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KAMAN CORPORATION

Date: Feb. 3rd, 2023 Ticker (KAMN) Exchange: NYSE Sector: Industrials Aerospace & Defense Current Price: \$25.00 Target Price: \$27.00 Recommendation: HOLD Upside: 8%

Snapshot	
52-Week Range	\$18.88-\$46.50
Dividend P/S	\$0.80
Shares Outstanding	30434000
Beta (5Y Monthly)	0.98

Figure 1

Source: TradingView

SUMMARY Kaman Corporation (KAMN) is an aerospace company headquartered in Bloomfield, CT, offering engineered products, precision products, and structures for various industries.

INVESTMENT THESIS

We issue a HOLD rating for Kaman Corporation (NYSE: KAMN) based on a 12-month target price of \$27.00. Our target price is comprised of an evaluation and analysis of the current market, the macroeconomic forecast, Discounted cashflow model, and multiples-based valuations ([APPENDIX C-1: 10-Year Projected Discount 1](#)). With KAMN stock currently trading around \$25.00 Per Share, our current outlook represents an approximate 8% upside from today's market price. We forecast the decline in sales for the JPF contract will affect full year sales in 2022 and 2023 but expect KAMN will pick up and maintain cashflows in their Engineered Products segment.

Year to date, the KAMN stock price is up over 12.00%, but is down 37.00% over the previous year with a high of \$46.50 ([Figure 2](#)). The decrease in stock price was related to economic headwinds, supply chain issues, the rise in both inflation and interest rates, as well as but not limited to general market conditions. We see KAMN as oversold over the last year and expect to see positive performance regarding equity in 2023. Our **HOLD** rating takes into account the recent outperformance of the S&P 500 and gives a current fair value of KAMN at \$27.00 per share.



Figure 2 Source: TradingView

INDUSTRY OVERVIEW

Within KAMN, the business sells between four main segments. 1) Defense. 2) Commercial, business, & general aviation. 3) Medical. 4) Industrials.

DEFENSE - The Defense industry outlook aligns with the growth of the global Defense and Security market. This has been catalyzed by the ongoing, large-scale international violence and tensions throughout Europe and East Asia. As a result, most National Defense budgets are positioned for growth, with the USA leading expenditure by a significant margin, spending \$801B USD in 2021 and roughly \$817B in 2022 – this is more than 3 times China's expenditure who comes in second on the overall list ([Figure 4](#)). Thus, expectations for the industry are continued significant growth with the changing landscape of military spending. This is positive for US businesses, especially as the US is the leading Defense manufacturer and exporter. However, there is significant pressure within the industry to

KAMN's Industry growth - Defense

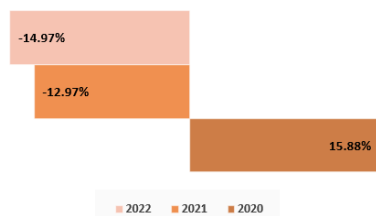


Figure 3

Source: Company Data

**US MILITARY SPENDING
2016-2021
(IN BILLION U.S.
DOLLARS)**

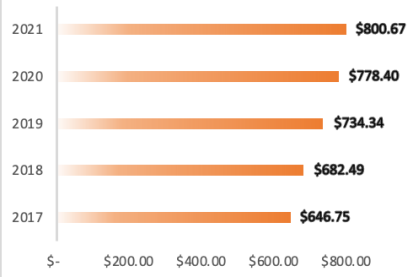


Figure 4 Source: SIPRI Database

improve efficiency and maximize profitability, as advancements in technology have led manufacturers and buyers to change their suppliers and product choice – the industry is on the digital pathway with automation and smart factories allowing for greater efficiency.

This requires businesses such as KAMN to have the capacity to provide diverse products and incorporate innovation and adaptability as fundamental concepts to their operation structure. Additionally, what separates the defense industry from others is its durability. With the nature of the industry requiring a high frequency of long-term contracts and being somewhat anti-cyclical, if a recession is to come in the near future, the industry should be able to hold up. Thus, it is fortunate that this is the largest industry KAMN operates with a 45% weight.

COMMERCIAL, BUSINESS, & GENERAL AVIATION

The S&P 500 Airlines Industry Index had a -6.75% YOY change. Although losses will likely continue into 2023, the industry is expected to slowly recover from the pandemic-driven suppression in consumer demand and we expect that the sector will turn profitable later in 2023 as consumer air travel consistently returns to pre-pandemic levels.

**KAMN's Industry growth -
Commercial, GA, Business**

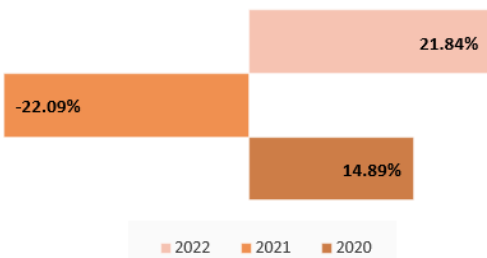


Figure 5 Source: Company Data

KAMN's commercial, business, and general segments made up 31% of KAMN's end-market sales in 2022. It produces metallic details, complex metallic aerostructures, and metallic subassemblies for manned and unmanned helicopters, fixed-wing aircraft, and ground platforms. One of the biggest catalysts for this sector was the COVID-19 pandemic which impacted sales volume between 2020 – 2021 and delayed deliveries which created a -22.09% sales growth at that time (Figure 5). Boeing and Airbus are its top customers, making up 28% of its commercial sales. Boeing seeks KAMN's products on a sole source basis, but there is still room for competitors to beat out KAMN, which keeps pricing pressure high. KAMN's commercial, business, and general aviation portfolio has become more diversified over the last 4 years, aiding in the rebound of the segment. Examples include the acquisition of Bal Seal, JPF deliveries, a strong backlog in engineered products 2021 year-end, the acquisition of Parker-Hannifin Aircraft wheel and brake, and investment in Near Earth Autonomy.

MEDICAL

The Healthcare sector in the S&P 500 finished the year off -4.5% YOY better than the broader indexes -20% YOY return (Figure 6). We expect that the sector will remain relatively neutral and believe that the defensive attributes of the Healthcare Sector will remain intact even if a larger-than-expected economic downturn hits the US economy in 2023.

KAMN's Industry growth - Medical

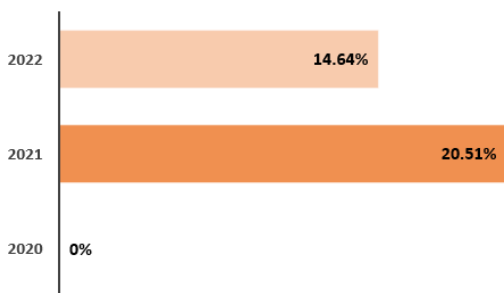


Figure 6 Source: Company Data

KAMN is a supplier of bearings for turbomolecular pumps. Healthcare providers are reliant on the bearings KAMN produces, as they are essential parts of their needed equipment, and believe these products will continue to see strong demand into 2023. The growth of the medical industry grew 9.7% YOY and expect similar growth into 2023. KAMN has also been investing in a new healthcare market to stretch into the cardiovascular industry and provide high RPM seals for heart valve pumps. Their target launch is as soon as 2024 pending certification. Under the current environment, medical sales reconcile to approximately 14% of the business' sales, which equates to less than \$100 Million in aggregate revenue per year. This portion of KAMN's business is still a small fraction of its

overall business structure. The addition of the heart valve pump upon approval will contribute to the firm's overall diversification and earnings/growth in 2-3 years.

INDUSTRIALS

The Industrial sector had a relatively stable year with a -.29% YOY based on the Industrial S&P 500. This sector is typically neutral and can usually withstand an economic downturn such as the one that occurred in 2022. Still, this sector is expected to have steady growth/loss in the upcoming years.

KAMN's Industry growth - Industrial & other

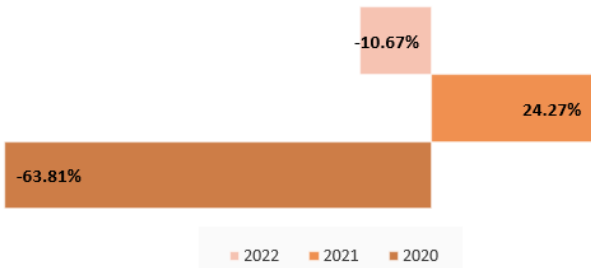


Figure 7
Source: Company Data

In 2021, KAMN's industrial segment exceeded full-year expectations, benefiting from strong order rates, improved performance, and the adoption of innovative technologies. Over the past three years, this segment has grown from 6% to 8% to 11%. As of recent reports, the sector has decreased by 0.4% for the past 9 months. The success of this sector may partially be attributed to KAMN's ability to recover from the impact of the COVID-19 pandemic. Sales in this industry grew by 18.5% from 2020-2021. The most sought-after products in this sector are bearings and precision seals, springs, and contacts. The demand for these seals and springs is expected to continue increasing year over year, and the company is also launching a new product with unique abrasion-resistant technology in the coming years, which is expected to become a popular commodity. Miniature bearings have played a key role in the

increased advancement of this segment. The bearings provide a steady demand with good margins, potentially establishing them as a stable money-maker. With 83% of sales being by way of OEM and 17% being aftermarket, it would be wise to increase the aftermarket percentage as it is a less risky market. This is due to the nature of bearings requiring significant and frequent damage repair – thus consistent demand. Additionally, in the nine-month fiscal period ending September 30, 2022, KAMN had a higher sales volume of seals, springs, and contacts used in industrial applications than in previous years. This helps offset the decrease in sales of bearings experienced in the year 2022 so far.

BUSINESS DESCRIPTION

KAMN Corporation, together with its subsidiaries operates in the aerospace, defense, medical, and industrial markets. Through these different markets, KAMN Corporation has broken down its business into three separate divisions: Engineered Products, Precision Products, and Structures.

ENGINEERED PRODUCTS

Industries	Engineered products		
	Defense Bearings	Comm Bearings	Springs, Seals & Contacts
Defense	✓		✓
Safe and Arms			
Commercial, Business, and GA		✓	
Medical			✓
Industrial and Other			✓

Figure 8
Source: Company Data

KAMN's Engineered Products segment is their largest segment and produces the largest net sales out of the three. This segment develops products for aerospace and defense, industrial, and medical industries and is expected to continue growing through M&A. Products supplied include aircraft wheels and brakes, self-lubricating bearings, traditional airframe bearings, flexible drive systems, high-precision miniature bearings,

engine aftermarket components, and high-precision seals, springs, and contacts (Figure 8). These products are sold for use in helicopters, fixed-wing, and UAV aircraft. The bearings that are sold to the US military for the AH-64 helicopter, Virginia Class submarine, and Joint Strike Fighter aircraft make up a large share of defense-engineered product sales. Bearings produced for Boeing, Airbus, and Bombardier platforms make up most of the commercial bearing sales. Additionally, the Engineered Products division has introduced a new Titanium Diffusion Hardening (TDH) process and has a recent order from an electric vertical takeoff and landing manufacturer. The corporation is looking to use the TDH process across more end markets in the future. The segment's percent of total sales is expected to grow to 53.42% in 2026 primarily driven by the rebounding commercial, business, and general aviation segment producing commercial bearings.

PRECISION PRODUCTS

Industries	Precision Products		
	FMU-152 A/B - JPF	K-Max KARGO	Missile Fuzing
Defense	✓		✓
Safe and Arms	✓		✓
Commercial, Business, and General Aviation		✓	✓
Medical			
Industrial and Other			

Figure 9
Source: Company Data

The Precision Products segment is a supplier for the United States and Allied Forces via subcontracts that relate to the safe and arming solutions for missile and bomb systems. The systems used by KAMN are their Joint Programmable Fuse that works on the ATacMS, AMRAAM, Harpoon, JASSM, MK54, SLAM-ER, and Tomahawk missile and bomb systems. Precision Products additionally operates on supporting mission & flight-critical applications that work within ruggedized avionics modules, advanced sensor technology, and Signal Conditioning electronics. Lastly, the Precision Products division operates within subcontracts for Helicopters that work to supply, restore, and modify the SH-2G Super Sea sprite maritime, assist in the

manufacturing of the heavy lift K-Max helicopter, the K-MAX TITAN, and the KARGO UAV (Figure 9). We expect this segment to have negative growth in the coming years because of the halting of the JPF program.

STRUCTURES

The third and final segment of KAMN is their Structures Segment, the weakest performing of the three.

Industries	Structures				
	A-10	Black Hawk	AH-1Z	777/767 FTE	Composite Products
Defense	✓	✓	✓		✓
Safe and Arms	✓				
Commercial, Business, and General Aviation				✓	
Medical					✓
Industrial and Other					✓

Figure 10
Source: Company Data

This segment spreads itself amongst three industries, the Aerospace, Defense, and Medical markets. This is achieved through its production of highly sophisticated composite and metallic aerostructures that are used in commercial, military, and general aviation, whilst also producing medical imaging tables.

KAMN's main Structure programs include the production of the Black Hawk Helicopter cockpit, A-10 Thunderbolt wing assemblies, AH-1Z metal sheets, and Fixed Trailing Edge assemblies for the Boeing 777 and 767 commercial aircraft (Figure 10). Additionally, the recent expansion into the medical industry has seen KAMN's surgical C-Arm tabletop program for medical imaging use grow significantly in 2022 – part of the Structures Segment. Ultimately, due to the lack of profit from this segment, KAMN's "next phase of transformation" - aimed at increasing efficiency in the company and reducing costs – is targeting the structures program, such as consolidating their structures facility in Jacksonville last December. We expect this segment to grow in the coming years with the expansion of the medical field.

MANAGEMENT REPORT

The history of the leaders of KAMN is quite interesting. Charles KAMN was the founder and first CEO of KAMN. Under his leadership, the company developed innovative technologies such as the K-125 helicopter, which became the first helicopter to be certified for commercial use in the United States. Paul Kuhn served as CEO after Charles KAMN, leading the company through a period of growth and expansion. Neal Keating was hired as CEO of Hughes Supply and was instrumental in helping KAMN recover from the 2008 financial crisis. He doubled the company's annual revenue during his tenure and was later moved to the board of trustees before retiring. The current CEO of KAMN is Ian Walsh, who brings a new face and culture to the organization as an outsider.

KAMN has gone through a big overhaul at the top of its management team over the past couple of years. For the current management team, here are the new roles that have been filled. The Senior VP and COO, Russ Bartlett, was hired in 2021. He served as President and CEO of Textron Airborne Solutions before KAMN and has a Naval background with expertise in aerospace engineering and general aviation. CFO James Coogan was promoted in 2021 after being with KAMN since 2008. Carroll Lane was hired as Senior Vice President and President of Air Vehicles and Precision Products divisions in 2022. He has experience in many facets of engineering and was President of Commercial Engines at Pratt & Whitney prior to KAMN.

There can be various reasons that KAMN has undergone this transition with their management team. There is a commonality among the top positions of KAMN, bringing in people from outside the company. The new CEO and COO were both hired with experience in the aerospace sector. However, this displays that KAMN is looking for new ideas and somewhat of a change culturally. With the complexity and future expectations of the main industries KAMN is involved in, it is crucial to build new products and diversify KAMN's product line to stay competitive. With the introduction of new management, KAMN hopes to build new ideas with people who know their industries.

SWOT ANALYSIS

STRENGTHS

KAMN and its revenue-producing segments rely on producing individual parts such as aircraft bearings and components; super precision, miniature ball bearings; proprietary spring energized seals, springs, and

contacts; wheels, brakes, and related hydraulic components for helicopters. For this reason, once KAMN enters a contract with another company that uses its "parts," the given company relies on the use of its products for producing and fixing the product being made. In addition, 45% of its revenue-producing segments are aligned with government-issued contracts under the "defense" category. This is an advantage for KAMN as this allows regular, steady, and forecastable use of resources, especially for multi-year and long-term contracts. In terms of how KAMN receives monetary compensation for its goods/services, KAMN has also entered contracts with very reliable customers, such as the U.S. Government and Boeing, and has not had any issues receiving compensation under its agreed terms.

WEAKNESSES

KAMN's ongoing restructuring has occurred because of the several weaknesses plaguing the company. The first major weakness of KAMN is that its operations are not efficient and have high costs. KAMN does not own some of its factories, thus paying high rent costs in conjunction with not using some factories due to divesting and changing operations. Other costs include high inventory as their 'days inventory' in comparison to competitors is high. Their structures segment lost money in 2021. These high costs directly contribute to their major profitability issue, which is another major weakness. KAMN's Net Contribution and Profitability ratios are below the industry average. Without generating significant profit in the coming years – operations becoming more efficient will be vital to this – liquidity problems may arise with their current assets to current liabilities levels. This ratio particularly suggests the inefficient use of cash and resources.

Furthermore, industries such as Defense and Medical are expanding at a greater pace than KAMN due to the advancement of Technology. KAMN's current use of technology in products and operations is becoming outdated and will need to be updated and significantly invested in for the company to drive growth and attempt to regain market share. Some of KAMN's other weaknesses include minimal investment in customer-based services, having a high employee turnover rate, and being a top-heavy company. In attempting to fix some of these issues by restructuring and changing parts of their business model, other weaknesses have been created. A large weakness of KAMN is its need for new supplier relations and to expand its networks. Their current customer network is somewhat narrow and deemed vulnerable as losing one or two clients or contracts could lead the company into turmoil. For example, at the conclusion of their JPF contract with the USG coming up soon, new customers and contracts need to be found as this is a major money-making product for KAMN.

OPPORTUNITIES

KAMN has plenty of different options for enhancing the company's operations. The aerospace sector is forecasted to continue growing in the future due to the rise in air travel and the need for new and modernized aircraft and parts. This presents KAMN with the chance to benefit from this growth by broadening its offerings and increasing its market share. Furthermore, KAMN has an opportunity to enter new global markets as it currently has a limited international presence and is exposed to currency fluctuations. This could result in new sources of income and diversification of the company's clientele. KAMN has been focusing on opportunities for acquisition and consolidation in the aerospace and defense industry. Parker-Hannifin Corporation Aircraft Wheel & Brake Division was a recent acquisition made by KAMN. This acquisition will also allow KAMN to strengthen its position in the aerospace and defense markets and increase its focus on higher-margin aftermarket products. The transaction is expected to bring financial benefits to KAMN, including an increase in margins and cash flow within the first year, and KAMN plans to use the resulting free cash flow to reduce its debt. KAMN can look to expand its company with plans to acquire more companies in the near future.

THREATS

The threats for KAMN include intense competition in the aerospace and industrial markets. The company operates in highly competitive industries where many players are vying for market share and contracts.

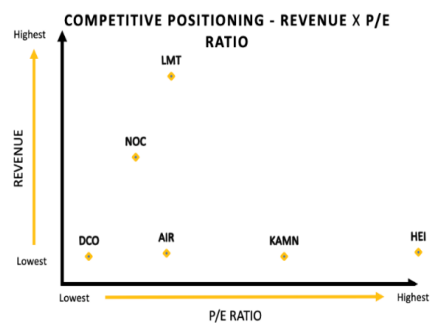


Figure 11
Source: CapIQ

This competition can lead to price pressure and reduced profit margins. Another threat is the possibility of economic downturns and decreased spending on defense and aerospace, which may negatively impact KAMN’s revenue and profitability. Even with the industry’s expected growth, the murky economic scene poses a threat to the overall operations of KAMN. Additionally, regulatory changes and compliance costs can also be a threat, as they may require the company to spend additional resources to meet new requirements. With the ever-changing regulations within the industry, it is difficult to fully account for all changes. Furthermore, supply chain disruptions and increased material costs can also be a threat to the company as they may lead to delays in production and increased costs.



Figure 12
Source: MarketScreener

ESG

ENVIRONMENT

Positive contributions to KAMN’s environmental ratings include their aspiration to improve manufacturing processes and operational efficiency, hopefully leading to operations using sustainable energy sources. Their development towards this notion is their attempt to preserve electrical energy consumption through their facilities transitioning from high energy-consuming lighting - such as incandescent or HID lighting – to LED lighting, which is more efficient and saves more power. Additionally, they conduct regular reporting and monitoring of their water and energy usage, alongside their hazardous waste. Furthermore, in October 2021, First Coast Manufacturing Association awarded KAMN’s Jacksonville Division as Manufacturer of the year, with environmental, community engagement, and health safety all part of the considerations for the award.

Conversely, several concerning factors are detrimental to KAMN’s environmental rating, all of which revolve around the absence of implemented policy. KAMN has not demonstrated commitment to implementing renewable energy into their operations, they have no active involvement in reducing their carbon footprint, and have little public reporting on their plans, protocols, or systems to dispose of the hazardous waste that they produce (Figure 13). Ultimately, the limited effort and company policy toward reducing their impact on the environment at this current time is of great concern.



Figure 13
Source: MarketScreener

SOCIAL

Positive factors towards KAMN’s social ratings are derived from their belief in creating a diverse environment, filled with opportunities for all. This is illustrated through engaging in programs such as Women Advocating Leadership (WALK) at KAMN, the Rising Star Mentor Program, and the Rotational Development Program, all of which look to catalyze employee development and leadership. Not only do they progress their employees, but their overall treatment of their workers enhances their quality of life. This occurs by focusing on employee health and wellness through hosting events, webinars, challenges, and programs such as KAMN Work-Life Solutions, Fit For Life, and Retirement Financial Courses – all alongside other employee benefits. KAMN’s philanthropy also aids its social rating as they partner with various organizations and charities such as Habitat for Humanity, Toys for Tots, Adopt-A-Family, and the Wounded Warrior Foundation. Volunteering is consistently performed as well as KAMN’s sponsorship of the Aerospace Industry Association’s Team America Rocketry Challenge (TARC) and Capital Region Education Council (CREC) to drive young minds into technology and innovation.

The very few negative contributors to KAMN’s Social ratings include the absence of a Chief Diversity Officer among their executives and the limited information about childcare access or support – however, there is paid parental leave (Figure 14).

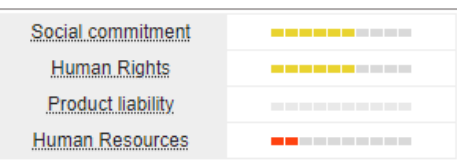


Figure 14
Source: MarketScreener

GOVERNANCE

Board of Directors: KAMN's Board Structure ratings are positively influenced by a large amount of experience and are equipped with diversity and variance among members. The board members' average tenure of 5 years, with the shortest being 0.58 years and the longest being 28 years. Further, they have a 1:1 ratio of male to female members, as well as having various backgrounds. Conversely, the concerns which adversely affect the governance ratings include the compensation difference between CEO Ian Walsh and the other members of the board who are all on approximately the same compensation. Additionally, Walsh's role as both Board Chair and CEO introduces the potential for conflict of interest ([Figure 15](#)).



Figure 15
Source: MarketScreener

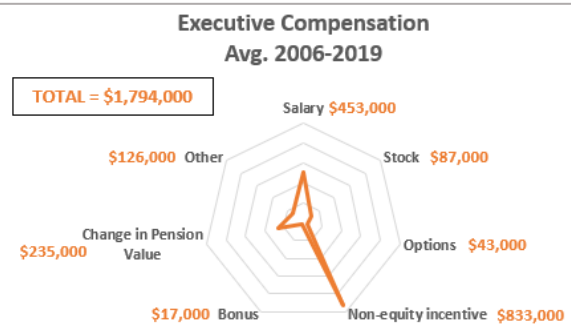


Figure 16
Source: ExecPay

Executive Compensation: The positive contributions to KAMN's executive compensation ratings include their compensation recoupment policy that's put in place to hinder fraudulent compensation. Compensation is awarded in correlation to executives' ownership of the company and the company's performance and profits. Additionally, KAMN's compensation average aligns with their similar-sized competitors. In contrast, the main negative aspect diminishing KAMN's executive compensation rating is that Ian Walsh, the CEO, has received a 20% increase in the last year, which has widened the difference between him and other executives. Between 2006 and 2019, KAMN's top executives received on average \$2 million USD in compensation, while Walsh received \$4.9 million USD by the end of 2021 ([Figure 16](#)).

Shareholder Ownership: Institutional investors with Class A Shares make up 87.35% of KAMN, this number being common amongst companies in the Aerospace and Defense industries. Furthermore, the board owns approximately \$7 million USD worth of stock as of 2019 and Insiders own under 1% of the company ([Figure 17](#)).

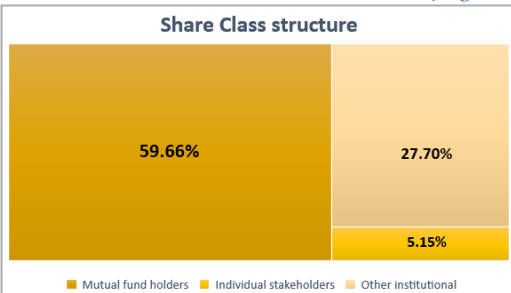


Figure 17
Source: CNN Business

VALUATION

KEY ASSUMPTIONS

Revenue Growth Using our modest growth revenue scenario, we believe that KAMN's revenue growth will remain impacted by the COVID-19 pandemic in 2022 at -9.86%, similar to 2021, but will begin to have growth in 2024 at 5% ([Appendix B-3: Revenue Growth 1](#)). We forecasted each segment individually and considered the rise and fall of different categories such as the ending of the JPF contract causing a 20% decline in the precision products segment in 2022. Primary drivers of growth include expected growth in the engineered products segment, providing more structures for commercial and general aviation post-pandemic and the introduction of KAMN's launch of their high RPM seals for heart valve pumps in 2024 ([Figure 18](#)).

Recent Acquisition With the recent acquisition of Parker Hannifin Wheel and Brake, we forecast \$412 million USD in other assets and long-term debt for 2022. KAMN used its revolving credit facility for this purchase. This among other factors caused an 8.6% decrease in cash and cash equivalents between 2021 and 2022 ([Appendix A-3: Statement of Cash Flows 1](#)).

Depreciation and Amortization We forecasted amortization based on the estimated amortization expenses provided in the most recent 10-K. We then forecasted depreciation relative to amortization and depreciation numbers in historical annual reports ([Appendix B-2: Depreciation and Amortization 1](#)).

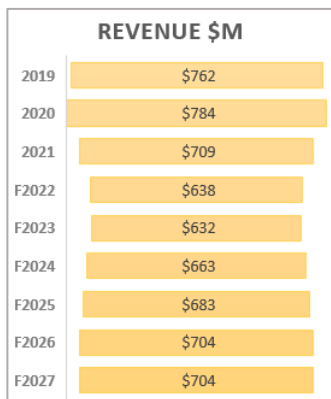


Figure 18
Source: Company Data

VALUATION ANALYSIS

WACC Our 8.35% WACC calculation is shown in the figure we calculated; we calculated this figure based on a formula with the notion of the increases of interest rates over 2022 and the anticipation of additional rate increases in 2023. We used our WACC calculation as the discount rate to bring the forecasted future cash flows back to present value ([Figure 20](#)).

	WACC					
	26.83	9.05%	8.70%	8.35%	8.00%	7.65%
Terminal Growth	-0.25%	24.26	25.25	26.33	27.50	28.78
	0.00%	24.45	25.47	26.58	27.78	29.10
	0.25%	24.65	25.69	26.84	28.08	29.44
	0.50%	24.86	25.94	27.11	28.40	29.81
	0.75%	25.08	26.19	27.40	28.73	30.20

Figure 19
Source: DCF Valuation

Terminal Growth We used a 0.25% terminal growth rate based upon the assumption that once free cash flow begins to stabilize, there will be limited growth of free cash flow in the long run. In addition, based on our assumptions and analysis of KAMN we believed that a terminal free cash flow growth rate of 0.25% best represented its terminal free cash flow growth rate.

Sensitivity Analysis We created upside and downside scenarios for calculating our discount and terminal growth rate when constructing our discounted free cash flow model. In this, we wanted to forecast the **potential likely increases and then decreases in the federal reserve interest rates. We also wanted to** account for potential prosperous or weak long-run terminal growth. In our upside case, we could see a price target 30% higher and a downside of -3% from today's valuation ([Figure 19](#)).

Price to Earnings Today, KAMN has a P/E in the mid-high 30s. Historically, this has been high for KAMN but can be explained by the sell-off of Littlejohn & Co. as well as the recent acquisition of Parker-Hannifin. These recent management decisions on the sale and M&A deal amongst other market characteristics called for the markets to readjust their willingness to value KAMN ([Figure 22](#)).

Enterprise Valuation KAMN Enterprise value is comprised of the sum of our discounted free cashflows. When creating multiple discounted free cashflow models, our enterprise value came in between \$791 million and \$820 million USD. For DCF valuations, we used ([APPENDIX C-1: 10-Year Projected Discount 1](#)).

Equity Value Once the enterprise value was calculated for KAMN we account for cash and debt by adding back cash to the enterprise value and then subtracting debt. To then get our share price, we divided by shares outstanding ([APPENDIX C-1: 10-Year Projected Discount 1](#)).

WACC Calculation	
Inputs	Value
US 10 yr	3.50%
ERP	7.00%
Beta	1.02
Cost of equity	10.6%
Cost of debt	7.00%
Marginal tax rate	20.00%
# shares outstanding	27,865.0
Share price	\$25.00
Market capitalization	696,625
Debt	578,921
Total capital	1,275,546
% equity	54.6%
% Debt	45.4%
WACC	8.35%

Figure 20
Source: DCF Valuation

FINANCIAL ANALYSIS

Short-Term Liquidity Risk KAMN's historical **current and quick ratios** from 2017 – 2021 were both above 1 indicating they have been able to pay its short-term obligations, but with a slight dip in 2020 by 1.84x. We forecast both ratios to slightly increase from 2022 to 2026 indicating their continued ability to pay their obligations in the short term ([APPENDIX D-1: Financial Ratios 1](#)).

Solvency In 2019 and 2021, KAMN's **time interest earned** was above 2.5x indicating fairly strong financial stability, but 2020 took a turn at -4.29x indicating a poor ability to cover long-term debts. We forecast that the time's interest earned will start at 2.38x in 2022 and grow to 2.72x in 2026 as they will be generating more cash flow to cover the long-term debt ([APPENDIX D-1: Financial Ratios 1](#)).

Profitability The COVID-19 pandemic was a main contributor to the loss of profit of the company in 2020, and many measures of profitability have suffered due to this factor. Historical **return on equity** was strong at 25.5% in 2019 but the decline in revenues in the more recent years caused a dip in ROE by 34.8% in 2020. Although still an unfavorable percentage, we forecast ROE to remain at around 5.9% in our projected years. **ROA** and **net income** margins also suffered in 2020 but expect a slow recovery in the single digits through 2026 ([APPENDIX D-1: Financial Ratios 1](#)).

Leverage and Coverage The **leverage multiplier** is expected to remain constant around the value of 1.8x through 2026 indicating that KAMN is using a large amount of debt to finance its assets. Being of concerning value, it should be a priority to decrease it in the next few years to 1x. S&P Global Ratings affirmed the "BB" Foreign Currency LT credit rating of KAMN on March 8, 2021. High **Gross Debt/EBITDA**

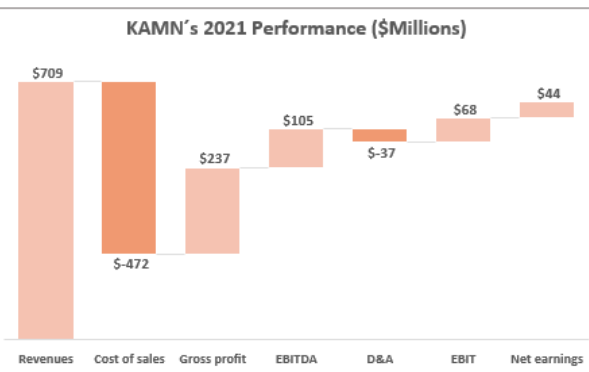


Figure 21
Source: Company Data + DCF Valuation

is forecasted for 2022 at 8.02x, due to the credit line with J.P. Morgan due 2024 and is forecasted to decrease to 5.72x in 2026, but the extremely high number is a cause for concern for the company's ability to pay off debts ([APPENDIX D-1: Financial Ratios 1](#)).

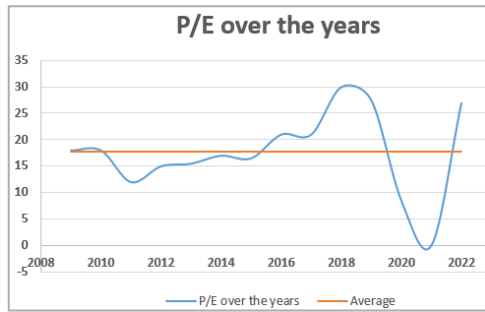


Figure 22
Source: Company Data

Shareholder Ratios **Earnings per share** is expected to remain low and fairly constant with a slight increase from 1.4x to 1.8x in 2026. The **dividend payout ratio** is expected to be 47% for 2022 and 40% for 2026. This ratio will need to be reduced as it is very difficult for KAMN to stay sustainable according to the current debt and cash flow situation ([APPENDIX D-1: Financial Ratios 1](#)).

Other The **Altman Z-score** has remained above 2.5 since 2009 indicating there is no prediction that the company was in financial distress. More recently the z-score has been above or close to 3 between 2019 and 2021 indicating a low probability of financial distress. Partly due to KAMN's current debt situation, the score forecasts risk for bankruptcy in 2022 and 2023, but no financial distress prediction through 2026 as the score slowly increases above 1.8. This is likely due to unfavorable ROE and leverage ratios ([APPENDIX D-1: Financial Ratios 1](#)).

INVESTMENT RISKS

OPERATIONAL RISKS

OR1 - Dividends: Liquidity, revenues, and cash flows are a major concern for KAMN in this transition stage, yet they continue to pay quarterly dividends of 20c per share. In 2021 they paid out \$22.3 million USD in dividends, which accounted for 51% of their net earnings. Currently, the company is struggling to find sources of revenue and of the limited earnings made, it's going to shareholders instead of back into the company ([Figure 23](#)).

OR2 - Talent Shortage: There is a global shortage of skilled labor, and thus a swift rise in competition for talented workers post Covid-19 has occurred. Consequentially, operations and output have suffered immensely alongside delays in new contracts. This, combined with ongoing supply chain disruptions, has seen projected future revenues lowered. Additionally, A&D companies are currently experiencing high attrition rates and estimating that the commercial aerospace segment could require an additional 610,000 technicians for maintenance alone between now and 2040. To combat this, wages are 81% above the national average, continuing to raise labor costs for A&D companies ([Figure 23](#)).

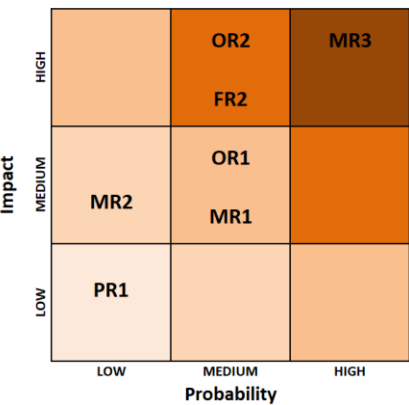


Figure 23
Source: Team Consensus

MARKET RISKS

MR1 – Trailing the Curve in Industry Tech (Innovations and Systems): Technology advancements pose a large risk to KAMN through the market's demand for new products and the improvement in operations from new technology. The key issue is the cost of obtaining and investing in new technology. For example, emerging markets with products such as the AAM Aircraft are the future of aviation, and for KAMN to enter this market would require significant costs into the latest technology and machinery to produce such products. This is the first way that KAMN may fall behind its competitors in the A&D industry.

Furthermore, the expectations for A&D companies are that production competencies need to be flexible to manage future, disruptive environments. To attain the expected production capabilities, having a Model-Based Enterprise (MBE) is crucial. MBEs are enabled through a digital thread, and research suggests less than 5% of manufacturing companies have implemented digital thread, however about 85% of companies plan to use it in the future. Digital thread is said to improve throughput by 7%–10%, create a 35%–45% reduction in engineering hours/unit, a 25%–40% decrease in labor, and increase asset efficiency by 15%–20%. The risk of not investing in and implementing these new systems and technology is that operations will not be efficient enough to compete and will create a competitive disadvantage for KAMN. If KAMN's financials aren't good enough, they might need a longer period for this transition which affects all aspects of the company and hinders competitive progress ([Figure 23](#)).

MR2 – Inflation: The current PPI is up 12.2% for goods and 6.8% for services over the last 12 months, illustrating current inflation. The impact of inflation on the defense industry especially is far worse, with input costs for common defense products and services increased far higher, a 10% increase for industrial chemicals, 25.9% for energy, and 17.8% for transportation and warehousing ([Figure 23](#)).

MR3 – Supply Chain Disruptions: Global supply chains have been disrupted due to European tensions (War) and the ongoing Pandemic, greatly impacting the supply of critical metals, fuel, and rare earth elements – increasing input costs and lowering margins. Russia supplies 50% of the A&D-grade titanium creating a huge shortage and alternate suppliers needing to be found. This has partly contributed to 90% of manufacturers in the A&D industry experiencing supply chain disruptions, and their response has been to mitigate risk and aid growth by attempting to build resilient supply chain relations. A&D supply chains are highly complex with multiple tiers of suppliers. For example, the average US commercial aerospace company has over 12,000 tier-2 suppliers – making it evident that managing beyond tier-1 suppliers can be highly problematic. Thus, supply chain management and planning have become a major risk for those in the industry ([Figure 23](#)).

POLITICAL RISKS

PR1 - Environment – Decarbonization: Catalyzed by climate change, regulations, and policy have been ramped up in conjunction with consumer activism, motivating A&D companies to reduce emissions. However, significant challenges including limited alternatives, high cost and the ambiguous nature of the benefits are hindering some companies. 80% of global manufacturers will incorporate environmental sustainability in their products by 2024, which can improve sales by 3% (International Data Corporation). Depending on KAMN's prioritization, they may or may not be in that 80%, and will have to decide whether they take on the short- or long-term risk ([Figure 23](#)).

FINANCIAL RISKS

FR2 – Debt: KAMNs current transition phase has resulted in fading out of and emerging in different industries. Without a strong foothold and competitive advantage in these industries, and with the absence of secured major contracts (their biggest contract, the USG JPF program, is ending within the next 12-24 months), future revenue streams are currently at an elevated level of risk. This is all exacerbated by their high level of debt that is due at the conclusion of 2024. Thus, careful management is required in the immediate future to handle the repayment of their \$191 million USD worth of debt ([Figure 23](#)).

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APPENDIX A: FINANCIALS

Appendix A-1: Income Statement

<i>USD Thousands</i>	2019	2020	2021	2022F	2023F	2024F	2025F	2026F	2027F
Revenues	761,608	784,459	708,993	639,103	631,928	666,391	684,154	708,233	708,233
Cost of sales	520,803	538,877	472,375	434,590	429,711	453,146	465,224	481,598	481,598
Gross profit	240,805	245,582	236,618	204,513	202,217	213,245	218,929	226,635	226,635
Selling, general and administrative expenses	160,768	169,485	152,474	136,768	135,233	142,608	146,409	151,562	151,562
Research and Development	11,896	14,755	16,072	14,699	14,534	16,660	17,104	17,706	18,414
EBIT	68,141	61,342	68,072	53,046	52,450	53,978	55,416	57,367	56,659
Goodwill and other intangibles impairment	-	50,307	0	-	-	-	-	-	-
Impairment on assets held for sale	-	36,285	0	-	-	-	-	-	-
Intangible asset amortization expense	4,523	15,666	10,468	4,137	4,118	3,908	9,271	8,858	8,500
Costs from transition services agreement	4,673	12,515	1,728	2,000	2,000	2,000	2,000	2,000	2,000
Cost of acquired retention plans	-	22,814	-	-	-	-	-	-	-
Restructuring costs	1,558	8,359	6,154	300	3,000	2,000	2,000	1,000	1,000
(Gain) loss on sale of business	3,739	(493)	234	-	-	-	-	-	-
Net loss (gain) on sale of assets	237	200	(8)	-	-	-	-	-	-
Operating (Loss) Income	53,411	(84,311)	49,496	46,609	43,332	46,070	42,145	45,509	45,159
Interest expense, net	17,202	19,270	16,290	19,546	18,815	18,084	17,352	16,621	0
Non-service pension and post retirement benefit income, net	(396)	(16,250)	(26,229)	(41,871)	(43,100)	(44,156)	(44,839)	(45,378)	(46,378)
Income from transition services agreement	(3,673)	(8,439)	(931)	-	-	-	-	-	-
Other income, net	(309)	(728)	(142)	-	-	-	-	-	-
(Loss) earnings from continuing operations before income taxes	40,587	(78,164)	60,508	68,933	67,617	72,142	69,632	74,266	91,537
Income tax (benefit) expense	(15,859)	(7,730)	16,832	17,233	16,904	18,035	17,408	18,566	22,884
(Loss) earnings from continuing operations, net of tax	56,446	(70,434)	43,676	51,700	50,713	54,106	52,224	55,699	68,652
Earnings from discontinued operations before gain on disposal, net of tax	29,027	0	-	-	-	-	-	-	-
Gain on disposal of discontinued operations, net of tax	124,356	692	-	-	-	-	-	-	-
Total earnings from discontinued operations, net of tax	153,383	692	-	-	-	-	-	-	-
Net (loss) earnings	209,829	(69,742)	43,676	51,700	50,713	54,106	52,224	55,699	68,652

A-1: Income Statement 1

Appendix A-2: Balance Sheet

USD Thousands	2019	2020	2021	2022F	2023F	2024F	2025F	2026F	2027F
Assets									
Cash and Cash Equivalents	471,540	104,377	140,800	124,024	157,955	163,507	187,347	217,765	266,021
Restricted Cash	-	25,121	-	-	-	-	-	-	-
Accounts receivable, net	156,492	153,806	73,524	127,821	126,386	133,278	136,831	141,647	141,647
Contract Assets	121,614	108,645	112,354	112,354	112,354	112,354	112,354	112,354	112,354
Contract costs, current portion	6,052	3,511	850	850	850	850	850	850	850
Inventories	156,353	185,072	193,100	193,100	193,100	193,100	193,100	193,100	193,100
Income tax refunds receivable	8,069	5,269	13,832	9,587	9,479	9,996	10,262	10,623	10,623
Other current assets	16,368	12,173	12,083	10,865	10,743	11,329	11,631	12,040	12,040
Total current assets	936,488	597,974	546,543	578,600	610,866	624,413	652,375	688,379	736,635
Net P,P&E	140,450	210,852	197,822	192,937	187,853	184,087	171,146	158,418	148,040
Operating right of use asset, net	15,159	12,880	11,011	8,000	5,000	3,000	1,000	0	0
Goodwill	195,314	247,244	240,681	240,681	240,681	240,681	240,681	240,681	240,681
Other intangible assets	53,439	150,198	138,074	133,937	129,819	125,911	116,640	107,782	99,282
Deferred income taxes	35,240	39,809	15,717	15,717	15,717	15,717	15,717	15,717	15,717
Contract costs, noncurrent portion	6,099	8,311	10,249	10,249	10,249	10,249	10,249	10,249	10,249
Other assets	36,754	39,125	38,385	412,000	412,000	412,000	412,000	412,000	412,000
Total non-current assets	482,455	708,419	651,939	1,013,521	1,001,319	991,645	967,433	944,847	925,969
TOTAL ASSETS	1,418,943	1,306,393	1,198,482	1,592,120	1,612,185	1,616,058	1,619,808	1,633,226	1,662,604
Liabilities & Equity									
Financing gap	-	-	-	-	-	-	-	-	-
Accounts payable – trade	70,884	60,200	42,134	56,497	70,054	61,409	56,497	55,862	58,909
Accrued salaries and wages	43,220	70,552	38,892	41,800	43,890	46,085	48,389	50,808	53,349
Contract liabilities, current portion	42,942	39,073	2,945	2,945	2,945	3,500	3,500	3,500	3,500
Operating lease liabilities, current portion	4,306	4,305	4,502	4,824	3,643	2,547	673	315	246
Income taxes payable	4,722	19	386	183	183	183	183	183	183
Liabilities held for sale, current portion	-	18,086	-	-	-	-	-	-	-
Other current liabilities	37,918	36,177	32,076	28,760	28,437	29,988	30,787	31,870	31,870
Total current liabilities	203,992	228,412	120,935	135,008	149,152	143,711	140,028	142,539	148,057
Long-term debt, excluding current portion, net	181,622	185,401	189,421	578,921	556,421	533,921	511,421	488,921	466,421
Deferred income taxes	6,994	7,381	6,506	7,000	7,000	7,000	7,000	7,000	7,000
Underfunded pension	97,246	69,610	21,786	21,786	21,786	21,786	21,786	21,786	21,786
Contract liabilities, noncurrent portion	37,855	11,019	16,528	16,528	16,528	16,528	16,528	16,528	16,528
Operating lease liabilities, noncurrent portion	11,617	9,325	7,140	7,140	7,140	7,140	7,140	7,140	7,140
Liabilities held for sale, noncurrent portion	-	1,171	-	-	-	-	-	-	-
Other long-term liabilities	56,415	47,636	39,837	0	0	0	0	0	0
Total non-current liabilities	391,749	331,543	281,218	631,375	608,875	586,375	563,875	541,375	518,875
Preferred stock, \$1 par value, 200,000 shares €	-	-	-	-	-	-	-	-	-
Common stock, \$1 par value, 50,000,000 share	30,058	30,279	30,434	30,434	30,434	30,434	30,434	30,434	30,434
Additional paid-in capital	228,153	238,829	248,153	248,153	248,153	248,153	248,153	248,153	248,153
Retained earnings	820,666	728,764	750,445	779,853	808,274	840,088	870,020	903,428	949,788
Accumulated other comprehensive income (loss)	(150,893)	(130,821)	(111,385)	(111,385)	(111,385)	(111,385)	(111,385)	(111,385)	(111,385)
Less 2,573,896 and 2,555,785 shares of common	(104,782)	(120,613)	(121,318)	(121,318)	(121,318)	(121,318)	(121,318)	(121,318)	(121,318)
Total equity	823,202	746,438	796,329	825,737	854,158	885,972	915,904	949,312	995,672
TOTAL LIABILITIES & EQUITY	1,418,943	1,306,393	1,198,482	1,592,120	1,612,185	1,616,058	1,619,808	1,633,226	1,662,604

Appendix A-2: Balance Sheet 1

Appendix A-3: Statement of Cash Flows

<i>USD Thousands</i>	2022F	2023F	2024F	2025F	2026F	2027F
Net Income	51,699.99	50,712.84	54,106.49	52,224.01	55,699.27	68,652.48
Amortization	4,137.00	4,118.00	3,908.00	9,271.00	8,858.00	8,500.00
Accounts receivable, net	(54,296.50)	1,434.85	(6,892.54)	(3,552.52)	(4,815.88)	-
Contract Assets	-	-	-	-	-	-
Contract costs, current portion	-	-	-	-	-	-
Inventories	-	-	-	-	-	-
Income tax refunds receivable	4,245.46	107.61	(516.94)	(266.44)	(361.19)	-
Other current assets	1,218.26	121.96	(585.87)	(301.96)	(409.35)	-
Operating right of use asset, net	3,011.00	3,000.00	2,000.00	2,000.00	1,000.00	-
Goodwill	-	-	-	-	-	-
Other intangible assets	-	-	-	-	-	-
Deferred income taxes	-	-	-	-	-	-
Contract costs, noncurrent portion	-	-	-	-	-	-
Other assets	38,385.00	-	-	-	-	-
Depreciation	20,863.00	20,882.00	21,092.00	30,729.00	31,142.00	29,500.00
Accounts payable – trade	14,362.66	13,557.35	(8,645.26)	(4,912.09)	(634.20)	3,046.50
Accrued salaries and wages	2,908.00	2,090.00	2,194.50	2,304.23	2,419.44	2,540.41
Contract liabilities, current portion	-	-	555.00	-	-	-
Operating lease liabilities, current portion	322.00	(1,181.00)	(1,096.00)	(1,874.00)	(358.00)	(69.00)
Income taxes payable	(203.00)	-	-	-	-	-
Liabilities held for sale, current portion	-	-	-	-	-	-
Other current liabilities	(3,316.39)	(322.84)	1,550.82	799.32	1,083.57	-
Deferred income taxes	494.00	0.06	0.06	0.06	0.06	-
Underfunded pension	-	-	-	-	-	-
Contract liabilities, noncurrent portion	-	-	-	-	-	-
Operating lease liabilities, noncurrent portion	-	-	-	-	-	-
Liabilities held for sale, noncurrent portion	-	-	-	-	-	-
Other long-term liabilities	(39,836.94)	-	-	-	-	-
Operating cash flows	43,993.55	94,520.83	67,670.26	86,420.59	93,623.71	112,170.39
Acquisition of businesses	(412,000.00)	-	-	-	-	-
CAPEX	(15,977.56)	(15,798.21)	(17,326.17)	(17,787.99)	(18,414.06)	(19,122.29)
Investing cash flows	(427,977.56)	(15,798.21)	(17,326.17)	(17,787.99)	(18,414.06)	(19,122.29)
Borrowings under revolving credit facility	412,000.00	-	-	-	-	-
Long-term debt, excluding current portion	(22,500.00)	(22,500.00)	(22,500.00)	(22,500.00)	(22,500.00)	(22,500.00)
Common stock	-	-	-	-	-	-
Additional paid-in capital	-	-	-	-	-	-
Dividend	(22,292.00)	(22,292.00)	(22,292.00)	(22,292.00)	(22,292.00)	(22,292.00)
Accumulated other comprehensive income	-	-	-	-	-	-
Treasury Stock	-	-	-	-	-	-
Financing cash flows	367,208.00	(44,792.00)	(44,792.00)	(44,792.00)	(44,792.00)	(44,792.00)
Change in cash	(16,776.02)	33,930.62	5,552.10	23,840.60	30,417.65	48,256.10
Cash - beg	140,800.00	124,023.98	157,954.60	163,506.70	187,347.30	217,764.95
Change in cash	(16,776.02)	33,930.62	5,552.10	23,840.60	30,417.65	48,256.10
Cash - end	124,023.98	157,954.60	163,506.70	187,347.30	217,764.95	266,021.06

Appendix A-3: Statement of Cash Flows 1

APPENDIX B: ASSUMPTIONS

Appendix B-1: Financial Statement Assumptions

Assumptions	2019	2020	2021	2022F	2023F	2024F	2025F	2026F	2027F
Income statement									
Revenue growth	-	3.0%	-9.6%	(9.9%)	(1.1%)	5.5%	2.7%	3.5%	0.0%
COGS (excl deprec) % of sales	68.4%	68.7%	66.6%	68.0%	68.0%	68.0%	68.0%	68.0%	68.0%
Selling, general and administrative expenses % sales	21.1%	21.6%	21.5%	21.4%	21.4%	21.4%	21.4%	21.4%	21.4%
Research and Development % of sales	1.6%	1.9%	2.3%	2.3%	2.3%	2.5%	2.5%	2.5%	2.6%
Effective tax rate	39.07%	9.89%	27.82%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Basic WASO	27,936.0	27,723.0	27,865.0	27,865.0	27,865.0	27,865.0	27,865.0	27,865.0	27,865.0
Diluted WASO	28,092.0	27,723.0	27,891.0	27,891.0	27,891.0	27,891.0	27,891.0	27,891.0	27,891.0
Dividends per share growth rate	-	396.91%	260.65%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Goodwill and other intangibles impairment (Note 12)	0	50,307	0	-	-	-	-	-	-
Impairment on assets held for sale (Note 2)	0	36,285	0	-	-	-	-	-	-
Intangible asset amortization expense	4,523	15,666	10,468	4,137.0	4,118.0	3,908.0	9,271.0	8,858.0	8,500.0
Costs from transition services agreement (Note 2)	4,673	12,515	1,728	2,000.0	2,000.0	2,000.0	2,000.0	2,000.0	2,000.0
Cost of acquired retention plans (Note 3)	0	22,814	0	-	-	-	-	-	-
Restructuring costs (Note 5)	1,558	8,359	6,154	300.0	3,000.0	2,000.0	2,000.0	1,000.0	1,000.0
(Gain) loss on sale of business (Note 5)	3,739	(493)	234	-	-	-	-	-	-
Net loss (gain) on sale of assets	237	200	(8)	-	-	-	-	-	-
Non-service pension and post retirement benefit income, net	-396	-16,250	-26,229	(41,871.0)	(43,100.0)	(44,156.0)	(44,839.0)	(45,378.0)	(46,378.0)
Income from transition services agreement (Note 2)	-3,673	-8,439	-931	-	-	-	-	-	-
Other income, net	-309	-728	-142	-	-	-	-	-	-
Assets									
Restricted Cash - \$	0.0	25,121.0	0.0	-	-	-	-	-	-
Accounts receivable, net % sales	20.5%	19.6%	10.4%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Contract Assets - \$	121,614.0	108,645.0	112,354.0	112,354.0	112,354.0	112,354.0	112,354.0	112,354.0	112,354.0
Contract costs, current portion - \$	6,052.0	3,511.0	850.0	850.0	850.0	850.0	850.0	850.0	850.0
Inventories % COGS plus depreciation	156,353.0	185,072.0	193,100.0	193,100.0	193,100.0	193,100.0	193,100.0	193,100.0	193,100.0
Income tax refunds receivable - % sales	1.1%	0.7%	2.0%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Other current assets - % sales	2.1%	1.6%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%
Net P,P&E	18.44%	26.88%	27.90%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Operating right of use asset, net - \$	0.0	15,159.0	12,880.0	8,000.0	5,000.0	3,000.0	1,000.0	-	-
Goodwill - \$	195,314.0	247,244.0	240,681.0	240,681.0	240,681.0	240,681.0	240,681.0	240,681.0	240,681.0
Other intangible assets - \$	53,439.0	150,198.0	138,074.0	138,074.0	138,074.0	138,074.0	138,074.0	138,074.0	138,074.0
Deferred income taxes - is this times tax rate??	35,240.0	39,809.0	15,717.0	15,717.0	15,717.0	15,717.0	15,717.0	15,717.0	15,717.0
Contract costs, noncurrent portion - \$	6,099.0	8,311.0	10,249.0	10,249.0	10,249.0	10,249.0	10,249.0	10,249.0	10,249.0
Other assets - % sales	36,754.0	39,125.0	38,385.0	412,000.0	412,000.0	412,000.0	412,000.0	412,000.0	412,000.0
Liabilities (excluding debt)									
Accounts payable – trade - % COGS	13.6%	11.2%	8.9%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%
Accrued salaries and wages - \$	43,220.0	70,552.0	38,892.0	41,800.0	43,890.0	46,084.5	48,388.7	50,808.2	53,348.6
Contract liabilities, current portion - \$	42,942.0	39,073.0	2,945.0	2,945.0	2,945.0	3,500.0	3,500.0	3,500.0	3,500.0
Operating lease liabilities, current portion - \$	4,306.0	4,305.0	4,502.0	4,824.0	3,643.0	2,547.0	673.0	315.0	246.0
Income taxes payable	4,722.0	19.0	386.0	183.0	183.0	183.0	183.0	183.0	183.0
Liabilities held for sale, current portion - \$	-	18,086.0	-	-	-	-	-	-	-
Other current liabilities % sales	5.0%	4.6%	4.5%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%
Long-term debt, excluding current portion, net of debt issuance costs	181,622.0	185,401.0	189,421.0	412,000.0	412,000.0	412,000.0	412,000.0	412,000.0	412,000.0
Deferred income taxes	6,994.0	7,381.0	6,506.0	7,000.0	7,000.0	7,000.0	7,000.0	7,000.0	7,000.0
Underfunded pension	97,246.0	69,610.0	21,786.0	21,786.0	21,786.0	21,786.0	21,786.0	21,786.0	21,786.0
Contract liabilities, noncurrent portion	37,855.0	11,019.0	16,528.0	16,528.0	16,528.0	16,528.0	16,528.0	16,528.0	16,528.0
Operating lease liabilities, noncurrent portion	11,617.0	9,325.0	7,140.0	7,140.0	7,140.0	7,140.0	7,140.0	7,140.0	7,140.0
Liabilities held for sale, noncurrent portion	-	1,171.0	-	-	-	-	-	-	-
Other long-term liabilities % sales	7.4%	6.1%	5.6%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
Equity									
Common stock - \$	30,058.0	30,279.0	30,434.0	30,434.0	30,434.0	30,434.0	30,434.0	30,434.0	30,434.0
APIC - \$	228,153.0	238,829.0	248,153.0	248,153.0	248,153.0	248,153.0	248,153.0	248,153.0	248,153.0
Change in AOCI	-	20,072.0	19,436.0	-	-	-	-	-	-

Appendix B-1: Financial Statement Assumption 1

USD Thousands	2019	2020	2021	2022F	2023F	2024F	2025F	2026F	2027F
PP&E									
Beg balance				197,822	192,937	187,853	184,087	171,146	158,418
CAPEX	22,447	17,783	17,530	15,978	15,798	17,326	17,788	18,414	19,122
Depreciation	21,300	28,000	26,200	20,863	20,882	21,092	30,729	31,142	29,500
Ending balance	140,450	210,852	197,822	192,937	187,853	184,087	171,146	158,418	148,040
Intangibles									
Beg balance				138,074	133,937	129,819	125,911	116,640	107,782
Amortization				4,137	4,118	3,908	9,271	8,858	8,500
Ending balance	53,439	150,198	138,074	133,937	129,819	125,911	116,640	107,782	99,282
Retained Earnings									
Beg balance				750,445	779,853	808,274	840,088	870,020	903,428
Net income				51,700	50,713	54,106	52,224	55,699	68,652
Dividends				22,292	22,292	22,292	22,292	22,292	22,292
Ending balance	820,666	728,764	750,445	779,853	808,274	840,088	870,020	903,428	949,788
Long Term Debt									
Beginning balance				189,421	578,921	556,421	533,921	511,421	488,921
Acquisition of business				412,000					
Less Repayments in 1 year				22,500	22,500	22,500	22,500	22,500	22,500
Ending balance			189,421	578,921	556,421	533,921	511,421	488,921	466,421
Financing gap			-	-	-	-	-	-	-
Note payable			-	-	-	-	-	-	-
Total debt			189,421	601,421	578,921	556,421	533,921	511,421	488,921
Interest rate on debt			8.6%	3.3%	3.3%	3.3%	3.3%	3.3%	0.0%
Interest expense	17,202	19,270	16,290	19,546	18,815	18,084	17,352	16,621	-
Interest income calcs									
Cash	471,540	104,377	140,800	124,024	157,955	163,507	187,347	217,765	266,021
Short term investments	6,052	3,511	850	850	850	850	850	850	850
Interest rate on cash				0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Interest income - beginning balance				708	624	794	822	941	1,093

Appendix B-2: Depreciation and Amortization

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022F	2023F	2024F	2025F	2026F	2027F
D&A	28,383	31,555	36,209	37,729	43,393	42,471	42,029	25,854	43,899	36,654	25,000	25,000	25,000	40,000	40,000	38,000
Amortizaion	11,000	11,000	9,527	9,520	9,505	9,399	9,406	4,523	15,666	10,468	4,137	4,118	3,908	9,271	8,858	8,500
Depreciation	17,383	20,555	26,682	28,209	33,888	33,072	32,623	21,331	28,233	26,186	20,863	20,882	21,092	30,729	31,142	29,500

Appendix B-2: Depreciation and Amortization 1

Appendix B-3: Revenue Growth

Year	2019	2020	2021	2022	2023	2024	2025	2026
Engineered products	270,335	315,063	317,683	317,683	320,860	346,529	356,924	378,340
% of Sales	35.5%	40.2%	44.8%	49.7%	50.8%	52.0%	52.2%	53.4%
Growth		16.5%	0.8%	0.0%	1.0%	8.0%	3.0%	6.0%
Precision products	307,312	302,509	256,329	199,937	185,941	182,222	178,578	167,863
% of Sales	40.4%	38.6%	36.2%	31.3%	29.4%	27.3%	26.1%	23.7%
Growth		(0.0)	(0.2)	-22.00%	-7.00%	-2.00%	-2.00%	-6.00%
Structures	183,961	166,887	134,981	121,483	125,127	137,640	148,651	162,030
% of Sales	0.2	0.2	0.2	19.01%	0.2	0.2	0.2	0.2
Growth		-9.3%	-19.1%	-10.0%	3.0%	10.0%	8.0%	9.0%
Overall	761,608	784,459	708,993	639,103	631,928	666,391	684,154	708,233
Growth		3.0%	-9.6%	-9.9%	-1.1%	5.5%	2.7%	3.5%

Appendix B-3: Revenue Growth 1

APPENDIX C: VALUATION

APPENDIX C-1: 10-Year Projected Discounted Free Cash Flow with Long Run Calculated Terminal Value

INPUT

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Free cash flow	124,020	49,275	47,055	64,171	60,678	60,678	60,678	60,678	61,285	61,898	62,517	63,142	63,773	64,411	65,055
FCF growth rate expected		(60.3%)	(4.5%)	36.4%	(5.0%)	0.0%	0.0%	0.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%

Calculations

Year (for discounting)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PV of Free Cash Flow	114,460	41,971	36,990	46,557	40,629	37,497	34,607	31,939	29,772	27,751	25,868	24,113	22,477	20,951	19,530

OUTPUT

Enterprise Value for 60 year time horizon	796,143
Equity value	747,522
FCF Valuation of an Enterprise under a 60 Year Time Horizon	26.83

Terminal Value 241,031.9

APPENDIX C-1: 10-Year Projected Discount 1

APPENDIX C-2: Price to Earnings

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Today
P/E over the years	18	18	12	15	15.5	17	16.5	21	21	30	27.5	8.5	0	27	37
Average	17.64		Fair PE estimate		27		EPS 2022E		1.02		Price Target		27.54		

APPENDIX C-2: Price to Earnings 1

APPENDIX D: FINANCIAL ANALYSIS

APPENDIX D-1: Financial Ratios

Ratios	2019	2020	2021	2022F	2023F	2024F	2025F	2026F	
ST Liquidity Risk									
Current Ratio	4.59	2.62	4.52	4.29	4.10	4.34	4.66	4.83	
Quick Ratio	3.08	1.24	1.77	1.87	1.91	2.07	2.32	2.52	
Cash Flow from Ops to Current Liabilities				0.33	0.63	0.47	0.62	0.66	
LT Solvency Risk									
Times Interest Earned	3.10	-4.38	3.04	2.38	2.30	2.55	2.43	2.74	
Profitability									
EBIT margin	8.9%	7.8%	9.6%	8.3%	8.3%	8.1%	8.1%	8.1%	
EBITDA margin	12.3%	13.4%	14.8%	12.2%	12.3%	11.9%	13.9%	13.7%	
Operating Profit Margin	7.0%	-10.7%	7.0%	7.3%	6.9%	6.9%	6.2%	6.4%	
Net income margin	27.6%	-8.9%	6.2%	8.1%	8.0%	8.1%	7.6%	7.9%	
Return on equity - ROE	25.5%	-9.3%	5.5%	6.3%	5.9%	6.1%	5.7%	5.9%	
Return on assets - ROA	14.8%	-5.3%	3.6%	3.2%	3.1%	3.3%	3.2%	3.4%	
Total (gross) debt	224,842	255,953	228,313	620,721	600,311	580,006	559,810	539,729	
Net debt	(252,750)	148,065	86,663	495,847	441,506	415,649	371,612	321,114	
Leverage & Coverage									
Gross debt / EBITDA	2.39	2.44	2.18	8.01	7.60	6.08	5.75	5.70	
EBITDA / interest expense	5	5	6	4	4	4	5	6	
Leverage Multiplier	1.7	1.8	1.5	1.9	1.9	1.8	1.8	1.7	
Shareholder Ratios									
Earnings per share	7.0	(2.3)	1.4	1.7	1.7	1.8	1.7	1.8	
Dividend payout ratio	11%	-32%	51%	43%	44%	41%	43%	40%	
Asset management									
Payable days - use COGS	50	41	33	47	60	49	44	42	
Working capital	732,496	369,562	425,608	443,591	461,714	480,703	512,347	545,840	
Operating working capital (OWC)		432,908	401,562	450,598	448,933	456,374	460,495	466,081	
Net PPE to sales	18.4%	26.9%	27.9%	30.2%	29.7%	27.6%	25.0%	22.4%	
CAPEX to sales	2.9%	2.3%	2.5%	2.5%	2.5%	2.6%	2.6%	2.6%	
CAPEX/Depreciation	105.4%	63.5%	66.9%	76.6%	75.7%	82.1%	57.9%	59.1%	
Other									
EBIT	68,141.0	61,342.0	68,072.0	53,045.5	52,450.0	53,977.7	55,416.4	57,366.9	
D&A	25,823.0	43,666.0	36,668.0	25,000.0	25,000.0	25,000.0	40,000.0	40,000.0	
CAPEX	22,447.0	17,783.0	17,530.0	15,977.6	15,798.2	17,326.2	17,788.0	18,414.1	
Altman Z-Score	3.50	2.72	3.19	1.65	1.80	1.92	2.04	2.11	

APPENDIX D-1: Financial Ratios 1