CFA Institute Research Challenge
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RECOMMENDATION	BUY
Date	01.28.2022
Current Price	USD 6.29
Target Price	USD 7.78
Upside	19.8%
Sector	Industrials
Industry	Pollution & Treatment Controls
Ticker/ Stock Exchange	CECE: U.S. NASDAQ
Shares Outstanding	35.81M
Market Capitalization	224.52M
Diluted EPS (TTM)	0.05
Free Float	28.1M

CECO Environmental provides equipment and solutions to protect people, industrial equipment, and the environment. Its products help to control emissions and contaminants in manufacturing facilities primarily by its Energy and Industrial solutions segments. The company has installed more than $6 billion of equipment across a global customer base.

INVESTMENT SUMMARY

We issue a **BUY** recommendation for CECO Environmental with a 12-month price target of $7.78, presenting a 19.8% upside on the closing price of 6.29 on January 28, 2022. This target price is based on a Discounted Cash Flow (DCF) model and supported by Relative Valuation. Our recommendation rests on the following five key drivers:

Leveraging an Asset-Light Model with Fixed Cost Structure

CECO's asset-light model creates its value from designing products before third-party partners manufacture them while subcontractors handle turnkey projects (Figure 1). The offshoring of manufacturing allows the company to concentrate its resources on developing an in-house product portfolio, and application-specific engineering expertise. This creates a fixed-cost structure allowing CECO to improve its margins as the revenue grows. CECO's global footprint and emerging markets exposure, combined with tighter environmental regulations, increase its addressable market and growth opportunities. Among its peers, we found that the company has been able to operate with a competitive operating efficiency in recent years under its asset-light model (Figure 2). Overall, we expect an increase in revenue would improve its margins and increase its cashflows because of a high operating leverage.

Decoupling from Energy Sector Cyclicality

In the last five years, the revenue contribution from the energy segment has influenced CECO's stock performance. Its reliance on energy solutions long-cycle products has brought dependable backlogs but downturns in the energy sector have severely affected CECO's revenues. This influenced the investors' perception of CECO's operations as an energy solutions company. The current changes in segments and inclusion of more short-cycle products in its product mix allow CECO to strengthen its industrial and fluid handling solutions segments. The company's aftermarket services focus would bring more recurring and stable cash flows.

ESG Report to Increase CECO's Exposure

We believe CECO's inaugural ESG (Environmental, Social and Governance) report would attract investors' attention. Its proven solutions have helped industries decrease their Green House Gas (GHG) emissions to meet and exceed compliance targets. We believe CECO's products and solutions would make it an exemplary ESG stock once it has published statistics and materials on its ESG operations. Doing so would provide assurance to new and existing investors while creating a positive reputation among the ESG community, increasing exposure.

Backlog Growth to Drive 2022 Earnings

The past three reported quarters have all shown growth in CECO's backlog and based on the company's Q3 results backlogs had increased to $219.1M from $210M (Figure 3). Although backlogs are non-GAAP figures, we believe that this metric is key in portraying the state of operations in CECO. Furthermore, with CECO having a historically low cancellation rate of 1-2%, we are confident in seeing these backlogs convert to revenue growth especially in 2022, increasing the company's EBITDA.

Short Cycle Products & Growing Aftermarket Segment

The recent acquisition of GRC increases CECO's short-cycle product concentration in its product mix. We believe these acquisitions will enable the company to access adjacent industrial markets, increasing its total addressable market. We anticipate that margins will increase by utilizing the economics of scale as CECO manufactures Standard & Configured products in-house. This would improve revenues greatly with aftermarket margins being around 40–50%. The aftermarket segment also has immense growth potential with $6 billion in installed equipment.

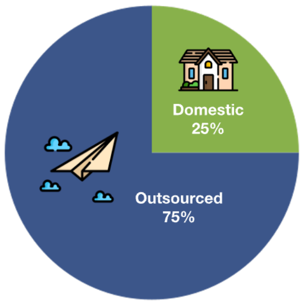

Figure 1: Production Sources
Source: Company Data

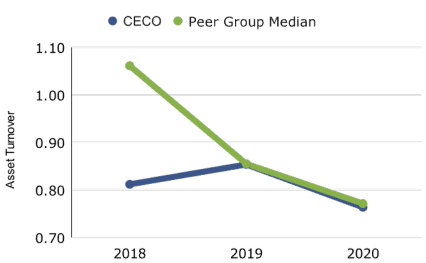

Figure 2: Asset-light Model Performance
Source: Company Data, Team Analysis
More details in Appendix VIII

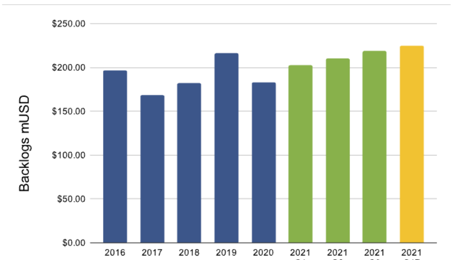

Figure 3: Historic Backlogs
Source: Company Data

BUSINESS DESCRIPTION

Figure 4: Business Overview
Source: Company Data

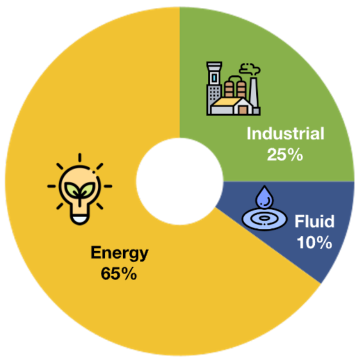

Figure 5: 2020 Revenue by business segment
Source: Company Data

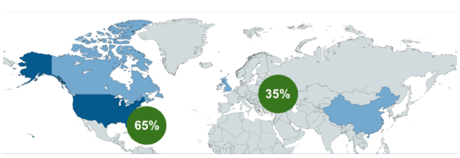

Figure 6: 2020 Revenue by geography
Source: Company Data

CECO Environmental offers products and solutions for each part of the industrial process	
Engineered System Solutions	• Customizable • Can also be supplied on a turn-key basis
Standard and Configured Products	• Specifically supports end-market
Aftermarket	• Provides services like replacement/ retrofits/ training

Figure 7: Overview of products and solutions
Source: Company Data, Team Analysis

CECO Environmental offers pollution-control solutions and products relating to five main areas, namely- air quality, fluid handling, energy, water, as well as professional & field services. The company operates worldwide with four headquarters and serves a diverse range of over nine industries (Figure 4). CECO has over 20 brands of sophisticated standard and configured products that aim to remove contaminants at various stages of the industrial process. These brands are widely known in the industry including CECO Peerless, CECO Effox-Flextor and CECO Burgess-Aarding. CECO also has an aftermarket business solution that provides parts and service, replacements and retrofits, and engineering studies for CECO equipment (Figure 3).

Business Segments & Geographical Reach

CECO's business segments are split into 3 categories: energy solutions, industrial solutions, and fluid handling solutions. Energy solutions account for 65% of total revenue followed by 25% for industrial solutions and 10% in fluid handling solutions (Figure 5). The company's customers are present across the globe with 65% of revenue coming from America and 35% coming from foreign customers including Canada, the United Kingdom, and China (Figure 6). With tens of thousands of customers and none making up more than 10% of its revenue, CECO has a highly diversified customer base that allows the company to benefit from growth in multiple markets.

Product Highlights

The company distinguishes itself by offering a wide range of industrial and process solutions related primarily to air and liquid management systems (Figure 7). CECO products and services protect people, the environment, and industrial equipment.

As a business-to-business firm, CECO enters the manufacturing environment of its customers and installs appropriate equipment and provides aftermarket solutions to ensure that its customers' industrial investments are protected. Some examples of the company's engineered systems and solutions include dust collection and recycling solutions for recycled products.

These systems are highly customized and are outsourced to global production partners. Other solutions provided include standard and configured products along with aftermarket solutions. With CECO moving more toward short cycle revenue, we expect to see an increase in resources allocated to building these two solution types.

Company Strategy

Moving forward, the company plans to increase investment into its Standard and Configured Products and Aftermarket segments. Management is currently working to double its aftermarket revenues from 15% to 30%. The goal of this is to capitalize on higher margins and more repeatable revenue opportunities present in those segments compared to the current engineered systems and solutions segment. Examples of the company's aftermarket services include replacements and retrofits, parts and service, and engineering studies for equipment provided by CECO.

One of the main ways that CECO plans to move further into these short cycle segments is by performing medium to large acquisitions. Management has already started acting on this plan by acquiring Environmental Integrated Solutions (EIS) and General Rubber Company (GRC), increasing annual revenue by approximately $16M and $12M, respectively. We expect CECO to benefit from both companies by providing more efficient, reliable, and diverse products to its customers while expanding its market reach. We expect management to continue taking advantage of the low-interest rates of ~2.5% on its recent credit agreement in December 2021. Doing so would allow CECO to continue acquisitions and divestitures moving into 2023 and beyond. We believe this will put the company in a position to grow within its sector.

Acquisition of General Rubber Corp (GRC)

CECO announced on 01/10/2022 the acquisition of a minority stake in General Rubber Corporation. The acquisition with a purchase price of approximately $24 million is expected to be completed by 04/30/2022.

We believe CECO is acquiring General Rubber Corporation to expand its Standard and Configured Products segment. This segment includes manufacturing and delivering pumps, water reuse, and gas separation solutions which would all benefit from high-quality and reliable rubber expansion joints. This acquisition is also in line with management's plan of expanding its short-cycle product revenue seeing that GRC has above average EBITDA and cash flows, delivering approximately $12 million of revenue in 2021.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG)

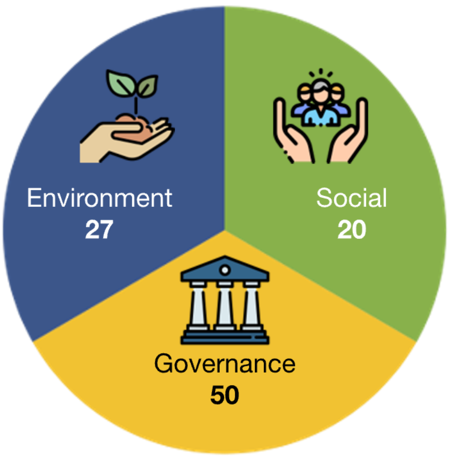

Figure 8: Current ESG score (out of 100)

Source: Refinitiv

ESG data reveals how good a company is at managing and disclosing non-financial factors that are relevant to the long-term health of its business operations and the risk associated with it. We analyzed CECO Environmental on these parameters both in terms of business risk and opportunities.

Environmental

CECO Environmental plays a direct role in contributing to a more sustainable and cleaner environment by operating in the pollution control industry. The firm has enabled many companies to achieve certain production targets while minimizing toxic emissions, volatile organic compounds, and other harmful byproducts. The company's Selective Catalytic Reduction (SCR) technology has removed more than 6 billion tons of toxic NOx emissions from being released into the environment.

CECO helps a wide range of industries all around the world to meet or exceed compliance targets. Moving forward, we can expect to see greater disclosures and a more conscientious effort to monitor and produce data on the company's consumption, reusing and recycling rates. The company has specifically mentioned tracking and gathering data on water use, waste/recycling and Greenhouse Gases (GHG).

With these plans in place, we expect CECO's Environmental Scores to improve in the coming years. Furthermore, with a greater emphasis on sustainable and transparent business practices, we believe that introducing and achieving targets specific to improving consumption and recycling rates is imperative to effective delivery from an environmental perspective.

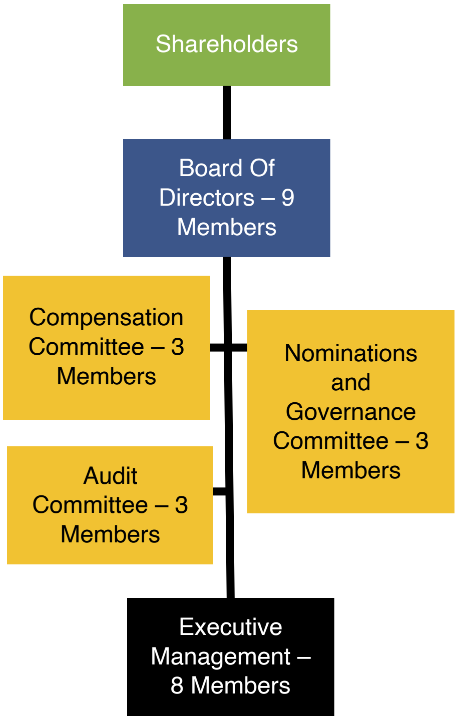

Figure 9: Corporate Governance Structure

Source: Company Data

Social

CECO is enhancing long-term shareholder return by its commitment to social responsibility. With locations in eleven countries serving global customers, CECO's workforce and customer base are ethnically and culturally diverse. The company issued information on its website covering its policies around inclusion, diversity, fair practices, fair labor, and compensation. Specifically, the company issued its Code of Business Conduct policy. Although CECO's Human Rights Policy is not accessible on its website, the Code of Business Conduct covers the company policies on acting with integrity for different parties including its community, team members, and customers.

Even with those policies issued, there is still lacking information and specific statistics that we believe are leading to a D+ in its social pillar score (Figure 8). We expect the inaugural ESG report in Q1 2022 to improve the social rating as CECO plans to showcase its safety, wellness, and training programs and discuss diversity, equity, and inclusion in its workplace.

Governance

While we believe that CECO Environmental has a reasonable executive management and board structure, we would like to see more transparency and policies that encourage shareholder engagement.

Board of Directors: CECO's Board of Directors are made up of 9 members, with an average tenure of 7.84 years (Figure 9). All members of the board bring valuable insight to the company ranging from operation and sales to legal and strategic expertise. In addition, 2 out of 9 members of the board are women or ethnically diverse, and we believe that this gender and diversity ratio can be improved.

Executive Management: CECO's executive management is reasonably diversified with around 3 out of 8 members in management being female or ethnically diverse. The management team has changed very recently with the appointment of CEO in 2020- Todd R Gleason, who drives the strategic vision of the company.

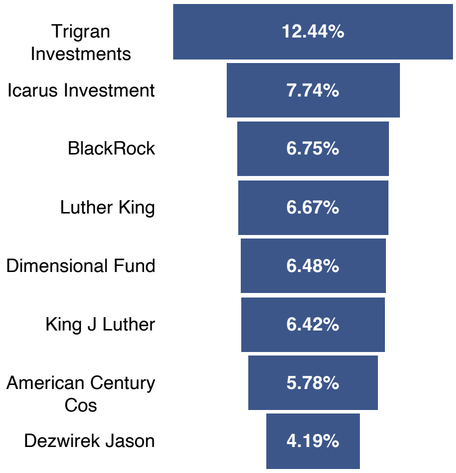

Figure 10: Equity Concentration (%)

Source: Bloomberg

To increase shareholder value, we would like to see more transparency of diversity within employees as well as policies that set targets around improving the gender and diversity ratio within the company. Specific statistics on this are not published. The executives' average tenure at CECO Environmental is slightly under 3 years. We also note that three out of eight of the executives were hired in the past two years. We are encouraged to consider that a relatively new team of executive management may bring a fresh perspective and vision to the company and how it operates, given the team's depth and breadth of experience in working in different geographical locations and industries.

Shareholders: CECO does not have a particularly diverse base of shareholders, the company's free float accounts for 78.5% of outstanding shares and the largest shareholder owns 12.44% of CECO (Figure 10) and this is a point of concern as they are likely to have significant influence in how the firm is managed. The firm's equity ownership does include some long-term holdings from reputable asset managers such as BlackRock, and the equity concentration leads us to believe that these shareholders may be actively driving changes in business strategy.

INDUSTRY OVERVIEW AND COMPETITIVE POSITIONING

We believe the demand for industrial air quality control and fluid handling solutions far exceeds the current supply. We expect tighter regulations, developing markets, and increasing global energy consumption to be the primary demand drivers for these solutions. The high barrier to entry and customized engineered products make it harder for companies to enter the marketplace. CECO positioned itself competitively among its peers with a broad customer base and diverse product portfolio to deliver on the expected demand worldwide. The asset-light business model gives the company an advantage in navigating potential supply chain bottlenecks, in leveraging its fixed cost structure as revenue grows.

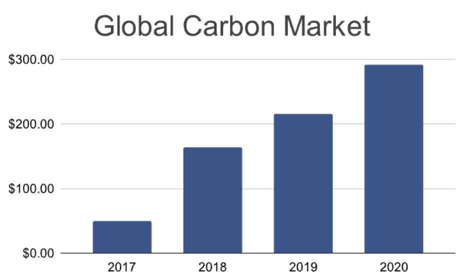

Figure 11: Global Carbon Market 2017-2020

Source: Refinitiv

Demand Drivers

Environmental Accountability and Regulation: The importance on climate change has increased the demand in finding efficient solutions. Industries are subjected to stricter legislatures with new regulations that aim to reduce emissions and encourage sustainable production of goods and services. The $2 trillion Build Back Better bill aims to develop technologies to combat climate change. The European Green Deal aims to reach no net emissions of greenhouse gases by 2050. To achieve its Paris climate agreement target by 2030, India is set to cut down carbon emissions by 22% and reduce the carbon intensity of its economy by less than 45%. We believe this trend to continue in the coming years with more industries looking for sustainable methods to operate.

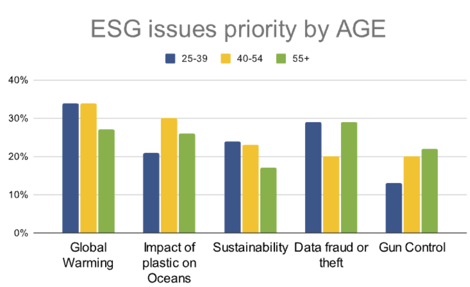

Figure 12: Investors ESG Issues Priority

Source: New York Life Investments,2019

Carbon Credit: The increased scrutiny of emissions by governments has created concepts such as Carbon-Credit. It creates a higher burden on a few manufacturing industries whose carbon footprint is higher than the others. It leaves companies with two choices: either buy carbon credits from other companies or decrease their carbon emissions. In the coming years, carbon credits may become more restrictive and costlier for companies to buy (Figure 11).

ESG Wave: The rising popularity of ESG among investors has created new criteria for investing metrics. McKinsey's survey found that shareholders are willing to pay a premium to acquire a company given that it has a positive ESG record compared to a negative one. We expect markets to place higher premiums on better ESG stocks. Companies are trying to Increase ESG scores by increasing transparency about their internal governance, environmental impact, and social causes. Companies are more willing to spend on industrial services that decrease emissions as climate change is the top priority in ESG issues for investors of all ages (Figure 12). We expect this will influence companies to increase their budget for air pollution control.

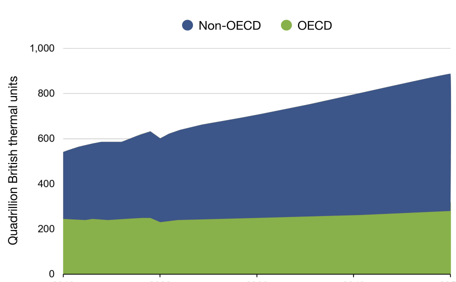

Figure 13: World Energy Consumption

Source: U.S. Energy Information Administration

Emerging Markets: Globalization and global trade in the last decade have been primary growth drivers for emerging markets (China and India). The strong labour participation and workforce have transformed these countries and made an ideal place for manufacturing as developed countries started to outsource. We believe industrial ventilation products demand will increase in the next five years as the new manufacturing plants are needed to supply the growing demand. Historically, the developing markets operated in lower regulatory environments but with increasing global consciousness in environmental emissions, we expect these markets to adapt to new regulations needing industrial ventilation and other products to control emissions.

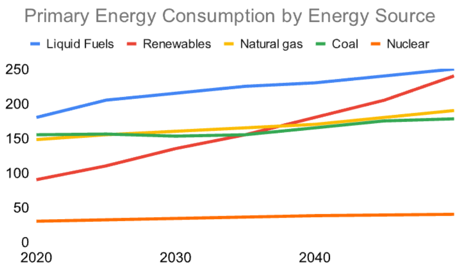

Figure 14: Projected Primary Energy Consumption in Quadrillion Thermal Units
Source: US Energy Information Administration

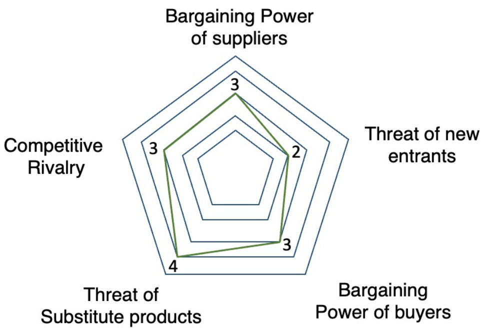

Figure 15: Porters Five Forces
Source: Team Analysis

STRENGTHS

- Asset-light model with fixed cost structure
- Diverse product portfolio
- Geographical footprint
- Broad customer base

WEAKNESS

- Goodwill and intangible concentration
- Fixed contract prices in inflationary environment
- Subcontractor dependency
- Energy industry exposure

OPPORTUNITIES

- Regulation in industrial emissions
- ESG ratings attracting new share holders
- Developing markets industrial growth
- Increasing expenditure in infrastructure

THREATS

- Failing to integrate new acquisitions into current product mix.
- High Interest rates increasing cost of borrowing.
- Industry cutting cost in air filtration services to decrease spending in high inflation environment.
- Third-party manufacturing leading to substandard quality.

Figure 16: SWOT Analysis
Source: Team Analysis

Energy: United States EIA (Energy Information Administration) expects a rise in global energy demand by 47% in the next 30 years (Figure 13). This demand is driven by population, economic growth, particularly in developing countries (Figure 14). We believe this expected demand will be supplied by a combination of liquid fuel, natural gas, and coal. This would result in higher CO2 levels for the next three decades, increasing the need for industrial air quality control products like power generators, natural gas, refineries, and petrochemical processing industries.

Supply Drivers

High Barriers to Entry and Technology: Highly engineered products require industrial experience to develop and understand the requirements and conditions. This creates a high barrier to entry (Figure 15). Complex industrial processes are challenging in an environment with rapidly changing technology as customers continually require products and services that complement their equipment. The Original Equipment Manufacturers (OEM) have high competition in these niche products to develop and manufacture reliably. In contracts where products get extremely niche to the specific company, customers might choose to design solutions in-house and manufacture with third-party manufacturers.

Sustainable Solutions with new Technology: The pressure from environmental activists coupled with progressive regulation is persuading industries to control their emissions and tighten their manufacturing processes to minimize environmental hazards and adopt sustainable methods. Companies that provide products and services to manufacturing industries are fragmented, this creates companies that specialize in products and services catering to their niche. Companies that provide industrial products and services are making changes to their business models and diversifying their product mix to capture the growing demand for new products and services which are sustainable to capture the growing market share.

Competitive Position

CECO's position in energy and industrial solutions gives a unique advantage of modulating its product mix according to the industry's outlook, unlike Nederman (NMAN SS) serving only the industrial air filtration market. The diverse portfolio of CECO covers various platforms reducing the risk of relying on any segment. CECO holds a larger and more diverse customer base than its peers, lowering exposure to an industry or customer comparatively. CECO possesses the aftermarket service focus like Nederman (NMAN SS), asset-light model like Fuel Tech Inc (FTEK), diversified products in industrial applications like Advanced Emissions Solutions (ADES). Among its Industry peers, CECO is more adaptable to changes in products, industry trends, and global demand.

CECO Diverse Product Mix

CECO's asset-light model and short cycle focus benefit CECO with a faster revenue cycle than the rest of the industry. We expect the expanding brand names and book of business CECO is acquiring through M&A (mergers & acquisitions) to propel revenue growth in different industries and platforms (Figure 16). We feel an aftermarket focus increases customer confidence in CECO's reliability and produces recurring revenue with higher margins. When the revenue cycle length decreases, it increases CECO's potential to take on more projects on a rotational basis. Additionally, aftermarket services such as engineering studies give CECO a better understanding of industrial needs. This information could be useful in developing future products as the company has deeper insight into potential customer requirements.

Aftermarket and Short Cycle Focus

Historically the cyclicality of long-cycle products is the primary driver of volatility in CECO. As long-cycle products require extensive engineering and subcontractor involvement, margins are lower. The customers were cost-sensitive to long cycle products as it was capital Expense and capital expenditure decisions often face scrutiny from management. CECO shifting its focus into aftermarket service and short cycle products provides recurring revenue with improved margins. Since Short cycle products come under operating expenses, it gives higher bargaining power for CECO. This shift will also help CECO attain a stable SG&A as the short cycle product need lower technical expertise (needing to engineer specifically to the customer preference) and a higher volume of these products gives the CECO the advantage of economies of scale.

INVESTMENT RISKS

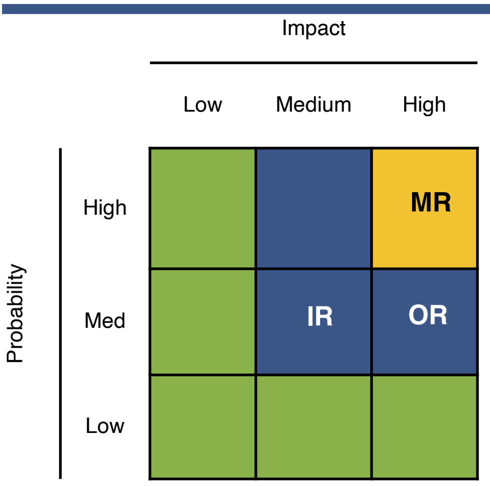

Figure 17: Risk Matrix
Source: Team Analysis, Company Data

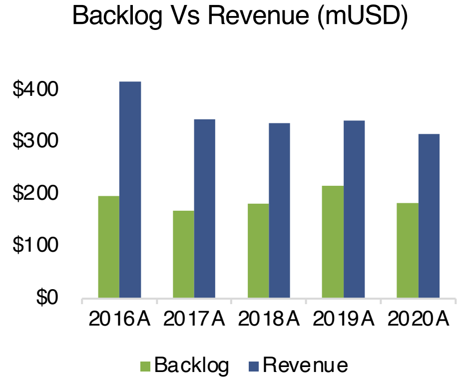

Figure 18: Backlog Vs Revenue (mUSD)
Source: Team Analysis, Company Data

Operational Risk	Mitigating Measures
Unreliable future potential revenue stream	• Increased focus on short-cycle product mix • Historically low cancellation rates
Dependance on sub-contractors	• Optimize sub-contractor relationships
Post-acquisition integration risk	• Creation of an integration team

Market Risk	Mitigating Measures
Exposure to fluctuating raw material prices	• Price increases may be passed on the customers
Exposure to energy industry	• Reduced focus on contracts from the energy industry

Industry Risk	Mitigating Measures
Competitive and fragmented market	• Acquiring smaller companies in key areas
Innovation risk	• Acquiring smaller companies

Figure 19: Risk & Mitigation Table
Source: Team Analysis

CECO Environmental (CECE) is exposed to the following risks, namely operational risk, market risk, and industry risk (Figure 7). These threats may undermine future growth prospects and reduce investment returns, and upon our team's risk analysis, we find most of these risks will occur with low to moderate probability with low to moderate impact but have identified some key risks that are high in probability and will leave a high impact on the company.

Operational Risk (OR)

A large proportion of future revenue hinges on backlogs and creating an unreliable future potential revenue stream: CECO has consistently reported its backlogs, and this typically makes up over 30% of the reported revenue of each financial year (Figure 18). With backlogs making up a large proportion of future potential revenues, there is a significant operational risk if the backlogs are delayed beyond reasonable time periods, and this can create unreliable revenue streams for CECO, which may be misleading to investors should the revenue growth rates never improve with increasing backlog growth rates.

Dependence on subcontractors: With backlogs expected to increase quarter over quarter, lengthening an operational chain that uses sub-contractors to complete a project may hurt their ability to further close on backlog orders and perform on quality. As noted in the 10K report in FY '20, most of the manufacturing for CECO's international customers is performed by sub-contractors and this represents around 35% of annual revenues. A significant dependency on third parties like a subcontractor may mean longer cycle periods to turn to revenue. Subcontractors may be experiencing the burden of a serious backlog from CECO due to shortages in labour and increased costs post-pandemic. These factors create strong pressures on subcontractors and make them more vulnerable to serious risks pertaining to efficiency, safety, and quality.

Post-acquisition integration risk: With a business strategy that has an increased focus on mergers and acquisitions (M&A), these may be a significant operational risk for CECO (Appendix X). Historically speaking, CECO has made 20 acquisitions in the past 21 years and has had to divest 4 times since. As a result, a significant financial risk of overpaying for the target company may arise. This can be reflected in the company's Goodwill to Total Asset ratio which makes up more than 30% of Total Assets. Additionally, M&A, if not executed properly run the risk of overestimating companies' synergies and may erode shareholder value over time due to the impairment of goodwill.

Market Risk (MR)

Exposure to fluctuating raw material prices: CECO uses raw materials such as steel, resin, and aluminium in the production of their products, as such, an increase in raw material prices may negatively impact CECO's cost of production (Figure 19). Additionally, due to the infrequency of orders, the company does not actively hedge against price increases and does not have fixed-price contracts which may leave CECO in a worse-off position given the nature of the industry.

Exposure to Energy industry risk: With more than 60% of sales coming from the Energy Solution Segments, this reflects CECO is dependent on the revenue segment and may be more vulnerable should the industry undergo supply and/or demand contractions.

Interest rate risk: The Federal Reserve is expected to hike interest rates at least three times in 2022 and this signals an unfavourable borrowing environment in the foreseeable future, which may hurt CECO's borrowing capacity and profitability.

Industry Risk (IR)

Competitive and extremely fragmented market: The pollution and treatment control industry is a fragmented market where no single firm has enough influence to move the industry in a single direction. CECO Environmental needs to work extremely hard to establish a brand reputation in markets that it has only just recently gained access to, for example Canada and Europe.

Innovation Risk: With increased technological requirements and an increased level of sophistication in the next generation of industries, CECO Environmental will need to ensure that its treatment control solutions are technologically advanced without which, investors will be exposed to the downside.

FINANCIAL ANALYSIS

CECE – Key GAAP Financials (mUSD)					
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Revenue	417	345.1	337.3	341.9	316
EPS, Adj per share	0.55	0.18	-0.08	0.53	0.36
EBITDA	55.8	35.2	27.7	33.8	32.8
Dividend per Share (USD)	0.26	0.23	0	0	0
			← Dividends suspended from FY 2018 – Present →		

Profitability Ratios					
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Gross Margin (%)	32.34	32.81	33.06	33.38	33.27
EBITDA Margin (%)	-1.6	6.99	6.9	9.42	8.45
EBIT Margin (%)	-6.13	2.33	2.97	5.26	4.22
ROE (%)	-17.81	-1.61	-3.9	9.53	4.15
ROA (%)	-6.96	-0.65	-1.71	4.42	1.98
ROC (%)	-8.97	-5.59	-9.79	8.33	3.78
ROIC (%)	-8.65	-5.32	-9.71	7.89	3.07

Leverage & Liquidity Ratios					
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Current Ratio	1.46	1.61	1.55	1.56	1.68
Total Debt/Equity	67.6	64.39	42.65	41.31	41.63
Total Debt/T12M EBITDA	—	4.98	3.27	2.48	3.17

Operating Figures (mUSD)					
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Backlog (Non-GAAP)	$197.00	$168.90	$182.10	$216.60	$183.10
Cancellations	N/A	$12.60	$18.30	$6.70	$9.20
Operating Ratio (%)	106%	98%	97%	95%	96%

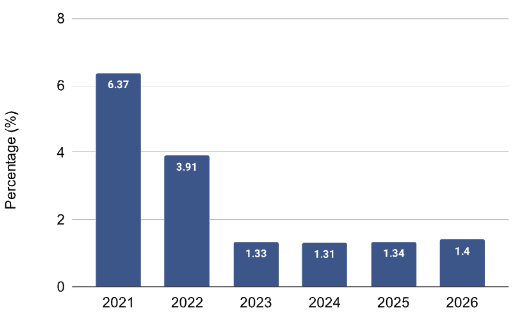

Figure 20: Air Purification Equipment Manufacturing Annual Revenue Growth Outlook 2021-2026

Source: IBIS World

Infrastructure Deal to Bring New Customers

On November 6, 2021, Congress passed the Bipartisan Infrastructure Deal. Many aspects of this deal are expected to bring business and competition to the industrial goods sector. With a strong focus on environmental safety, the plan is to rebuild and improve upon America's roads, railways, internet, and power infrastructure.

We believe CECO will benefit from its customers, including 3M, Fluor Corporation, and Caterpillar, experiencing an increase in demand in future years. In addition, environmental awareness in manufacturing is expected to increase in importance so we believe companies like CECO will experience an increase in demand from industrial manufacturing companies. We expect revenue from the air purification equipment manufacturing industry to increase at an annualized rate of 1.9% to $7.2 billion over the five years to 2026 due to demand brought on from the industrial, business, and consumer markets (Figure 20). Additionally, we expect CECO to be able to capitalize on the continued expansion of global industrialization.

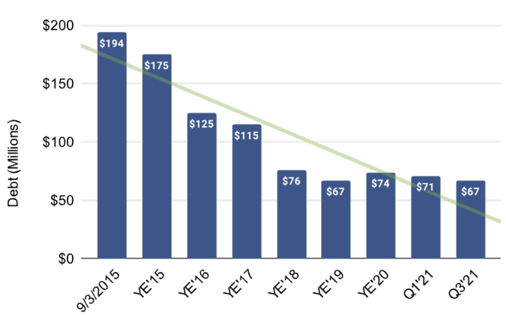

Figure 21: Debt Paydown

Source: Company Data

Short Cycle Product Shift Improving Lending

Moving into a shorter cycle product mix will allow CECO Environmental to have more recurring and predictable cash flows. There are many opportunities for growth within the company by shifting into short-cycle products including higher margins, repeatable revenue, and a more accurate market valuation. Additionally, a recent acquisition announcement, on January 10, 2022, of industrial flow leader GRC is expected to increase CECO's short cycle mix.

With an average order size of around $100k, GRC increases CECO's short cycle mix to 27% from 22%. We believe that the increased certainty present in short-term products compared to long-term products will improve its ability to borrow from banks. With a D/E ratio of 0.31 in Q3, we believe that CECO does have the capacity to take advantage of improved lending availability especially since the company has a solid track record of paying down debt (Figure 21). These borrowed funds can allow the company to expand its operations further and promote growth in its business.

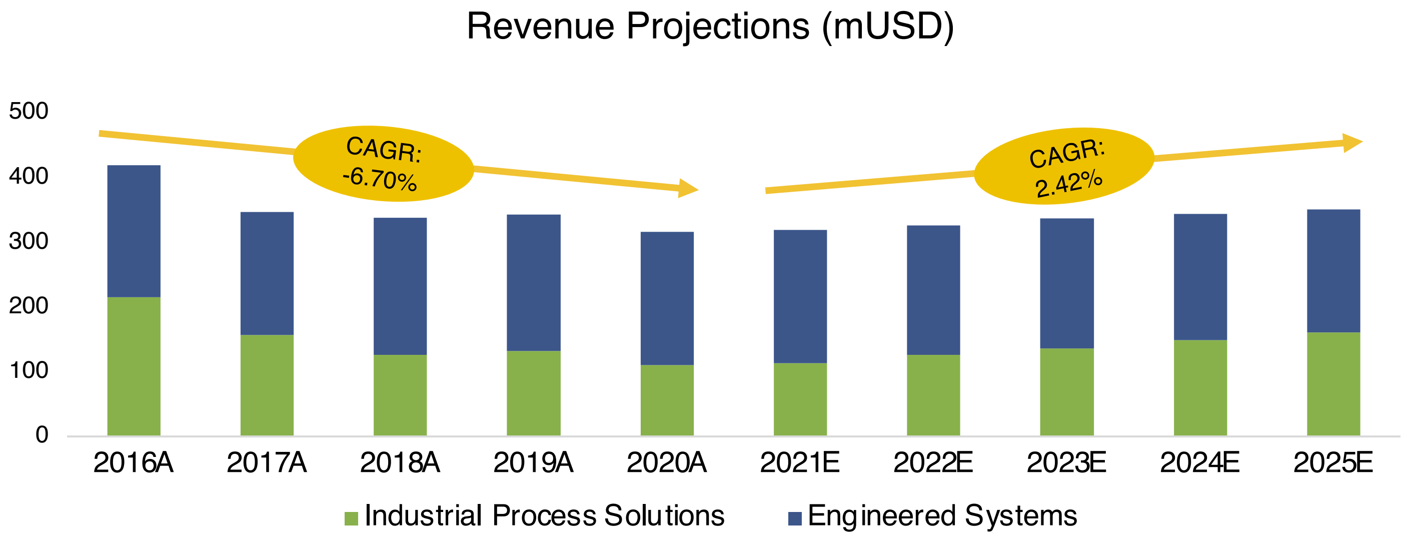

Figure 22: Revenue Projection CAGR

Source: Team Analysis

Operating (EBIT) Margin by Segment

	2016A	2017A	2018A	2019A	2020A
Industrial Solutions	10.2%	9.2%	7.8%	6.2%	2.9%
Fluid Handling Solutions	-58.6%	21.3%	17.0%	13.8%	14.1%
Energy Solutions	11.6%	7.7%	13.6%	16.1%	16.6%
Total Operating Margins	-6.1%	2.3%	3.0%	5.3%	4.2%

Operating (EBIT) Margin by Segment

	Projected Annual Forecast				
	2021P	2022P	2023P	2024P	2025P
Industrial Solutions	3.3%	5.2%	6.0%	6.7%	9.7%
Fluid Handling Solutions	13.0%	13.0%	16.0%	17.0%	16.0%
Energy Solutions	15.0%	11.0%	16.0%	13.0%	8.0%
Total Operating Margins	2.0%	2.3%	2.5%	3.0%	2.8%

Figure 23: Operating Margin Projections

Source: Team Analysis

Operating Margin Drivers

- Short-cycle products allows CECE to price their products favorably as compared to its long-cycle counterparts and this will drive the operating margins higher.
- Aftermarket services - such as replacements, retrofits and training are more personalized to customers and this allows CECE to charge a higher price point, which will drive revenues.

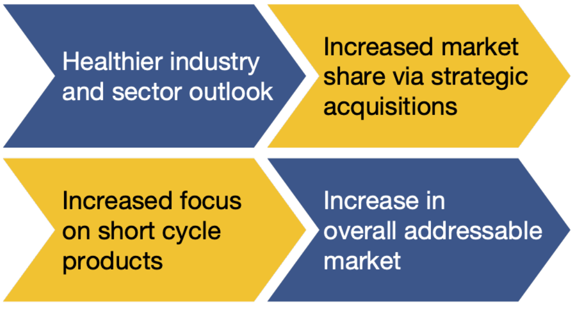

Figure 24: Revenue Growth Drivers Chart

Source: Team Analysis

Outlook Towards 2026 and Revenue Drivers

With new management at the helm of CECO Environmental, we expect to see some key transformations in the foreseeable future. We have projected a CAGR of 2.42% increase in revenue (Figure 22).

- **Healthier industry and sector outlook:** With the sector and industry set to grow post-pandemic, tighter EPA standards act as a tailwind for CECO to maintain and grow orders. We expect to see healthy backlogs moving forward with a Book-to-Bill ratio greater than 1.2x.
- **Increased focus on short-cycle products:** We believe that an increased focus on short-cycle products will create a recurring, dependable revenue stream that will reduce revenue volatility from year to year as was experienced earlier (Figure 24). An increase in short-cycle products will also change the revenue segments composition incrementally year over year (Figure 23). Accordingly, we should see more revenues proportionally from Industrial Process Solutions (formally Industrial and Fluid Handling) than Engineered Systems (formally Energy Solutions).
- **Increase in addressable market:** CECO's management has indicated that they will increase the number of environmental services offered and will begin to build a "core" in secular growth markets which we believe will unlock revenue growth potential.
- **Increased market share**: With more strategic acquisitions in the Industrial and Fluid Handling segment, we expect market share to increase which will further drive growth in revenue.

Company and Director Share Buyback

On August 3, 2021, CECO Environmental announced a share repurchase program that would expire on December 31, 2021. In this program, the company announced to purchase $5M worth of shares which represents approximately 2.0% of outstanding common shares based on the closing price of $7.04 as of June 30, 2021. CEO Todd Gleason stated, "The Board's approval of our share repurchase program reflects our confidence in CECO's strategic growth, the strength of our balance sheet, and our heightened commitment to optimizing long-term shareholder return."

We believe this significant buyback is aligned with CECO's strategy to return value to its shareholders by offsetting dilution from previous share issuances and increasing buying power over time. Additionally, this shows the company is confident in its financial position and its ability to convert its backlogs into revenue going into 2022. Since the company stopped dividends in August 2017, we believe a buyback of this value indicates that CECO is serious about its plan to provide value to shareholders via share buybacks, M&A, and company expansion.

Trade Date	Shares	Trade Price	Total
12/9/21	3690	$6.10	$22,509
12/9/21	1840	$6.10	$11,224
12/10/21	16310	$6.10	$99,491
12/10/21	8160	$6.09	$49,694
12/20/21	5426	$5.86	$31,796
12/21/21	9574	$6.01	$57,540
		Total	**$272,255**

Figure 25: Wallman F Richard insider transactions (12/9/21 - 12/20/21)
Source: Bloomberg

In addition to company buybacks, Director Wallman F Richard purchased $272,255 worth of company stock from 12/9/21 - 12/21/21 (Figure 25). The director purchased a total of 45,000 shares over this period, making up approximately 0.13% of outstanding common shares given the common stock share count of 35,809,090 from the company's Q3'21 8-K filing.

We see these significant stock purchases from both CECO Environmental and Director Wallman F Richard as a strong indication of management expecting the company to grow significantly moving into 2022 and beyond.

VALUATION

Relative Valuation

	Peer Group	Market Cap (mUSD)
1	ADVANCED EMISSIONS SOLUTIONS - (ADES US)	127
2	FUEL TECH INC - (FTEK US)	44
3	NEDERMAN - (NMAN SS)	767
4	BIOREM INC - (BRM CN)	27
Target Company	CECO Environmental (CECE US)	225

While CECO Environmental does not make clear its competitors in its 10K filings, we examined companies close to CECO's industry and sector. Two companies have been specifically identified as the closest competitor to CECO by executive management, namely, Nederman (a better peer to CECO) and Fuel Tech Inc (a poorer peer to CECO). The rest of the peers chosen all share similar business and financial characteristics. As such, the peer universe contains the following companies: Advanced Emissions (ADES), Fuel Tech Inc (FTEK), Nederman (NMAN SS), and Biorem Inc (BRM CN). Then, we proceeded to use select Operating Multiples and Equity Multiples to obtain a range of implied share price values we can expect CECE to be trading at (Figure 26).

When choosing our multiples, we found that the most appropriate multiple would be EV/Sales. Using Enterprise Value (EV) is more meticulous than its counterpart (Price) as the numerator of this multiple is adjusted for debt and cash on the balance sheet. We chose the trailing twelve months sales to compare amongst CECO's peers as we find it more suitable for firms that are not very profitable. Sales multiples are likely to be less volatile than earnings multiples and are also less likely to be impacted by year-to-year changes in the firm's earnings. We obtained an implied share price of $7.70 which confirms our recommendation that CECO is currently undervalued.

Peer Group		EV/ Sales (TTM)	EV/ EBITDA (TTM)	P/B
	ADVANCED EMISSIONS SOLUTIONS	0.73x	3.55x	1.04x
	FUEL TECH INC	0.74x	-	2.01x
	NEDERMAN	1.8x	11.59x	3.71x
	BIOREM INC	1.0x	13.93x	1.59x
Target Company	CECO Environmental	0.94x	16.00x	1.23x
	Implied Share Price (Median)	**$7.70**	**$7.38**	**$9.37**

Figure 26: Relative Valuation
Source: Team Analysis, Bloomberg

DCF Valuation

The DCF valuation uses the Free-Cash-Flow (FCF) methodology to arrive at the intrinsic value of the company. We arrived at the revenue growth rates by forecasting revenues from CECO's separate revenue segments, Engineering Solutions and Industrial Process solutions. This model considers industry projected growth rates and CECO's competitive and differentiated positioning to capture the growing industry. The model also considers how we expect CECO's capital structure to look like.

Input	Rate	Source
Expected Market Return	9.50%	S&P 500 historic annualized average return - 1%
Risk free rate	1.75%	10 year US Treasury Yield
Beta	1.11	5 year weekly adjusted
Equity risk premium	8.87%	Market Risk Premium * Beta
Cost of equity	10.32%	CAPM
Cost of debt	2.19%	Weighted average interest rate
Tax rate	31%	2020 Effective Tax Rate
WACC	**8.07%**	

Figure 27: WACC Inputs
Source: Team Analysis

Weighted Average Cost of Capital (WACC) Inputs

We estimated a WACC of 8.07% for CECO Environmental (Figure 27). The cost of debt was calculated by taking the weighted average interest rate of the company's two outstanding loans (Appendix V). Being headquartered in the US with 65% of revenue being domestic, we used the 10-year US Treasury yield of 1.75% for the risk-free rate. The cost of equity was calculated with the Capital Asset Pricing Model (CAPM) reflecting the equity risk premium, the risk-free rate, and the adjusted beta of 1.11.

VALUATION

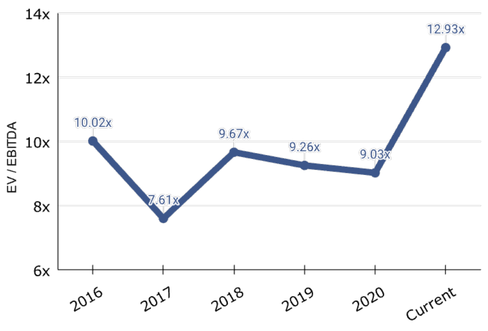

Figure 28: Historical EBITDA multiples
Source: Team Analysis, Bloomberg

Figure 29: Football field projections
Source: Team Analysis

Terminal Growth Rate / EBITDA Multiple

In January 2022, The International Monetary Fund (IMF) downgraded its global GDP growth forecast for 2022 following rising COVID cases and global supply chain disruptions. In its World Economic Report, the IMF said it expects global GDP to decelerate to 4.4% in 2022 from 5.9% in 2021. Given that CECO has international customers, we took this drop into consideration when deciding on our terminal growth rate. The industrial industry typically sees minimal growth, so we believe a perpetual growth rate of 3.0% is suitable for CECO. However, we only used the EBITDA multiple method from the DCF in our target price because we foresee that CECO will see more growth than its industry peers in the coming years given its competitive positioning. The company has a current EV/EBITDA multiple of 12.9x and the machinery industry EV/EBITDA multiple is 16.27x. Although CECO has a history of a stagnant EV/EBITDA multiple (Figure 28), we expect to see a moderate increase in the company's EBITDA multiple to 14x in 2022 as the company converts 2021 backlogs into revenue, shifts further into short-cycle revenue with higher margins, and recovers from supply chain problems found in 2021.

Target Price

We arrived at our 12-month target price of $7.78 by evenly weighing our Discounted Cash Flow model and relative valuation equity value per share. By using both models, we feel our projections from the DCF complement the relative valuation and balance out well to provide a valid target price. Following the reasoning mentioned above, we feel that the implied share price of $7.70 found with EV/Sales was the most accurate relative valuation multiple. There were outliers found with other multiples like P/B and P/E due to CECO outsourcing much of its manufacturing, keeping its assets lower than other manufacturing competitors (Figure 29). We used our base case DCF EBITDA multiple method valuation of $8.68 for the other half of our target price. We believe the base case is the most likely scenario, and that the EBITDA multiple method is a better alternative to the perpetuity method given CECO's positioning for growth coming out of the COVID-19 pandemic. As stated in our recommendation, our 12-month target price for CECO Environmental is USD 7.92, which represents a potential upside of 21.96% on the closing price of USD 6.29 on January 28, 2022. To examine how CECO will be able to capitalize on industry-specific drivers as well as company-specific revenue and margin drivers, we conducted a DCF analysis. We also complemented our analysis with a relative valuation of peers, which validated a buy recommendation.

Scenario Analysis

To ensure that our models are robust, we ensured that we examined a wide range of possible outcomes and considered a Bear Case and Bull Case in addition to the Base Case. We believe that this hinges on three main situations as listed in the table below in Figure 30. CECO Environmental may misjudge (for better or worse), the demand for its newly focused product and services mix, and where they choose to expand into international markets by means of contracts, joint-ventures, and expansion.

Scenarios	Bear Case	Base Case	Bull Case
Demand for shorter-cycle and aftermarkets products/ services	Demand softer than expected	Demand as expected	Demand greater than expectations
International market expansion	Competition in Asian and Europe markets stiffer than expected	Healthy competition and expansion in International markets	Extremely well-positioned to capture and increase market share
Post-acquisition integration	CECE needs to realise a loss on impairment due to failed synergies with the acquired company	Synergies with acquired company as expected.	Better than expected synergies with acquired company
Price Target	$7.14	$7.78	$8.19

Figure 30: Bull, Bear and Base Case
Source: Team Analysis

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Appendix I – Porter's Five Forces analysis

Bargaining Power of Buyers: The Bargaining power of buyers varies according to the product cycle. The long cycle product buyers have higher buying power because those products are CAPEX-based expenditures. Often long-cycle products are contract-based bidding processes giving buyer leverage in the transaction. Short cycle products especially aftermarket parts have very low bargaining power due to existing products/machinery needing a specific part; which could only be sold by the specific seller.

Bargaining Power of Suppliers: The bargaining power of suppliers is moderate as the companies get to pick their contractors and subcontractors for a project through the bidding process. Suppliers who procure raw materials have higher bargaining power if the underlying material is scarce volatile (price). The fixed-price contract does however mitigate the risk of having to pay more than the expected price to a certain extent if circumstances change.

The Threat of New Entrants: The products are highly Engineered to perform a specific application in niche Industrial processes. It creates a high barrier for entry to new entrants to develop their portfolio in a highly competitive environment where customers are looking for product quality, on-time delivery, advanced engineering, and operational excellence. The product specificity makes it harder to develop without prior industry knowledge.

The Threat of Substitute Products: The Ever-changing technology coupled with fierce competitors in a cost-sensitive industry leads to a high threat of substitute products. Since industrial air solutions face higher regulation risk, the compliance standards are more dynamic to change. It creates competitors to develop products that could outperform others or replace previous low-tech products with newer versions.

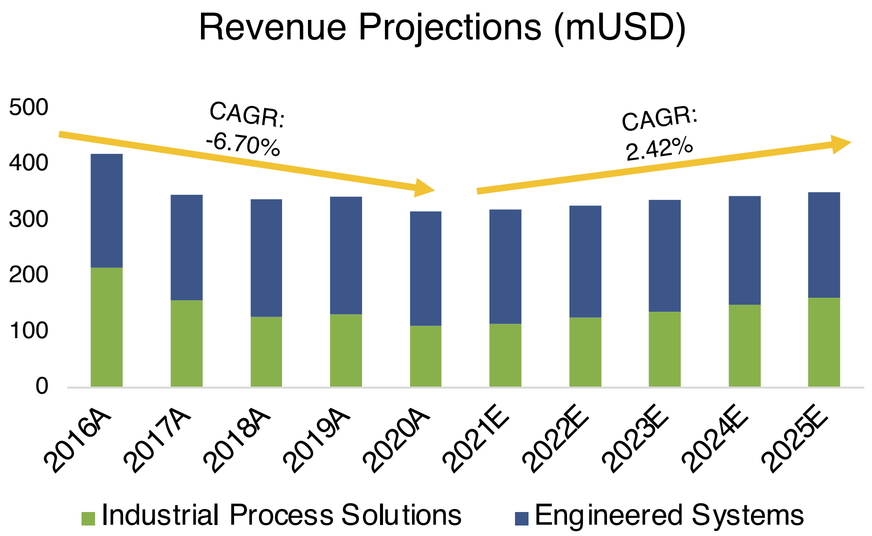
Competitive Rivalry: The industrial Solutions Industry is Highly fragmented with companies that develop products for niche industries/product segments. However, companies that do have a similar product portfolio face tight competition in timeliness, reliability, product pricing, and product engineering. Bigger Companies increase their addressable markets by entering adjacent markets via mergers and acquisitions leading to congestion and making it hard to hire contractors and procure raw material. They influence overall margins and reduce them using economics of scale to eliminate competition.

Appendix II – DuPont Decomposition analysis

	Profit Margin	Asset turnover	Financial Leverage	ROE
Advanced Emissions Solutions	-32.97%	0.38	1.66	-20.79%
CECO	2.6%	0.76	2.09	4.12%
Fuel Tech	-18.97%	0.72	1.28	-17.48%
Nederman Holding	3.0%	0.82	3.35	8.241%
Biorem	8.57%	1.23	1.57	16.55%

2020 Company Financial report
Source: Bloomberg

Appendix III – Revenue and operating margin projections



The revenue growth-trend over the past 5 years has been on a decline since 2016, with a compounded annual growth rate (CAGR) of –6.70%. Moving forward, with CECO Environmental Corp's stronger backlog growth, improved cost structures and more short-cycle mix, we expect revenue growth to increase at a 5-year CAGR of 2.42%. Additionally, we also considered the proportion of revenue from each segment. We expect a greater proportion of revenues to come from Industrial Process Solution, with a decreasing long-cycle exposure to the Energy market. We expect an increased focus on servicing the less-cyclical industries which will also be a growth driver.

Revenue Segments

						Projected Annual Forecast				
	2016A	2017A	2018A	2019A	2020A	2021P	2022P	2023P	2024P	2025P
Industrial Solutions	37%	25%	24%	27%	24%	24%	26%	29%	30%	30%
Energy Solutions	49%	55%	63%	62%	65%	64%	61%	60%	57%	54%
Fluid Handling Solution	15%	20%	13%	12%	11%	11%	12%	12%	14%	16%
Total Revenue Growth	13.5%	-17.3%	-2.5%	1.3%	-7.6%	1.0%	2.1%	3.1%	2.2%	2.1%

Operating (EBIT) Margin by Segment

						Projected Annual Forecast				
	2016A	2017A	2018A	2019A	2020A	2021P	2022P	2023P	2024P	2025P
Industrial Solutions	10.2%	9.2%	7.8%	6.2%	2.9%	3.3%	5.2%	6.0%	6.7%	9.7%
Fluid Handling Solutions	-58.6%	21.3%	17.0%	13.8%	14.1%	13.0%	13.0%	16.0%	17.0%	16.0%
Energy Solutions	11.6%	7.7%	13.6%	16.1%	16.6%	15.0%	11.0%	16.0%	13.0%	8.0%
Total Operating Margins	-6.1%	2.3%	3.0%	5.3%	4.2%	2.0%	2.3%	2.5%	3.0%	2.8%

We considered the operating margins by each reporting segment (Industrial, Fluid Handling and Energy Solutions). We expect Industrial and Fluid Handling Solutions to be the main drivers behind the increase in operating margins given by the recent acquisitions – GRC and EIS in the past year which serviced the Industrial and Fluid Handling Solutions segment. We also included more potential acquisitions built into our projections in the next 5 years which will increase the operating margins.

Appendix IV – Discounted Cash Flow (DCF) model

Target Price	Perpetuity Method	Multiple Method
Base Case	$8.23	$7.85
Best Case	$9.00	$8.68
Weak Case	$7.35	$6.57

We arrived at the following price targets for each case scenario (Base Case, Best Case and Weak Case) using both the perpetuity method and the EV/EBITDA Multiple Method.

- **Forecast of selected operating data:**

Select Operating Data										
In Millions						Projected Annual Forecast				
	2016A	2017A	2018A	2019A	2020A	2021P	2022P	2023P	2024P	2025P
Revenue	$417.0	$345.1	$337.3	$341.9	$316.0	$319.2	$325.5	$333.7	$341.4	$348.2
Revenue Growth Rate (%)	13.50%	-17.24%	-2.26%	1.36%	-7.58%	*1.0%*	*2.0%*	*2.5%*	*2.3%*	*2.0%*
EBITDA	($6.7)	$24.1	$23.3	$32.2	$26.7	$19.1	$20.5	$21.7	$23.9	$24.4
EBITDA Margin (%)	-1.61%	6.98%	6.91%	9.42%	8.45%	*6.0%*	*6.3%*	*6.5%*	*7.0%*	*7.0%*
EBIT	(25.6)	8.0	10.0	18.0	13.3	$6.4	$7.5	$8.3	$10.2	$9.7
EBIT Margin (%)	-6.14%	2.32%	2.96%	5.26%	4.21%	*2.0%*	*2.3%*	*2.5%*	*3.0%*	*2.8%*
Depreciation & Amortization	$18.9	$16.1	$13.3	$10.6	$9.9	$12.8	$13.0	$13.3	$13.7	$14.6
D&A as a % of revenue	4.53%	4.67%	3.94%	3.10%	3.13%	*4.0%*	*4.0%*	*4.0%*	*4.0%*	*4.2%*

- **Forecast of selected Balance Sheet data:**

Select Balance Sheet And Other Data										
In Millions						Projected Annual Forecast				
	2016A	2017A	2018A	2019A	2020A	2021P	2022P	2023P	2024P	2025P
Cash & Equivalents	$45.8	$29.9	$43.7	$35.6	$36.0	38.3	39.9	41.9	44.0	46.2
Accounts Receivable	10.2	7.4	4.4	9.6	5.6	6.4	8.1	9.1	10.4	11.4
Inventories	21.5	21.0	20.8	20.6	17.3	15.6	14.0	12.9	12.0	11.2
Prepaid Expenses	1.6	1.9	1.4	8.2	7.8	6.6	5.6	4.8	4.1	3.5
Accounts Payable	$59.0	$45.4	$52.0	$48.8	$55.9	$57.6	$58.2	$58.7	$59.3	$59.9
Accrued Expenses	36.6	25.4	28.2	26.4	26.3	25.0	23.7	22.5	21.4	20.4
Debt	114.4	103.5	74.5	74.1	78.8	82.0	85.2	87.8	93.1	96.8
Capex	(1.1)	(1.0)	(3.1)	(5.7)	(3.9)	(4.3)	(4.7)	(5.2)	(5.8)	(6.4)
Cash & Equivalents Growth (%)	33.92%	-34.72%	46.15%	-18.54%	1.12%	*6.5%*	*4.0%*	*5.0%*	*5.0%*	*5.0%*
Accounts Receivable Growth (%)	-12.07%	-27.45%	-40.54%	118.18%	-41.67%	*15.0%*	*25.0%*	*13.0%*	*14.0%*	*10.0%*
Inventories Growth (%)	-33.85%	-2.33%	-0.95%	-0.96%	-16.02%	*(10.0%)*	*(10.0%)*	*(8.0%)*	*(7.0%)*	*(7.0%)*
Prepaid Expenses Growth (%)	-65.96%	18.75%	-26.32%	485.71%	-4.88%	*(15.0%)*	*(15.0%)*	*(15.0%)*	*(15.0%)*	*(15.0%)*
Accounts Payable Growth (%)	-5.14%	-23.05%	14.54%	-6.15%	14.55%	*3.0%*	*1.0%*	*1.0%*	*1.0%*	*1.0%*
Accrued Expenses Growth (%)	-0.27%	-30.60%	11.02%	-6.38%	-0.38%	*(5.0%)*	*(5.0%)*	*(5.0%)*	*(5.0%)*	*(5.0%)*
Debt Growth (%)	-27.50%	-9.53%	-28.02%	-0.54%	6.34%	*4.0%*	*4.0%*	*3.0%*	*6.0%*	*4.0%*
Capital Expenditures Growth (%)	37.50%	-9.09%	210.00%	83.87%	-31.58%	*10.0%*	*10.0%*	*10.0%*	*12.0%*	*10.0%*

- **Forecast of Free Cash Flow Buildup (Base Case):**

Free Cash Flow Buildup										
$mm						Projected Annual Forecast				
	2016A	2017A	2018A	2019A	2020A	2021P	2022P	2023P	2024P	2025P
Period						-0.55	0.40	1.40	2.40	3.40
Total Revenues	$417.0	$345.1	$337.3	$341.9	$316.0	$319.2	$325.5	$333.7	$341.4	$348.2
EBITDA	($6.7)	$24.1	$23.3	$32.2	$26.7	19.1	20.5	21.7	23.9	24.4
EBIT	($25.6)	$8.0	$10.0	$18.0	$13.3	6.4	7.5	8.3	10.2	9.7
Tax rate	(16.00%)	314.98%	385.18%	(33.08%)	31.00%	25.00%	25.00%	25.00%	25.00%	25.00%
EBIAT	($29.7)	($17.2)	($28.5)	$24.0	$9.2	$4.8	$5.6	$6.3	$7.7	$7.3
Depreciation & Amortization	$18.9	$16.1	$13.3	$10.6	$9.9	12.8	13.0	13.3	13.7	14.6
Accounts receivable	$1.4	$2.8	$3.0	($5.2)	$4.0	(0.8)	(1.6)	(1.0)	(1.3)	(1.0)
Inventories	$11.0	$0.5	$0.2	$0.2	$3.3	1.7	1.6	1.1	0.9	0.8
Prepaid expenses	$3.1	($0.3)	$0.5	($6.8)	$0.4	1.2	1.0	0.8	0.7	0.6
Accounts payable	($3.2)	($13.6)	$6.6	($3.2)	$7.1	1.7	0.6	0.6	0.6	0.6
Accrued expenses	($0.1)	($11.2)	$2.8	($1.8)	($0.1)	(1.3)	(1.2)	(1.2)	(1.1)	(1.1)
Stock-Based Compensation	$2.1	$1.8	$3.2	$2.7	$1.8	5.0	1.0	2.0	1.0	2.0
Capital expenditures	($1.1)	($1.0)	($3.1)	($5.7)	($3.9)	($4.3)	($4.7)	($5.2)	($5.8)	($6.4)
Unlevered free cash flows	$2.4	($22.1)	($2.0)	$14.8	$31.7	$2.0	$15.2	$16.7	$16.3	$17.5
Discount Rate *(WACC)*						*8.0%*	*8.0%*	*8.0%*	*8.0%*	*8.0%*
Present value of free cash flows						$2.0	$14.7	$15.0	$13.6	$13.4
Sum of present values of FCFs			$58.8							

- Corresponding Equity Value per share using Growth in Perpetuity Method:

Enterprise Value to Equity Value	
Growth in perpetuity method:	
Enterprise Value	$334.1
Less: Net debt	42.8
Equity Value	$291.3
Diluted Shares Outstanding	35.4
Equity Value Per Share	$8.23

- Corresponding Equity Value per share using EV/EBITDA Multiple Method

EBITDA multiple	14.0x
EBITDA multiple method:	
Enterprise Value	$321.2
Less: Net debt	42.8
Equity Value	$278.4
Diluted Shares Outstanding	35.4
Equity Value Per Share	$7.86

Appendix V – Cost of Debt Analysis

	Loan amount	Interest rate	Interest
1.	44.07	0.02198	0.9686586
2.	22.9	0.02175	0.498075

Total interest expense	1.4667336
Total loan amount	66.97
Weighted average interest rate	0.021901353

- The Weighted Average Interest Rate was used as the cost of debt due to the company's debt being comprised of two outstanding loans.

Appendix VI – Sensitivity analysis

Sensitivity Analysis

Equity Value Per Share (Perpetuity Method)

		Long-term growth-rate (g):				
		2.6%	2.8%	3.0%	3.2%	3.4%
WACC:	8.5%	$6.94	$7.18	$7.44	$7.72	$8.02
	8.3%	$7.22	$7.48	$7.76	$8.06	$8.38
	8.1%	$7.56	$7.84	$8.15	$8.48	$8.84
	7.9%	$7.83	$8.14	$8.46	$8.82	$9.21
	7.7%	$8.18	$8.51	$8.86	$9.25	$9.68

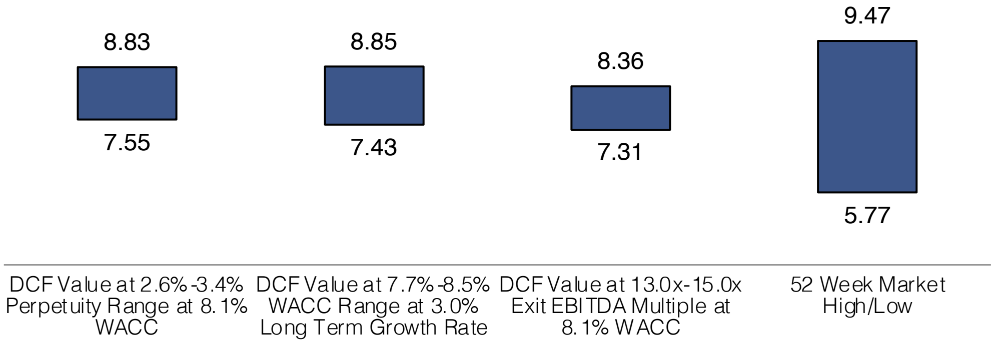
Sensitivity Analysis

Equity Value Per Share (EBITDA Multiple Method)

		Exit EBITDA multiple				
		13.0x	13.5x	14.0x	14.5x	15.0x
WACC:	8.5%	$7.22	$7.48	$7.74	$8.00	$8.26
	8.3%	$7.27	$7.53	$7.79	$8.05	$8.32
	8.1%	$7.32	$7.59	$7.85	$8.12	$8.38
	7.9%	$7.36	$7.63	$7.90	$8.16	$8.43
	7.7%	$7.41	$7.68	$7.95	$8.22	$8.48

After assigning the highest chance of likelihood to the base case scenario, we also did a sensitivity analysis and obtained a value range of price target by adjusting the following inputs: 1) Long-term growth rates for the perpetuity method, 2) WACC range and the 3) Exit EV/EBITDA multiple. We did this to ensure that our price target of $7.86 was within the range of values, considering a margin of error in estimating the inputs.

DCF Equity Valuation Range



	Low	Diff.	High
DCF Value at 2.6%-3.4% Perpetuity Range at 8.1% WACC	7.55	1.28	8.83
DCF Value at 7.7%-8.5% WACC Range at 3.0% Long Term Growth Rate	7.43	1.42	8.85
DCF Value at 13.0x-15.0x Exit EBITDA Multiple at 8.1% WACC	7.31	1.06	8.36
52 Week Market High/Low	5.77	3.70	9.47

We also visualized the equity value range for the base case scenario as the above graph to ensure that our sensitivity ranges were not too tight and allowed for a reasonable margin of error as explained earlier.

Appendix VII – Exit EV/EBITDA Multiple

EBITDA multiple	14.0x
EBITDA multiple method:	
Enterprise Value	$321.2
Less: Net debt	42.8
Equity Value	$278.4
Diluted Shares Outstanding	35.4
Equity Value Per Share	$7.86

We forecasted the EV/ EBITDA multiple to be 14.0x, in determining the Equity Value per Share. We expect CECO's multiple to expand over a 12-month period, due to improved EBITDA numbers and will trend towards an industry average of 16.27x.

	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
CECO's Historic EV/EBITDA Adjusted	10.02	7.61	9.67	9.26	9.03

Industry Name	Number of firms	All firms EV/EBITDA
Machinery	111	**16.27**

Last Updated in January 2022

By Aswath Damodaran

Source: Aswath Damodaran, Webpage: https://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/vebitda.html

Appendix VIII – Relative Valuation

Competitors	Ticker	EV to EBITDA (TTM)	Price to Book Ratio LF	EV to Sales TTM
ADVANCED EMISSIONS SOLUTIONS	ADES US	3.55x	1.20	0.73x
FUEL TECH INC	FTEK US	-	4.39	0.74x
NEDERMAN	NMAN SS	11.59x	3.65x	1.80x
BIOREM INC	BRM CN	13.93x	2.24x	1.00x

We examined the competitors price multiples (EV/ EBITDA (TTM), P/B (LF), EV/Sales (TTM).

Target Company: CECE	1st Quartile		Median		3rd Quartile	
EV/EBITDA Implied Share Price	$	4.38	$	7.38	$	8.25
P/B Ratio Implied Share Price	$	5.89	$	9.37	$	14.41
EV/Sales Implied Share Price	$	6.53	$	7.70	$	10.62

	Mkt Cap (mUSD)	Diluted EPS:Y
Median	127	0.04
CECO ENVIRONMENTAL CORP (Target)	225	0.23
FUEL TECH INC	127	-0.17
NEDERMAN HOLDING AB	44	0.34
ADVANCED EMISSIONS SOLUTIONS	767	-1.12
BIOREM INC	27	0.04

Relative Valuation - Asset Turnover

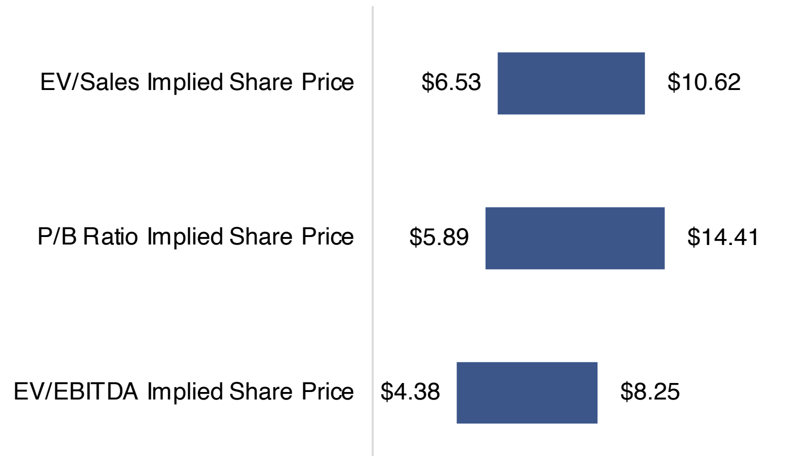
	2018	2019	2020
CECO Environmental	0.81	0.85	0.76
Peer Group (Median)	1.06	0.85	0.77
Advanced Emissions	0.20	0.42	0.38
Fuel Tech	1.11	0.73	0.73
Nederman	1.02	0.98	0.82
Biorem	1.32	1.07	1.23

Relative Valuation - Inventory Turnover

	2018	2019	2020
CECO Environmental	10.81	11	11.12
Peer Group (Median)	18.135	11.51	9.865
Advanced Emissions	0.57	2.65	3.52
Fuel Tech	38.35	32.17	65.99
Nederman	4.68	4.63	4.17
Biorem	31.59	18.39	15.56

Appendix IX– Relative Valuation Ranges

Target Company: CECO Environmental Corp.



We also took into consideration that one of the competitor, FTEK was currently unprofitable that resulted in an unmeaningful EV/EBITDA multiple to compare CECE with. We ranked the implied share prices into 1st Quartile – 3rd Quartile to determine a range at which CECO Environmental should be expected to be trading at.

We examined key financial ratios to determine CECO's and earning potential relative to its peers. We note that CECE has a much higher EPS relative to the Median.

Appendix X– Past completed Mergers and Acquisitions

Announce Date	Target Name	Acquirer Name	Seller Name	Total Value (mil.)	Payment Type
6/4/20	Environmental Integrated Solutions Lt	CECO Environmental Corp		10.3	Cash
10/29/2018	Jiangyin Zhongli Industrial Technolog	Jiangsu Zhongli Environmental Technology Co ltd	CECO Environmental Corp	N/A	Undisclosed
4/2/18	Strobic Air Corp	Cincinnati Fan & Ventilator	CECO Environmental Corp	N/A	Undisclosed
3/1/18	Keystone Filter	Porvair PLC	CECO Environmental Corp	N/A	Cash
5/4/15	PMFG Inc	CECO Environmental Corp		150.22	Cash or Stock
11/5/14	Jiangyin Zhongli Industrial Technolog	CECO Environmental Corp		1.15	Cash
11/4/14	Emtrol LLC	CECO Environmental Corp		38	Cash and Stock
9/30/2014	SAT Technology Inc	CECO Environmental Corp		N/A	Undisclosed
8/14/2014	HEE Environmental Engineering LLC	CECO Environmental Corp		N/A	Undisclosed
4/22/2013	Met-Pro Corp	CECO Environmental Corp		158.72	Cash or Stock
3/4/13	Aarding Thermal Acoustics BV	CECO Environmental Corp		41.37	Cash and Stock
1/22/2013	Adwest Technologies Inc	CECO Environmental Corp		N/A	Undisclosed
8/4/08	Flextor Inc	CECO Environmental Corp		N/A	Cash
8/4/08	AVC Specialists Inc	CECO Environmental Corp		N/A	Cash
2/21/2008	Fisher-Klosterman Inc	CECO Environmental Corp		16	Cash and Stock
11/1/07	GMD Environmental Technologies Inc	CECO Environmental Corp		N/A	Cash
1/9/07	Effox Inc	CECO Environmental Corp	Hammond Kennedy Whitney &	7.5	Cash
2/2/06	HM White Inc	CECO Environmental Corp		N/A	Undisclosed
6/22/2005	Manufacturing & corporate office	Trademark Property Co	CECO Environmental Corp	8	Undisclosed
9/7/99	Kirk & Blum Manufacturing Co/The	CECO Environmental Corp		30	Cash
9/7/99	KBD/Technic Inc	CECO Environmental Corp		N/A	Cash
3/30/1998	Integrated Facilities Management	CECO Environmental Corp		N/A	Cash

Source: Bloomberg

Appendix XI– Financial Statements

- **Income Statement (GAAP)**

CECO Environmental Corp (CECE US) - BBG GAAP

In Millions of USD except Per Share 12 Months Ending	FY 2014 12/31/2014	FY 2015 12/31/2015	FY 2016 12/31/2016	FY 2017 12/31/2017	FY 2018 12/31/2018	FY 2019 12/31/2019	FY 2020 12/31/2020
Revenue	**263.2**	**367.4**	**417.0**	**345.1**	**337.3**	**341.9**	**316.0**
+ Sales & Services Revenue	263.2	367.4	417.0	345.1	337.3	341.9	316.0
- Cost of Revenue	178.4	258.3	282.2	231.9	225.8	227.8	210.9
+ Cost of Goods & Services	178.4	258.3	282.2	231.9	225.8	227.8	210.9
Gross Profit	**84.8**	**109.2**	**134.9**	**113.2**	**111.5**	**114.1**	**105.1**
+ Other Operating Income	0.0	0.0	0.0	0.0	0.0	0.0	0.0
- Operating Expenses	63.2	104.2	160.4	105.2	101.5	96.1	91.8
+ Selling, General & Admin	51.4	67.3	81.7	89.0	87.5	86.0	76.9
+ Research & Development	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Depreciation & Amortization	10.2	25.6	—	—	—	—	—
+ Other Operating Expense	1.6	11.3	78.7	16.2	14.1	10.1	14.9
Operating Income (Loss)	**21.7**	**4.9**	**-25.6**	**8.0**	**10.0**	**18.0**	**13.3**
- Non-Operating (Income) Loss	5.4	8.0	7.4	6.6	7.5	4.6	1.5
+ Interest Expense, Net	3.1	6.0	7.7	6.7	7.1	5.4	3.5
+ Interest Expense	*3.1*	*6.0*	*7.7*	*6.7*	*7.1*	*5.4*	*3.5*
- Interest Income	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
+ Foreign Exch (Gain) Loss	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ (Income) Loss from Affiliates	—	—	—	—	—	0.0	0.0
+ Other Non-Op (Income) Loss	2.3	2.1	-0.3	-0.1	0.4	-0.8	-2.0
Pretax Income	**16.2**	**-3.1**	**-33.0**	**1.4**	**2.5**	**13.3**	**11.8**
- Income Tax Expense (Benefit)	3.1	2.6	5.3	4.4	9.6	-4.4	3.7
+ Current Income Tax	7.2	6.1	9.0	7.6	9.7	-3.4	2.6
+ Deferred Income Tax	-4.1	-3.5	-3.8	-3.1	0.0	-0.9	1.0
+ Tax Allowance/Credit	—	—	—	—	—	—	—
Income (Loss) from Cont Ops	**13.1**	**-5.7**	**-38.3**	**-3.0**	**-7.1**	**17.7**	**8.2**
- Net Extraordinary Losses (Gains)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Discontinued Operations	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ XO & Accounting Changes	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Income (Loss) Incl. MI	**13.1**	**-5.7**	**-38.3**	**-3.0**	**-7.1**	**17.7**	**8.2**
- Minority Interest	0.0	-0.1	0.0	0.0	0.0	0.0	0.0
Net Income, GAAP	**13.1**	**-5.6**	**-38.2**	**-3.0**	**-7.1**	**17.7**	**8.2**
- Preferred Dividends	0.0	0.0	0.0	0.0	0.0	0.0	0.0
- Other Adjustments	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Income Avail to Common, GAAP	**13.1**	**-5.6**	**-38.2**	**-3.0**	**-7.1**	**17.7**	**8.2**
Net Income Avail to Common, Adj	**14.2**	**4.0**	**18.8**	**6.1**	**-2.7**	**18.9**	**12.7**
Net Abnormal Losses (Gains)	1.1	9.6	57.0	9.1	4.4	1.2	4.5
Net Extraordinary Losses (Gains)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Basic Weighted Avg Shares	25.8	28.8	34.0	34.4	34.7	35.0	35.3
Basic EPS, GAAP	**0.51**	**-0.19**	**-1.12**	**-0.09**	**-0.21**	**0.51**	**0.23**
Basic EPS from Cont Ops, GAAP	**0.51**	**-0.19**	**-1.12**	**-0.09**	**-0.21**	**0.51**	**0.23**
Basic EPS from Cont Ops, Adjusted	**0.55**	**0.13**	**0.55**	**0.18**	**-0.08**	**0.54**	**0.36**
Diluted Weighted Avg Shares	26.2	28.8	34.0	34.4	34.7	35.5	35.5
Diluted EPS, GAAP	**0.50**	**-0.19**	**-1.12**	**-0.09**	**-0.21**	**0.50**	**0.23**
Diluted EPS from Cont Ops, GAAP	**0.50**	**-0.19**	**-1.12**	**-0.09**	**-0.21**	**0.50**	**0.23**
Diluted EPS from Cont Ops, Adjusted	**0.54**	**0.13**	**0.55**	**0.18**	**-0.08**	**0.53**	**0.36**
Reference Items							
Accounting Standard	US GAAP	US GAAP	US GAAP	US GAAP	US GAAP	US GAAP	US GAAP
EBITDA	32.9	21.5	-6.7	24.1	23.3	32.2	26.7
EBITDA Margin (T12M)	12.51	5.84	-1.60	6.99	6.90	9.42	8.45
EBITA	29.2	17.3	-11.7	19.6	19.8	30.1	24.2
EBIT	21.7	4.9	-25.6	8.0	10.0	18.0	13.3
Gross Margin	32.23	29.71	32.34	32.81	33.06	33.38	33.27
Operating Margin	8.23	1.35	-6.13	2.33	2.97	5.26	4.22
Profit Margin	4.97	-1.52	-9.16	-0.88	-2.11	5.18	2.60
Sales per Employee	309,667.06	314,035.90	429,908.25	392,103.41	421,673.75	411,890.36	432,891.78
Dividends per Share	0.23	0.26	0.26	0.23	0.00	0.00	0.00
Total Cash Common Dividends	5.9	8.0	9.0	7.8	0.0	0.0	0.0
Depreciation Expense	3.7	4.2	5.0	4.5	3.5	2.1	2.5
Rental Expense	2.9	4.0	4.5	4.2	3.7	3.6	3.5

Source: Bloomberg

• **Balance Sheet**

CECO Environmental Corp (CECE US) - Standardized

In Millions of USD except Per Share 12 Months Ending	FY 2011 12/31/2011	FY 2012 12/31/2012	FY 2013 12/31/2013	FY 2014 12/31/2014	FY 2015 12/31/2015	FY 2016 12/31/2016	FY 2017 12/31/2017	FY 2018 12/31/2018	FY 2019 12/31/2019	FY 2020 12/31/2020
Total Assets										
+ Cash, Cash Equivalents & STI	12.7	23.0	22.7	18.2	34.2	45.8	29.9	43.7	35.6	36.0
+ Cash & Cash Equivalents	12.7	23.0	22.7	18.2	34.2	45.8	29.9	43.7	35.6	36.0
+ ST Investments	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Accounts & Notes Receiv	23.1	29.5	44.4	15.2	11.6	10.2	7.4	4.4	9.6	5.6
+ Accounts Receivable, Net	23.1	29.5	44.4	15.2	11.6	10.2	7.4	4.4	9.6	5.6
+ Notes Receivable, Net	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Unbilled Revenues	10.6	5.7	11.1	24.4	43.2	38.1	33.9	29.7	34.8	45.5
+ Inventories	4.3	3.9	25.4	23.4	32.5	21.5	21.0	20.8	20.6	17.3
+ Raw Materials	3.0	2.5	19.8	18.8	24.3	17.9	18.4	15.8	15.2	14.3
+ Work In Process	0.0	0.0	3.2	2.6	6.4	4.0	3.2	6.1	7.3	5.6
+ Finished Goods	1.1	1.1	3.0	2.5	2.7	1.5	0.9	0.8	0.7	0.5
+ Other Inventory	0.2	0.3	-0.5	-0.6	-1.0	-1.9	-1.6	-1.9	-2.6	-3.0
+ Other ST Assets	2.7	2.2	21.3	61.8	106.9	97.3	81.7	62.3	79.0	79.0
+ Prepaid Expenses	—	—	3.5	4.2	4.7	1.6	1.9	1.4	8.2	7.8
+ Derivative & Hedging Assets	0.0	0.0	0.0	0.0	0.0	—	—	—	—	—
+ Assets Held-for-Sale	—	—	11.1	4.2	1.7	7.8	7.9	1.2	0.6	0.5
+ Discontinued Operations	—	—	—	—	0.0	0.0	—	—	—	—
+ Misc ST Assets	2.7	2.2	6.7	53.5	100.5	87.9	71.9	59.7	70.1	70.8
Total Current Assets	**53.5**	**64.3**	**124.8**	**143.0**	**228.5**	**213.0**	**173.9**	**160.9**	**179.5**	**183.5**
+ Property, Plant & Equip, Net	5.7	4.9	21.7	19.0	45.0	27.3	23.4	22.2	28.9	27.6
+ Property, Plant & Equip	15.6	15.2	34.0	34.2	62.6	43.7	44.8	45.1	48.1	45.9
- Accumulated Depreciation	10.0	10.3	12.3	15.2	17.6	16.5	21.4	22.9	19.3	18.3
+ LT Investments & Receivables	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Other LT Assets	20.2	24.9	202.1	250.2	325.4	258.4	241.2	209.5	200.3	208.2
+ Total Intangible Assets	18.4	24.4	197.5	244.0	321.5	252.9	236.6	206.4	197.6	204.4
+ Goodwill	*14.7*	*19.5*	*132.2*	*165.9*	*220.2*	*170.2*	*167.0*	*152.2*	*152.0*	*161.8*
+ Other Intangible Assets	*3.7*	*4.8*	*65.2*	*78.2*	*101.3*	*82.8*	*69.6*	*54.2*	*45.6*	*42.6*
+ Deferred Tax Assets	0.8	—	0.1	3.0	0.0	0.0	—	—	—	—
+ Derivative & Hedging Assets	0.0	0.0	0.0	0.0	0.0	—	—	—	—	—
+ Discontinued Operations	—	—	—	—	—	—	—	—	—	—
+ Misc LT Assets	1.0	0.5	4.6	3.2	3.9	5.5	4.6	3.1	2.7	3.8
Total Noncurrent Assets	**25.9**	**29.8**	**223.8**	**269.1**	**370.4**	**285.7**	**264.6**	**231.7**	**229.1**	**235.8**
Total Assets	**79.3**	**94.1**	**348.5**	**412.1**	**598.8**	**498.6**	**438.5**	**392.6**	**408.6**	**419.3**
Liabilities & Shareholders' Equity										
+ Payables & Accruals	14.0	16.2	35.9	54.2	100.7	97.1	70.8	82.0	75.2	82.7
+ Accounts Payable	8.2	11.1	23.1	31.9	62.2	59.0	45.4	52.0	48.8	55.9
+ Accrued Taxes	0.4	1.1	1.6	0.4	1.6	1.5	0.0	1.8	0.0	0.5
+ Interest & Dividends Payable	0.0	0.2	0.0	0.2	0.2	—	—	—	—	—
+ Other Payables & Accruals	5.4	3.8	11.2	21.7	36.7	36.6	25.4	28.2	26.4	26.3
+ ST Debt	0.0	0.0	9.9	8.9	19.5	14.1	16.6	1.7	5.6	6.0
+ ST Borrowings	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ ST Lease Liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	2.8
+ ST Finance Leases	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.5*	*0.6*
+ ST Operating Leases	—	—	—	—	—	—	—	—	*2.6*	*2.3*
+ Current Portion of LT Debt	—	—	9.9	8.9	19.5	14.1	16.6	1.7	2.5	3.1
+ Other ST Liabilities	9.6	11.4	13.5	14.7	28.0	35.1	20.5	20.1	34.4	20.7
+ Deferred Revenue	9.6	11.4	13.5	14.7	28.0	35.1	20.5	20.1	34.4	20.7
+ Derivatives & Hedging	0.0	0.0	0.0	0.0	0.0	—	—	—	—	—
+ Discontinued Operations	—	—	—	—	—	—	—	—	—	—
+ Misc ST Liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Current Liabilities	**23.6**	**27.5**	**59.3**	**77.8**	**148.2**	**146.4**	**107.9**	**103.9**	**115.2**	**109.4**
+ LT Debt	9.6	0.0	79.2	103.0	157.8	114.4	103.5	74.5	74.1	78.8
+ LT Borrowings	9.6	0.0	79.2	103.0	157.8	114.4	103.5	74.5	55.7	62.7
+ LT Lease Liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.5	16.1
+ LT Finance Leases	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*7.3*	*6.8*
+ LT Operating Leases	—	—	—	—	—	—	—	—	*11.1*	*9.3*
+ Other LT Liabilities	3.1	4.6	39.6	50.1	47.8	47.8	40.6	35.7	26.3	27.5
+ Accrued Liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Pension Liabilities	3.0	3.1	6.6	11.0	11.0	11.1	9.6	8.8	8.9	9.7
+ Pensions	—	—	*0.0*	—	—	—	—	—	—	—
+ Other Post-Ret Benefits	—	—	*0.0*	—	—	—	—	—	—	—
+ Deferred Revenue	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Deferred Tax Liabilities	—	0.1	—	22.2	17.7	13.0	10.2	8.8	5.9	7.0
+ Derivatives & Hedging	0.0	0.0	0.0	0.0	0.0	—	—	—	—	—
+ Misc LT Liabilities	0.2	1.4	33.1	16.8	19.1	23.8	20.8	18.1	11.5	10.8
Total Noncurrent Liabilities	**12.7**	**4.6**	**118.8**	**153.0**	**205.6**	**162.2**	**144.1**	**110.1**	**100.4**	**106.3**
Total Liabilities	**36.4**	**32.1**	**178.1**	**230.9**	**353.8**	**308.6**	**252.0**	**214.0**	**215.6**	**215.7**
+ Preferred Equity and Hybrid Capital	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Share Capital & APIC	44.4	55.0	159.8	169.2	243.6	245.2	248.5	251.8	254.2	255.7
+ Common Stock	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4
+ Additional Paid in Capital	44.2	54.8	159.6	168.9	243.3	244.9	248.2	251.4	253.9	255.3
- Treasury Stock	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
+ Retained Earnings	1.3	9.7	11.9	19.1	5.5	-41.7	-52.7	-59.4	-46.3	-38.1
+ Other Equity	-2.4	-2.3	-1.0	-6.6	-9.6	-13.0	-8.9	-13.4	-14.5	-14.5
Equity Before Minority Interest	**43.0**	**62.0**	**170.4**	**181.2**	**239.2**	**190.1**	**186.6**	**178.6**	**193.0**	**202.7**
+ Minority/Non Controlling Interest	0.0	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0	1.0
Total Equity	**43.0**	**62.0**	**170.4**	**181.2**	**245.0**	**190.1**	**186.6**	**178.6**	**193.0**	**203.6**
Total Liabilities & Equity	**79.3**	**94.1**	**348.5**	**412.1**	**598.8**	**498.6**	**438.5**	**392.6**	**408.6**	**419.3**
Reference Items										
Accounting Standard	US GAAP	US GAAP	US GAAP	US GAAP	US GAAP	US GAAP	US GAAP	US GAAP	US GAAP	US GAAP
Shares Outstanding	14.5	17.0	25.6	26.3	33.9	34.2	34.6	34.8	35.1	35.4
Number of Treasury Shares	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Pension Obligations	3.0	3.1	6.6	11.0	11.0	11.1	9.6	8.8	8.9	9.7
Future Minimum Operating Lease Obligati	5.6	7.4	7.3	14.3	17.1	15.5	17.3	10.1	16.6	13.8
Capital Leases - Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	7.3
Options Granted During Period	0.1	0.2	0.0	0.3	0.3	0.1	0.1	0.0	—	1.2
Options Outstanding at Period End	1.2	1.2	—	1.7	1.9	1.5	0.7	0.5	0.4	1.6
Net Debt	-3.1	-23.0	66.4	93.7	143.1	82.7	90.2	32.5	44.1	48.8
Net Debt to Equity	-7.27	-37.09	38.98	51.70	58.42	43.49	48.36	18.19	22.87	23.95
Tangible Common Equity Ratio	40.34	53.96	-17.90	-37.36	-29.67	-25.58	-24.77	-14.94	-2.17	-0.81
Current Ratio	2.26	2.34	2.10	1.84	1.54	1.46	1.61	1.55	1.56	1.68
Cash Conversion Cycle	48.84	49.22	67.97	34.32	-11.38	-37.17	-39.59	-38.59	-40.19	-50.55
Number of Employees	523.00	—	—	850.00	1,170.00	970.00	880.00	800.00	830.00	730.00

Source: Bloomberg

- **Cash Flow Statement**

CECO Environmental Corp (CECE US) - Standardized

In Millions of USD except Per Share 12 Months Ending	FY 2012 12/31/2012	FY 2013 12/31/2013	FY 2014 12/31/2014	FY 2015 12/31/2015	FY 2016 12/31/2016	FY 2017 12/31/2017	FY 2018 12/31/2018	FY 2019 12/31/2019	FY 2020 12/31/2020
Cash from Operating Activities									
+ Net Income	10.9	6.6	13.1	-5.6	-38.2	-3.0	-7.1	17.7	8.2
+ Depreciation & Amortization	1.3	6.6	11.3	16.5	18.9	16.1	13.3	10.6	9.9
+ Non-Cash Items	1.9	3.4	-3.0	16.3	64.9	1.6	4.1	1.3	1.0
+ Stock-Based Compensation	0.7	1.1	0.7	2.0	2.1	1.8	3.2	2.7	1.8
+ Deferred Income Taxes	0.5	1.1	-4.1	-3.5	-3.8	-3.1	0.0	-0.9	1.0
+ Other Non-Cash Adj	0.8	1.2	0.3	17.8	66.5	3.0	1.0	-0.4	-1.8
+ Chg in Non-Cash Work Cap	2.8	7.6	-3.6	-14.6	24.1	-8.1	11.7	-19.4	-14.6
+ (Inc) Dec in Accts Receiv	-5.1	2.8	2.5	-15.6	13.3	14.1	-6.1	-15.6	8.4
+ (Inc) Dec in Inventories	0.5	1.7	2.0	-3.5	9.4	0.9	-1.7	-0.2	4.4
+ Inc (Dec) in Other	7.4	3.1	-8.1	4.5	1.3	-23.1	19.4	-3.6	-27.4
+ Net Cash From Disc Ops	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cash from Operating Activities	**16.8**	**24.2**	**17.7**	**12.6**	**69.6**	**6.6**	**22.0**	**10.2**	**4.4**
Cash from Investing Activities									
+ Change in Fixed & Intang	0.1	-1.2	6.6	2.4	-0.4	-0.7	3.2	-5.1	-3.3
+ Disp in Fixed & Intang	0.4	0.2	7.7	3.2	0.7	0.4	6.3	0.5	0.6
+ Disp of Fixed Prod Assets	*0.4*	*0.2*	*7.7*	*3.2*	*0.7*	*0.4*	*6.3*	*0.5*	*0.6*
+ Disp of Intangible Assets	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
+ Acq of Fixed & Intang	-0.3	-1.4	-1.2	-0.8	-1.1	-1.0	-3.1	-5.7	-3.9
+ Acq of Fixed Prod Assets	*-0.3*	*-1.4*	*-1.2*	*-0.8*	*-1.1*	*-1.0*	*-3.1*	*-5.7*	*-3.9*
+ Acq of Intangible Assets	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
+ Net Change in LT Investment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Dec in LT Investment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Inc in LT Investment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Net Cash From Acq & Div	-4.0	-104.4	-44.4	-37.5	0.0	0.0	35.1	0.0	-5.9
+ Cash from Divestitures	0.0	0.0	0.0	0.0	0.0	0.0	35.1	0.0	0.0
+ Cash for Acq of Subs	-4.0	-104.4	-44.4	-37.5	0.0	0.0	0.0	0.0	-5.9
+ Cash for JVs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Other Investing Activities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
+ Net Cash From Disc Ops	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cash from Investing Activities	**-3.9**	**-105.6**	**-37.8**	**-35.0**	**-0.4**	**-0.7**	**38.3**	**-5.1**	**-9.2**
Cash from Financing Activities									
+ Dividends Paid	-2.5	-4.3	-5.9	-8.0	-9.0	-7.8	0.0	0.0	0.0
+ Cash From (Repayment) Debt	0.0	0.0	23.2	51.6	-55.6	-11.9	-42.0	-11.1	3.7
+ Cash From (Repay) ST Debt	0.0	0.0	—	—	—	0.0	0.0	0.0	0.0
+ Cash From LT Debt	—	0.0	—	—	—	0.0	0.0	0.0	96.0
+ Repayments of LT Debt	—	0.0	—	—	—	-11.9	-42.0	-11.1	-92.3
+ Cash (Repurchase) of Equity	-0.2	-1.0	1.3	0.2	1.6	1.4	0.1	0.1	0.0
+ Increase in Capital Stock	0.2	1.4	2.3	0.2	1.8	1.4	0.1	0.1	0.0
+ Decrease in Capital Stock	-0.5	-2.4	-1.0	0.0	-0.2	0.0	0.0	0.0	0.0
+ Other Financing Activities	0.0	86.4	-2.3	-4.9	7.1	-4.4	-2.9	-1.1	0.0
+ Net Cash From Disc Ops	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cash from Financing Activities	**-2.7**	**81.1**	**16.3**	**38.9**	**-55.8**	**-22.7**	**-44.9**	**-12.1**	**3.7**
Effect of Foreign Exchange Rates	0.0	0.0	0.0	-0.5	-1.7	0.9	-1.5	-0.4	1.9
Net Changes in Cash	**10.3**	**-0.3**	**-3.8**	**16.0**	**11.6**	**-15.9**	**13.8**	**-7.5**	**0.9**
Cash Paid for Taxes	**2.6**	**2.2**	**8.7**	**5.1**	**6.4**	**3.0**	**10.2**	**5.9**	**2.2**
Cash Paid for Interest	**0.9**	**1.8**	**2.8**	**4.7**	**6.9**	**5.7**	**5.6**	**3.5**	**3.2**
Reference Items									
EBITDA	17.9	13.6	32.9	21.5	-6.7	24.1	23.3	32.2	26.7
Trailing 12M EBITDA Margin	13.28	6.90	12.51	5.84	-1.60	6.99	6.90	9.42	8.45
Net Cash Paid for Acquisitions	4.0	104.4	44.4	37.5	0.0	0.0	—	—	5.9
Tax Benefit from Stock Options	—	—	0.9	0.0	0.1	0.0	0.0	—	—
Free Cash Flow	16.6	22.8	16.5	11.9	68.5	5.5	18.9	4.6	0.5
Free Cash Flow to Firm	17.4	—	19.0	—	—	-8.9	-1.5	—	2.9
Free Cash Flow to Equity	16.9	23.0	47.5	66.7	13.6	-6.0	-16.9	-6.0	4.8
Free Cash Flow per Basic Share	1.12	1.13	0.64	0.41	2.02	0.16	0.54	0.13	0.01
Price to Free Cash Flow	8.90	14.25	24.23	18.62	6.92	31.88	12.42	58.62	516.00
Cash Flow to Net Income	1.55	3.69	1.35	—	—	—	—	0.58	0.54

Source: Bloomberg

Appendix XII– Citations

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