021E	2021E
Aker Solutions	0.5x	8.8x	29.2x
Baker Hughes Company	1.2x	10.2x	21.3x
Cactus, Inc.	3.7x	12.8x	21.7x
China Oilfield Services Limited	2.1x	7.6x	16.9x
Drii-Quip, Inc.	2.4x	22.6x	n.m.
Fluor Corporation	0.1x	4.3x	5.6x
Forum Energy Technologies, Inc.	0.8x	n.m.	n.m.
Halliburton Company	2.0x	11.7x	19.6x
John Wood Group PLC	0.6x	6.7x	15.8x
National Oilwell Varco, Inc.	1.2x	22.6x	n.m.
Oceanenergy International, Inc.	0.9x	9.5x	n.m.
Oil States International, Inc.	0.7x	14.7x	n.m.
Petrofac Limited	0.4x	4.8x	8.2x
Saipem SpA	0.4x	4.3x	18.4x
Schlumberger Limited	2.1x	10.4x	22.5x
Transocean Ltd.	3.2x	9.0x	51.5x
Weatherford International plc	0.6x	6.7x	n.m.
The Weir Group PLC	3.0x	14.7x	18.7x
TechnipFMC	0.4x	4.5x	7.4x
Mean	1.4x	9.8x	20.8x
Median	1.0x	9.5x	19.1x

Source: Capital IQ

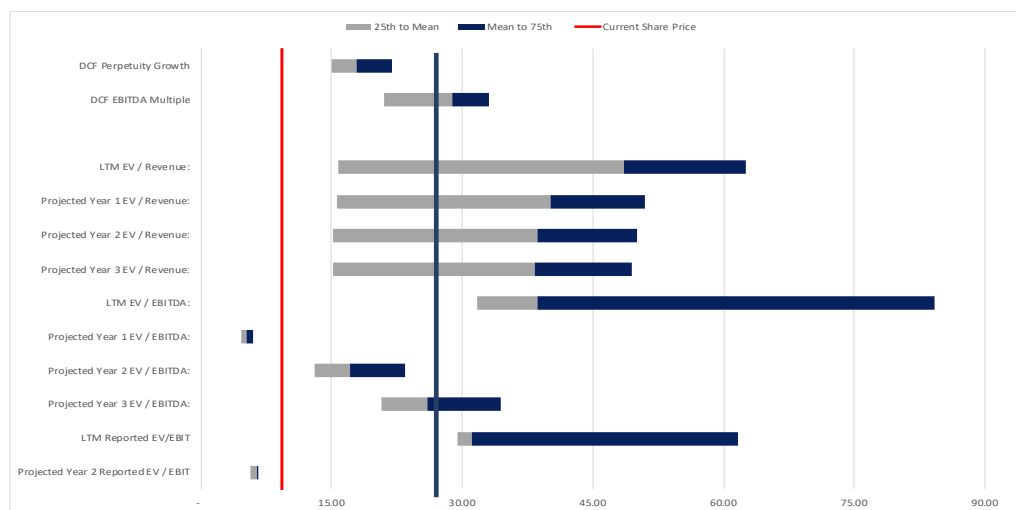


Exhibit 32: Valuation Football Field

Source: Analyst Estimates

Sensitivity Analysis

To examine the responses of certain input factors in our valuation a sensitivity analysis was undertaken. In our intrinsic valuation there are three drivers in the model that can have significant impact on the valuation outcomes. The WACC as it is utilised to discount the unlevered cash flows of the company, the EBITDA multiple for terminal value calculations (which in our model is the mean of competitors) and lastly the terminal growth rate (which is a function of the RONIC and reinvestment rate)

Firstly, exhibit 57 examines the impact of WACC and the EBITDA terminal multiple on the implied share price. The analysis returns a high share price of USD 36.46 at a 12.00x EV/EBITDA multiple and 7.00% WACC and a low range share price of USD 21.57 at an 8.00x EV/EBITDA multiple and 11.75% WACC. It also indicates that the valuation is more sensitive to

changes in the discount rate (WACC) as price movements occur more drastically when the WACC changes rather than the terminal EBITDA multiple.

		Weighted Average Cost of Capital (WACC):										
		7.00%	9.50%	9.75%	10.00%	10.25%	10.50%	10.75%	11.00%	11.25%	11.50%	11.75%
Terminal EV / EBITDA Multiple (Terminal Value Calculated Using the Multiples Method):	12.00 x	\$ 36.46	\$ 30.56	\$ 30.04	\$ 29.54	\$ 29.05	\$ 28.58	\$ 28.11	\$ 27.66	\$ 27.21	\$ 26.78	\$ 26.36
	11.50 x	35.52	29.81	29.32	28.83	28.36	27.90	27.45	27.01	26.59	26.17	25.76
	11.00 x	34.58	29.07	28.60	28.13	27.67	27.23	26.80	26.37	25.96	25.56	25.16
	10.50 x	33.63	28.33	27.87	27.42	26.98	26.56	26.14	25.73	25.33	24.94	24.56
	10.00 x	32.69	27.59	27.15	26.72	26.29	25.88	25.48	25.09	24.70	24.33	23.97
	9.50 x	31.75	26.85	26.43	26.01	25.61	25.21	24.82	24.45	24.08	23.72	23.37
	9.00 x	30.80	26.11	25.70	25.31	24.92	24.54	24.17	23.80	23.45	23.11	22.77
	8.50 x	29.86	25.37	24.98	24.60	24.23	23.86	23.51	23.16	22.82	22.49	22.17
	8.00 x	28.91	24.63	24.26	23.89	23.54	23.19	22.85	22.52	22.20	21.88	21.57

Exhibit 33: WACC and Terminal EBITDA Sensitivity

Source: Analyst Estimates

Secondly, the relationship between WACC and the terminal growth rate (g) was examined.

Giving a high range share price of USD 23.51 at a g of 3.00% and a WACC of 7.00%, compared to the low-end share price of USD 13.49 at a g of 1.40% and WACC of 11.75%. Here WACC also has greater impact on valuation output.

		Weighted Average Cost of Capital (WACC):										
		7.00%	9.50%	9.75%	10.00%	10.25%	10.50%	10.75%	11.00%	11.25%	11.50%	11.75%
Terminal FCF Growth Rate (Terminal Value Calculated Using the Gordon Growth Method):	3.00%	\$ 23.51	\$ 16.46	\$ 16.06	\$ 15.70	\$ 15.36	\$ 15.05	\$ 14.76	\$ 14.49	\$ 14.24	\$ 14.00	\$ 13.78
	2.80%	23.03	16.34	15.96	15.61	15.28	14.98	14.70	14.43	14.19	13.96	13.74
	2.60%	22.60	16.23	15.86	15.52	15.20	14.91	14.63	14.38	14.14	13.91	13.70
	2.40%	22.20	16.13	15.77	15.44	15.13	14.84	14.57	14.32	14.09	13.87	13.66
	2.20%	21.83	16.03	15.68	15.36	15.06	14.78	14.52	14.27	14.04	13.83	13.62
	2.00%	21.50	15.94	15.60	15.28	14.99	14.72	14.46	14.22	14.00	13.79	13.59
	1.80%	21.19	15.85	15.52	15.21	14.93	14.66	14.41	14.18	13.96	13.75	13.55
	1.60%	20.90	15.76	15.44	15.15	14.87	14.61	14.36	14.13	13.92	13.71	13.52
	1.40%	20.63	15.69	15.37	15.08	14.81	14.56	14.32	14.09	13.88	13.68	13.49

Exhibit 34: WACC and Terminal Perpetuity Growth Sensitivity Analysis

Source: Analyst Estimates