Due Diligence and Valuation Report

Arrowhead code:	05-02-01
Coverage initiated:	26-Oct-2021
This document:	26-Oct-2021
Fair value bracket: (per share)	USD 43.70 to USD 53.41
Share Price (25 Oct):	USD 30.50

Analyst

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Nasdaq

NCS MULTISTAGE

Company:	NCS Multistage Holdings, Inc
Ticker:	NASDAQ: NCSM
Headquarters:	Houston, TX
CEO:	Robert Nipper
Chairman:	Michael McShane
Website:	www.ncsmultistage.com

Market Data

52-Week Range:	USD 13.41 – USD 47.97
YTD Avg. Daily Volume:	7,535
Market Cap. on date:	USD 71.34 Million

Financial Forecast (in USD mn) (FY Ending – Dec)

	'21P	'22P	'23P	'24P	'25P
NI (mn)	(10.3)	(1.4)	8.1	11.8	18.2
EPS (USD)	(4.31)	(0.61)	3.37	4.93	7.59

Company Overview

NCS Multistage Holdings, Inc ("NCS" or "the Company'') is an oilfield services and equipment ("OFSE") company, which provides highly engineered products and associated services to support onshore oil and gas ("O&G") well completion and field development projects. The Company's products are specially designed for use in projects involving drilling with horizontal laterals in unconventional formations.

NCS Multistage aims to achieve technology-based market leadership. The Company focusses heavily on R&D and outsources most of its supply chain activities. It offers products and services in five categories: Fracturing Systems, Well Construction, Tracer Diagnostics, Repeat Precision, and Enhanced Oil Recovery ("EOR") Products.

Key Highlights

1. Fracturing Systems is the Company's flagship line of offerings. It comprises a wide range of products and support services for several stages of the fracturing process. The Company's fracturing solutions have been used in over 14,000 wells and have helped place 300,000 frac stages to date. The Company believes it is the worldwide leader in pinpoint stimulation technology
2. NCS maintains lean operations by outsourcing most of its supply chain activities to local and overseas partners, and only managing core business aspects like R&D, design, engineering, assembly / testing, and quality control internally. As a result, the Company's capex has averaged 3.5% of revenue and the Company has generated USD 40 million in free cash flows over the last five years (after distributions to RJ Machine, its 50:50 JV partner in Repeat Precision, which manufactures frac plugs, bridge plugs, and related products).
3. The US and Canada are NCS's main markets and make up almost 88% of its revenue. The Company's strategic priority is to increase the adoption of its products and services in these markets, as well as in selected other markets.
4. At December 31, 2020, NCS held 40 US and 43 international patents, which is up from 9 US and 14 international patents at the time of its IPO in April 2017. However, after large non-cash impairment charges taken in 2018 and 2020, the book value of the company's technology was reduced to USD 3.7 million as of June 30, 2021.

Key risks

We believe that NCS Multistage has an above average risk profile since it is highly correlated with the Oil & Gas industry, which faces some short- and long-term headwinds. The industry's most significant short-term risk is a potential fall in oilfield activity due to possible fresh Covid-induced lockdowns, . These lockdowns had a significant negative impact on the Company in 2020. In the long term, expectations of a stagnating oil and gas demand due to the growing adoption of renewable energy might be the Company's greatest challenge.

Valuation & Assumptions

Based on its due diligence and valuation estimates, Arrowhead believes that NCS's fair value lies in the USD 43.70 to USD 53.41 bracket, which has been calculated using a blended valuation method: with 34% weighting to a DCF method and 66% weighting to a Comparable Companies Valuation method. Our DCF model suggests a fair value of USD 54.38, while a relative valuation provides a fair value of USD 45.55.

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Investment Thesis

Arrowhead is initiating equity research coverage of NCS Multistage Holdings, Inc. ("NCS") with the following investment highlights:

Market leadership position across focused product lines

NCS has established leadership positions across a focused product line portfolio. The Company claims to be the worldwide leader in pinpoint stimulation and North America's top provider of tracer diagnostics services. The Company has established this leadership position in the tracer diagnostics space by leveraging its unique particulate tracer technology. The Company believes that its AirLock, which is the anchor product for its Well Construction product line and which has achieved over 13,000 runs with 99.99% success rate, was the first economical casing buoyancy system in the world. It also believes that Repeat Precision is among the top 5 providers of composite frac plugs in the US, thanks to its differentiated factory-assembled Purple Seal Express system.

Strong focus on IP development for technology-based market leadership

NCS aims to emerge as a top OFSE market player by developing and integrating innovative technologies into the market. At December 31, 2020, NCS held 40 US and 43 international patents, which is up from 9 US and 14 international patents at the time of its IPO in April 2017. However, after large non-cash impairment charges taken in 2018 and 2020, the book value of the company's technology was reduced to USD 3.7 million as of June 30, 2021. The Company continues to have a strong R&D focus and has been working on several potential patents. It also has several pending patent applications in the US and overseas across each of its existing product categories as well as in new product categories. The Company's R&D efforts could generate new technologies that could potentially culminate into new offerings as well as improve its existing offerings. Its R&D spending is expected to be the highest in Fracturing Systems, EOR Products, Tracer Diagnostics, and new product lines, with limited spending in Well Construction and Repeat Precision. In addition to investing in R&D, we also expect the Company to make technology-motivated acquisitions as it tries to expand its offerings and return to stable revenue and profit growth after a period of negative revenue and profit growth following the Covid outbreak.

"Capital-light" business model due to lean operations

NCS maintains lean operations by outsourcing most of its supply chain activities to local and overseas partners, and only managing core business aspects like R&D, design, engineering, assembly / testing, and quality control internally. NCS's supply chain (including Repeat Precision) includes low-cost manufacturing in Mexico. This provides the Company a sizeable cost advantage over its competitors and allows it to offer a comparatively better value proposition to customers even for less-differentiated products. Lean operations translate to a "capital-light" business model relative to many of NCS's peers because they allow the Company to operate with a smaller fixed asset base. The Company also requires limited investments in field equipment and customized vehicles. With smaller capex requirements, NCS is able to generate higher free cash flows than many competitors and uses them for scaling up as well as investing in R&D and inorganic growth opportunities. Since 2016, the Company's capex has averaged 3.5% of revenue and the Company has generated USD 40 million in free cash flows after distributions to the JV partner.

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Early indications of recovery after massive Covid-19 impact, but long-term uncertainty remains

NCS has been significantly affected by the Covid-19 outbreak because of its direct exposure to the Oil & Gas industry, which is among the worst affected by Covid. The Company's revenue almost halved to USD 106.9 million in 2020 from 205.5 million in 2019 because customers had to reduce or suspend oilfield operations. Economic activity, and therefore demand for oil and gas, has improved since the lows of mid-2020. Since that time E&P customers have slowly begun to increase activity and have benefitted from higher oil prices. NCS has begun to benefit from this as well and has transitioned from YoY revenue declines from Q2'20 through Q1'21 to YoY revenue improvements beginning in Q2'21. The Company's most recent guidance indicates full year revenue growth in 2021 of more than 10% as compared to 2020.

The continuation of this industry recovery remains subject to continued global economic growth and reduced Covid-related restrictions, including an increase in travel, which could be at risk if lockdown measures were to be imposed in response to future Covid outbreaks. This risk is somewhat mitigated due to increasing vaccination levels across the world.

In the long term, NCS's greatest challenge would be the intensifying shift away from oil and gas, and toward renewable energy. Although the Company is taking some R&D initiatives to play into this energy transition theme, we do not see its core focus drifting away from oilfield services.

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Company Presentation

NCS Multistage Holdings, Inc ("NCS" or "the Company'') is an oilfield services and equipment company, which provides highly engineered products and associated services to support onshore and offshore oil and gas well completion and field development projects. The Company's products are specially designed for use in projects involving drilling with horizontal laterals in unconventional formations. NCS is based in Houston, Texas, and primarily serves the North American market (the US and Canada), with some clients in selected overseas markets such as Argentina, China, the North Sea, and the Middle East. The Company mostly sells its products and services directly to exploration and production companies. However, it also distributes certain categories of products through other OFSE companies. Additionally, the Company has licensed the intellectual property ("IP") to one of its offerings (AirLock casing buoyancy system) to third parties and receives royalty income for this. NCS's common shares are listed on the NASDAQ under the ticker NCSM.

Fracturing Systems is the Company's flagship line of offerings. It comprises a wide range of products and support services for several stages of the fracturing process. The Company's solutions enable efficient pinpoint stimulation i.e. individual and precise stimulation of each entry point into the target formation to enhance the efficiency of the well. This process enables well developers to place stimulation treatment in a more controlled and repeatable manner than traditional completion technologies. NCS believes it is the global leader in pinpoint stimulation, with its products used in over 14,000 wells and over 300,000 frac stages.

The Company's other categories of products and services include Well Construction, Tracer Diagnostics, Repeat Precision, and Enhanced Oil Recovery Products. A brief description of NCS's key product and service categories is as follows:

1. **Fracturing Systems:** NCS's Fracturing Systems include casing-installed sliding sleeves and downhole frac isolation assemblies, which are typically used in cemented wellbores. The Company also provides associated installation and advisory services that help Exploration & Production ("E&P") companies optimize well completion designs and development strategies.

   NCS has numerous patents (product and method) for its Fracturing Systems offerings, which enable more efficient field operations. The Company is one of the industry leaders in fracturing using sleeves shifted by a downhole assembly using coiled tubing. It has significant experience and technical knowhow having installed more sleeves and completed more wells than many of its competitors. The Company constantly works on improving its sleeve designs and downhole frac isolation assembly to improve performance and reliability.

2. **Tracer Diagnostics:** NCS provides cost-effective tracer diagnostic services that utilize a variety of chemical and radioactive tracers. The Company's offering includes related analytics services that leverage its laboratory infrastructure and leading third-party software.

   NCS's tracer analytics services include analysis of oil, water, and gas samples using high-resolution chromatography-mass spectrometry, standard reporting for all tracer diagnostics projects using data visualization software, including visualization of chemical tracer recovery and well-to-well fluid communication using the FirstView application.

   The Company's primary differentiators for Tracer Diagnostics are its quick sample turnaround time, and the "particulate" form factor of its WST and OST tracers, which get embedded in the formation and provide longer-term results than traditional liquid tracers.

 See important disclosures on page 42 of this report.

3. **Well Construction:** NCS's Well Construction range includes casing buoyancy systems, toe sleeves, liner hanger systems etc. These products and services are designed to allow customers to install casing and production liners, facilitate cementing operations, and safely and efficiently initiating a flow path into the formation at the commencement of stimulation operations.

   The Company claims to be the first one in the market with a reliable, cost-effective AirLock casing buoyancy system that has over 12,000 runs and a 99.99% success rate. It has developed a strong IP position around this product and licenses it to competitors for deeper market penetration. Although most of the Company's other Well Construction products (such as toe sleeves) are more commoditized, it has achieved some product differentiation for its liner hanger product line.

4. **Repeat Precision:** Repeat Precision is a 50:50 JV between NCS Multistage and RJ Machine. It manufactures a line of high-performance Purple Seal composite frac plugs and bridge plugs, single-use disposable setting tools, and Purple Seal Express systems, which combine a composite plug and a disposable setting tool. Repeat Precision markets these products directly to E&P companies as well as to other OFSE companies who act as distributors.

   Composite plugs are more commoditized items with little differentiation across manufacturers. The Company tries to offer a better value proposition to its customers by delivering a high-quality product at a more competitive price point, thanks to its Mexico-based supply chain. The Company has also developed IPs around its Purple Seal Express product, which enhances safety at the well site.

5. **EOR Products:** This is an emerging market segment and is an extension of Fracturing Systems. NCS has a potential to develop this as an area of strength for it by drawing on its fracturing experience. The Company has a wide of range of offerings in this segment, including sleeves that can be repurposed from producers to injectors, cost-effective secondary completion systems installed when the well is converted to an injector to distribute the fluid, and higher end systems that the Company is developing, such as Qumulus, to provide precise control, measurement, and data through downhole sensors and cables.

Market Leadership Positions: NCS has established leadership positions across a focused product line portfolio. The Company claims to have the following market positions across different product lines:

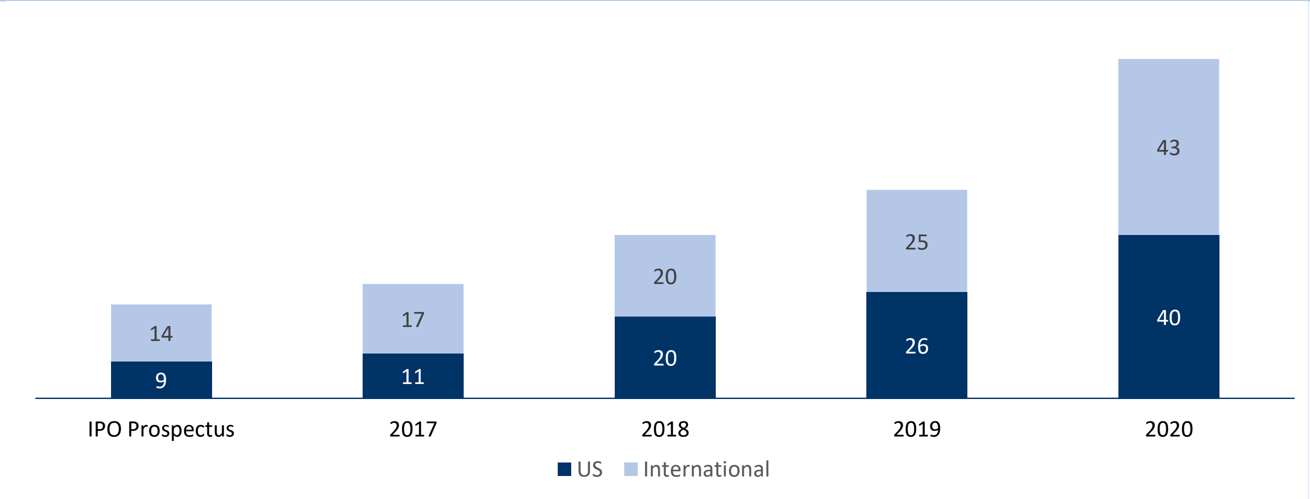
Product Line	Market Position
Fracturing Systems	NCS claims to be the worldwide leader in pinpoint stimulation.
Tracer Diagnostics	NCS is among the leading providers of tracer diagnostics services in North America, leveraging unique particulate tracer technology.
Well Construction	NCS claims that Anchor AirLock was the first economical casing buoyancy system in the world and it has achieved over 13,000 runs with 99.99% success rate.
Repeat Precision	NCS claims that Repeat Precision is among the top 5 providers of composite frac plugs in the US; differentiated factory-assembled Purple Seal Express system.

Intellectual Property: NCS aims to continue developing and integrating innovative technologies into the market. At December 31, 2020, NCS held 40 US and 43 international patents, which is up from 9 US and 14 international patents at the time of its IPO in April 2017. However, after large non-cash impairment charges taken in 2018 and 2020, the book value of the company's technology was reduced to USD 3.7 million as of June 30, 2021. NCS believes that its patent impairments are now complete and there will be no significant impairments over the next few years.

The Company continues to have a strong R&D focus and has been working on several potential patents. It also has several pending patent applications in the US and overseas across each of its existing product categories as well as in new product categories. The Company's R&D efforts could generate new technologies that could potentially culminate into new offerings as well as improve its existing offerings. The Company anticipates an annual R&D expenditure of USD 4 million to USD 5 million (including engineering costs) in 2021 and 2022, which is similar to its R&D expenditure in recent years. The Company will have room to increase this expenditure once its revenue starts normalising (late-2023 / early-2024 in our estimation). R&D spending is expected to be the highest in Fracturing Systems, EOR Products, Tracer Diagnostics, and new product lines, with limited spending in Well Construction and Repeat Precision.

In addition to investing on R&D, we also expect the Company to make technology-motivated acquisitions as it tries to expand its offerings and return to stable revenue and profit growth after a period of negative revenue and profit growth following the Covid outbreak. The Company is likely to face long-term headwinds with its client industry (Shale Oil and Gas) expected to enter a long-term stagnation phase in the next few years due to the growing adoption of renewable energy alternatives.

Year-End Awarded Patents – US and International



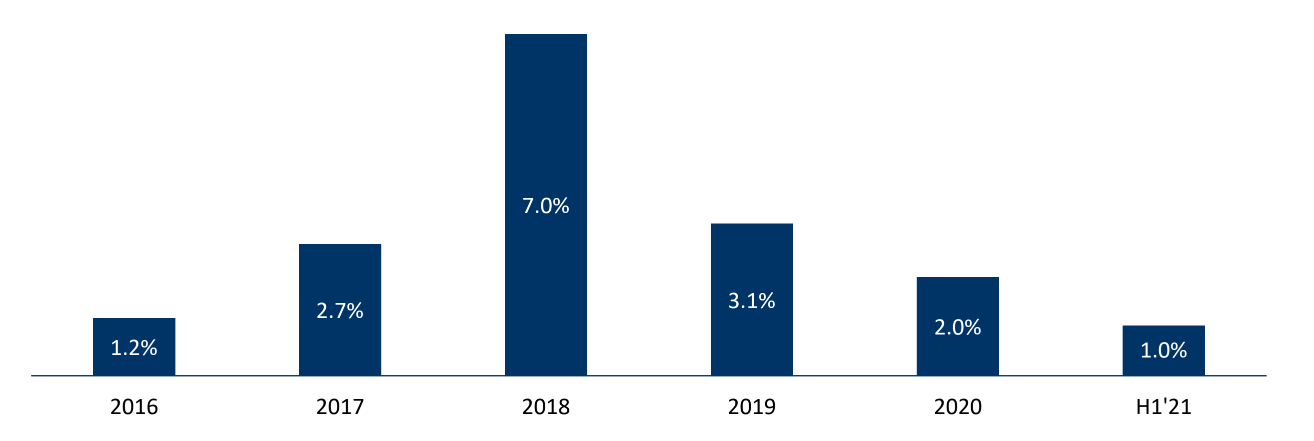
Lean Operations: NCS maintains a lean operating model, where it focusses on core areas such as R&D, design, engineering, assembly / testing, and quality control. It outsources manufacturing. The Company gets its product components manufactured by third-party machine shops, most of which are located within Texas. These machine shops ship these components to the Company's facility in Houston, where they are quality tested, assembled, and performance tested before being shipped to customers. In some cases, components are quality tested at the vendor's location under NCS's supervision.

NCS also sources ancillary products for its Well Construction segment, such as float equipment and centralizers, from third-party vendors and bills them as a part of its full Well Construction package (including NCS's proprietary liner hanger, AirLock, and toe sleeves).

Repeat Precision's supply chain is almost entirely located in Mexico, which offers it a cost advantage over competitors and allows it to offer greater value to customers despite the largely undifferentiated nature of its products. Repeat Precision also purchases power charges from an external vendor for use in PSE systems with the Company's plug and setting tool.

"Capital-Light" Business Model: NCS is able to maintain a "capital-light" business model compared to many of its OFSE peers due to its lean operating structure. Since 2016, the Company's capex has averaged 3.5% of revenue and the Company has generated USD 40 million in free cash flows after distributions to the JV partner. The Company operates with limited fixed assets because most of its production and supply chain is handled by third party partners, precluding the need for sizeable investments in property and heavy manufacturing equipment such as CNC machines and lathes. The Company also has limited investments in field equipment and customized vehicles, although it maintains an inventory of service tools and tracer chemicals. NCS also leases some of the equipment required for fracturing, sample collection for tracer diagnostics etc. and bills it to the customer. This equipment is only used by NCS personnel as a part of the project and is not leased separately. This "capital light" model minimises NCS's capex requirements and generates higher free cash flows to use for scaling up as well as investing in R&D and inorganic growth opportunities.

Annual Gross Capex (as %ge of Revenue)



Company Milestones

Year	Event
2006	• Founded in Alberta, Canada, as NCS Oilfield Services • Developed a line of Coiled-tubing fracturing tools for the coalbed methane gas market
2008	• Introduced the Mongoose Frac system to compete with plug-and-perforate and ball-drop-sliding-sleeve technology • NCS Energy Services was incorporated in the US, with its headquarters in Houston, Texas
2010	• Introduced GRIPSHIFT sliding sleeve, which works with the frac-isolation assembly to streamline multistage completions
2014	• Introduced MULTICYCLE frac Sleeve, which can be opened and closed repeatedly, giving operators unprecedented flexibility • Changed name to NCS Multistage in both US and Canada
2017	• Entered a joint venture (“JV”) with RJ Machine and launched Repeat Precision to provide composite frac plugs and complementary setting tools • Launched an IPO and became a publicly trading Company on NASDAQ • Added Tracer Diagnostics to its product portfolio by acquiring Spectrum Tracer Services LLC
2018	• Repeat Precision launched the Purple Seal Express, which combines a disposable setting tool with a Purple Seal plug to help operators maximize safety and efficiency • Successfully deployed and stimulated its first MULTICYCLE sleeve system for a major operator in the North Sea
2019	• Awarded a 7-year radioactive tracer contract in the Middle East • Successfully executed first AirLock project in Saudi Arabia
2020	• Launched Innovus product platform. • Extended Tracer Diagnostics work in Latin America
2021	• Introduced AirLock-G system • Started expansion of EOR-focus

 See important disclosures on page 42 of this report.

Corporate Strategy and Future Outlook

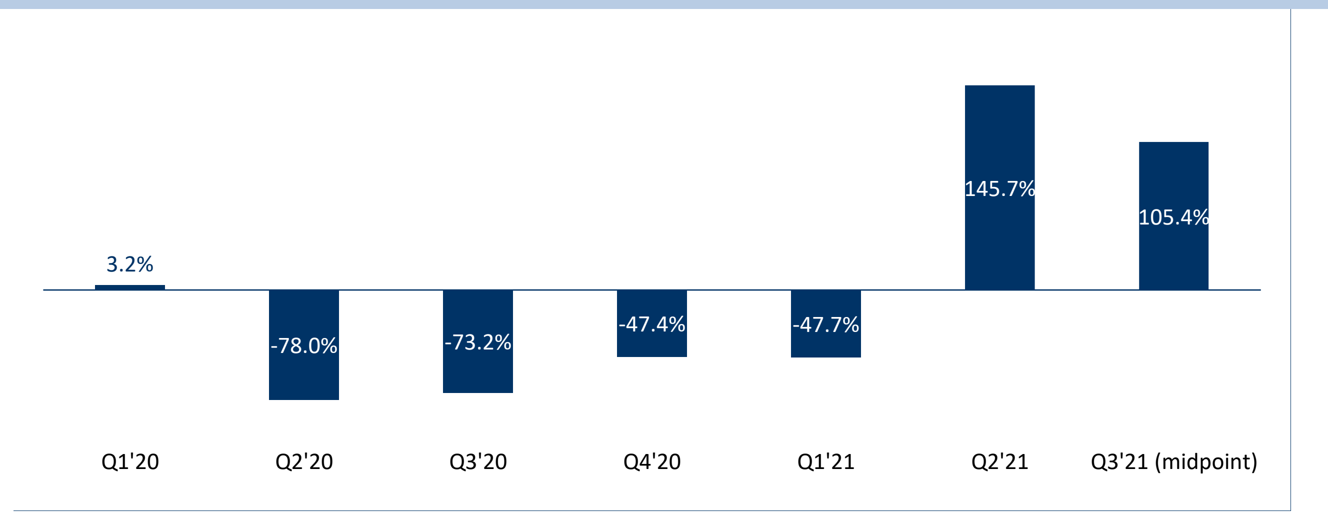
NCS's market entry in 2008 coincided with the onset of US Shale Revolution. The Company made the most of this over the next few years by establishing a firm presence in the US and Canada – two of the world's ten largest shale oil and gas producers – through a combination of technology and product innovation. NCS has also pursued growth opportunities outside North America and gained a foothold in key O&G markets such as the North Sea, China, and the Middle East.

Despite this impressive early run, NCS's performance has been underwhelming since its listing in 2017, largely owing to business cycles and a potential long-term slowdown in its client industry and the adverse economic consequences of the Covid outbreak. While the O&G industry has started recovering from the effects of Covid, another possible Covid outbreak in the near future is a significant short- and medium-term strategic concern for NCS. The stagnating growth of the O&G industry due to the accelerating global shift towards renewable energy is a much more significant long-term strategic concern for the Company.

Covid Still a Serious Short-Term Concern: Although the Covid-19 outbreak adversely affected most industries, its impact on the broader Energy industry, and specifically shale O&G producers, was among the most severe in 2020 since shale energy producers operate on smaller margins than conventional O&G companies. This Covid impact also rubbed off on OFSE companies and other service providers to shale energy companies. NCS's revenues almost halved from USD 205.5 million in 2019 to USD 106.9 in 2020, due to clients suspending drilling activity, going out of business, or merging with competitors. Other forms of Covid's impact on the Company's business included overseas travel-related uncertainties due to quarantine rules and changing requirements for US and Canadian personnel and extended supply chains and higher costs of third-party services.

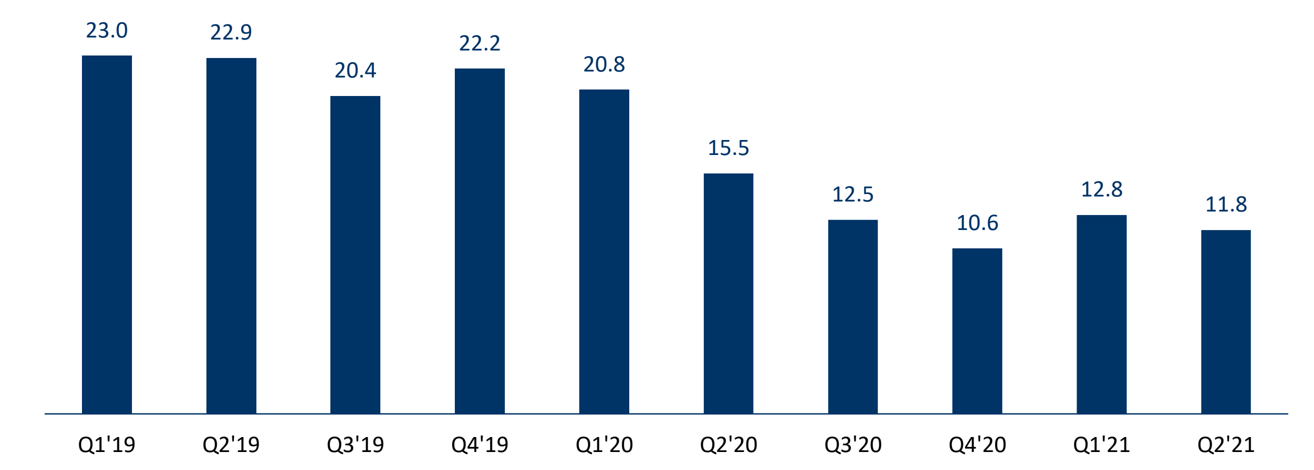
Economic activity, and therefore demand for oil and gas, has improved since the lows of mid-2020. Since that time E&P customers have slowly begun to increase activity and have benefitted from higher oil prices. NCS has begun to benefit from this as well, and has transitioned from YoY revenue declines from Q2'20 through Q1'21 to YoY revenue improvements beginning in Q2'21, as demonstrated in the chart below.

YoY Change in Quarterly Revenue



Although there are early signs of recovery and optimism for the next few quarters in NCS's H1'21 earnings and most recent full year 2021 guidance, the Company remains exposed to the risk of another potential slowdown in upstream O&G activity due to another wave of Covid, despite the risk of extended lockdowns getting somewhat mitigated by increasing vaccination levels across the world. NCS's Covid response included a review and rationalization of its operating cost structure, which resulted in USD 10 million (or 45%) average quarterly reduction in its Selling, General, and Administrative ("S,G&A") expenses (see chart below). The Company believes that a lot of this cost optimization is structural and could help it operate on a leaner cost structure in the long term as well be better prepared for periods of economic uncertainty in the future.

Quarterly S,G&A Expenses (in USD Millions)



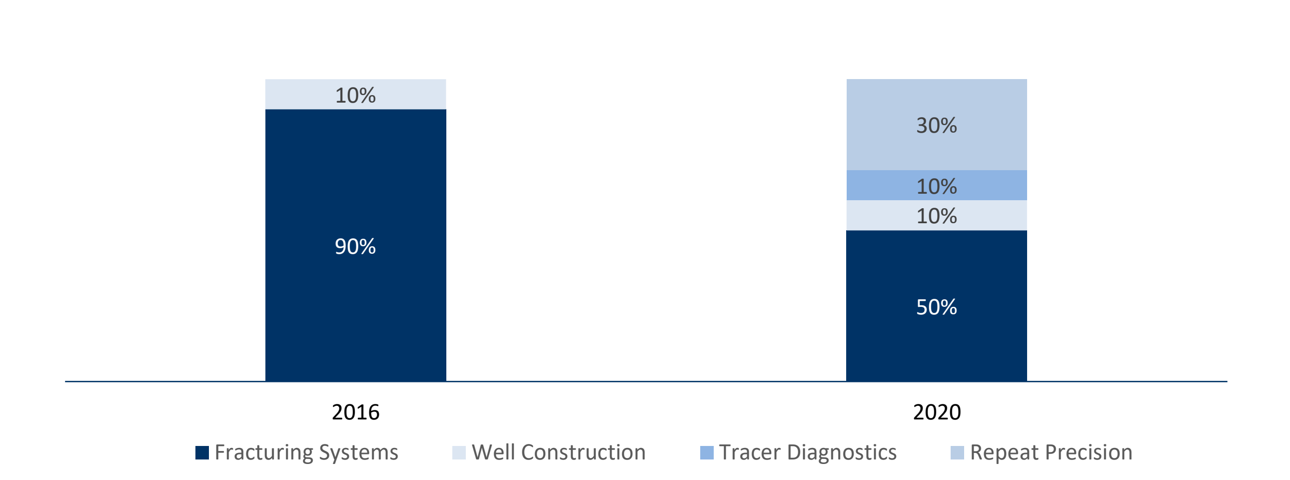
The Company's Covid response also included monitoring relevant authorities in every country it operates in (such as Centers for Disease Control and Prevention in the US) and the creation of an internal cross-functional Covid team that regularly updates its employees. The Company is also informing customers of upcoming price increases and trying to pass through price increases on a gross basis. It hopes to achieve net price increases over time.

Increasing Product and Service Adoption in Key Markets: The US and Canada are NCS's main markets, as they make up almost 88% of the Company's revenue. The Company's strategic priority is to increase the adoption of its products and services in these markets, as well as in selected other markets. Both these markets suffered heavily in 2020 due to the Covid outbreak but appear to be gradually recovering – Canada recovering faster than the US. A recovery in these markets is opportune for NCS because the demand for OFSE products in these markets is likely to grow as O&G activity increases. This recovery could lay a strong foundation for NCS to accelerate the adoption of its products and services.

Traditionally, most of the Company's sales in the US and Canada have been in the form of standalone product / service orders. However, the Company has substantially diversified its range of products and services as well as expanded its addressable market since 2016 (see chart below) through a combination of organic R&D and inorganic initiatives, such as the Repeat Precision JV the acquisition of Spectrum Tracer Services in 2017. These initiatives allow the Company to increase the adoption of its offerings by pursuing more package sales involving several products and services. The Company leverages its AirLock capability to promote such package sales in the US with Well Construction equipment as the centerpiece.

While we expect the Company to continue focusing on such packaged sales with Well Construction at their core, we also expect the Company to sharpen its focus on Tracer Diagnostics as well as composite plugs and other products serving the plug & perf market in the US.

Revenue Contribution by Product Line



NCS has a higher market share in Fracturing Systems in Canada and generally quotes a full NCS Wellbore, with Fracturing Systems and Well Construction products, as well tracers in some cases. The Company has also started marketing Repeat Precision frac plugs in Canada and received encouraging initial response from the market. Going forward, we expect the Company to also focus on expanding its Well Construction market share in Canada and developing its EOR business in Canada. Aligning its marketing efforts towards educating consumers about its novel EOR offerings will be an important contributor to the Company's long-term success in Canada.

We believe that continuing to focus on package sales (instead of one-off product or service sales) and selling directly to end consumers will be critical components of NCS's market penetration efforts. The Company's operations in the Middle East and Asia are likely to remain agent-driven in the short and medium term and the Company is unlikely to set up overseas locations of its own in addition to the ones it already has in Norway and Argentina. Specific overseas opportunities that the Company is likely to immediately target through its agents (who are responsible for registration and distribution) include sale of Fracturing Systems for offshore projects in Asia and deepening its presence for all product and service lines across various countries in the Middle East.

Strong Financial Position to Support Growth Initiatives: A sound cash position and flexibility to raise debt and equity capital have been key attributes of NCS's evolution. Efficient financial planning and management will continue to be vital to the Company's growth going forward since the Company plans to actively invest in R&D as well as selectively pursue inorganic growth opportunities, such as complementary acquisitions and joint ventures. These initiatives could help the Company build a strong pipeline of innovative offerings, which will be critical for NCS to diversify its offerings and win more package sales contracts.

 See important disclosures on page 42 of this report.

Plateauing O&G Demand a Major Long-Term Concern: In the long term, NCS would need to redesign its strategy to address the broad-based shift away from fossil fuels due to the growing adoption of renewable sources of energy, and the resulting stagnation of the OFSE industry. As exploration and development projects slow down, a fierce competition for market share might ensue among OFSE companies, where large players would have a clear advantage over smaller competitors like NCS, given the abundance of their resources, their well-developed marketing channels, and better capital access. This competition is likely to culminate in an industry consolidation where OFSE companies start acquiring their competitors. NCS might also need to invest in strategic acquisitions and in aggressive marketing to generate meaningful growth and market share expansion. However, with the overall market stagnating, this growth could come at a high incremental cost.

NCS has taken some early initiatives on both these fronts. In addition to developing adjacent products and services focused on onshore and offshore well completions, the Company is working on new products and repurposing existing products and services that play into the energy transition theme. Key segments include geothermal, carbon dioxide floods, and mining.

NCS also maintains an active M&A pipeline and regularly evaluates strategic inorganic opportunities. The Company primarily focuses on small to mid-sized transactions that it can readily integrate into its operations and for which it sees a clear path to realize meaningful synergies. The Company’s M&A focus over the short and medium term is likely to be very similar to its product development focus, which is near-adjacent products and services that can leverage its existing competencies and market presence. Some of the key internal attributes it is likely to consider while evaluating synergistic acquisition opportunities might include its strong downhole tool engineering capabilities, well-established overseas supply chain, and market presence in Canada, Argentina, the North Sea, the Middle East, and China.

News

Repeat Precision Receives Upfront Consideration in Connection with Diamondback Industries' Bankruptcy

December 10, 2020
The agreements entered into by Repeat Precision, LLC ("Repeat Precision"), a controlled joint venture subsidiary of NCS Multistage Holdings, Inc. (the "Company"), in connection with the settlement of Repeat Precision's claims in the Diamondback Industries, Inc. Chapter 11 bankruptcy became effective today and Repeat Precision received the upfront consideration previously disclosed in the Company's Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2020.

NCS Multistage Holdings, Inc. Announces Anticipated Completion of Reverse Stock Split

November 30, 2020
NCS Multistage Holdings, Inc. announced that it has filed a Certificate of Amendment to the Second Amended and Restated Certificate of Incorporation to effect, on December 1, 2020, a 1-for-20 reverse stock split of its shares of common stock, as previously disclosed in its filings with the Securities and Exchange Commission. The Company's common stock will begin trading on a split-adjusted basis when the market opens on December 1, 2020. The number of authorized shares of NCS common stock has also been reduced from 225,000,000 to 11,250,000.

NCS Multistage Announces Settlement and License Agreement Resolving AirLock Casing Buoyancy System Patent Infringement Lawsuit Brought Against Innovex Downhole Solutions

July 06, 2020
NCS Multistage Holdings, Inc. said today that it has settled a patent infringement suit that was pending in the Western District of Texas, Waco Division (C.A. No. 6:20-cv-280). NCS had sued Innovex Downhole Solutions, Inc. ("Innovex") for infringement of US. Patent No. 10,465,445 based on Innovex's casing floatation sub. NCS and Innovex have settled that case by entering into a patent license agreement.

NCS Multistage Holdings, Inc. Announces First Quarter 2020 Operational Update

April 01, 2020
Due to disruptions and demand loss caused by Covid pandemic, the Company is withdrawing its guidance related to the first quarter and full year 2020 provided in its earnings call on March 3, 2020. In response to these market circumstances, the Company has initiated further cost reductions which include a reduction in force of over 80 employees (approximately 20% of its US and Canadian workforce), furloughs for certain operationally focused employees and engineers, and salary reductions for substantially all remaining US and Canadian employees not participating in furloughs, including reductions in base salaries for its executive officers averaging approximately 20%. The Company expects these actions to result in an annualized cost savings of over USD 12 million, approximately 75% of which is related to its S,G&A expense.

Listing Information

MCS Multistage is headquartered in Huston, Texas, US, and is listed on the NASDAQ – (NASDAQ:NCSM)

Contacts

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Email	ir@ncsmultistage.com

Shareholding as on 30 June 2021

Equity Holder	No. of ordinary shares held	% Shareholding
Advent International Corp	1,478,426	62.1%
Tocuqueville Asset Management LP	132,449	5.6%
ArrowMark Colorado holdings LLC	100,105	4.2%
MSGGX – Meridian Small Cap Growth Fund Legacy Class	67,890	2.9%
American Century Companies	65,077	2.7%
ASVIX – Small Cap Value Fund Investor Class	55,000	2.3%
Management and Directors	240,884	10.1%
Others	240,522	10.1%
Total	**2,380,353**	**100%**

Source: Fintel

Management and Governance

Robert Nipper
Chief Executive Officer, Director

- Co-founded NCS in 2006 and has over 30 years of industry experience
- Held the current CEO position since November 2016
- He also held the CEO position at NCS in the last term from December 2012 to April 2016 and served as the Executive Chairman from April 2016 to February 2017
- Invented several patented technologies relating to downhole oil and natural gas and geothermal service equipment
- Prior to founding NCS he had spent 18 years with Tri-State Oil Tools Inc, and Baker Hughes, including various operations and sales management positions

Tim Willems
Chief Operations Officer

- Serving as the COO at NCS since May 2015
- Has previously served as the President of US/International Operations from January 2012 to May 2015 and Senior Vice President from April 2010 to January 2012
- Holds more than 30 years of experience in the oil and natural gas industry, sixteen of those years were spent in international markets, specializing in wellbore construction, completion, and remediation
- Prior to joining NCS has held diverse positions, including applications engineering, operations, sales, and marketing

Ryan Hummer
Chief Financial Officer

- Serving as the CFO at NCS since November 2016 and Treasurer since March 2020
- Previously served as the Executive Vice President, Corporate Development at NCS from July 2014 to August 2015
- Prior to joining NCS he has served as Director, Investment Banking at Lazard Freres & Co. from January 2011 to April 2014
- Holds a B.S in Economics from the Wharton School of the University of Pennsylvania

James King
Chief Strategy Officer

- Serving as the CSO at NCS since February 2019
- Previously served as the Chief Integration Officer at NCS from August 2017 to February 2019
- Prior to joining NCS has served various positions at Baker Hughes with the latest positions as Director of Business Transformation and Market Analysis and Commercialization
- Holds over 28 years of experience in the oil and natural gas industry, three of those years were spent in international arena

Products And Services

NCS offers products and services across 5 segments – Fracturing Systems, Tracer Diagnostics, Well Construction, Repeat Precision, and EOR Products. Fracturing Systems is NCS's primary offering category, and the Company seeks to bundle its Well Construction and other products with Fracturing Systems. Most of the Company's products are built around a standard design with slight customizations for each customer's requirements.

NCS's AirLock systems also need to be customized to work at a customer-specified pressure range. The Company stocks the systems components, which are produced by outsourced manufacturers according to the Company's specifications and assembles the system to the customers' specifications upon receiving an order.

The Company also offers many products that are more standardized, such as frac plugs, setting tools, and tracers utilized in its tracer diagnostics service line. These products are kept in stock and generally sold off the shelf without any customisation.

Fracturing Systems

Fracturing Systems include a range of products and services that enable efficient pinpoint stimulations and re-stimulation of shale oil wells. Pinpoint stimulation is the process of individually stimulating each entry point into a formation targeted by the oil or natural gas well. The fracturing products are comprised of casing-installed sliding sleeves and downhole frac isolation assemblies, which are deployed using coiled tubing. The Company also advises customers on optimizing completion designs and operates the downhole frac isolation assemblies.

Frac Sleeve

a. ***Casing-installed sliding sleeves:*** Casing-installed sliding sleeves are sold to E&P companies and cemented in place in a well's casing. The Company produces sliding sleeves that can only be opened once (single cycle sleeves) as well as sliding sleeves that can be opened and closed multiple times throughout the production phase (multicycle sleeves). The Company sells its single cycle sleeves under brands Innovus, BPAK, and Proppex.

b. ***Downhole Frac Isolation Assembly:*** The Company's proprietary downhole frac isolation assembly comprises several subcomponents which work together during well completions. The system is equipped with gauges that record downhole pressure and temperature data, with downhole pressure available in real time through coiled tubing. NCS typically does not sell the assemblies and utilizes them in service to its own customers. The Company's personnel operate the assemblies during completion operations in coordination with other on-site service providers.

c. ***Accelus Sleeves****:* Accelus Ball-Shifted Sleeves can be cemented in place or utilized in open-hole wells. These sleeves are activated by pumping a ball from the surface that lands on seats in the sleeves, providing pinpoint stimulation. These sleeves can also be used together with the coiled-tubing deployed technology in a hybrid application to increase the number of stages that can be run in extended-reach applications with the Accelus sleeves installed at the toe of such wells.

d. ***Enhanced Recovery Solutions:*** Enhanced recovery solutions are used in the management of fluid injection and are also called inflow / injection control devices ("ICD"). The Company currently offers these solutions under the 'Terrus' brand and is planning to launch another brand named 'Qumulus' by the end of 2021. It claims that 'Qumulus' will be the most advanced and cost-effective enhanced recovery solution on the market for onshore applications.

e. ***SpotFrac System***: The SpotFrac system provides a means to straddle and mechanically isolate producing zones for targeted refracturing applications. The system includes a sand jet perforating assembly which enables additional stages to be added and can perforate, isolate, and stimulate multiple stages in a single trip.

Tracer Diagnostics

Tracer Diagnostics help E&P companies evaluate well production, optimize field development strategies, and assess completion performance by injecting tracers during fracturing and subsequently diagnosing chemical and radioactive presence in wells. The Company conducts diagnostics using fracture fluid identifier tracers, water-soluble tracers, oil-soluble tracers, and natural gas tracers which enable cost-effective downhole diagnostics.

NCS's tracer analytics services include analysis of oil, water, and gas samples using high-resolution chromatography-mass spectrometry, standard reporting for all Tracer Diagnostics projects using data visualisation software, including visualization of chemical tracer recovery and well-to-well fluid communication using the FirstView application. The Company generally provides Tracer Diagnostics services on a standalone basis. They are occasionally combined with product sales as a package offering.

Well Construction

Well Construction products and services are designed to allow customers to install casing and production liners, facilitate cementing operations, and initiate a flow path into the formation at the commencement of stimulation operations safely and efficiently. The Company offers the following products in the Well Construction segment:

AirLock Casing Bouyancy System

a. ***AirLock Casing Buoyancy System:*** AirLock casing buoyancy system facilitates landing casing strings in horizontal wells without altering a customer's preferred casing and cementing operations. The AirLock system, which is installed with a well's casing, allows the vertical casing section to be filed with fluid, while the lateral section remains air-filled and buoyant. The enhanced buoyancy significantly reduces sliding friction, while the enhanced weight of the vertical section provides the force needed to push the casing to the toe of the well, ensuring the casing reaches the desired depth and reducing casing running time and cost. The AirLock casing buoyancy system is offered with ceramic or glass (AirLock-G) barriers.

b. ***Liner Hanger Systems:*** Liner hangers are used to distribute the loads and weight of the liner to the supporting casing. The Company's proprietary liner hanger systems are specifically designed to perform in complex horizontal wells and are fully compatible with the Company's Fracturing System products. NCS's liner hanger systems include Vectraset and Vecturon.

c. ***Toe Initiation Sleeves:*** Toe initiation sleeves are designed to provide initial formation access for multistage completions after shifting open the toe initiation sleeve. The customer can perform multiple tests and execute the first fracturing stage for the well. The Company offers two ranges of toe initiation sleeves, 'GoPort' and 'Innovus'.

Repeat Precision

Repeat Precision is a 50:50 JV between NCS Multistage and RJ Machine. The JV markets its high-performance line of composite plugs, single-use disposable setting tools, and Purple Seal Express system. The JV sells these products directly to E&P customers as well as distributes them through OFSE companies. NCS also utilizes Repeat Precision for manufacturing sleeve components, performing machining work, and supplying plugs to its Canadian entity for resale to E&P customers. This allows NCS to optimize costs and direct more business towards its related entity. Repeat Precision's product categories includes composite frac plugs, bridge plugs, RP single-use disposable setting tools, and Purple Seal Express system. Repeat Precision's supply chain is predominantly Mexico-based, which offers the Company among the lowest manufacturing costs in the industry.

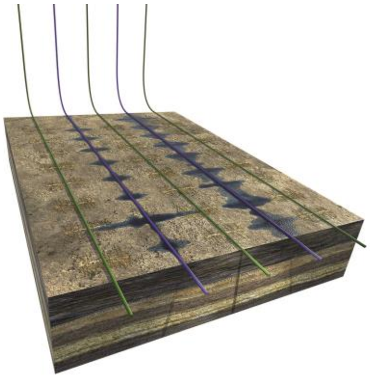
Purple Seal All-Composite Frac Plug

EOR Products

This is an emerging market segment that is an extension of Fracturing Systems. NCS has a potential to develop this as an area of strength for it by drawing on its fracturing experience. The Company has a wide range of offerings in this segment, including sleeves that can be repurposed from producers to injectors, cost-effective secondary completion systems installed when the well is converted to an injector to distribute the fluid, and premium systems, such as Qumulus, that the Company is developing to provide precise control, measurement, and data through downhole sensors and cables.

Qumulus: The Company's flagship under-development EOR system Qumulus, which is still in field trial status, is a series of sleeves (valves) installed in a well, separated by packers, to isolate and secure sections of the well for better control over EOR applications. Each valve has built-in pressure and temperature sensors and the entire system is wired with a connection to the surface.

The system's interface allows individual control (open, close, or partially open) and data monitoring from each valve. The system is configured to support injection (primarily of water) through the systems and, in addition to oil, can be used for polymer or gas flood purposes in an EOR application.



Qumulus

The Company plans to make significant R&D expenditure in EOR products over the coming periods. This includes lower-ticket applications as well as complex, big-ticket systems, such as its flagship Qumulus system. The Company has prioritized its lower-ticket applications in the near term over Qumulus and other big-ticket offerings because of lower customer inclination to make significant funding commitments and run trials during the Covid period. However, NCS is optimistic about Qumulus' prospects once the Covid impact withers away.

The Company has sold a small quantity of Qumulus sleeves and valves for trials and is investigating opportunities to re-prioritize development with additional customer commitments or funding. The Company plans to develop future versions of the system such that it can act as both an injector as well as a producer. This will enable its use in “huff-and-puff” miscible gas EOR projects in mature wells, many of which are under trial by NCS’s customers in the Eagle Ford Shale.

Industry Analysis

OFSE companies manufacture equipment and provide services for the exploration, construction, and operation of oil and gas wells. These products and services are either consumed directly by O&G companies or by engineering, procurement, and construction ("EPC") contractors for O&G assets. The global OFSE industry had a size of USD 267.8 billion in 2019 and is projected to reach USD 346.5 billion by 2028, translating to a CAGR of 6.6% during this period. [i]

Industry Segments: The US is the largest geographical segment of the OFSE industry, with a size of USD 101.9 billion (close to 38% the global industry) in 2019. Asia Pacific and Europe are the second- and third-largest geographical segments of the industry, respectively. Both these geographical segments, especially Asia Pacific, are expected to grow swiftly in the coming years after a pandemic-related slowdown.

The Asia Pacific region's increasing energy demand coupled with discoveries of oil and gas reserves in South China sea is expected to boost the region's production of oil and gas and create opportunities for Oilfield Services businesses. Despite this rapid growth, the US is expected to continue being the largest geography in revenue terms for the OFSE industry.

The Middle East and Africa region also holds substantial underexplored potential for E&P work, which could create opportunities for the OFSE industry. OPEC, which enjoys significant influence over the oil and gas producing countries in this region, decided to boost oil production by 400,000 barrels a day each month through the end of September 2022, creating an opportunity for OFSE companies to serve new E&P projects that could commence soon to meet these increased requirements.

Based on application, the OFSE industry is segmented into Offshore and Onshore companies. Offshore OFSE companies provide solutions to E&P fields located on the sea floor. The offshore segment is projected to be the fastest growing OFSE industry segment between 2019 to 2027, owing to growing investment in subsea oil and gas assets.[i] Several oil field service providers are investing heavily in offshore assets to increase their well productivity, reservoir performance and overall life cycle of the well.

The Onshore segment includes companies that serve E&P fields that are located on land. The Onshore segment saw massive growth with the shale oil boom that started in the late 2000s. Although new shale projects are likely to continue creating demand for onshore OFSE products and services, a growing percentage of demand going forward is likely to be related to maintenance of oil wells and plugging of closed oil wells.

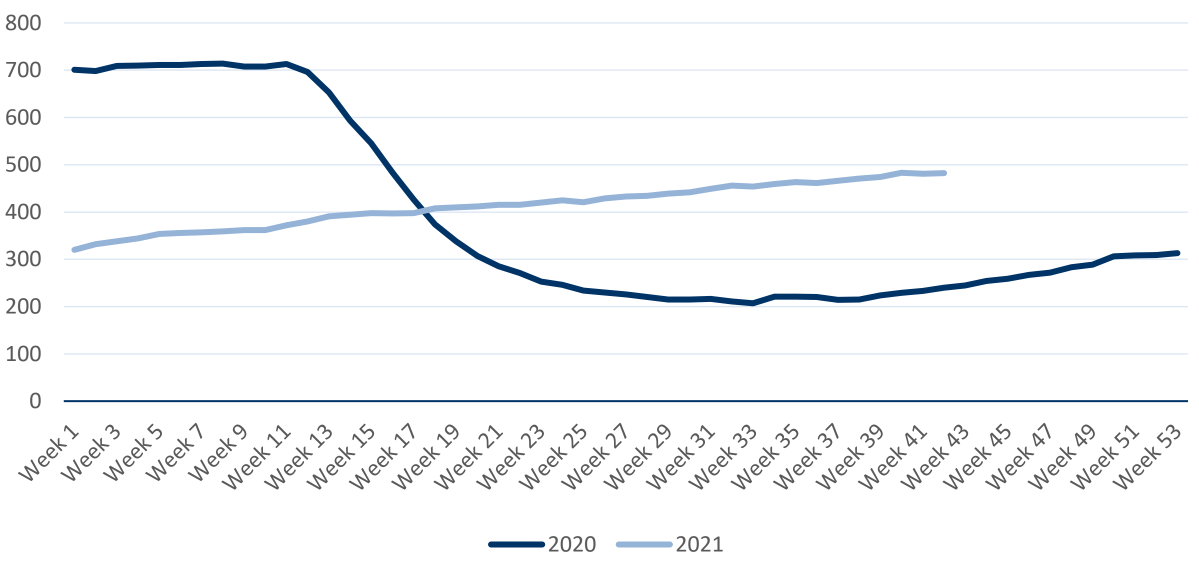
Industry Concentration: The OFSE industry is highly consolidated because large players have well-established distribution networks, bigger R&D budgets, and greater capacity to absorb wild swings in oil prices. Shale oil and gas producers and OFSE companies serving them are the worst affected by sharp oil price swings because shale producers have lower margins than other oil and gas producers.

As of 2019, Baker Hughes, Schlumberger Limited, Halliburton Company, and Weatherford, together held an overwhelmingly large market share. The rest of the market was highly fragmented among small players and frequent new entrants.

Covid Impact: The Covid outbreak has impacted the O&G industry severely, which has in turn adversely affected the OFSE industry. The pandemic disrupted global commodity markets, including oil and gas, because economic activity slowed and consumption levels fell. This drop in demand hampered the operations of O&G companies worldwide and many of them had to permanently shut down some of their in-production facilities and indefinitely suspend exploration and development projects. An industry consolidation also ensued as many companies acquired or merged with their competitors.

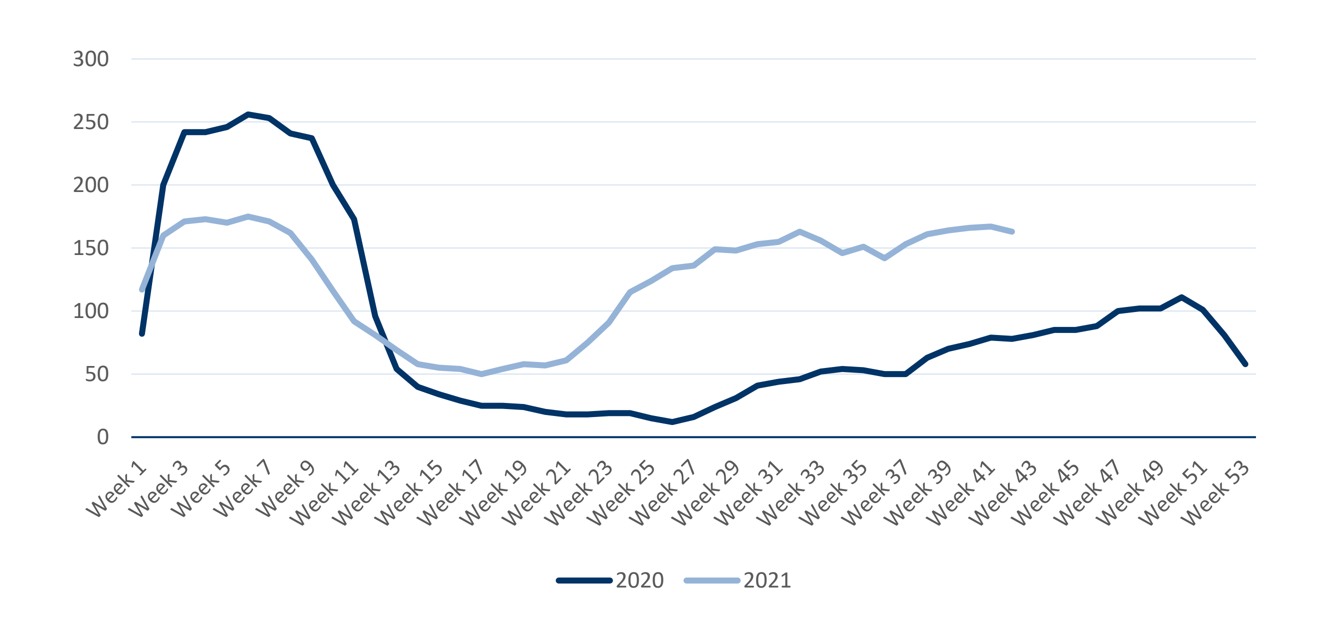
The OFSE industry is now experiencing early signs of recovery, with economies gradually opening up and the demand for oil and gas gradually returning to pre-pandemic levels. E&P work, which was almost entirely at a standstill during the pandemic-induced lockdowns, is gaining momentum and is likely to generate increasing levels of demand for OFSE products and services in the coming quarters. Rig counts in the US, Canada, as well as internationally have increased appreciably after a slump in mid-2020 (see chart below). However, the emergence of a new variant of the novel Corona virus could induce a relapse if it were to result in further lockdowns.

US Horizontal Rig Count (Weekly)



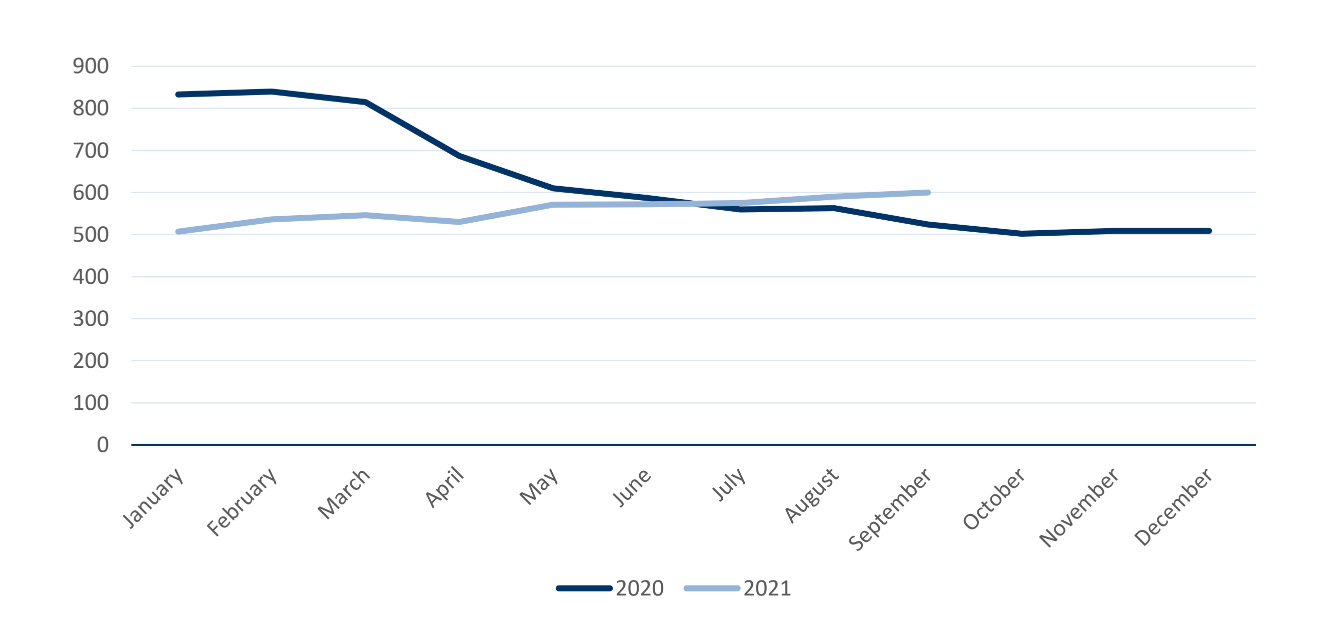
Source: Baker Hughes

Canada Land Rig Count (Weekly)



Source: Baker Hughes

International Land Rig Count (Monthly)



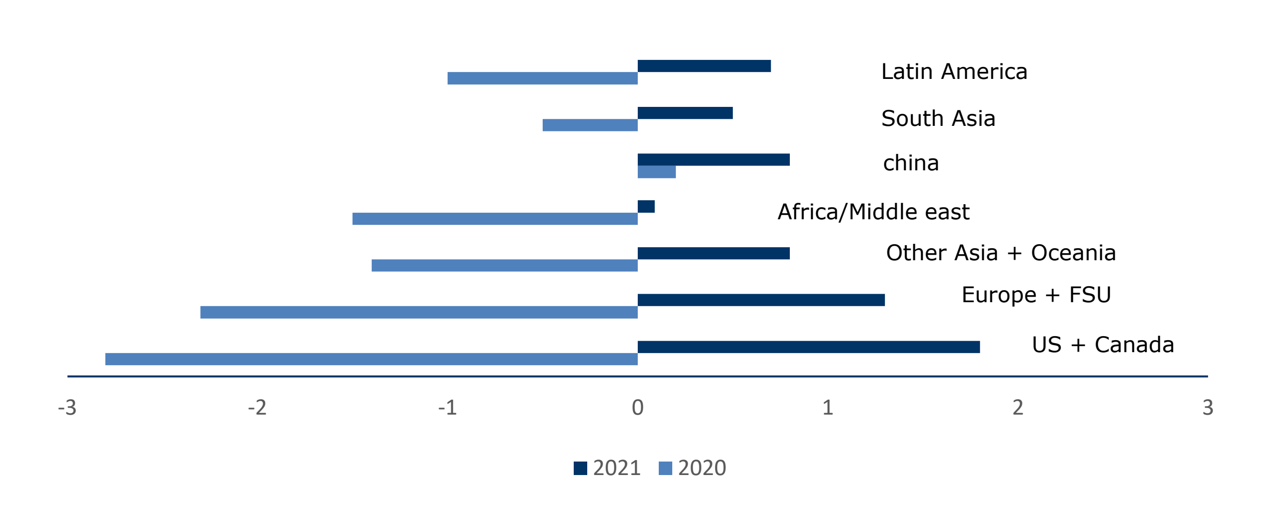
Source: Baker Hughes

Key Growth Drivers

While the OFSE industry is expected to experience flat growth in the long term due to its client industry, Oil & Gas, approaching stagnation, some of the factors that are expected to drive the OFSE Industry's growth in the short and medium term are as follows:

1. **Oil Demand Increasing with Early Signs of Economic Recovery**
   Oil demand has stayed depressed since the beginning of the pandemic in late 2019 / early 2020. Oil prices fell to an eight-year low in 2020 due to low industrial and transportation activity across the world. With lockdowns easing in recent months, economic activity has started picking up, and oil demand and oil prices have started rising. Consistent with the positive economic sentiment, oil production facilities are reopening, and exploration and drilling activities are being ramped up. This revival is likely to boost the demand for OFSE products and services for both reopening and maintaining wells, as well as exploring and drilling new assets.

Y-o-Y Change in Oil Demand (MBPD)



Source: S&P Global Platts analytics, 2020

2. **Opportunities for Innovation**
   E&P companies, especially those that are shale-focused, have been forced to operate under low margins due to low oil and gas prices. This has raised the demand for solutions and products that can improve efficiency and lower operating costs so that margins can be expanded. E&P companies also have the need to reduce their environmental impact in the face of stiff competition from renewable fuels. This has opened up more opportunities for the OFSE sector to invest in innovation and produce technologically advanced solutions.

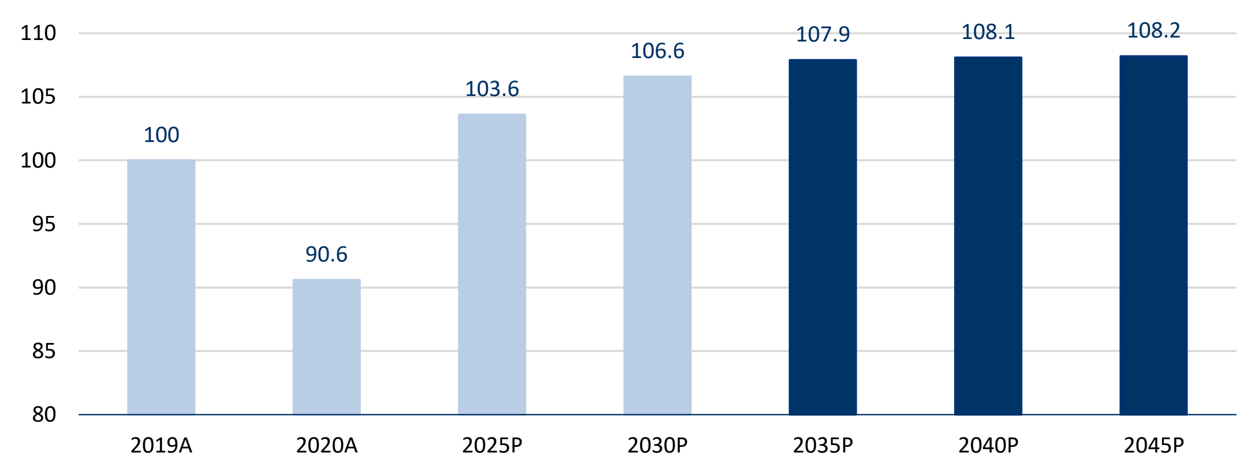
3. **USD 1 trillion US Infrastructure Proposal**
   The Biden government recently unveiled a USD 1 trillion infrastructure proposal to revitalize infrastructure across the country. The proposal also includes plans for O&G infrastructure, which could generate new opportunities for OFSE and E&P companies. The bill has earmarked about USD 16 billion to put laid off oil field laborers to work on plugging abandoned oil wells in the country, which could increase the order flow for OFSE companies.[ii]

Industry Trends

1. Plateauing Oil Demand

The global demand for oil is expected to enter a long period of flat growth, followed by a sustained decline, primarily due to the growing popularity of renewable energy. According to the OPEC's World Oil Outlook 2021, the global demand for oil fell to 90.6 million barrels per day ("MBPD") from 100 MBPD in 2019 due to the pandemic and it is expected to recover and scale back above 100 MBP by 2025. However, oil demand is expected to grow marginally from 103.6 MBPD in 2025 to 107.9 MBPD in 2035, and start plateauing thereafter. This plateauing demand is likely to have a negative impact on exploration and drilling activities, which is likely to rub off on OFSE companies.

Global Oil Demand (Million Barrels Per Day)



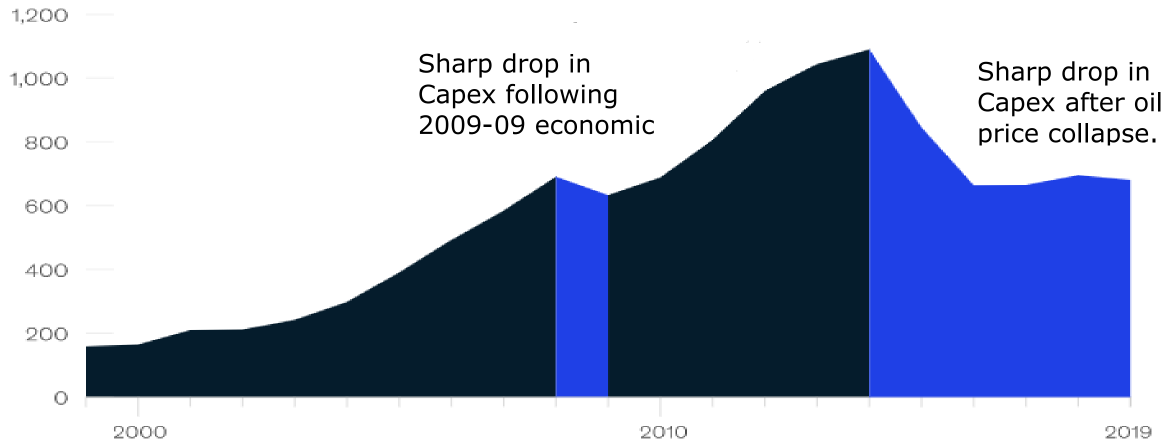
Source: International Energy Agency's 2019 World Energy Outlook

2. Increasing Popularity of Renewable Energy Solutions

The adoption of renewable sources of energy is growing as governments and businesses are recognizing the urgent need to reduce carbon emissions to counter global warming. Governments across the world have adopted sustainability goals that include increasing the renewable component of their energy mix and, in some cases, completely transitioning to clean energy over a period of time.

Major US Policy Initiatives Could Hurt OFSE Companies: The Biden administration plans to comprehensively review the federal oil program to limit the US O&G sector's contribution to climate change and progress towards the US's 2030 emission plans. Soon after assuming office, the administration froze new federal oil and gas lease sales, a step that is widely considered a precursor to a blanket ban. Although the move was blocked by a federal judge in August 2021 and the Interior Department resumed issuing fresh leases, the Biden administration's clear commitment to emission controls could adversely impact the OFSE sector by disincentivizing O&G capex, which is already in a decline since 2014.[iii]

Total Capex by Upstream O&G Majors in (Billions)



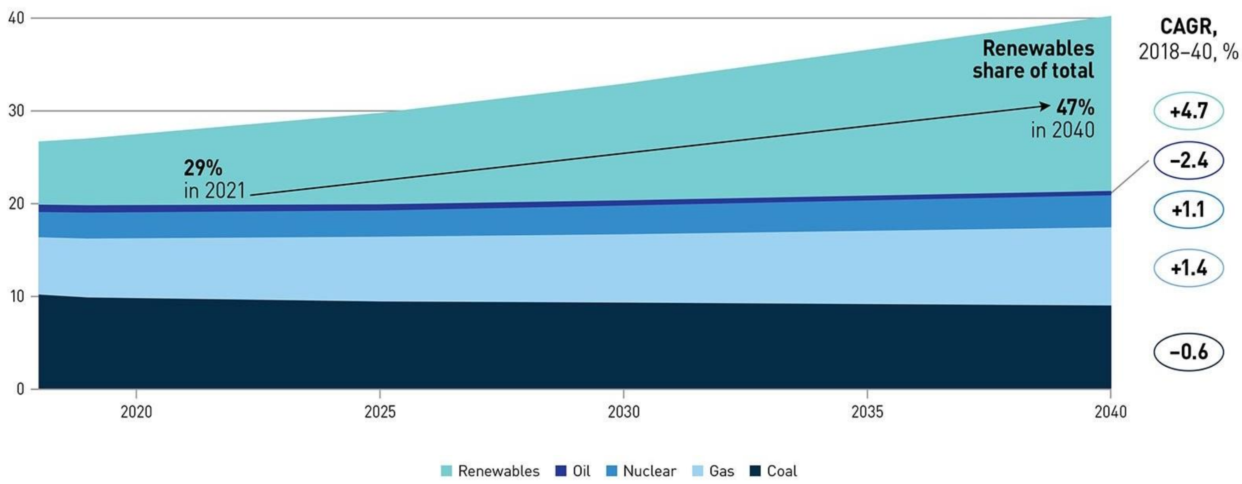
Source: "A Winning OFSE Agenda for Current Times", McKinsey & Company, October 1, 2020

In August 2021, the US government also announced a plan to slash the country's carbon emissions by at least 50% by 2030, which is more than double its earlier Paris climate summit commitment. This plan, if realized, is also likely to have an adverse effect on the OFSE sector because it aims to reduce the demand for oil and gas, which could force oil & gas companies to cut output and stall E&P activities. However, it could also stimulate OFSE innovation and incentivize companies to develop solutions to curb carbon emissions.[iv]

In addition to governments, private businesses are also committing to clean energy and emission controls. 66 private equity and venture capital funds have formally decided to eliminate or significantly reduce their oil and gas investments and replace them with Environmental, Social, and Governance ("ESG") investments. The transition to renewable energy is the most evident in the Power Generation and Passenger Vehicles segments.

Power Generation: The share of renewable energy sources for the generation of power is increasing, especially in the European Union and countries like the US, India, and China. The International Energy Agency expects the share of renewables used for electricity generation to increase from 29% in 2018 to 47% in 2040, at a 4.7% CAGR. It expects the usage of gas to witness a 1.4% CAGR and the usage of oil to witness a -0.6% CAGR over this period.[iv] Better renewables technology and improving cost efficiency of building and maintaining renewables-based utility-scale power plants are expected to contribute to this trend.

Global Electricity Generation by Source (Petawatt Per Hour)



Source: 2020 World Energy Outlook, International Energy Agency; Renewable Capacity Statistics, International Renewable Energy Agency

Passenger Vehicles: Passenger vehicles emit among the highest quantities of toxic elements into the environment because they consume close to 26% of the total oil produced across the world.[v] Greater use of ecofriendly vehicles is, therefore, a central component of the environment policy of most major carbon emitting countries, including the US, China, and India.

While the transition towards renewables is underway, efforts are also being made to reduce the environmental impact of fossil fuels that are currently in use through innovative technologies for oil & gas production, usage, and disposal. The ensuing energy transition might reduce conventional growth opportunities for OFSE companies since it is likely to result in negative oil demand growth, but it could create lucrative new opportunities for technology focused OFSE companies, such as developing new products and services that help conventional energy producers and consumers lower their environmental footprint.

Risk Profile Analysis

1. MARKET RISK

NCS's customers belong to the upstream O&G industry, which is very sensitive to oil and gas price movements. Most of NCS's current customers are shale-based energy producers and are more sensitive to oil and gas price movements than conventional O&G companies due to their higher production costs. Historically, many of these companies have had to shut operations temporarily or permanently when oil and gas prices fall sharply. These companies witnessed significant challenges in 2020 due to Covid-related lockdowns because the demand for energy had fallen sharply and production operations had to be suspended. Many companies, including NCS's customers, have had to merge with competitors or file for bankruptcy because of this. The gradual oil and gas demand recovery that is currently underway remains at risk due to possible future Covid outbreaks and associated government responses, although that risk is somewhat mitigated with increasing vaccination rates around the world. Given these headwinds faced by the global economy and specifically by the Shale O&G industry, we feel that NCS currently has a MID-HIGH market risk profile.

2. CUSTOMER RISK

The Company's revenue in 2020 was well distributed across 200 customers with only one customer contributing 10% or more of the revenue. Although this is much lower than the 300+ customers the Company had in 2018 and 2019, the Company does not over-rely on a few key clients. Additionally, the Company enjoys reasonable business predictability because of its healthy mix of repeat and new customers. In 2020, approximately 75% were repeat and 25% new, a ratio that has continued into H1'21. However, it must be noted that the oil and gas industry has gone through significant bankruptcies and is going through consolidation with several companies acquiring or merging with others. This can narrow down the NCS's customer base and concentrate revenue among few key clients. The top 5 customers accounted for 31% of Total Revenue in 2020 and this concentration can go up.

Most of the Company's customers are into shale oil production and based out of Canada and the US. Shale oil producers came under immense pressure in 2020 and early 2021 due to a steep decline in oil prices and their much higher production costs compared to traditional O&G producers. While consistently improving activity levels in the US and Canadian Shale O&G space and optimistic 2022 forecasts from competent authorities like IEA and OPEC are encouraging for the Company, a recurrence of lockdowns following another possible wave of Covid in the US and Canada could hurt recovery and turn out to be a major headwind.

The Biden administration's decision to suspend auctioning of drilling rights on federal properties could potentially be a significant additional headwind for US O&G operators and their suppliers, such as NCS. The federal government is currently contesting a preliminary injunction issued on its decision in June 2021 and has started the process of issuing new leases in compliance with this injunction. The number of new O&G projects is likely to fall significantly if the government prevails and this could significantly reduce NCS's revenue from new customers. However, the Company does not expect the suspension order to meaningfully impact its business from current customers if the government honors the existing permits, since NCS's current customers have permits for several years. This is significant because over 90% of the Company's revenue comes from repeat customers. Repeat customers accounted for 90% of NCS's revenue in 2019, 95% in 2020, and 90% in H1'21.

Based on these factors, we believe that NCS's overall customer risk profile is MID-HIGH.

 See important disclosures on page 42 of this report.

3. COMPETITION RISK

The OFSE industry is very competitive and dynamic due to the highly engineered and technology-driven nature of the products and services it offers. This makes it very important for NCS to stay up to date with the latest technologies and offer innovative solutions to stay ahead of its competitors. One key way in which the Company holds a competitive edge over its peers is through its patented products and methods. The Company has a risk of losing this competitive edge as its key patents expire over time (earliest expirations is 2030 for US patents and 2025 for overseas patents). The Company must actively work towards replenishing its intellectual property over time. Consequently, we feel that NCS has a MEDIUM competition risk profile.

4. REGULATORY RISK

NCS operates in an industry with strong and well-defined regulatory standards and procedures. Most of the Company's work in the US is governed by API standards and has limited need for licenses and permits. However, the Company requires EPA approval for its activities in the Tracer Diagnostics space. Standards and procedures in Canada, NCS's other major market, are similar to the US and equally well-defined in most cases. The Company also has permits in place related to storing and transporting radioactive material (for radioactive tracer work) and ATF permits for handling and storing explosive utilized in certain products sold by Repeat Precision. The Company has never reported any serious difficulties in obtaining or renewing any licenses, permits, or certificates in these two geographies and, since the standards are generally well-defined and predictable, we do not foresee the Company facing any serious difficulties in the near future.

Outside the US and Canada, NCS closely reviews the regulatory aspects of entering any geography or product / service line beforehand, including the cost implications of applying for regulatory approvals. The Company claims to have not entered certain markets in the past due to the high certification costs or complex approval procedures. For example, the Company does not operate with radioactive tracers outside of the US, except for supplying them to a customer for use in Oman. In such cases, NCS has a policy of only moving forward if there is a significant customer commitment.

Acquiring patents and regulatory qualifications for its products and technologies is an important aspect of NCS business since it must ringfence these from competitors. The Company currently has several patent applications that are awaiting approval in all its current product categories as well as new categories. It is also working to get its sleeves qualified to V0 (gas-tight) standards for work in the North Sea. Although it is possible that the Company will not obtain some of these qualifications and approvals, judging by its track record, we do not feel the odds for this are very high. Therefore, we feel that NCS's overall regulatory risk profile is MID-LOW.

5. LEGAL RISK

NCS is currently contesting several IP infringement lawsuits, two of which it initiated. In the most significant of these lawsuits, NCS sued a Canadian competitor for infringing on its technology. The Company expects to go to trial in this lawsuit in early 2022. With the case going to trial, we expect the Company's legal costs to go up significantly over the next three to four quarters, followed by a sudden decline. The Company does not expect the case to drag on for long because it believes it has a strong claim. However, the course of events once the trial begins can be protracted and cannot be predicted with certainty. Any of these cases dragging on for long will have financial implications for the Company and may increase the probability of an unfavorable verdict. However, status quo is likely to be maintained in case there is an unfavorable verdict and the decision to pursue the case further will rest with the Company. As such, we feel that the only significant implications for the Company in case one of the cases drags on for long will be an increase in litigation costs. We, therefore, believe that the Company has a LOW legal risk profile.

Financial Analysis

Revenue: NCS's revenue decreased from USD 226.9 million at its peak in 2018 to USD 106.9 million in 2020, translating to a 52.9% decline. While Fracturing Systems, Well Construction, and Tracer Diagnostics experienced a revenue decline of over 60% each over this period, Repeat Precision experienced a revenue growth of 41.4%. The key reasons for this increase in Repeat Precision's revenue were its growing market share in the plugs segment, addition of the setting tool segment, and its lawsuit win against Diamondback. Consequently, Repeat Precision's share of the Company's Total Revenue increased from 10% in 2018 (its first full year in business and the year in which it launched the Purple Seal Express) to 30% in 2020. During the same period, Fracturing Systems' revenue share fell from 60% to 50% and Well Construction and Tracer Diagnostic's revenue share fell from approximately 15% to approximately 10% each. However, Repeat Precision's revenue share in 2021 has been smaller and this is likely to continue going forward.

With the Covid situation gradually improving, especially in Canada, and oilfield activity recovering, we have projected NCS's revenue to reach USD 119.3 million for the full year 2021, translating to a 11.6% YoY growth. We believe that the Company is well placed to achieve this target because it generated USD 49.9 million or 40% of its full year target in H1'21 and H2 revenue is typically higher than what the company achieves in H1.

We expect a conducive market environment and the Company's plans of rolling out new products, repurposing existing products for new uses, and expanding its Sales & Marketing efforts in the US and Canada to support its revenue growth going forward. According to our projections, the Company could return to its pre-Covid (2018) revenue levels by 2023/24, with a 23.5% average revenue growth between 2021 and 2024. Revenue growth is projected to remain positive but moderate beyond 2024.

Costs: NCS's Cost of Sales increased sharply as a percentage of Total Revenue from 47.7% in 2018 to 58.8% in 2020 due to lower volumes and discounted pricing. Cost of Product Sales increased from 51.5% to 68.4% of product revenue while Cost of Services decreased marginally from 55.2% to 54.3% of services revenue. The Company's Total Cost of Sales as a percentage of revenue was higher in H1'21 than in full year 2020 (64.4% versus 58.8%) and we expect Total Cost of Sales for full year 2021 to also be higher as a percentage of revenue than in 2020. We expect these costs to steadily decline as a percentage of revenue in the next few years with supply chain constraints easing and the Company experiencing economies of scale with growing volumes. Additionally, we expect the Company to witnessing improved inventory velocity and lower inventory build ups with demand continuing to pick up and on-hand inventory getting mobilized. NCS also stands to continue benefitting from its ability to optimize costs by utilizing Repeat Precision for manufacturing sleeve components, performing machining work, and supplying plugs to NCS's Canadian entity for resale to E&P customers.

The primary components of NCS's product costs include purchase cost of third-party components for its Fracturing Systems and Well Construction products, raw material and components sourced by Repeat Precision for frac plugs and setting tools, shop supplies and ancillary equipment (O-rings, screws, grease, etc.) for assembling, freight and shipping costs, and manufacturing labor costs. For services, the Company's primary costs include field personnel costs for Fracturing Systems and Tracer Diagnostics (wages, travel, logistics, food etc.), field operations contracting costs in Canada, tracer deployment for Tracer Diagnostics, rent and property tax charges for field service locations, scrap charges for tool components, and vehicle-related costs for field personnel.

NCS's S,G&A expenses increased from 36.5% in 2018 to 55.5% in 2020 and 49.2% in H1'21. We expect this percentage to moderate considerably in H2'21 but still remain much higher than 2018 for full year 2021. We expect these expenses to continue declining as a percentage of sales beyond 2021 and approach

2018 levels by H2’22 since NCS has been putting in significant efforts to optimize its operating costs in response to the Covid outbreak and some of these cost optimization initiatives are likely to continue benefitting the Company in the long run because of their structural nature.

The Company fully expenses its sustaining engineering and R&D costs to S,G&A, including both internal costs and third-party prototype spending. These costs added up to between USD 4 million and USD 5 million per year over the last two years, and the Company anticipates it to continue at this level in 2021 and 2022, followed by a possible increase in later years. However, since these costs are discretionary, the Company may decide to increase or decrease these based on the trajectory of its revenue recovery. The Company expects its R&D spending to be highest in Fracturing Systems, EOR, Tracer Diagnostics, and new product lines. R&D spending requirements in Well Construction and Repeat Precision are likely to be limited.

Profitability: NCS’s profitability has steadily declined since its listing, primarily due to patent impairments and the Covid outbreak which resulted in suspension of oilfield activities and, in many cases, bankruptcies and customer consolidation. NCS’s input costs also increased due to Covid-induced supply chain constraints, although the Company was able to pass some of these on to its customers.

NCS’s Gross Profit declined from USD 118.7 million in 2018 to USD 44.1 million in 2020, translating to a 62.9% decline. The Company’s Gross Margin declined from 52.3% in 2018 and to 41.2% in 2020, and 35.6% in H1’21. NCS’s EBITDA declined from USD 35.8 million in 2018 to USD -15.4 million in 2020, translating to a 142.8% decline. The Company’s EBITDA Margin declined from 15.8% in 2018 and to -14.4% in 2020, and -13.7% in H1’21.

NCS generated a Net Profit of USD 2.1 million in 2017 and has made a Net Loss in each year since. The Company’s Net Loss decreased from USD 190.3 million in 2018 (inclusive of USD 227.5 million in non-cash impairments) to USD 57.6 million in 2020 (inclusive of USD 50.2 million in non-cash impairments) and stood at USD 7.1 million in H1’21. NCS’s Net Margin improved from -83.9% in 2018 to -53.8% in 2020, and -14.2% in H1’21. Repeat Precision contributed significantly to this improvement due to its rapid revenue growth. Repeat Precision’s profit grows incrementally with an increase in its revenue because NCS does not allocate any corporate costs to Repeat Precision for intragroup services such as IT, legal, and taxation support, other than what Repeat Precision would pay to source these from third parties if not provided by NCS.

Our projections suggest that the Company could return to EBITDA profitability in 2022 and achieve net profitability by 2023 with the Covid impact wearing away and the Company’s efforts to optimize costs bearing fruit. According to our projections, the Company could generate an EBITDA of USD -2.1 million (-1.8% EBITDA Margin) in 2021 and of USD 10.9 million (6.6% EBITDA Margin) in 2022. Although we expect the Company’s EBITDA margin to increase consistently in the next few years, we do not expect it to return to the peak levels of 2017 until 2025/26. We project NCS’s Net Income to increase to USD -10.3 million (-8.7% Net Margin) in 2021 and USD -1.5 million (-0.9 % Net Margin) in 2022.

Capital Structure: NCS’s share capital decreased from USD 161.3 million on December 31, 2018 to USD 87.2 million as of June 30, 2021. The Company’s total long-term debt decreased from USD 25.4 million in December 2018 to USD 6 million in June 2020. We expect the Company’s additional capital requirements to remain moderate other than in case of major acquisitions or more aggressive R&D investments because of the Company’s capital-light operating model where it outsources most of its capital-intensive activities to third parties, resulting in high free cash flows. If the Company were to pursue a sizeable acquisition, it could need to raise debt or equity capital to fund the deal.

Pursuant to its capital-light strategy, NCS has consistently maintained a healthy cash position. The Company had a cash balance of USD 15.5 million in 2020 and USD 13.9 million in June 2021. Assuming no significant changes to the current business and no major non-routine investments, we project the Company's cash balance to increase to USD 18.9 million as of December 2021.

Income Statement – Historical

(All figures are in USD thousands)	2016	2017	2018	2019	2020
Revenue					
Fracturing Systems	88,631	161,307	136,178	92,468	53,489
YoY Growth %		*82.0%*	*-15.6%*	*-32.1%*	*-42.2%*
Repeat Precision	-	4,033	22,696	51,371	32,093
YoY Growth %		*-*	*462.8%*	*126.3%*	*-37.5%*
Well Construction	9,848	24,196	34,044	30,823	10,698
YoY Growth %		*145.7%*	*40.7%*	*-9.5%*	*-65.3%*
Tracer Diagnostics	-	12,098	34,044	30,823	10,698
YoY Growth %		*-*	*181.4%*	*-9.5%*	*-65.3%*
Total Revenue	**98,479**	**201,634**	**226,963**	**205,485**	**106,977**
YoY Growth %		*104.7%*	*12.6%*	*-9.5%*	*-47.9%*
Cost of Sales	**53,833**	**98,792**	**108,306**	**108,030**	**62,907**
% of Total Revenue	*54.7%*	*49.0%*	*47.7%*	*52.6%*	*58.8%*
Gross Profit	**44,646**	**102,842**	**118,657**	**97,455**	**44,070**
% of Total Revenue	*45.3%*	*51.0%*	*52.3%*	*47.4%*	*41.2%*
Selling,General & Adminstrative Expenses	37,061	64,707	82,813	88,554	59,425
% of Total Revenue	*37.6%*	*32.1%*	*36.5%*	*43.1%*	*55.5%*
EBITDA	**7,585**	**38,135**	**35,844**	**8,901**	**(15,355)**
% of Total Revenue	*7.7%*	*18.9%*	*15.8%*	*4.3%*	*-14.4%*
Depreciation Expense	1,766	3,193	4,747	5,877	4,426
% of Total Revenue	*1.8%*	*1.6%*	*2.1%*	*2.9%*	*4.1%*
Amortization Expense	23,801	24,458	13,090	4,559	1,465
% of Total Revenue	*24.2%*	*12.1%*	*5.8%*	*2.2%*	*1.4%*
Impairments	-	-	227,543	7,919	50,194
% of Total Revenue	*0.0%*	*0.0%*	*100.3%*	*3.9%*	*46.9%*
Change in Fair Value of Contigent Consideration	-	5,525	(2,872)	37	-
% of Total Revenue	*0.0%*	*2.7%*	*-1.3%*	*0.0%*	*0.0%*
EBIT	**(17,982)**	**4,959**	**(206,664)**	**(9,491)**	**(71,440)**
% of Total Revenue	*-18.3%*	*2.5%*	*-91.1%*	*-4.6%*	*-66.8%*
Other Expenses (Income)	(45)	(1,085)	(182)	(308)	(1,729)
% of Total Revenue	*0.0%*	*-0.5%*	*-0.1%*	*-0.1%*	*-1.6%*
Loss (Gain) on Patent Infringement Settlement	-	-	-	-	(25,678)
Net Interest Expense	6,286	4,306	1,963	1,925	1,796
% of Total Revenue	*6.4%*	*2.1%*	*0.9%*	*0.9%*	*1.7%*
Foreign Exchange Loss (Gain)	2,522	(224)	(162)	958	1,060
% of Total Revenue	*2.6%*	*-0.1%*	*-0.1%*	*0.5%*	*1.0%*
EBT	**(26,745)**	**1,962**	**(208,283)**	**(12,066)**	**(46,889)**
% of Total Revenue	*-27.2%*	*1.0%*	*-91.8%*	*-5.9%*	*-43.8%*
Effective Income Tax Expense / (Recovery)	(8,818)	670	(23,052)	10,752	(7,783)
% of EBT	*33.0%*	*34.1%*	*11.1%*	*-89.1%*	*16.6%*
Net Income / (Loss)	**(17,927)**	**1,292**	**(185,231)**	**(22,818)**	**(39,106)**
% of Total Revenue	*-18.2%*	*0.6%*	*-81.6%*	*-11.1%*	*-36.6%*
Net Income (loss) Attributable to Non-Controlling Intre:	-	(810)	5,086	10,005	18,493
% of Total Revenue	*0.0%*	*-0.4%*	*2.2%*	*4.9%*	*17.3%*
Net Income / (Loss) Attributable to NCS Multistage	**(17,927)**	**2,102**	**(190,317)**	**(32,823)**	**(57,599)**
% of Total Revenue	*-18.2%*	*1.0%*	*-83.9%*	*-16.0%*	*-53.8%*

Balance Sheet – Historical

(All figures are in USD thousands)	Dec 2016	Dec 2017	Dec 2018	Dec 2019	Dec 2020
Current Assets					
Cash & Cash Equivalent	18,275	33,809	25,131	11,243	15,545
Account Receivables - Trade, Net	32,116	47,880	49,984	41,960	21,925
Inventories, Net	17,017	33,135	32,753	39,921	34,871
Prepaid Expenses & Other Current Assets	2,445	1,616	2,037	2,444	2,975
Other Current Receivables	3,053	1,369	4,685	5,028	8,358
Deferred Income Taxes	2,116	-	-	-	-
Total Current Assets	**75,022**	**117,809**	**114,590**	**100,596**	**83,674**
Non - Current Assets					
Property & Equipment	9,759	23,651	32,296	32,974	24,435
Goodwill	122,077	184,478	23,112	15,222	15,222
Intangible Assets	118,697	136,412	48,985	45,248	6,413
Operating Lease Assets	-	-	-	5,071	5,170
Deposits and Other Assets	1,272	1,563	1,392	3,460	3,559
Deferred Tax Asset	-	-	9,326	6	205
Total Non-Current Assets	**251,805**	**346,104**	**115,111**	**101,981**	**55,004**
TOTAL ASSETS	**326,827**	**463,913**	**229,701**	**202,577**	**138,678**
Equity					
Preferred Stock	-	-	-	-	-
Common Stock	340	439	451	23	24
Additional Paid-In Capital	237,566	399,426	411,423	425,079	432,801
Accumulated Other Comprehensive Income	(82,015)	(66,707)	(84,030)	(80,811)	(81,780)
Retained Deficit	21,762	23,864	(166,206)	(199,029)	(256,628)
Treasury Stock	(175)	(175)	(337)	(652)	(809)
Total Shareholders' Equity	**177,478**	**356,847**	**161,301**	**144,610**	**93,608**
Non Controlling Interest	-	12,144	14,930	18,935	19,878
Total Equity	**177,478**	**368,991**	**176,231**	**163,545**	**113,486**
Current Liabilities					
Accounts Payable - Trade	10,258	7,448	7,167	8,549	4,943
Accrued Expenses	3,290	6,673	4,084	3,451	3,347
Income Taxes Payable	-	10,561	184	1,883	653
Operating Lease Liabilites	-	-	9,963	2,052	1,826
Current Portion of Long-Term Debt	3,223	1,673	1,991	1,481	1,347
Other Current Liabilities	772	5,334	2,236	2,364	2,768
Total Current Liabilities	**17,543**	**31,689**	**25,625**	**19,780**	**14,884**
Non - Current Liabilities					
Long-Term Debt	88,394	21,702	23,455	11,436	4,442
Non Current Contingent Consideration	-	12,835	-	-	-
Operating Lease Liabilites	-	-	-	3,487	3,989
Other Long-Term Liabilities	717	4,513	1,258	1,373	1,864
Deferred Income Taxes	42,695	24,183	3,132	2,956	13
Total Non - Current Liabilities	**131,806**	**63,233**	**27,845**	**19,252**	**10,308**
TOTAL LIABILITIES & SHAREHOLDERS' EQUITY	**326,827**	**463,913**	**229,701**	**202,577**	**138,678**

 See important disclosures on page 42 of this report.

Income Statement Summary – Projected

(All figures are in USD thousands)	2021 E	2022 P	2023 P	2024 P	2025 P	2026 P
Total Revenue	**119,333**	**166,240**	**211,753**	**245,439**	**272,289**	**296,795**
YoY Growth %	*11.6%*	*39.3%*	*27.4%*	*15.9%*	*10.9%*	*9.0%*
EBITDA	**(2,105)**	**10,936**	**28,773**	**37,706**	**47,593**	**55,194**
% of Total Revenue	*-1.8%*	*6.6%*	*13.6%*	*15.4%*	*17.5%*	*18.6%*
Net Income / (Loss) Attributable to NCS Multistage	**(10,338)**	**(1,454)**	**8,090**	**11,825**	**18,215**	**22,807**
% of Total Revenue	*-8.7%*	*-0.9%*	*3.8%*	*4.8%*	*6.7%*	*7.7%*
EPS	(4.31)	(0.61)	3.37	4.93	7.59	9.50
YoY Growth %		*-85.9%*	*-656.5%*	*46.2%*	*54.0%*	*25.2%*

Balance Sheet – Projected

(All figures are in USD thousands)	Dec 2021	Dec 2022	Dec 2023	Dec 2024	Dec 2025	Dec 2026
Current Assets						
Cash & Cash Equivalent	18,945	4,400	5,393	10,380	11,614	17,012
Account Receivables - Trade, Net	24,520	34,159	43,511	50,433	55,950	60,985
Inventories, Net	29,540	37,748	43,196	46,937	48,306	49,758
Prepaid Expenses & Other Current Assets	2,616	3,188	1,740	2,017	2,238	2,439
Other Current Receivables	4,904	4,555	3,481	4,035	4,476	4,879
Deferred Income Taxes	-	-	-	-	-	1
Total Current Assets	**80,526**	**84,050**	**97,321**	**113,802**	**122,584**	**135,075**
Non - Current Assets						
Property & Equipment	21,225	19,895	19,008	18,433	17,980	17,553
Goodwill	15,222	15,222	15,222	15,222	15,222	15,223
Intangible Assets	5,940	5,501	5,095	4,719	4,371	4,048
Operating Lease Assets	5,536	5,536	5,536	5,536	5,536	5,536
Deposits and Other Assets	3,559	3,559	3,559	3,559	3,559	3,559
Deferred Tax Asset	205	205	205	205	205	205
Total Non-Current Assets	**51,686**	**49,918**	**48,625**	**47,674**	**46,873**	**46,124**
TOTAL ASSETS	**132,212**	**133,968**	**145,946**	**161,476**	**169,456**	**181,199**
Equity						
Preferred Stock	-	-	-	-	-	-
Common Stock	24	24	24	24	24	24
Additional Paid-In Capital	432,801	432,801	432,801	432,801	432,801	432,801
Accumulated Other Comprehensive Income	(81,780)	(81,780)	(81,780)	(81,780)	(81,780)	(81,780)
Retained Deficit	(266,966)	(268,420)	(260,329)	(248,504)	(230,289)	(207,482)
Treasury Stock	(809)	(809)	(809)	(809)	(809)	(809)
Total Shareholders' Equity	**83,270**	**81,816**	**89,907**	**101,732**	**119,947**	**142,754**
Non Controlling Interest	19,878	19,878	19,878	19,878	19,878	19,878
Total Equity	**103,148**	**101,694**	**109,785**	**121,610**	**139,825**	**162,632**
Current Liabilities						
Accounts Payable - Trade	5,364	7,216	8,692	9,942	10,770	11,678
Accrued Expenses	3,164	3,990	4,870	5,645	6,263	6,826
Income Taxes Payable	-	-	-	-	-	-
Operating Lease Liabilites	2,157	2,826	3,600	4,172	4,629	5,046
Current Portion of Long-Term Debt	444	735	692	772	875	1,035
Other Current Liabilities	2,768	2,768	2,768	2,768	2,768	2,769
Total Current Liabilities	**13,898**	**17,535**	**20,622**	**23,299**	**25,304**	**27,354**
Non - Current Liabilities						
Long-Term Debt	7,350	6,923	7,723	8,750	10,353	12,327
Non Current Contingent Consideration	-	-	-	-	-	-
Operating Lease Liabilites	3,487	3,487	3,487	3,487	3,487	3,487
Other Long-Term Liabilities	1,373	1,373	1,373	1,373	1,373	1,373
Deferred Income Taxes	2,956	2,956	2,956	2,956	2,956	2,956
Total Non - Current Liabilities	**15,166**	**14,739**	**15,539**	**16,566**	**18,169**	**20,143**
TOTAL LIABILITIES & SHAREHOLDERS' EQUITY	**132,212**	**133,968**	**145,946**	**161,476**	**183,298**	**210,129**

 See important disclosures on page 42 of this report.

Valuation

Equity Value of NCSM stands between **USD 104.4 million and USD 127.5 million**

Equity Value per share for NCSM stands between **USD 43.70 and USD 53.41**

(All figures in USD thousands)

Valuation Approach	Variance	Equity Value as on 26-Oct-2021	Price per Share (USD)
Downside Case	-10%	104,345	43.70
Base Case	0%	115,949	48.55
Upper Case	10%	127,544	53.41

Important information on Arrowhead methodology

The principles of the valuation methodology employed by Arrowhead BID are variable to a certain extent, depending on the sub-sectors in which the research is conducted. But all Arrowhead valuation research possess an underlying set of common principles and a generally common quantitative process.

With Arrowhead commercial and technical due diligence, Arrowhead researches the fundamentals, assets and liabilities of a Company, and builds estimates for revenue and expenditure over a coherently determined forecast period.

Elements of past performance such as price/earnings ratios, indicated as applicable, are mainly for reference. Still, elements of real-world past performance enter the valuation through their impact on the commercial and technical due diligence.

We have presented the Discounted Cash Flow ("DCF") estimate approach for Free Cash Flow to Firm ("FCFF") valuation. We have also presented Comparable Company Analysis. The fair value bracket is built on the basis of these two methods.

Arrowhead BID Fair Market Value Bracket

The Arrowhead Fair Market Value is given as a bracket. This is based on quantitative key variable analyses such as key price analysis for revenue and cost drivers or analysis and discounts on revenue estimates for projects, especially relevant to projects estimated to provide revenue near the end of the chosen forecast period. Low and high estimates for key variables are produced as a valuation tool.

In principle, an investor comfortable with the high brackets of our key variable analysis will align with the high bracket in the Arrowhead Fair Value Bracket, and, likewise, in terms of low estimates. The investor will also note the Company intangibles to analyze the strengths and weaknesses, and other essential Company information. These intangibles serve as supplementary decision factors for adding or subtracting a premium in investor's own analysis.

The bracket should be taken as a tool by Arrowhead BID for the reader of this report and the reader should not solely rely on this information to make his decision on any particular security. The reader must also understand that while on the one hand global capital markets contain inefficiencies, especially in terms of information, on the other, corporations and their commercial and technical positions evolve rapidly. This present edition of the Arrowhead valuation is for a short to medium-term alignment analysis (one to twelve months).

Estimation of Equity Value

Value of NCS Multistage's equity has been arrived at using two approaches – Listed Comparable Analysis and DCF Valuation Approach. We have conducted the Listed Comparable Analysis using 2019 and expected 2022 valuation multiples because 2020 and 2021 financials do not represent the true financial potential of the Company or its peers due to the Covid impact. The results have been summarized in the table below.

(All figures in USD thousands)

Valuation Approach	Equity Value as on 26-Oct-2021	Price per share (USD)	Weight (%)
Listed Company Analysis (2019)	113,679	47.76	33%
Listed Company Analysis (2022E)	103,170	43.34	33%
DCF Valuation	130,556	54.38	34%
Weighted Average Equity Value	**115,949**	**48.55**	**100%**

1. Listed Company Analysis

Listed Comparable Analysis method operates under the assumption that similar companies will have similar valuation multiples such as EV/Sales and EV/EBITDA. We have shortlisted companies similar in business with NCS Multistage based on parameters such as products and services, geography etc.

A list of available statistics for the companies was completed, and the EV/Sales and EV/EBITDA multiple was calculated for each of the comparable companies for 2019 and 2022 (expected). Since most of the data was not normalized, we have left outliers in our calculations. We discounted the value obtained from the 2022 multiples to the present date. The weighted average of the resulting multiples was then calculated and used as benchmark for valuing NCS Multistage.

The weights allocated to the comparable companies were based on the degree of their business match with the subject Company.

(All figures in USD thousands)

Relative Valuation based on:	Weight	Equity Value as on 26-Oct-2021	Implied Share Price (USD)
EV/Sales 2019	20%	267,210	112.26
EV/EBITDA 2019	80%	75,296	31.63
Weighted Average Equity Value	**100%**	**113,679**	**47.76**

(All figures in USD thousands)

Relative Valuation based on:	Weight	Equity Value as on 26-Oct-2021	Implied Share Price (USD)
EV/Sales 2022E	20%	182,126	76.51
EV/EBITDA 2022E	80%	83,431	35.05
Weighted Average Equity Value	**100%**	**103,170**	**43.34**

Stock Exchange	Ticker	Company Name	Business Match %	EV/Sales	EV/EBITDA
New York Stock Exchange	BKR	Baker Hughes Co.	75%	1.8	26.2
New York Stock Exchange	CLB	Core Laboratories NV	75%	2.4	15.1
Nasdaq Stock Market	BOOM	DMC Global INC.	70%	1.9	9.7
New York Stock Exchange	FET	Forum Energy Technologies, Inc.	80%	0.5	(68.7)
New York Stock Exchange	HAL	HALLIBURTON COMPANY	80%	1.4	15.3
New York Stock Exchange	NINE	Nine Energy Service, Inc.	85%	0.4	4.4
New York Stock Exchange	NOV	NOV Inc.	85%	0.8	75.2
New York Stock Exchange	OIS	Oil States International, Inc.	75%	0.6	7.2
New York Stock Exchange	SLB	Schlumberger N.V.	75%	1.9	16.7
Wiener Boerse	SBO	Schoeller Bleckmann Oilfeild Equipment AG	80%	1.8	7.7
Median				**1.4**	**12.4**
Mean without Outliers				**1.4**	**10.9**
Weighted Average Without Outliers				**1.4**	**10.8**
Nasdaq Stock Market	**NCSM**	**NCS Multistage, Inc**		**0.4**	**10.3**

2. Discounted Cash Flow Approach

- **Valuation Methodology:** The Arrowhead fair valuation for NCS Multistage is based on the Discounted Cash Flow analysis using Free Cash Flows to the Firm.
- **Time Horizon:** The time period selected for valuation is 6 years (2021 – 2026).
- **Terminal Value:** Terminal value is based on terminal growth rate of 3.0%.

The following table calculates the cost of equity of NCS. The expected return on the market is assumed for the broader market. We have assumed additional company-specific risk to account for the risk involved in taking NCS's business forward.

Weighted Average Cost of Capital

Valuation	
Risk Free Rate (Rf)	2.0%
Beta	1.2
Expected Market Rate of Return	10.0%
Company Specific Business Risk	2.0%
Cost of Equity	**13.6%**
Interest Rate Paid on Debt	**7.3%**
Assumed Weight – Debt	10.0%
Assumed Weight – Equity	90.0%
Weighted Average Cost of Capital (WACC)	**12.8%**

The following table summarizes the FCFF computation for NCS Multistage, which is subsequently discounted by the Weighted Average Cost of Capital ("WACC").

FCFF *(All figures in USD thousands)*						
	2021	**2022**	**2023**	**2024**	**2025**	**2026**
Net Income	(10,338)	(1,454)	8,090	11,825	18,215	22,807
Add: Depreciation and Amortization	4,684	4,095	3,834	3,651	3,524	3,421
Add: Interest Expense x (1-Tax Rate)	451	560	550	605	686	809
Less: CAPEX	1,000	2,327	2,541	2,700	2,723	2,671
Less: Increase in Net Working Capital	(5,562)	14,432	9,191	8,817	5,543	5,044
Free Cash Flow to Firm (FCFF)	**(641)**	**(13,558)**	**743**	**4,565**	**14,160**	**19,322**
Terminal Value						**203,100**
Present Value of Free Cash Flow to Firm (FCFF)	**(568)**	**(10,656)**	**518**	**2,820**	**7,754**	**9,380**
Present Value of Terminal Value						**98,602**

Valuation	
Enterprise Value as on 31-Dec-2020	**107,850**
Equity Value as on 31-Dec-2020	**117,606**
Equity Value as on 26-Oct-2021	**130,556**
Number of Shares Outstanding (in thousands)	2,401
Value per Share	**54.38**

Analyst Certifications

I, Aditya Ahluwalia, certify that all of the views expressed in this research report accurately reflect my personal views about the subject security and the subject Company, based on the collection and analysis of public information and public Company disclosures.

Important disclosures

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Appendix

Glossary

O&G	Oil and Gas
E&P	Exploration & Production
S,G&A	Selling, General, and Administrative
OFSE	Oilfield Services and Equipment
R&D	Research & Development
USD	United States Dollar
WACC	Weighted Average Cost of Capital
AVM	Automated Valuation Model
ROI	Return on Investment
DCF	Discounted Cash Flow
FCFF	Free Cash Flow to Firm
EOR	Enhanced Oil Recovery
IP	Intellectual Property
JV	Joint Venture
ICD	Inflow / Injection Control Devices
ESG	Environmental, Social, and Governance
MBPD	Million Barrels Per Day

Notes and References

[i] *International energy agency's 2019 world energy outlook, 2019*

[ii] https://www.rigzone.com/news/wire/biden_plan_gives_oil_sector_surprise_boost-01-apr-2021-165051-article/

[iii] https://apnews.com/article/why-is-biden-halting-federal-oil-and-gas-sales-b8f03552c2c2fa7ec0dfc5debeb3f882

[iv] https://www.cnbc.com/2021/04/22/biden-pledges-to-slash-greenhouse-gas-emissions-in-half-by-2030.html