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HEXCEL CORPORATION

DATE: 02/04/2024

TICKER: HXL

EXCHANGE: NYSE

GICS SECTOR: Industrials

GICS SUBSECTOR: Capital Goods

INDUSTRY: Aerospace & Defense

CURRENT PRICE: $68.92

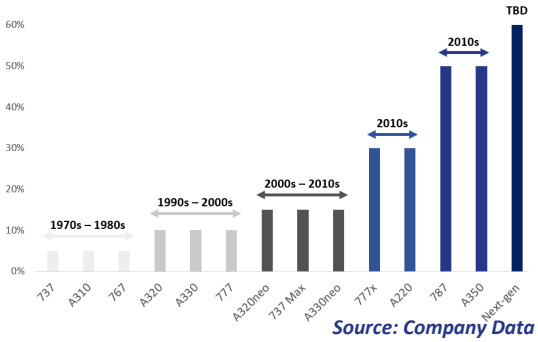
RECOMMENDATION: BUY

Exhibit 1: HXL Overview

Enterprise Value (B)	$6.269
Shares Outstanding (M)	84.100
Market Capitalization (B)	$5.796
2023 EPS	$1.81
Current Share Price	$68.92
52– Week High	$78.04
52– Week Low	$59.61
Beta (5 Year Adj.)	1.301
Annual Dividend (LTM)	$0.50
12– Month Target Price	$95.00
Upside Potential	37.9%

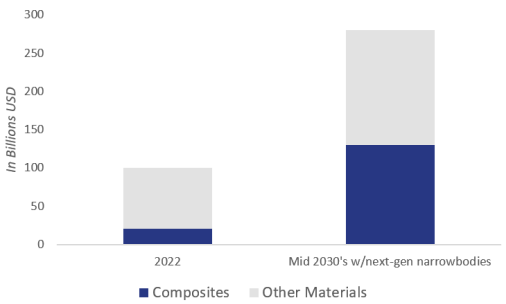
Source: Bloomberg

Figure 2: Composite Penetration



Source: Company Data

Figure 3: Composite Aircraft Demand



Source: Wells Fargo

COMPANY OVERVIEW

We issue a BUY recommendation for Hexcel Corporation (HXL) with a 12-month price target of $95, representing a 37.9% upside to its February 2, 2023 closing price of $68.92. Our 12-month price target analysis utilizes a Discounted Cash Flow model, Monte Carlo simulation, and Relative Valuation. Additionally, a Sum of the Parts Valuation reveals strong long-term upside potential, demonstrated by a 2028 price target of $146, or a 16.2% 5-year IRR. Our positive outlook and price target is built on the following three pillars.

INVESTMENT SUMMARY

We initiate coverage on Hexcel Corporation (HXL) with a BUY recommendation and a 12-month price target of $95, representing a 37.9% upside compared to its closing price of $68.92 on February 2 2023. Our comprehensive analysis, encompassing a Discounted Cash Flow (DCF) model, a Monte Carlo simulation, Relative Valuation, and Sum of the Parts Valuation, reveals strong long-term upside potential and 5 year IRR of16.2%. Our positive outlook and price target is built on the following three pillars.

I. Secular Penetration and Cyclical Growth tailwinds in Commercial Aerospace

Secular Penetration: The value proposition offered by composite materials is leading to their expanded use in newer aircraft models (appendix). Composite penetration in commercial aerospace has been most successful in widebody aircraft programs, such as Airbus A350 and Boeing 737 (Figure 2). These programs have more than 50% composite content. Although the adoption of composite materials in narrowbody aircraft has been slower compared to widebody aircraft (10-20% composite penetration), it is expected that the new generation of narrowbody aircraft – which are scheduled to begin production within the next 10 years – will be made of over 60% composites. This new generation of narrowbody aircraft is expected to increase composite demand by a factor of 6, Wells Fargo estimates (Figure 3).

Cyclical Growth: Boeing and Airbus are expected to deliver more commercial aircraft in 2024 than 2023, with wide-body deliveries likely rising faster than narrow-body. Additionally, wide-body order flow is likely to remain strong during 2024, while narrow-body orders are expected to plateau. These factors, alongside profit and free cash flow incentives, will drive airframer production rates higher – specifically wide-body production rates. Hexcel benefits most from a wide-body production rate increase given the higher shipset value. Although questions have been raised about economic strength and airline profits for 2024, it is unlikely airlines will cancel orders and withdraw deposits. Doing so would result in going to the back of the line. A line that extends into the 2030s. As the backlog grows, airframers have tried to lower parked rates back to pre-pandemic levels. For narrow-bodies, A320neo and 737 Max have parked rates of approx. 9% and 3%. Wide-body parked rates include A350 and 787 at approx. 5% and 3%, respectively.

Specific build rates for commercial aerospace programs for Hexcel are as follows:

Figure 4: Commercial Aerospace Build Rates

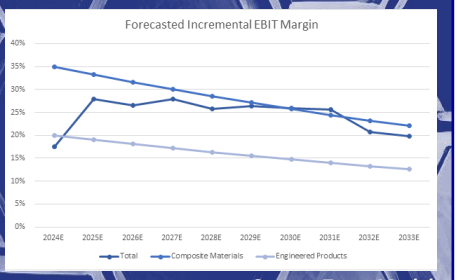
Aircraft	Current Build Rate (per month)	Expected Build Rate (per month)	Expected Date	Hexcel Shipset Value (mm)
Airbus A350	6	10	2026	$4.5-$5.0
Airbus A330	3	4	2024	$1.0-$2.0
Airbus A320	45	75	2026	$0.2-$0.5
Airbus A220	5	14	2026	$0.2-$0.5
Boeing 787	5	10	2025/2026	$1.0-$2.0
Boeing 777/777X	3	3	2022	$1.0-$2.0
Boeing 737	31	50	2025/2026	$0.2-$0.5

Source: Bloomberg and Company Data

Figure 5:

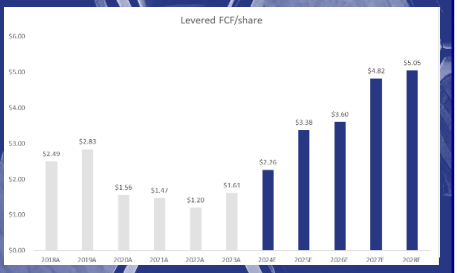
Source: Hexcel 10-K

Figure 6:



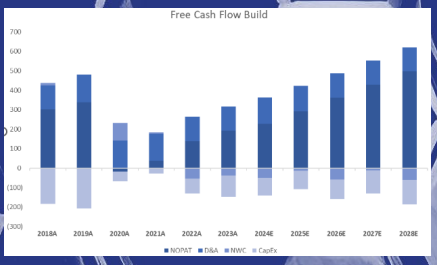
Source: Team Model

Figure 7:



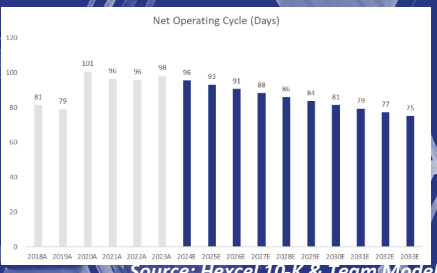
Source: Hexcel 10-K & Team Model

Figure 8:



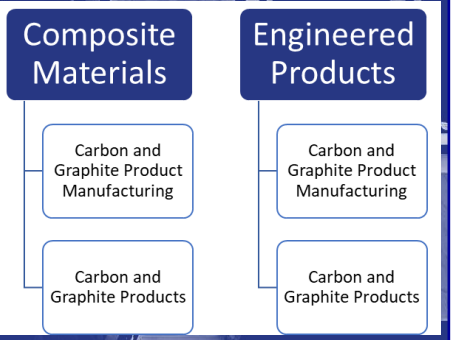
Source: Hexcel 10-K & Team Model

Figure 9:



Source: Hexcel 10-K & Team Model

Figure 10: Revenue Segments



Source: HXL 10-K 2022

II. Cost adaptability and operating leverage

Hexcel has demonstrated a robust ability to manage costs and achieve operating leverage. Despite a significant sales decline of 36% in 2020, Hexcel was able to maintain profitability through strict cost management (Figure 5). Alternatively, when revenues increase, Hexcel capitalizes on this growth through operating efficiencies. This was evident in 2022 when, despite inflationary pressures, Hexcel achieved an impressive incremental EBIT margin of 49%, and historically, achieves approximately 25% incremental EBIT margin when revenue increases. This is relative to a pre-COVID average EBIT margin of 14%, indicating Hexcel's operating leverage abilities. This demonstrates that Hexcel can not only withstand challenging economic conditions but take advantage of when market conditions improve. We forecast incremental EBIT margin over the next few years to be in the low-to-mid thirties for the Composite Materials segment, high teens for the engineered products segment, and high twenties for the entire company, driven by strong direct and indirect cost control and lower depreciation from depressed CapEx (Figure 6), Appendix Model Drivers).

III. Fundamentally undervalued with strong FCF improvement

We forecast a 4.2x increase in levered FCF/share — $1.20 to $5.05 — from 2022 to 2028 (Figure 7). This FCF/share increase will be driven by strong compounding revenue growth, operating leverage, working capital improvements, and subdued capital expenditures (Figure 8). During this period, we expected revenue to grow from $1,578mm to $3,314mm, a 13% CAGR, predominantly driven by secular and cyclical commercial aerospace trends. Alongside revenue growth, Hexcel will realize operating leverage at a magnitude similar to historical trends. Hexcel's net operating cycle dramatically increased due to the pandemic in 2020 to 101 days from 79 days in 2019 (Figure 9). We predict Hexcel's working capital management to improve back to pre-pandemic levels, benefiting FCF expansion, coming mainly from decreasing days sales outstanding and days inventory outstanding. Lastly, the expectation of lower capital expenditures in the coming years — below $100mm — is based on the projection that will capacity gradually return to pre-pandemic levels. Additionally, there will be a reduced need for growth related capital expenditures due to a shift towards projects that require less capital, such as expanding weaving, prepreg, and honeycomb capacities.

BUSINESS DESCRIPTION

Headquartered in Stamford, Connecticut, Hexcel has 75 years of experience in the advanced composites industry producing lightweight composite material solutions primarily for the aerospace & defense industries. Advanced lightweight composites are stronger, lighter, and tougher than metals traditionally used in aerospace manufacturing. The company has 5,600 employees spanning over 21 manufacturing plants throughout North America, Western Europe, and North Africa. Hexcel's reported revenue for 2023 was $1,789 million.

History and Management Team

Hexcel was officially founded in 1948, at the time known as "California Reinforced Plastics." The company was founded by Roger C. Steele and Roscoe T. "Bud" Hughes. Steele and Hughes, who were classmates in high school, continued their education together at the University of California Berkeley. Additionally, they both served in the Navy during World War II. The company officially received its hallmark "Hexcel" name after it was renamed to Hexcel Products in 1954. Nick Stanage became Chief Executive Officer and President on August 1, 2013, and assumed the role of Chairman of the Board on January 1, 2014. Under the leadership of Stanage, Hexcel Corporation achieved revenue growth of 24% and diluted EPS growth of 169% from 2014 to 2019, prior to the pandemic. This translates to a CAGR of 5% for revenue and 11% for diluted EPS. Prior to joining Hexcel, Stanage held executive positions at Dana Holding Corporation and Honeywell Inc. Patrick Winterlich has served as Chief Financial Officer since September 2017 and has held roles across the company in Operations, Finance, and Information Technology. He has completed over 20 mergers and acquisitions over the history of the company.

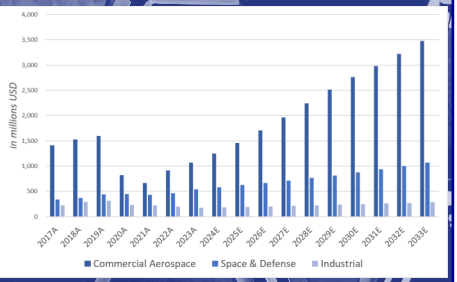
Business Segments

Hexcel, a global leader in advanced materials, operates through two distinct segments: **Composite Materials** and **Engineered Products**.

The **Composite Materials** segment forms the backbone of the company, producing and supplying a range of lightweight materials. These products include carbon fibers, fabrics, specialty reinforcements, prepregs, and other matrix materials. Additionally, the segment offers a diverse selection of structural adhesives, honeycomb structures, molding compounds, tooling materials, polyurethane systems, and laminates. In 2023, Composite Materials revenue was $1,474 million, 15.2% growth year-over-year, on 15.2% EBIT margin (ex-intersegment sales). We forecast a 5-year revenue CAGR of 12.8% and a 5-year average ROIC of 16.9%.

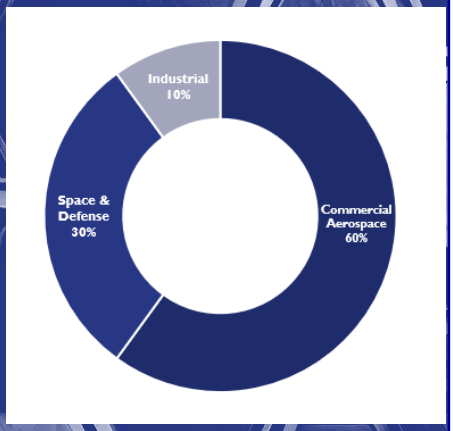
The **Engineered Products** segment focuses on the creation of finished components and structures, primarily for the aerospace industry. Leveraging their expertise in composites, they design and manufacture complex aircraft components such as wing to body fairings, wing panels, flight deck panels, and rotorcraft blades. Additionally, they produce sub-components and semi-finished parts for engine nacelles and other critical aircraft structures.

Figure 11:



Source: Hexcel 10-K & Team

Figure 12: Sales by Industry



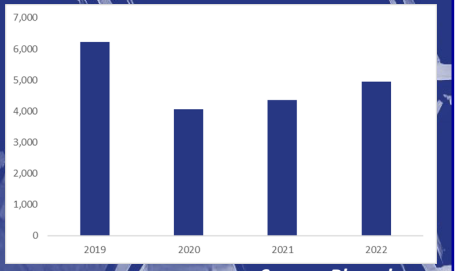
Source: Hexcel 10-K

Figure 13: Peer Groups

Composite Materials Peers
Solvay
Toray Industries
Cabot Corp
Woodward
Moog Inc.
Engineered Products Peers
Spirit AeroSystems
AAR Corp
Triumph Group
Huntsman Corp
Barnes Group

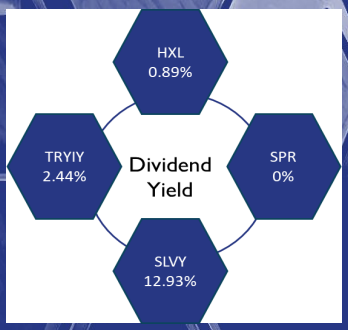
Source: Team Consensus

Figure 14: HXL Market Capitalization



Source: Bloomberg

Figure 15: Peer Dividend Yield Comparison



Source: Bloomberg

This segment allows Hexcel to move beyond raw materials and deliver integrated solutions that directly enhance the performance and efficiency of modern aircraft. In 2023, Engineered Products revenue was $315 million, 5.8% growth year-over-year, on 10.4% EBIT Margin (ex-intersegment sales). We forecast a 5-year revenue CAGR of 11.3% and a 5-year average ROIC of 8.1%.

Customer Base

Hexcel predominantly serves the aerospace industry — specifically commercial aerospace and space & defense — as well as the industrials industry. Therefore, Hexcel's success is heavily dependent on the build rates of aerospace manufacturers. The company has a strong reputation for quality and on-time delivery which has helped to build long-lasting customer relationships.

Commercial Aerospace

Commercial Aerospace represented 60% of Hexcel's 2023 sales. In the commercial aerospace end market, Airbus and Boeing are the dominant players. In 2022, 60% and 19% of Hexcel's commercial aerospace sales were to Airbus and Boeing, respectively. Hexcel is poised to benefit from the cyclical recovery of commercial OEM production rates and the secular increase of composites on aircraft. The drivers for demand for Hexcel's composite materials in the commercial aerospace market will be determined by airline passenger traffic and replacement rates for existing aircraft. As of December 31, 2023, Airbus' and Boeing's combined backlog was 14,800 – the largest backlog in commercial aerospace history. We forecast $1,250 million in sales for the commercial aerospace market in 2024, a 17% increase from 2023.

Space & Defense

Space & Defense represented 30% of Hexcel's 2023 sales. The primary customers in Space & Defense include Lockheed Martin, Sikorsky, Bell-Boeing, and Airbus. These companies provide military aircraft to the United States and certain Western European governments. Therefore, a key driver of demand is the procurement of military aircraft by the United States and certain Western European nations. We forecast $583 million in sales for the space & defense market in 2024, a 7% increase from 2023.

Industrial

The Industrial market represented 10% of Hexcel's 2023 sales. The automotive sector has emerged as a significant growth driver within the industrial market, recording double-digit sales growth in 2023. However, several other sectors within the broader industrial market have experienced a decline in growth. We forecast $185 million in sales for the industrial market in 2024, a 5% increase from 2023.

INDUSTRY OVERVIEW

The advanced composite materials industry is comprised of companies that specialize in the production and sale of advanced composite materials to infrastructure, construction, industrial, and transportation end markets. The prominent players in this industry include Hexcel, Solvay, Toray, and Spirit AeroSystems.

Industry Dynamics

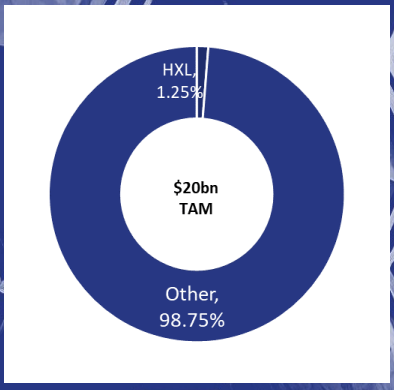
Hexcel is a key player in the Composite Materials and Engineered Products markets, which present promising growth. The Composite Materials market has a total addressable market of $117.5 billion expected to grow at a 5.5% CAGR to $144.5 billion in 2028 (Figure 16). Furthermore, the Engineered Products market is expected to grow at a 7.4% CAGR, having a total addressable market size of $1,510 billion by 2027 (Figure 17). Hexcel These are highly competitive markets where companies compete not only with industry competitors, but also companies that produce substitutes to composite materials such as metal, structural foam, and wood. However, these markets have high barriers to entry because of intellectual property, unique required skills and expertise, rigorous product certification requirements, and high expectation for consistent on-time delivery. (Appendix 18)

Tailwinds

Air Travel Demand

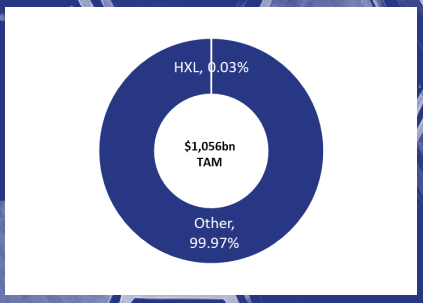
The International Air Transport Association forecasts that around 4.7 billion people will travel in 2024, surpassing the pre-pandemic travel figure of 4.5 billion people. Furthermore, in their Q4 press release, Delta highlighted the strength in demand for air travel from consumers to persist into 2024 and 93% of corporations expect their travel volumes to increase or stay the same in 2024 relative to 2023.

Figure 16: Composite Materials



Source: CSIMarket

Figure 17: Engineered Products Market Comparison



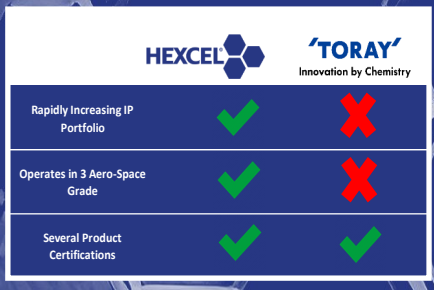
Source: CSIMarket

Figure 18: Geographic Comparison

Company	Countries	Revenue in Developed Countries
HXL	138	81.8%
SPR	89	92.8%
TRYIY	67	65.2%
SOLB	144	59.1%

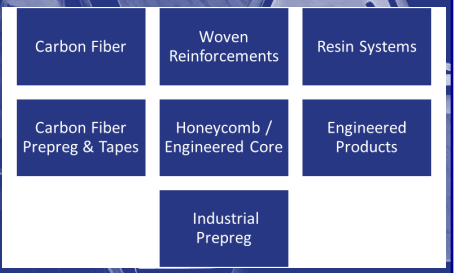
Source: FactSet

Figure 19: Industry Comparison



Source: Team Consensus

Figure 20: Product Range



Source: Hexcel Investor Briefing

Aircraft Retirement

The retirement of legacy aircraft fleets will lead to the manufacturing of modern aircraft comprised of advanced composite materials. Currently, pressure is being placed on commercial airlines to replace their fleet with more fuel efficient and quieter aircraft. Additionally, the Air Force has plans to retire 310 aircraft in 2024. The retired aircraft will be replaced by modern aircraft comprised of advanced composites, such as the Lockheed Martin F-35, a program for which Hexcel is a supplier.

Defense Spending

With growing geopolitical uncertainty and the presence of two wars, the path of least resistance for military spending is upward. Furthermore, the rapid innovation in military technology will create demand for the newest military aircraft and technology. These two forces will increase the demand for advanced composite materials.

Advanced Composite Adoption

The space & defense industry has led the adoption of advanced composite materials with Hexcel composites used extensively on the Sikorsky CH-53K and the Lockheed Martin F-35. Commercial aerospace adoption has lagged space & defense. Modern commercial aircraft widebodies are 50% composite, while narrow bodies are only 10-20%. However, expectations for commercial aircraft are 60%+ advanced composite makeup in the next 10 years.

Headwinds

Supply Chain

As supply chains try to work back to pre-pandemic capacity, isolated disruptions have created headwinds. Specifically, the war in the Ukraine has created barriers to receive raw materials and the turmoil in the Red Sea has caused shipment times to rise.

Labor Costs

Hiring and training employees has become a problem for aircraft manufacturers. Companies are having issues finding talent in a tight labor market resulting in higher wages, hurting profit. Ultimately, build rates may be affected negatively.

Regulatory Oversight

Operating in the Aerospace industry, Hexcel must comply with the standards set by regulatory agencies such as the Federal Aviation Administration (FAA) in the U.S. and the European Union Aviation Safety Agency (EASA) in Europe. For example, in the United States Hexcel must receive a Technical Standard Orders (TSO) authorization for material design and production approval. Current and future aerospace and military regulatory requirements may weaken profit margins with the increase in compliance costs.

COMPETITIVE POSITIONING

Market Share

Hexcel commands a 1.25% market share in the composite materials market and a 0.03% market share in the engineered products market.

Comparables Selection

To capture customer and revenue stream variation, we construct distinct peer groups for Hexcel's technology using management and analyst-selected peers as well as overlapping operating subindustries, target markets, and parallel product portfolios. Hexcel faces competition from several key players in the industry. Solvay (SOLB, a chemical and advanced materials company, is known for its focus on sustainable solutions). Toray Industries (TRYIY, a global chemical industry company, specializes in advanced materials and textiles). Spirit AeroSystems (SPR, an aerospace company actively involved in the design and manufacturing of aerostructures for commercial and defense aircraft), respectively (Appendix 12).

Competitive Advantage

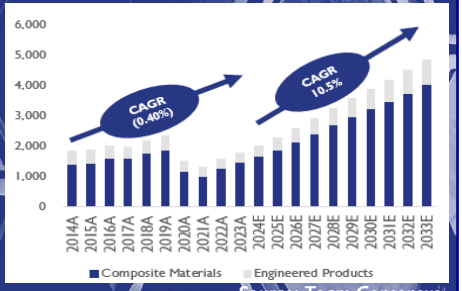
Hexcel has formidable competitive advantages that distinguishes it within the advanced composites industry. One of Hexcel's strategic differentiators is its ability to build customer relationships leading to customer retention, upsell/cross-sell opportunities, and alignment with emerging industry trends. By optimizing its existing customer relationships, Hexcel demonstrates a strong and resilient revenue model. The predictability of its operations, stemming from backlog with major customers and consistent demand in aerospace and defense, further fortifies its competitive edge. Another key strength lies in its pricing power, a result of its commitment to innovation and the delivery of high-quality, advanced materials. This allows Hexcel to establish favorable pricing strategies, enhancing its overall profitability. Consequently, Hexcel stands out as a strategic player, well-prepared to capitalize on the growth opportunities in the markets it participates in and achieve long-term success. Hexcel's ability to generate high free cash flow highlights its financial strength and flexibility, providing resources for strategic investments, R&D, and potential acquisitions.

Figure 21: M&A Comparison

Market	Company	Acquisitions since 2006	Disclosed Value Sum.
Engineered Products	HXL	2	$170mm
	TRYIY	1	$584mm
	SOLB	1	$5.5bn
Composite Materials	HXL	4	$86mm
	SPR	2	$143.7mm

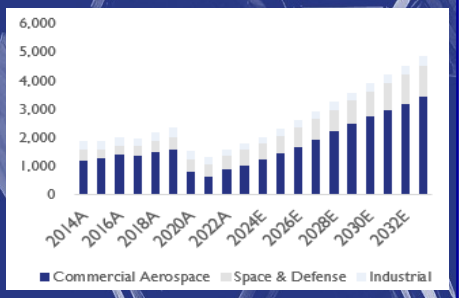
Source: Wolfe Research

Figure 22: Sales Forecast by Segment



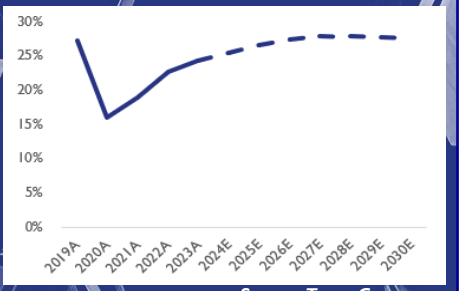
Source: Team Consensus

Figure 23: Sales Forecast by Market



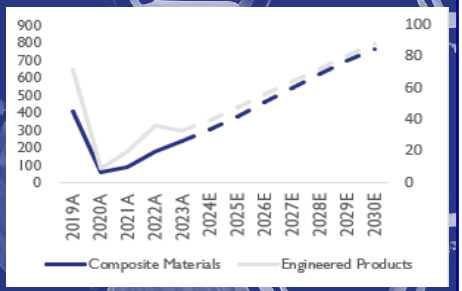
Source: Team Consensus

Figure 24: Gross Margins Forecast



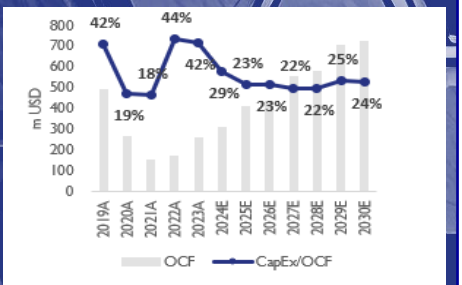
Source: Team Consensus

Figure 25: Segment EBIT Forecast



Source: Team Consensus

Figure 26: CapEx as % of OCF



Source: Team Consensus

Geographic Footprint

Hexcel distinguishes itself with a strategic approach to global revenue, maintaining a balance between the US and international markets as well as developed countries (Figure 18). The company's revenue breakdown reveals a 51% contribution from the US and a substantial 49% from international markets. Key European regions (France, Spain, Germany, UK, Austria) and the Rest of the World play a significant role in this international revenue.

This balanced distribution sets Hexcel apart from competitors who are heavily concentrated in the US or International markets. Hexcel's diverse international sales channels, particularly in key European markets, provide a competitive advantage in driving overseas revenue growth. This strategic positioning enhances Hexcel's resilience and competitiveness in the landscape of Composite Materials and Engineered Products.

Acquisitions

In the Composite Materials industry, acquisitions play a pivotal role in enhancing companies' competitive positions. Hexcel, a leading player, has proactively engaged in acquisitions since 2016, investing $276 million (Figure 21). The notable acquisition of ARC Technologies in 2019 strengthened Hexcel's expertise in radio frequency and electromagnetic interference solutions, aligning with the company's commitment to innovation.

Capital Base & Chemical Process

Hexcel's strategic advantages, driven by substantial capital investments over the past two decades, have propelled significant growth, solidifying its role in the advanced composites industry. Crucially, Hexcel's chemical process intellectual property and product certifications are factors as to why the company has above-average margins (Appendix 12). Hexcel distinguishes itself in the aerospace and materials sector with a superior product lineup, outshining peers such as Solvay, Toray, and Spirit AeroSystems, thanks to its innovative thermoset and thermoplastic solutions tailored for specific applications (Figure 20). Its long-standing expertise in carbon fiber, highlighted by a 50-year history and a pivotal role as a supplier to the U.S. military, solidifies its market leadership. Moreover, Hexcel's extensive intellectual property, with over 1,350 patents and applications, reinforces its pioneering position in composite materials, setting industry standards and driving technological advancements (Figure 19).

FINANCIAL ANALYSIS

Revenue & Profitability

Revenue: Hexcel's revenue is driven by its three end markets: commercial aerospace, space & defense (S&D), and industrial. We forecast Hexcel's revenue to grow at a 10.5% CAGR from 2023 to 2033 (Figure 22). This anticipated growth stems from our analysis of Hexcel's key end markets, with expected revenue CAGRs of 12.5% in Commercial Aerospace, 7.0% in S&D, and 5.0% in Industrial (Figure 23). Commercial Aerospace revenue projections are based on company guidance and expected growth in commercial aerospace OEM build rates, as detailed in investment thesis 1 in the Investment Summary. These build rate projections are impacted by two main factors: an increase in airline passenger traffic and higher aircraft replacement rates, both of which we identify as significant tailwinds contributing to growth in the sector. We estimate moderate growth in S&D end market demand, highlighted by increased global tension, strong shipset values, and growing opportunities with the space sector. Forecasted Industrial revenue growth will predominantly be driven by the automotive industry, as the company transitions its focus away from the wind sector, and other industries lag.

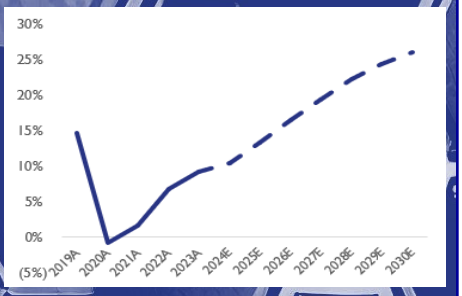
Gross Margins: With a cost structure heavily reliant on raw materials and commodity prices, gross margins are an important indicator to track for Hexcel. The 3 years preceding the pandemic, Hexcel's average gross margin was 27.2%. In 2023, its gross margin was 25.4%. Historically, Hexcel has been able to capitalize on driving incremental gross margin on average around 37%. We forecast 35% incremental gross margin in 2024, and incremental margins slightly deteriorating over time. We anticipate gross margins to reach pre-COVID levels by 2026 (Figure 24).

Operating Margins: Hexcel's two business segments, Composite Materials and Engineered Products, have distinct operating margin profiles leading us to model the two segments separately. We allocated end market revenue to the two business segments based on historical trends and our analysis.

Figure 27: Peer Margin Comparison

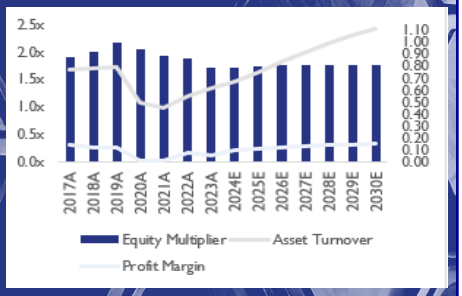
Company	Ticker	LTM Margins Gross	EBITDA	Operating	Profit
Hexcel	**HXL**	**24%**	**19%**	**12%**	**6%**
Composite Materials					
Solvay SA	SOLB-BE	28%	23%	16%	8%
Toray Industries	3402-JP	17%	9%	3%	2%
Cabot Corporation	CBT-US	21%	17%	13%	11%
Woodward	WWD-US	23%	16%	12%	8%
Moog	MOG.A-US	25%	12%	10%	5%
Average		**23%**	**15%**	**11%**	**7%**
Engineered Products					
Spirit AeroSystems	SPR-US	(2%)	(3%)	(9%)	(17%)
AAR Corp	AIR-US	19%	8%	6%	3%
Triumph Group	TGI-US	25%	13%	11%	(2%)
Huntsman Corp	HUN-US	15%	7%	2%	(0%)
Barnes Group	B-US	32%	15%	6%	2%
Average		**18%**	**8%**	**3%**	**(3%)**

Figure 28: ROIC Forecast



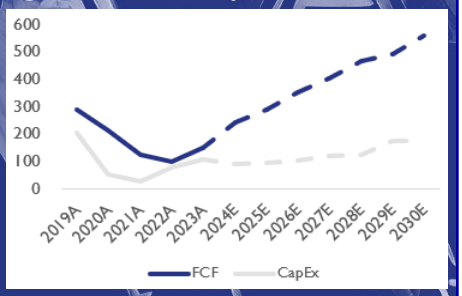
Source: Team Consensus

Figure 29: DuPont Analysis



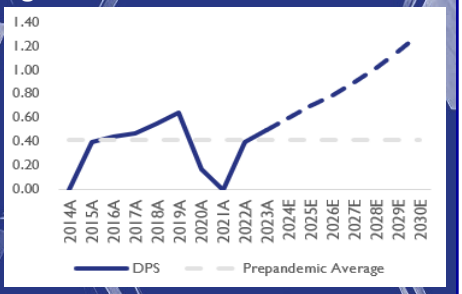
Source: Team Consensus

Figure 30: FCF & CapEx Forecast



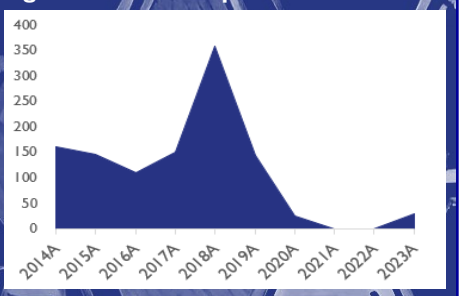
Source: Team Consensus

Figure 31: DPS Forecast



Source: Team Consensus

Figure 32: Share Repurchases



Source: FactSet

Figure 34: Debt Distribution Schedule

Source: FactSet

Composite Materials: Before COVID, the Composite Materials segment had a 3-year average operating margin (ex-intersegment sales) of 21.9%. In 2023, operating margin was 16.1%. We forecast initial incremental operating margin of 35% based on historical trends and operating leverage opportunities founded on current capacity utilization levels. As utilization levels ramp up, we expect incremental margins to deteriorate slightly. We anticipate Composite Materials margins to reach pre-COVID levels by 2027 (Figure 25).

Engineered Products: Before COVID, the Engineered Products segment had a 3-year average operating margin (ex-intersegment sales) of 13.2%. In 2023, operating margin was 11.4%. We forecast initial incremental operating margin of 20% based on historical trends and volume growth potential. As utilization levels ramp up, we expect incremental margins to deteriorate slightly. We anticipate Engineered Products margins to reach pre-COVID levels by 2027 (Figure 25).

Capital Management

Managerial priorities for cash flow allocation are internal investment, strategic acquisitions, and shareholder compensation, in that order. Capex as a percentage of operating cash flow from 2014-2023 has averaged 53% and we expect capex to remain at a lower average of 24% over the next 6 years, due to the lack of necessity to scale as Hexcel grows back into existing capacity (Figure 26). Regarding strategic acquisitions, Hexcel seeks to acquire companies that broaden and enhance its product portfolio and acquires companies on an opportunity basis. See appendix x for information on previous acquisitions. Lastly, shareholder compensation is discussed below.

Capital Efficiency: Hexcel's pre-pandemic ROIC ranging from 12.5% to 14.5% was higher than its WACC of 9.1% indicating economic value-add. Hexcel's ROIC has suffered since the pandemic, but we expect it to increase back to pre-COVID levels in 2025 due to the demand drivers mentioned (Figure 28). ROE has also declined substantially, averaging 17.4% before the pandemic, but falling to 1.1% in 2021. We anticipate ROE to surpass the pre-pandemic average ROE in 2026 at 18.9%, driven by increasing profit margins and asset turnover (Figure 29).

Shareholder Compensation

We expect strong FCF generation over the coming years (Figure 30). With capital expenditures anticipated to be subdued over the coming year — management guides for under $100 million in CapEx over the next few years — we project increased shareholder compensation. The company has historically compensated shareholders with dividends and share repurchases, except in 2021 due to pandemic-related setbacks. Hexcel reinstated the dividend in 2022, paying out $33.7 million and $42.2 million in 2022 and 2023, respectively. In their Q4 2023 earnings release, Hexcel announced a 20% increase in the dividend to a $0.15 quarterly dividend. We anticipate low double-digit growth in dividends over the next several years (Figure 31). After pausing share buybacks in 2021 and 2022, Hexcel bought back $30.1 million worth of shares in 2023. Prior to the pandemic, Hexcel historically repurchased over $100mm worth of shares each year (Figure 32). We forecast share buybacks to dramatically increase with the anticipated growth in FCF. This is shown by our projections of $120 million in share buybacks in 2024, and share buybacks accounting for approximately 80% of FCF in the years following.

Leverage & Liquidity

Hexcel's credit rating according to Fitch, Moody's and S&P is as follows:

Figure 33: Credit Ratings

	Fitch	Moody's	S&P
Credit Rating	BBB-	Baa3	BB+
Outlook	Stable	Stable	Positive

Hexcel's total debt outstanding is approximately $700mm and consists of 4.70% unsecured notes due 2025 and 3.95% senior unsecured notes due 2027 (Figure 34).

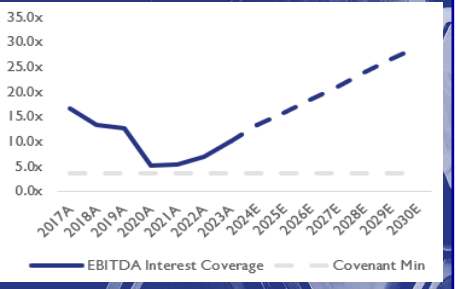
Liquidity: Hexcel ended 2023 with cash & cash equivalents of $227 million leading to Hexcel having a current ratio of 2.7 and cash ratio of 0.7, compared to LTM peer averages of 1.4 and 0.5, respectively. Hexcel has sufficient liquidity to handle its operations and can tap into a $750 million senior unsecured credit facility.

Leverage: With 2023 EBITDA of $340 million and our forecasted 2024 EBITDA of $425 million, Hexcel Net Debt/EBITDA stands at 1.4x on a last twelve months basis and improves to 1.0x when forecasting next twelve months. This demonstrates Hexcel's strong profitability, indicating its ability to cover debt. Additionally, Hexcel has an Altman Z-Score of 4.8 that is substantially above the peer average of 1.7 and its 40.7% D/E ratio is lower than its peer group average of 47.6%.

Figure 35: Net Leverage

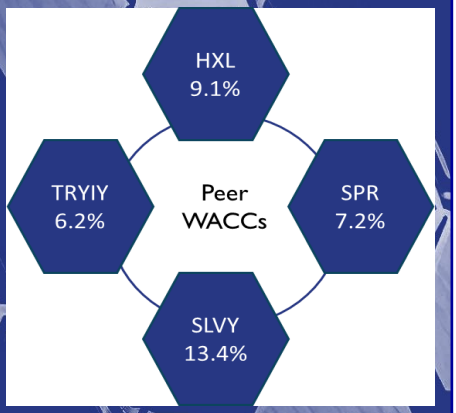
Source: Team Consensus

Figure 36: Interest Coverage



Source: Team Consensus

Figure #37: Peer WACC Comparison



Source: Bloomberg

Figure 39:

	2028 EBITDA	EV/EBITDA Multiple	Enterprise Value
Composite Materials	731	15.5x	11,334
Engineered Products	85	11.0x	931
Corporate & Other	(63)	15.0x	(943)
Total Enterprise Value			**11,323**
(+) Cash			227
(+) Equity Investments			5
(-) Debt			(700)
(+) 5-Year Cash Generation (FCF - Interest Expense)			1,560
2028 Equity Value			**12,416**
Diluted Shares Outstanding			85
2028 Share Price			$146.01
5-year return			**111.9%**
IRR			**16.2%**

Source: Company Proxy Statements

Figure 40:

Metholodogy	Price Target	Upside
DCF (Perpetuity Growth Rate)	$90.19	30.9%
DCF (12.5x EBITDA Exit Multiple)	$97.20	41.0%

	Peer EV/EBITDA	Peer P/E	SP400 P/E	HXL P/E
2025 Metric	499	$3.20	$3.20	$3.20
Applied Premium	1.6x	1.5x	1.76x	
NTM Multiple	15.4x	33.0x	30.1x	30.0x
Enterprise Value	7,714			
Market Cap	7,246			
12-month Price Target	$85.21	$105.48	$96.12	$95.85
Upside	23.6%	53.0%	39.5%	39.1%

Average 12-month Price Target	$95.01
Average Upside	37.9%

Source: Company Proxy Statements

Covenants Under its senior unsecured credit facility, Hexcel is required to maintain a minimum interest coverage ratio (EBITDA-to-interest expense) of 3.50x and a maximum leverage ratio (Net Debt-to-EBITDA) of 3.75x with a step up to 4.25x allowed following certain acquisitions. Hexcel is well within this range with a leverage ratio of 1.4x (Figure 35) and an interest coverage ratio of 10.0x (Figure 36).

Background Hexcel's management team has historically kept modest debt levels and steadily decreasing the proportion of debt within its capital structure. This can be seen by its total debt as a percentage of equity over time (key figures appendix). Finally, management has taken a disciplined approach by attempting to maintain a 1.5x-2x Net Debt/EBITDA. In conclusion, Hexcel maintains a low level of debt relative to its capital structure, has a management team committed to maintaining manageable levels of debt, benefits from consistent and predictable revenue, possesses a substantial asset base, and is expected to generate significant free cash flow. These factors lead us to conclude that Hexcel is in a robust financial condition.

VALUATION

Introduction

We issue a BUY recommendation on HXL with a 12-month price target of $95 representing a 37.9% upside from its closing price of $68.92 on 2/2/2024. Additionally, we set a 5-year price target of $146 representing an IRR of 16.2% over the five-year period. Our price target is based on a Discounted Cash Flow model and Relative Valuation (Figure 39 and 40) that incorporates key model assumptions (Appendix 22), HXL's historical valuation premium, and our investment thesis.

Discounted Cash Flow

WACC. The calculation of the 9.1% WACC assigned to Hexcel in our DCF valuation is shown in Figure 45. Figure 37 compares HXL's WACC relative to its competitors.

Terminal Growth. The 3% terminal growth rate reflects our analysis of factors such as the growth of the US economy, inflation rates, and our projection that the demand for advanced composites will continue to outpace US GDP growth well into the future.

Relative Valuation

Our relative valuation analysis considered Hexcel's composite materials peers (Solvay, Toray, Cabot, Woodward, and Moog), Hexcel's engineered products peers (Spirit AeroSystems, AAR, Triumph, Huntsman, and Barnes), the S&P Midcap 400 Index (Hexcel's self-identified benchmark), and Hexcel's historical valuations. The applied multiples are based on our analysis and Hexcel's pre-COVID and post-COVID valuation relative to peers, the S&P400 Midcap Index, and itself.

Figure #38: Relative Valuation

	Industry Peers EV/EBITDA		Industry Peers P/E		S&P400 Midcap	HXL P/E
	Composite Materials	Engineered Products	Composite Materials	Engineered Products	Total Company	Total Company
Current Peer Average	9.7x	10.2x	18.9x	25.6x	17.1x	28.2x
HXL Average Pre-Covid Premium	1.3x	1.5x	1.2x	1.5x	1.0x	20.2x
HXL Average Post-Covid Premium	1.9x	1.6x	2.3x	1.6x	2.9x	41.1x
Applied Premium	1.6x	1.5x	1.5x	1.5x	1.8x	
Applied Multiple	15.6x	15.3x	28.2x	37.8x	30.1x	30.0x
Multiple Used	**15.4x**		**33.0x**		**30.1x**	**30.0x**

Sensitivity Analysis

We produced a one-way and two-way sensitivity analysis in order to test the strength of our price target. In our two-way sensitivity analysis (Figure 42), we evaluated how variations in critical assumptions of our DCF model – WACC, long term growth rate, and exit EBITDA multiple – impact our price target. The results from our two-way sensitivity analysis indicate that adjusting key assumptions negatively has a limited impact on lowering our price target, while making positive adjustments reveals a significant potential for price appreciation. This demonstrates the asymmetric upside of HXL..

Figure 41:

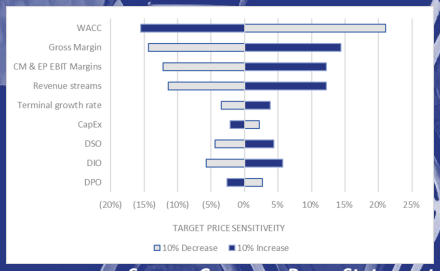
Upside

WACC: \ Exit EBITDA Multiple	10.5x	11.5x	12.5x	13.5x	14.5x
11.0%	6.7%	13.5%	20.3%	27.1%	33.9%
10.0%	15.7%	23.1%	30.6%	38.0%	45.5%
9.0%	25.5%	33.6%	41.8%	49.9%	58.1%
8.0%	36.3%	45.2%	54.1%	63.1%	72.0%
7.0%	48.1%	57.9%	67.7%	77.5%	87.3%

Upside

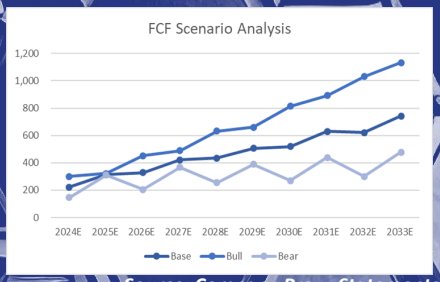
WACC: \ Long term growth rate (g):	2.0%	2.5%	3.0%	3.5%	4.0%
11.0%	(13.7%)	(10.4%)	(6.7%)	(2.6%)	2.2%
10.0%	0.4%	4.9%	10.0%	16.0%	22.9%
9.0%	18.6%	25.0%	32.6%	41.5%	52.2%
8.0%	43.0%	52.7%	64.3%	78.5%	96.3%
7.0%	77.6%	93.0%	112.3%	137.1%	170.1%

Figure 42:



Source: Company Proxy Statements

Figure 43:



Source: Company Proxy Statements

Figure 44: Base Case Variations

DCF	Bull	Base	Bear
Revenue CAGR	14.9%	10.5%	9.3%
FCF CAGR	20.9%	15.9%	10.9%
Stock Price	$140.68	$93.69	$59.63
Upside	104.1%	35.9%	(13.5%)

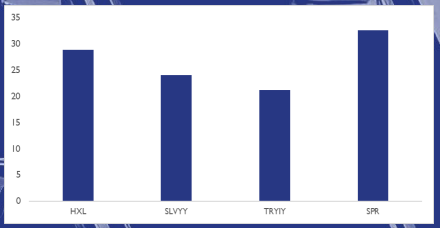
Source: Team Consensus

Figure 45:

Component	Rate	Methodology
Risk-free rate	4.1%	US 10-year treasury yield
Beta	1.2	FactSet 52 week beta
Equity Risk Premium	4.5%	Aswath Damodaran
Cost of Equity	9.4%	Calculated vis CAPM
Pre-tax cost of debt	5.5%	FactSet - YTW on 3.95% 2/27 Bond
Tax rate	21.1%	Tax rate used in DCF; 2022 tax rate
After-tax cost of debt	4.4%	Pre-tax cost of debt x (1 - tax rate)
WACC	9.1%	Calculated using market value D/E ratio of 0.08x

Source: Company Proxy Statements

Figure 46: Morningstar ESG Risk Rating Vs. Peers



Source: Morningstar

Figure 47: ESG Score Vs. Competitors

Company	Bloomberg ESG Score	Overall Vs Peers
HXL	2.45	Above Median
TRYIY	4.01	Leading
SOLB	4.23	Leading
SPR	5.96	Leading

Source: Bloomberg

Figure 48: Environmental Score

Company	Environmental Score
HXL	0.73
TRYIY	4.25
SOLB	4.68
SPR	4.57

Source: Bloomberg

Our one-way sensitivity analysis highlights the critical impact that assumptions regarding WACC, gross margin, EBIT margins for Composite Materials and Engineered Products, and revenue growth have on HXL's valuation. A 10% adverse adjustment to any of these assumptions individually leads to a double-digit reduction in our price target. However, even with these adverse adjustments, the analysis does not predict a decline in HXL's price to below its current trading level of $68.92, indicating resilience in its valuation against these specific downside risks.

Scenario Analysis

We conducted a DCF scenario analysis, presenting bull, base, and bear cases based on varying key assumptions and inputs as detailed in Appendix 22. The analysis projected a 12-month upside of 104.1% for the bull case, 35.9% upside for the base case, and a 13.5% downside for the bear case, by averaging the outcomes from the perpetuity growth method (using a 3.0% perpetual growth) and exit EBITDA multiple method (using a 12.5x EV/EBITDA). Our bull case scenario is heavily dependent on the early announcement and production of composite-rich narrowbody aircraft models by Airbus and Boeing (Investment Thesis #1). Our bear case scenario considers the possibility that aerospace production rates fall short of expectations and that Hexcel fails to attain the incremental margins we anticipated.

Monte Carlo Analysis

To assess potential impacts on Hexcel's stock price resulting from varying assumptions, we perform a Monte Carlo simulation. We ran 12,500 iterations in which the WACC and terminal growth rate were simulated to assess stock price impacts from changes in these parameters. The mean and standard deviation of these parameters are based on historical values and the team's analysis. The mean price established from the simulated outcomes was $94.75, solidifying the team's **BUY** recommendation. (Appendix 23).

ESG

The aerospace and defense industry has a medium ESG exposure relative to other industries Hexcel's Morningstar ESG rating is slightly riskier than comps excluding Spirit Aerosystems due to bribery and corruption risk from military contracts (Figure 46). While Hexcel's Bloomberg ESG scores lag their peers (Figure 47). Bloomberg lacks data for Hexcel in multiple environmental (Figure 48) and social metrics (Figure 49). BlackRock's high ownership (Figure 53) of their stock issue is partly due to holding Hexcel in multiple ESG screened portfolios and their high governance scores (Figure 50).

Environmental

Hexcel's carbon fiber helps to create lighter aircraft that use less fuel and produce less emissions than previous generations of aircraft, contributing to an increasing environmentally friendly portfolio of products. Hexcel is targeting a 30% reduction in emissions, a 30% reduction in landfill waste, and a 20% reduction in freshwater usage by 2030 on a 2019 baseline to improve the environmental impact of their production. Hexcel also targets 25% renewable energy consumption and has multiple energy saving initiatives at their production facilities. Hexcel received a sustainability award from Airbus Defense and Space in November 2022 recognizing a partnership in 2021 with Fairmat to recycle carbon fiber prepreg composite cutoffs from Hexcel European operations and its customers. Carbon fiber recycling is a nascent industry that will help improve the sustainability of carbon fiber production and reduce waste costs from the highly value-additive production process. The Fairmat partnership represents an opportunity to improve their ESG standing versus competitors. Hexcel Acousti-Cap is proven to reduce jet engine noise during takeoff when used on aircraft engine nacelles. The International Civil Aviation Organization requires noise reduction to reduce noise and emission impacts of air travel. Hexcel products are at the center of this industry-wide ESG initiative. Hexcel was a participant in a Lower Passaic River Valley clean up initiative that listed one of their old plants as a potentially responsible party in the pollution of the river. Hexcel and 83 other companies combined to pay $150 million dollars in damages. While not a statement of guilt, material production creates high levels of waste which Hexcel is committed to reducing through their strong ESG initiatives. Overall, Hexcel is at the center of an industry-wide movement to reduce the environmental impact of air travel and materials production.

Social

The Hexcel Foundation has made grants to charitable organizations supporting education, fighting cancer, and relieving hunger and homelessness. Grant recipients include The Smithsonian National Air and Space Museum, The Cancer Research Institute, Convoy of Hope, and the American Red Cross. These social initiatives are in conjunction with Hexcel's minimum charitable donations of $50 per employee per site to local non-profits which they plan to grow 10% per year through 2025. Hexcel is targeting a 50% reduction in total recordable incident rate (TRIR) by 2050 on a 2019 baseline to improve workplace safety and protect their employees.

Figure 49: Social Score

Company	Social Score
HXL	1.52
TRYIY	2.11
SOLB	2.36
SPR	6.84

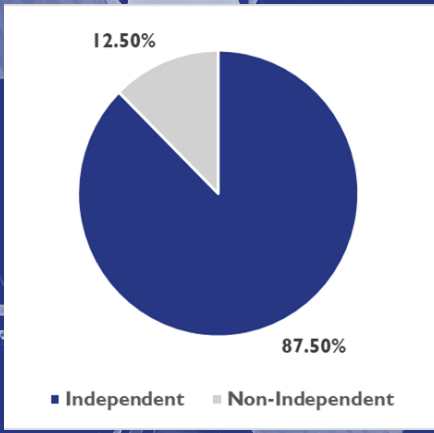
Source: Bloomberg

Figure 50: Governance Score

Company	Governance Score
HXL	6.59
TRYIY	5.88
SOLB	5.69
SPR	6.29

Source: Bloomberg

Figure 51: Board of Directors



Source: Hexcel Proxy Statement

Figure 52: CEO Pay Ratio

Source: Company Proxy Statements

Figure 53: Top Institutional Owners

Name	Percent of Common Stock
BlackRock, Inc.	10.7%
The Vanguard	9.1%
Morgan Stanley	7.9%
Allianceberstein	7.2%
EARNEST Partners,	6.1%

Source: Hexcel Proxy Statement

All suppliers are subject to Hexcel's Supplier Code of Conduct, which spells out requirements for the supply of raw materials including but not limited to fair trade and labor conditions, environmental and health restrictions, business ethics, and confidentiality clauses. These charitable initiatives as well as their commitment to safe, ethical supply chains greatly improve Hexcel's ESG standing. Hexcel supports science and technology education and career development at the high school and post-graduate level with career training, rotational programs and sponsorships of high school STEM programs and robotics teams. Their commitment to science education secures the future growth of their industry while also making them a valuable employer in their communities. Finally, Hexcel has strong diversity initiatives in which 100% of all external salaried positions are filled with diverse slates of candidates. These initiatives contribute to their high ESG rating and inclusion in ESG portfolios.

Governance

Board of Directors

Hexcel's Board of Directors is 87.5% independent (Figure 51) with an average tenure of 11.5 years and 62.5% of the board having a tenure below 10 years. Hexcel has a mandatory retirement age for their directors set at 70 years old. The average age of their board is 61 years and 37.5% of the Hexcel board are racially and/or gender diverse. (Appendix 5). In fact, the Hexcel board has been comprised of over 20% female independent directors for over a decade. By maintaining an active, independent, and diverse Board of Directors, Hexcel has shown a commitment to shareholder value and the sustainable growth of the company. Combined, the Hexcel Board holds 1,135,013 shares of Hexcel stock as of 2022 Fiscal Year end representing 1.325% of total outstanding shares, while total insiders hold 1.7% of the outstanding issue (Figure 55). Chairman and CEO, Nick Stanage is paid on an 87% variable, performance-based basis of which 56% are stock awards. This is above their competitor average of 66% variable (Figure 54). Hexcel has an annual say-on-pay vote which is a positive for shareholders as they can influence executive compensation.

Institutional Ownership

Five institutional investors own over 5% over Hexcel's outstanding shares. The top three among these investors are BlackRock, Inc. at 10.7%, The Vanguard Group, Inc. at 9.1%, and Morgan Stanley at 7.9%. Hexcel is included in aerospace and defense funds as well as small-cap U.S. equity indices and ESG screened ETFs.

CEO Pay Ratio Compared to Peers

American competitor Spirit AeroSystems pays their CEO at a pay ratio of 183x (Figure 52). This disparity highlights Hexcel's advantages to shareholders as they have a pay and incentive structure that rewards performance and limits disparities between executives and the average employee. Similar pay ratios for international competitors Solvay and Toray were not available due to differing submission requirements. However, Solvay and Toray pay their CEOs a much higher fixed salary as a percentage of total annual compensation (Figure 54), which again shows how Hexcel maximizes shareholder value through incentive-based executive compensation.

INVESTMENT RISKS

Greater than 85% of Hexcel's sales comes from aerospace markets. Hexcel represents an aerospace "pure play." As a result, most of the risks related to this investment are specific to the aerospace market. In addition to the risks related to their aerospace portfolio, risks related to Hexcel's own supply chain and operations contribute to the overall risk of this investment. Finally, short-term (Figure 57) and long-term risks (Appendix 13) as reported by the World Economic forum contribute to the risks of this investment. Our analysis on the probability and impact of defined risks is displayed in Figure 56.

Operational Risks

OR1: 26% of Hexcel's 2022 sales are from international sales especially in Europe and North Africa related to Airbus and Dassault projects. These operations expose Hexcel to seasonality trends in Europe surrounding summer break and Q3 sales as well as expose Hexcel to currency risk. **Impact**: Less than 10% drop in Q3 sales compared to Q2 which is factored into our base case assumptions. **Mitigation**: Deliver materials to Airbus before summer break and anticipate pent-up demand for Q4, rely on U.S. customers to fill gaps during Q3.

OR2: Over 50% of Hexcel's total revenues come from Airbus and Boeing, making their income heavily reliant on the actions of these two customers. **Impact**: 57% drop in sales in 2020, a similar drop in share price as seen during Covid represents an extreme bear case and a 56% drop in share price. **Mitigation**: Continue to plan production and R&T around Airbus and Boeing to secure revenue.

OR3: Hexcel's position in a rapidly evolving market related to composite materials requires them to rapidly develop new products to stay ahead of market demand and to compete effectively.

Impact: Potential loss of market share in Commercial Aerospace could represent a 10% to 20% drop in sales growth which represents an 11% drop in target price according to our valuation sensitivity analysis (Figure 42). **Mitigation**: Maintain target R&T as a percentage of sales of 3%.
OR4: Hexcel's production is dependent on retaining their highly trained workers with knowledge of the composite material production process. Training and hiring such talent is difficult and expensive, especially in a tight labor market. **Impact**: Decrease in margins due to overhead costs, factored into bear case analysis of a 13.5% drop in share price (Figure 44). **Mitigation**: Continue competitive pay structure to retain key employees.

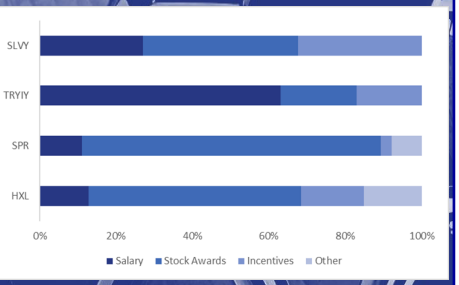
Market Risks

MR1: Hexcel's sales are largely determined by commercial aerospace OEM build rates and carbon fiber adoption. Boeing and Airbus are experiencing a high order backlog which indicates high production rates, but also is a signal of supply chain issues that still plague the commercial aerospace business and slow down production. **Impact**: Potential decrease in 2024 sales growth from 2023, factored into base case that is calculated on 2025 EPS and FCFs out to 2033. **Mitigation**: Maintain current strategy of preparation for expected production ramp.
MR2: Despite high consumer demand for travel, airline stocks are struggling in the current economic environment which could have long term impacts on their aircraft orders and future build rates. The consolidation and/or liquidation of airlines would negatively impact build rates. **Impact**: Reduction of build rates up to 10% decrease in revenue growth and potential 11% decrease in target price according to sensitivity analysis (Figure 42). **Mitigation**: Invest in Space and Defense and Industrial programs not reliant on commercial air travel demand.
MR3: A change in the demand for travel related to global events such as terror attacks, military conflict, and concerns about health and safety. **Impact**: Potential extreme bear case with high revenue impact and 56% drop to pandemic-era stock price. **Mitigation**: Capitalize on production efficiencies and diverse portfolio of composite use cases.
MR4: The supply of raw materials for Hexcel's composite materials are procured from sole sources and limited sources which can exacerbate the impacts of supply shortages, increases in costs, and supply chain constraints as seen in the 2020 and 2021 fiscal years. **Impact**: Decrease in operating income below 10% of sales, factored into bear case assumptions. **Mitigation**: Continued use of raw material hedging to maintain or improve cost level.

Political Risks

PR1: 30% of Hexcel sales come from their Space and Defense product lines. These sales are largely dependent on military spending in the U.S. and abroad and is subject to political risks surrounding national defense budgets. **Impact**: Potential loss of up to 80% of Space and Defense Revenue due to loss of discretionary U.S. government contracts offset by Commercial Aerospace and Industrial growth in bear case assumptions. **Mitigation**: Diversification into Industrials and large focus on Commercial Aerospace mitigates this risk.
PR2: Boeing is currently subject to FAA investigations surrounding quality control. If aircraft lines are shut down for an extended period, overall production rates could decrease, lowering Hexcel's sales. **Impact**: Short-term loss of up to 16% of sales attributable to Boeing, however valuations assume 2025 EPS and FCF out to 2033, likely no change to base case unless FAA announces major changes. **Mitigation**: Increase relationship with Airbus and divert resources to other customers during potential production freezes.
PR3: Retirement of passenger and freight aircraft subject to regulations established by civil aviation authorities and the concerns of the public. **Impact**: If retirement is decelerated, decreased growth in revenue and profits as next-gen models are delayed, -5% Commercial Aerospace revenue growth factored into bear case. **Mitigation**: Advocate for benefits of composites and work closely on next-gen projects with customers to increase composite adoption.
PR4: Environmental regulations related to manufacturing composite materials could interfere with or halt operations at Hexcel plants related to emissions and energy usage. In addition, ESG initiatives may require Hexcel to adjust their processes and supply chains to meet their goals, potentially at a higher cost base. **Impact**: Increase in COGS and decrease in operating margin as production and raw material costs increase. 10% decrease in EBIT margin represents a 13% drop in target price according to sensitivity analysis (Figure 42). **Mitigation**: Leverage supply chains and Supplier Code of Conduct to maintain current costs and meet sustainability targets ahead of regulation primarily due to emissions, production, and military exposure.

Figure 54: CEO Pay



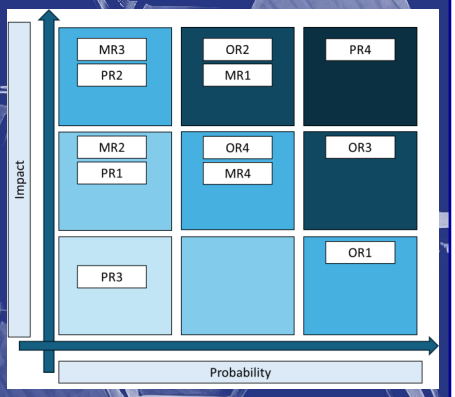
Source: Company Proxy Statements

Figure 55: Executive and Director Ownership

Name	Ownership	Percent Shares
Stanage	818,279	0.973%
Campbell	58,860	0.070%
Egnotovich	18,225	0.022%
Gendron	55,930	0.066%
Dr. Graves	142,239	0.169%
Hachey	20,500	0.024%
Dr. Minus	6,463 Shares	0.008%
Suever	14,544	0.017%
Winterlich	105,887	0.126%
Lehman	68,422	0.081%
Merlot	104,573	0.124%
Fitzsimons	16,498	0.020%
Hennemuth	153,338	0.182%
Pritchett	10,125	0.012%
Total Insiders	1,430,395 Shares	1.7%

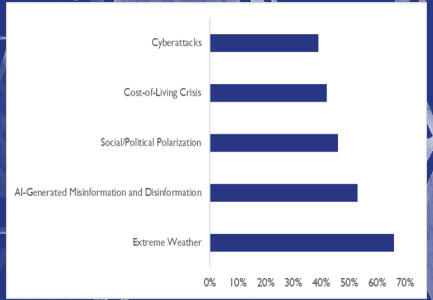
Source: Hexcel Proxy Statement

Figure 56: Risk Matrix



Source: Team Consensus

Figure 57: Most Likely Global Risks



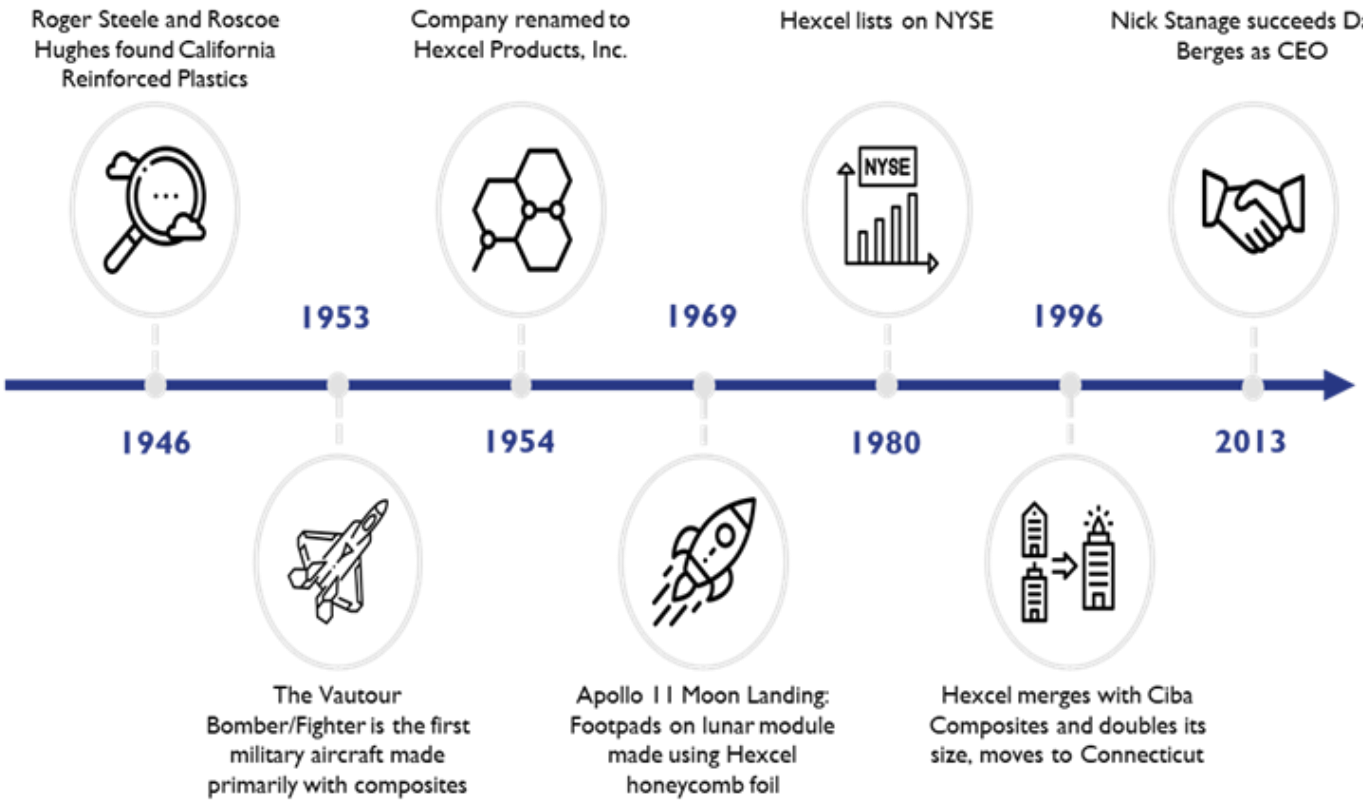
Source: World Economic Forum Survey

APPENDIX MAP

1. Glossary

Term	Definition
Carbon Fiber	HexTow® carbon fibers are used in certain reinforcements and composite materials. Carbon Fiber is a reinforcing fiber made from precursor fibers such as PAN (polyacrylonitrile) or Pitch. Hexcel manufactures of a broad range of high-performance carbon fibers for both aerospace and industrial applications and is the leading carbon fiber supplier to U.S. military applications.
Fabrics/Reinforcements	HexForce® fabrics, multi-axials and specialty reinforcements are made from a variety of fibers, including carbon, glass, aramid and other high strength polymers, quartz, ceramic and other specialty fibers. Hexcel manufactures the most complete line of reinforcements for aerospace and industrial markets and offers a range of globally certified aerospace products in carbon, glass and aramid and specialty fibers.
Prepegs and Resin	A prepreg is a composite material made from combining high performance reinforcement fibers or fabrics with a thermoset or thermoplastic resin matrix. The aerospace industry is the greatest consumer of Hexcel prepregs, for civil aircraft, military jets, helicopters, aero-engines or space satellite and launchers. HexFlow® polymer matrix materials are sold in liquid and film form for use in direct process manufacturing of composite parts.
Adhesives	A film adhesive is a thermoset resin that is supplied in film form and cured under heat and pressure to bond a wide range of composite, metallic and honeycomb surfaces. Hexcel manufactures a wide range of film adhesives, foaming films, primers and liquid shims for metal-to-metal and composite bonding.
Honeycomb	HexWeb® honeycomb is a lightweight, cellular structure generally composed of a sheet of nested hexagonal cells. Honeycomb is a lightweight core material, available in a wide range of materials and cell configurations, supplied by Hexcel in sheet form, in blocks for expansion by the customer or as special process components. Hexcel is the world leader in honeycomb. manufacturing for the commercial aerospace market. In addition to the aerospace market, Hexcel honeycomb is used in sandwich constructions for a wide range of industrial applications - from boat hulls and train interiors to sports equipment and car chassis and body panels.
Pultruded Profiles	Pultrusion is the process of molding carbon fiber materials and resin into finished composite parts. Hexcel pultruded profiles are used in multiple applications including in wind turbines.
Composite Structures	Hexcel manufactures and markets lightweight, high-strength composite structures and assemblies for commercial and military fixed wing aircraft, helicopters, business jets, UAVs, and spacecraft.
Engineered Honeycomb	Hexcel is the leading supplier of Engineered Core used in commercial and military aircraft including engine and nacelle applications.
RF Interference Control	ARC Technologies became part of Hexcel in January 2019. ARC Technologies, a Hexcel Company, is the leading supplier of microwave and RF absorbing materials for commercial and defense applications.
OEM	Original Equipment Manufacturer: For Hexcel, aircraft OEMs include Airbus, Boeing, Lockheed Martin, and others.
Narrowbody	Single aisle commercial plane primarily for domestic flights. Includes Boeing 737 and Airbus A320.
Widebody	Large scales commercial airliners with multiple aisles. Includes Boeing 777 and 787 and Airbus A350.
Shipset	Revenue Hexcel earns per plane for each model of aircraft. The amount increases due to composite material adoption.

2. COMPANY STORY



Source: Hexcel Investor Relations

3. Major Company Factories

Source: Hexcel Investor Relations

4. EXECUTIVE OFFICERS

	Name	Position	Age	Tenure (Years)	Year Joined	Education	Shares Held
	Nick L. Stanage	Chairman/CEO	64	11	2013	Mechanical Engineering (B) Business Admin. (M)	818,279
	Patrick Winterlich	Exec VP/CFO	53	26	1998	Accountancy & Financial Analysis (B)	105,887
	Gail E. Lehman	Exec VP/General Counsel/Secretary	63	7	2017	Psychology (B) Education (M) Law (JD)	68,422
	Gina Fitzsimons	Exec VP/Chief Human Resources Officer	52	5	2019	Business Management (B) Business Admin. (M)	16,498
	Thierry Merlot	President, Aerospace -- Europe, MEA/AP & Industrial	63	28	1996	Engineering (B)	104,573
	Don Morrison	Senior VP/CIO	-	17	2007	Business Management (B) Business Admin. (M)	-
	Paul Mackenzie	Senior VP/CTO	-	23	2001	Business Admin. (M) Organic Chemistry (PhD)	-
	Amy S. Evans	Senior VP/CAO	-	4	2020	Accountancy (B)	-

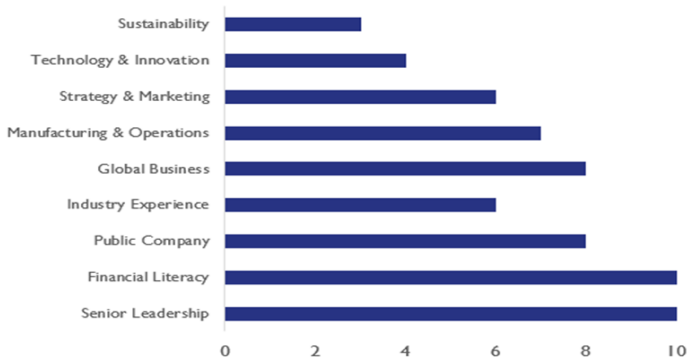
Source: SEC Proxy Statement, Company Website, LinkedIn

5. BOARD OF DIRECTORS

	Name	Position	Age	Tenure (Years)	Director Since	Independent	Shares Held	Other Positions
	Nick L. Stanage	Chairman/ CEO	64	11	2013		818,279	
	Jeffrey C. Campbell	Lead Director	62	21	2003	✓	58,860	Vice Chairman and CFO, American
	Cynthia M. Egnotovich	Board Member	65	9	2015	✓	18,225	Former President, Aerospace Systems
	Thomas A. Gendron	Board Member	62	14	2010	✓	55,930	Former Chairman and CEO of
	Dr. Jefferey A. Graves	Board Member	61	17	2007	✓	142,239	CEO of 3D Systems Corp.
	Guy C. Hachey	Board Member	67	10	2014	✓	20,500	Former COO of Bombardier
	Dr. Marilyn L. Minus	Board Member	45	4	2020	✓	6,436	Professor and Chair of the Department of
	Catherine A. Suever	Board Member	64	6	2018	✓	14,544	Former CFO of Parker-Hannifin
	James J. Cannon	Board Member	-	1	2023	✓	-	CEO of AM General
	Dr. Patricia Hubbard	Board Member	-	1	2023	✓	-	CTO of Cabot Corp.

Source: SEC Proxy Statement, Company Website

6. BOARD OF DIRECTORS EXPERTISE



Source: SEC Proxy Statement, Company Website

7. COMITTEES

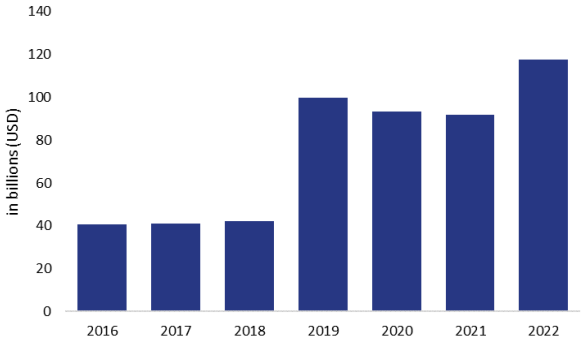
	Audit	Compensation	Nominating, Governance, and Sustainability
Stanage			
Campbell	Chairman		✓
Egnotovich	✓		Chairman
Gendron		✓	
Graves		✓	✓
Hachey		Chairman	
Minus			✓
Suever	✓		
Cannon		✓	
Hubbard			✓

Chairman ✓ Member

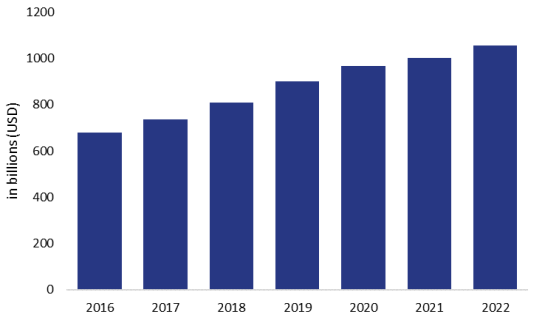
Source: SEC Proxy Statement, Company Website

8. HISTORICAL TAM

Composite Materials Historical TAM



Engineered Products Historical TAM



9. ACQUISITIONS

Composite Materials Acquisitions

ARC TECHNOLOGIES

OPM

Engineered Products Acquisitions

SAFRAN Structil

carbon conversions

FORMAX

LUMINATI

10. KEY CUSTOMERS

Engineered Products Key Customers

BOEING

GE

CTRM

BELL

SPIRIT AEROSYSTEMS

SIKORSKY A LOCKHEED MARTIN COMPANY

Raytheon

Composite Materials Key Customers

AIRBUS

BOEING

BMW

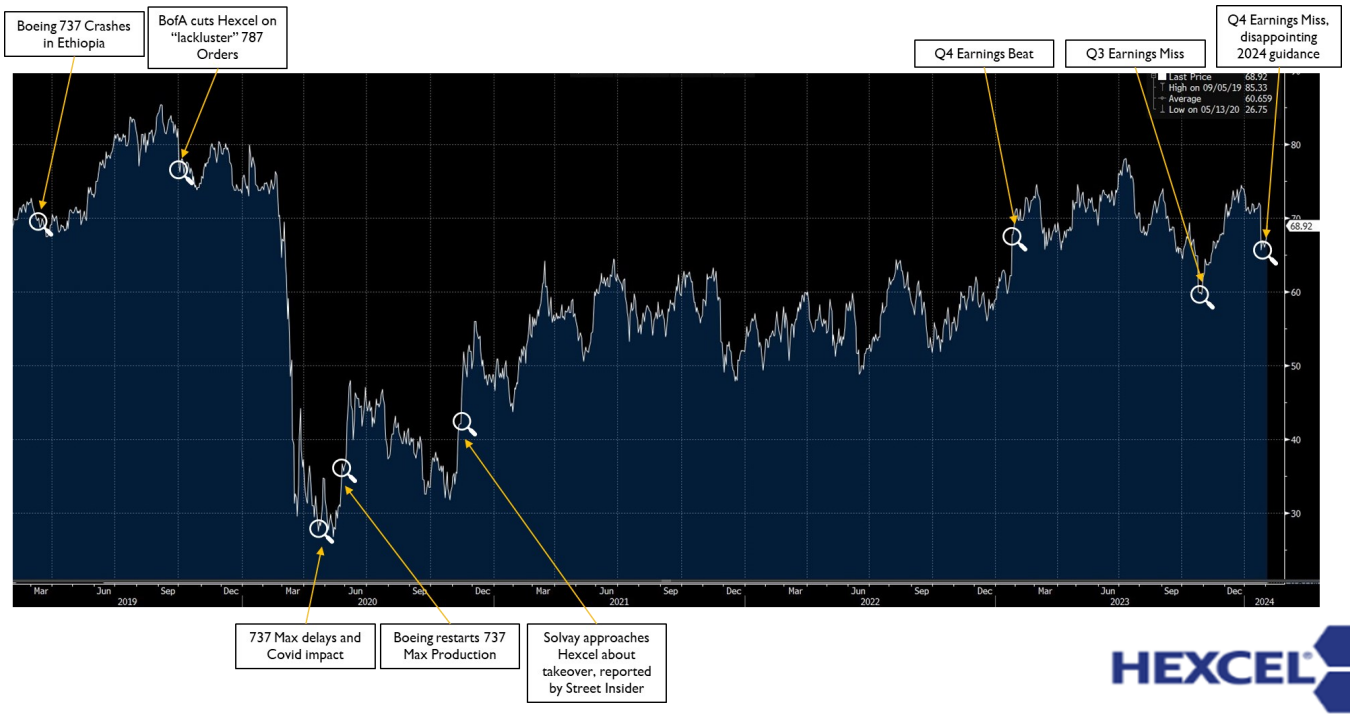
EMBRAER

LEONARDO DRS

LOCKHEED MARTIN

Raytheon

11. ANNOTATED PRICE CHART



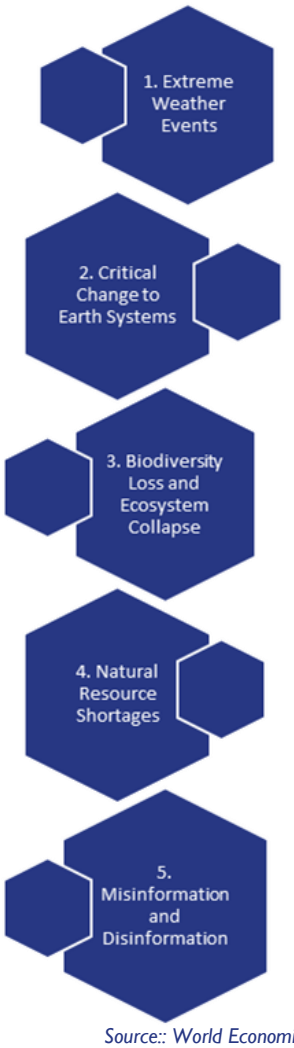
HEXCEL

12. PEER VALUATION

Company	Market Cap (mm, USD)	Sales (mm, USD)	Sales by Region	Business Segments	Customer Base	# of Employees
Hexcel	$6,057	$1,789	International / US	Composite Materials, Engineered Prodcuts		5,600
Composite Materials						
Solvay	$2,553	$13,426	North America / Europe	Solutions, Chemicals, Materials, Corporate & Business Services		9,000
Toray Industries	$1,157	$18,398	Rest / Asia	Textile, Functional Chemical, Carbon Fiber Composites, Environmental & Engineering, Life Science		48,682
Cabot Corp	$59,288	$6,585	International / US	Reinforcement Materials, Performance Chemicals		7,000
Woodward	$8,366	$9,244	International / US	Aerospace, Industrial		9,000
Moog Inc.	$4,857	$5,850	International / US	Aircraft Controls, Industrial Systems, Space & Defense Controls		10,000
Engineered Products						
Spirit AeroSystems	$3,098	$5,030	International / US	Commercial, Defense & Space, Aftermarket		12,000
Huntsman Corp	$4,247	$8,412	International / US	Polyurehtanes, Performance Products, Advanced Materials		7,000
Triumph Group	$1,217	$3,123	International / US	Systems & Support, Interiors		4,800
Barnes Group	$1,648	$2,921	International / US	Industial, Aerospace		5,200
AAR Corp	$2,052	$2,328	International / US	Aviation Services, Expeditionary Services		6,000

Source:: FactSet, Company Website

13. HIGHEST SEVERITY LONG-TERM GLOBAL RISKS



Source:: World Economic Forum

14. RELATIVE VALUATION: COMPOSITE MATERIALS

Company	Market Cap	Enterprise Value (mm)	EV/EBITDA 2021	EV/EBITDA 2022	EV/EBITDA 2023	EV/EBIT 2021	EV/EBIT 2022	EV/EBIT 2023	EV/Sales 2021	EV/Sales 2022	EV/Sales 2023	P/E 2021	P/E 2022	P/E 2023
Solvay SA	$2,553.0	$4,673.0	6.8x	4.4x	2.9x	11.6x	6.4x	6.6x	1.3x	.9x	1.2x	11.2x	5.1x	4.6x
Toray Industries	$1,156.7	$1,797.9	9.5x	7.3x	9.4x	21.7x	14.0x	22.7x	1.x	.8x	.8x	24.9x	12.1x	16.6x
Cabot Corp	$4,069.0	$5,333.0	6.3x	7.1x	7.6x	8.3x	8.9x	9.7x	8.3x	8.9x	9.7x	11.5x	17.7x	9.0x
Woodward	$8,366.0	$9,244.0	20.1x	29.3x	17.4x	30.8x	82.8x	23.4x	3.3x	2.3x	2.8x	35.6x	29.6x	32.9x
Moog Inc.	$4,857.0	$5,850.0	10.2x	8.7x	11.3x	14.1x	11.7x	14.5x	1.2x	1.x	1.4x	16.1x	14.6x	21.2x
Average			10.6x	11.4x	11.4x	17.3x	24.7x	15.4x	3.0x	2.8x	3.2x	19.9x	15.8x	16.8x
Median			9.5x	7.3x	10.3x	14.1x	11.7x	14.5x	1.3x	1.x	1.4x	16.1x	14.6x	16.6x
Hexcel	$5,676.0	$6,313.0	24.8x	22.2x	19.6x	75.5x	44.1x	31.0x	3.9x	3.6x	3.7x	272.2x	39.6x	59.5x

Company	Market Cap	Enterprise Value (mm)	EBITDA 2021	EBITDA 2022	EBITDA 2023	EBIT 2021	EBIT 2022	EBIT 2023	Sales 2021	Sales 2022	Sales 2023	EPS 2021	EPS 2022	EPS 2023
Solvay SA	$2,553.0	$4,673.0	$2,188.0	$3,069.0	$1,207.0	$1,282.0	$2,121.0	$900.0	$11,434.0	$16,071.0	$5,082.0	$9.1	$18.3	$6.3
Toray Industries	$1,156.7	$1,797.9	$1,946.0	$2,230.0	$1,596.0	$853.0	$1,159.0	$664.0	$17,760.0	$19,832.0	$18,369.0	$0.1	$0.2	$0.2
Cabot Corp	$4,069.0	$5,333.0	$650.0	$718.0	$673.0	$490.0	$572.0	$529.0	$3,409.0	$4,321.0	$3,931.0	$4.4	$3.6	$7.7
Woodward	$8,366.0	$9,244.0	$371.0	$187.0	$463.0	$242.0	$66.0	$343.0	$2,246.0	$2,383.0	$2,915.0	$3.2	$2.7	$3.8
Moog Inc.	$4,857.0	$5,850.0	$327.0	$351.0	$404.0	$237.0	$263.0	$313.0	$2,852.0	$3,037.0	$3,320.0	$4.9	$4.8	$5.3
Hexcel	$5,676.0	$6,313.0	$205.5	$253.6	$340.1	$67.5	$127.4	$215.3	$1,323.5	$1,545.0	$1,789.0	$0.2	$1.5	$1.2

15. RELATIVE VALUATION: ENGINEERED PRODUCTS

Company	Market Cap	Enterprise Value (mm)	EV/EBITDA 2021	EV/EBITDA 2022	EV/EBITDA 2023	EV/EBIT 2021	EV/EBIT 2022	EV/EBIT 2023	EV/Sales 2021	EV/Sales 2022	EV/Sales 2023	P/E 2021	P/E 2022	P/E 2023
Spirit AeroSystems	$3,098.0	$6,614.0	-64.5x	96.0x	19.1x	-15.9x	-23.8x	N/A	1.8x	1.3x	1.2x	N/A	-9.9x	-8.3x
AAR Corp	$2,052.0	$2,328.0	8.8x	12.2x	12.2x	11.x	15.7x	14.7x	1.x	1.x	1.x	41.6x	22.3x	19.8x
Triumph Group	$1,217.0	$3,123.0	14.6x	16.2x	12.7x	30.7x	22.2x	15.8x	1.4x	2.1x	1.6x	N/A	N/A	9.7x
Huntsman Corp	$4,247.0	$5,132.0	8.2x	6.4x	7.3x	12.1x	9.5x	34.6x	1.1x	.8x	1.0x	7.4x	12.1x	59.8x
Barnes Group	$1,648.0	$2,921.0	11.3x	10.6x	12.1x	19.x	18.4x	19.8x	2.3x	2.1x	2.0x	23.8x	154.8x	20.4x
Average			-4.3x	28.3x	12.7x	11.4x	8.4x	21.2x	1.5x	1.4x	1.4x	24.3x	44.8x	20.3x
Median			8.8x	12.2x	12.2x	12.1x	15.7x	17.8x	1.4x	1.3x	1.2x	23.8x	17.2x	19.8x
Hexcel	$5,676.0	$6,313.0	24.8x	22.2x	19.6x	75.5x	44.1x	31.0x	3.9x	3.6x	3.7x	272.2x	39.6x	59.5x

Company	Market Cap	Enterprise Value (mm)	EBITDA 2021	EBITDA 2022	EBITDA 2023	EBIT 2021	EBIT 2022	EBIT 2023	Sales 2021	Sales 2022	Sales 2023	EPS 2021	EPS 2022	EPS 2023
Spirit AeroSystems	$3,098.0	$6,614.0	-$107.4	$66.9	$362.4	-$435.0	-$270.0	-$67.0	$3,953.0	$5,030.0	$5,967.0	-$5.2	-$5.2	-$3.2
AAR Corp	$2,052.0	$2,328.0	$184.0	$148.0	$163.0	$148.0	$115.0	$136.0	$1,652.0	$1,820.0	$1,991.0	$1.0	$2.2	$2.5
Triumph Group	$1,217.0	$3,123.0	$177.0	$185.0	$177.0	$84.0	$135.0	$142.0	$1,870.0	$1,460.0	$1,379.0	-$8.6	-$0.7	$1.2
Huntsman Corp	$4,247.0	$5,132.0	$1,132.0	$1,046.0	$474.0	$774.0	$710.0	$195.0	$8,453.0	$8,023.0	$6,035.0	$4.7	$2.3	$0.4
Barnes Group	$1,648.0	$2,921.0	$257.0	$245.0	$238.0	$152.0	$141.0	$146.0	$1,258.0	$1,262.0	$1,456.0	$2.0	$0.3	$1.6
Hexcel	$5,676.0	$6,313.0	$205.5	$253.6	$340.1	$67.5	$127.4	$215.3	$1,323.5	$1,545.0	$1,789.0	$0.2	$1.5	$1.2

Source: FactSet, Nasdaq

18. PORTER'S FIVE FORCES

Threat of New Entrants: 1.5

Composite Materials: 1

- High level of intellectual property and know-how in carbon fiber weaving represents a large barrier to entry.

Engineered Products: 2

- Low barrier to entry in carbon fiber molding and design offset by low access to composite materials by non-manufacturers.

Threat of Substitutes: 4

Composite Materials: 5

- While lighter and stronger than conventional materials, composites are expensive to produce and are constantly changing, which exposes Hexcel to substitution risk.

Engineered Products: 3

- High substitution for fabricated parts manufacturers, Hexcel covers some of this risk by producing their own composite materials.

Customer Bargaining Power: 2.5

Composite Materials: 4

- Hexcel among a small group of primary competitors and concentration among a few OEMs give composite materials customers a high level of pricing power.

Engineered Products: 1

- Hexcel offers engineered solutions on a project-by-project basis with its key customers, which gives them flexibility on pricing to meet specific needs.

Supplier Bargaining Power: 1.5

Composite Materials: 2

- While Hexcel is exposed to some sole-source providers, a large portion of their raw materials are highly abundant from multiple suppliers.

Engineered Products: 1

- Hexcel can supply their own raw materials for their engineered solutions, which gives them complete control over supply costs.

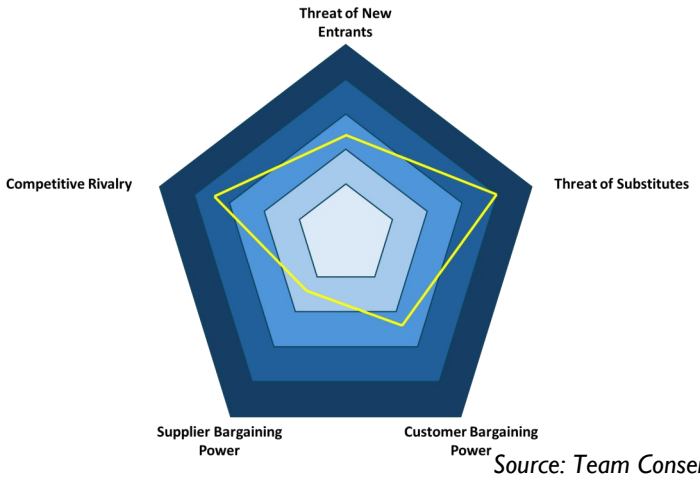
Competitive Rivalry: 3.5

Composite Materials: 5

- Small group of companies in the world with Hexcel's know how are highly competitive especially in commercial and defense contract acquisitions.

Engineered Products: 2

- Hexcel's engineered solutions are tailored to customer needs and are not based highly competitive.

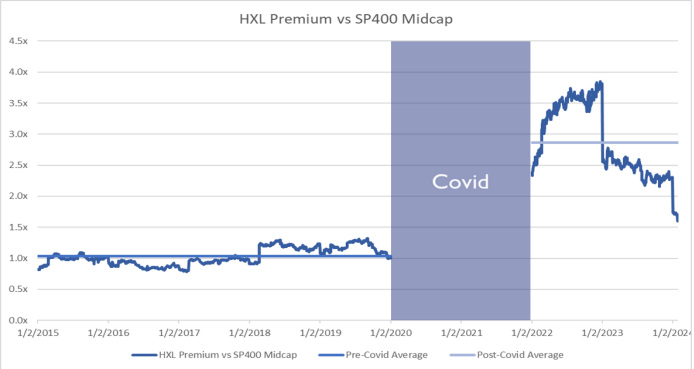


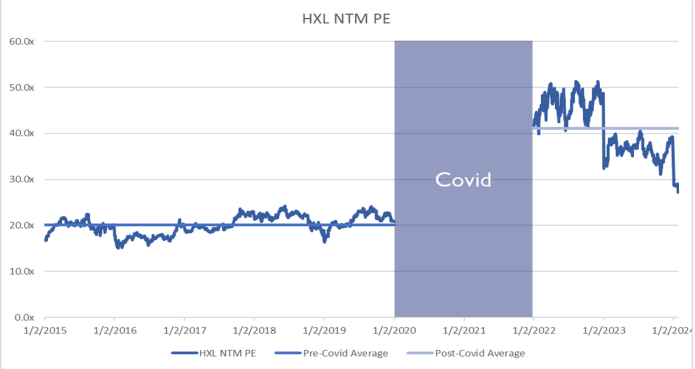
Source: Team Consensus

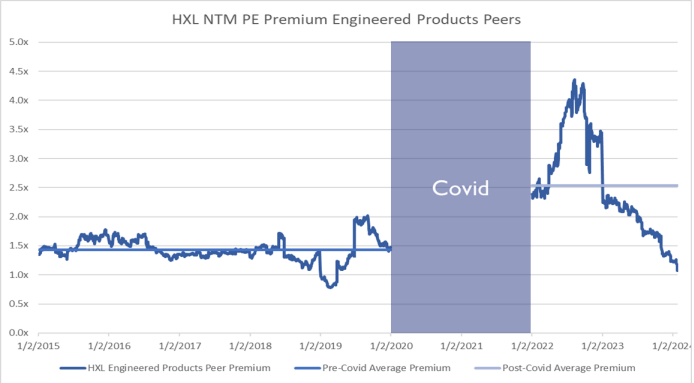
19. SWOT ANALYSIS

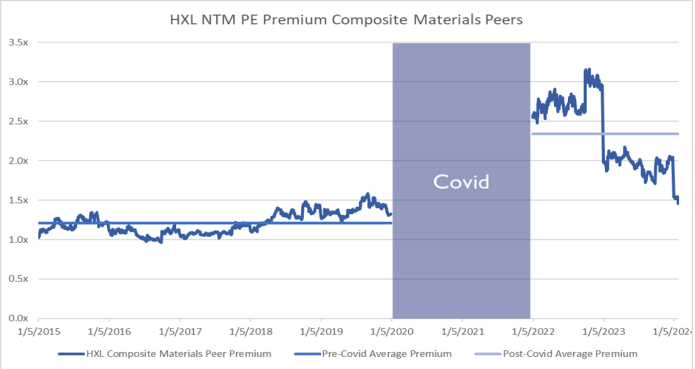
Source: Team Consensus

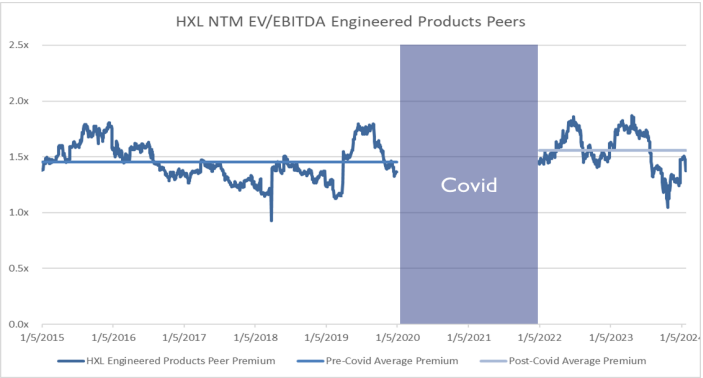
16. HXL HISTORICAL VALUATION

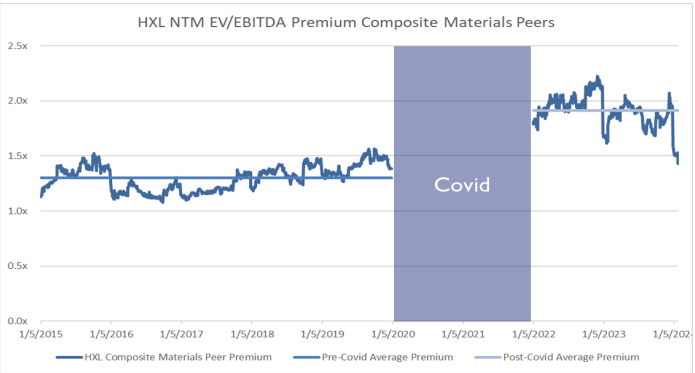












Source: Company Filings

17. INCOME STATEMENT

Income Statement (m USD)	2019A	2020A	2021A	2022A	2023A	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E
Composite Materials	1,863	1,186	1,019	1,280	1,474	1,666	1,888	2,144	2,409	2,693	2,975	3,244	3,490	3,755	4,041
Engineered Products	493	317	305	298	315	351	392	438	487	539	591	642	690	742	798
Total Revenues	**2,356**	**1,502**	**1,325**	**1,578**	**1,789**	**2,018**	**2,280**	**2,582**	**2,896**	**3,232**	**3,566**	**3,886**	**4,180**	**4,498**	**4,839**
Cost of sales	(1,715)	(1,263)	(1,075)	(1,221)	(1,356)	(1,504)	(1,676)	(1,874)	(2,089)	(2,332)	(2,576)	(2,811)	(3,028)	(3,258)	(3,505)
Gross Profit	**640**	**240**	**250**	**357**	**433**	**513**	**604**	**708**	**807**	**899**	**989**	**1,075**	**1,152**	**1,240**	**1,334**
Selling, general and administrative expenses	(159)	(121)	(135)	(148)	(164)	(168)	(173)	(181)	(187)	(186)	(187)	(189)	(191)	(198)	(208)
Research and technology expenses	(57)	(47)	(45)	(46)	(53)	(57)	(63)	(70)	(78)	(83)	(89)	(97)	(106)	(119)	(135)
Other operating (income) expense	0	(58)	(18)	12	(1)	0	0	0	0	0	0	0	0	0	0
Operating profit (EBIT)	**425**	**14**	**52**	**175**	**215**	**288**	**368**	**456**	**542**	**631**	**714**	**789**	**855**	**923**	**992**
Interest income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interest expense	(46)	(42)	(38)	(36)	(34)	(32)	(32)	(32)	(32)	(32)	(32)	(32)	(32)	(32)	(32)
Other income	0	0	9	11	(72)	0	0	0	0	0	0	0	0	0	0
Pretax profit	**380**	**(28)**	**22**	**150**	**110**	**257**	**337**	**424**	**511**	**599**	**682**	**758**	**824**	**891**	**960**
Income Taxes	(77)	61	(6)	(32)	(12)	(54)	(71)	(90)	(108)	(126)	(144)	(160)	(174)	(188)	(203)
Income before equity	303	33	16	118	98	203	266	335	403	473	538	598	650	703	757
Equity earnings	4	(2)	0	8	8	0	0	0	0	0	0	0	0	0	0
Net Income	**307**	**32**	**16**	**126**	**106**	**203**	**266**	**335**	**403**	**473**	**538**	**598**	**650**	**703**	**757**
Depreciation and amortization	(142)	(141)	(138)	(126)	(125)	(136)	(131)	(127)	(124)	(123)	(120)	(122)	(124)	(127)	(131)
EBITDA	**567**	**155**	**190**	**301**	**340**	**425**	**499**	**583**	**667**	**753**	**834**	**911**	**980**	**1,050**	**1,123**
Revenue growth		(36.2%)	(11.8%)	19.1%	13.4%	12.8%	13.0%	13.2%	12.1%	11.6%	10.3%	9.0%	7.6%	7.6%	7.6%
Gross profit margin	27.2%	16.0%	18.9%	22.6%	24.2%	25.4%	26.5%	27.4%	27.9%	27.8%	27.7%	27.7%	27.6%	27.6%	27.6%
SG&A % of revenue	6.7%	5.1%	5.7%	6.3%	7.0%	7.1%	7.3%	7.7%	7.9%	7.9%	7.9%	8.0%	8.1%	8.4%	8.8%
R&T % of revenue	2.4%	2.0%	1.9%	1.9%	2.2%	2.4%	2.7%	3.0%	3.3%	3.5%	3.8%	4.1%	4.5%	5.0%	5.7%
EBITDA margin %	24.1%	10.3%	14.3%	19.1%	19.0%	21.1%	21.9%	22.6%	23.0%	23.3%	23.4%	23.5%	23.4%	23.3%	23.2%
EBIT margin %	18.0%	0.9%	3.9%	11.1%	12.0%	14.3%	16.2%	17.7%	18.7%	19.5%	20.0%	20.3%	20.5%	20.5%	20.5%
Profit margin	13.0%	2.1%	1.2%	8.0%	5.9%	10.0%	11.7%	13.0%	13.9%	14.6%	15.1%	15.4%	15.5%	15.6%	15.7%

Source: Company Filings and Team Consensus

20. BALANCE SHEET

Balance Sheet (m USD)	2019A	2020A	2021A	2022A	2023A	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E
Assets															
Cash & cash equivalents	64	103	128	112	227	279	284	286	299	307	320	325	341	342	351
Accounts receivable[1]	280	169	191	255	260	312	324	385	399	463	473	532	533	596	601
Inventory	333	214	246	319	334	373	395	442	468	523	544	591	601	650	662
Prepaid expenses and other current assets	27	38	40	39	43	48	55	62	70	78	86	93	100	108	116
Assets held for sale	0	13	13	10	0	0	0	0	0	0	0	0	0	0	0
Total Current Assets	**705**	**536**	**616**	**734**	**864**	**1,012**	**1,058**	**1,175**	**1,235**	**1,370**	**1,423**	**1,542**	**1,576**	**1,695**	**1,731**
Property, plant, and equipment, net	1,943	1,874	1,746	1,658	1,679	1,641	1,615	1,599	1,607	1,624	1,694	1,763	1,837	1,909	1,979
Goodwill and other intangible assets	280	278	268	256	251	243	233	222	209	195	180	163	145	126	105
Investments in affiliated companies	47	45	45	48	5	5	5	5	5	5	5	5	5	5	5
Other assets	154	185	145	142	119	119	119	119	119	119	119	119	119	119	119
Total Assets	**3,129**	**2,918**	**2,819**	**2,837**	**2,919**	**3,020**	**3,030**	**3,120**	**3,176**	**3,314**	**3,421**	**3,592**	**3,682**	**3,854**	**3,939**
Liabilities & Stockholders' Equity															
Short-term borrowings	10	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Accounts payable	158	70	113	156	159	186	195	227	238	276	286	322	327	364	372
Accrued compensation and benefits	74	43	54	70	76	84	94	105	117	130	144	157	169	182	196
Accrued Liabilities	81	69	79	105	81	90	100	112	125	139	154	168	181	195	209
Total Current Liabilities	**323**	**183**	**248**	**330**	**316**	**360**	**388**	**444**	**480**	**546**	**584**	**647**	**677**	**741**	**777**
Long term debt (ex-Credit facility)	738	698	697	698	699	700	700	700	700	700	700	700	700	700	700
Credit facility	313	228	125	25	0	0	0	0	0	0	0	0	0	0	0
Retirement obligations	53	54	53	43	43	43	43	43	43	43	43	43	43	43	43
Other non-current liabilities	256	245	211	187	144	144	144	144	144	144	144	144	144	144	144
Total Long-Term Liabilities	**1,360**	**1,225**	**1,086**	**953**	**886**	**887**	**887**	**887**	**887**	**887**	**887**	**887**	**887**	**887**	**887**
Total Liabilities	**1,683**	**1,408**	**1,334**	**1,283**	**1,202**	**1,247**	**1,275**	**1,331**	**1,366**	**1,433**	**1,471**	**1,533**	**1,563**	**1,627**	**1,664**
Stockholders' Equity															
Common stock[2]	831	851	880	906	938	961	988	1,018	1,052	1,090	1,132	1,177	1,226	1,278	1,335
Retained Earnings	1,979	1,996	2,013	2,105	2,169	2,321	2,529	2,800	3,132	3,526	3,977	4,478	5,021	5,605	6,230
Other comprehensive income	(119)	(60)	(127)	(174)	(74)	(74)	(74)	(74)	(74)	(74)	(74)	(74)	(74)	(74)	(74)
Treasury stock	(1,245)	(1,277)	(1,280)	(1,282)	(1,316)	(1,436)	(1,688)	(1,955)	(2,301)	(2,661)	(3,085)	(3,522)	(4,054)	(4,583)	(5,215)
Total Stockholders' Equity	**1,446**	**1,510**	**1,486**	**1,554**	**1,717**	**1,773**	**1,755**	**1,789**	**1,809**	**1,881**	**1,950**	**2,059**	**2,119**	**2,226**	**2,275**
Total Liabilities & Stockholders' Equity	**3,129**	**2,918**	**2,819**	**2,837**	**2,919**	**3,020**	**3,030**	**3,120**	**3,176**	**3,314**	**3,421**	**3,592**	**3,682**	**3,854**	**3,939**

[1]Includes contract assets

[2]Includes additional paid-in capital

Source: Team Consensus

21. CASH FLOW STATEMENT

Fiscal year	2019A	2020A	2021A	2022A	2023A	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E
Cash Flows From Operating Activities:															
Net Income	307	32	16	126	106	203	266	336	405	476	544	605	660	716	773
Depreciation and amortization	142	141	138	126	125	136	131	127	124	123	120	122	124	127	131
Amortization related to financing	1	1	3	1	1	0	0	0	0	0	0	0	0	0	0
Deferred income taxes	16	(51)	(3)	(3)	(33)	0	0	0	0	0	0	0	0	0	0
Equity in earnings from affiliated companies	(4)	2	0	(8)	(8)	0	0	0	0	0	0	0	0	0	0
Stock-based compensation	18	15	19	20	21	24	27	30	34	38	42	45	49	53	57
Merger & restructuring expenses, net of payments	(3)	23	(6)	(1)	(4)	0	0	0	0	0	0	0	0	0	0
Changes in NWC															
Accounts receivable[1]	31	112	(22)	(64)	(5)	(52)	(13)	(61)	(14)	(64)	(10)	(58)	(2)	(62)	(6)
Inventories	(35)	120	(32)	(74)	(15)	(38)	(22)	(47)	(25)	(55)	(21)	(47)	(10)	(49)	(13)
Prepaid expenses and other current assets	7	(11)	(2)	1	(4)	(5)	(6)	(7)	(8)	(8)	(8)	(8)	(7)	(8)	(8)
Accounts payable and accrued liabilities	(4)	(131)	65	83	(14)	45	28	56	36	66	38	63	30	64	36
Other, net	15	12	(25)	(34)	88	0	0	0	0	0	0	0	0	0	0
Net cash provided by operating activities	**491**	**264**	**152**	**173**	**257**	**311**	**410**	**434**	**552**	**575**	**704**	**722**	**845**	**841**	**971**
Cash Flows From Investing Activities:															
Capital expenditures	(204)	(51)	(28)	(76)	(108)	(90)	(95)	(100)	(120)	(125)	(175)	(175)	(180)	(180)	(180)
Proceeds from sale of assets and investments	0	0	0	22	58	0	0	0	0	0	0	0	0	0	0
Acquisitions and Investments	(163)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash used for investing activities	**(367)**	**(51)**	**(28)**	**(55)**	**(51)**	**(90)**	**(95)**	**(100)**	**(120)**	**(125)**	**(175)**	**(175)**	**(180)**	**(180)**	**(180)**
Cash Flows From Financing Activities:															
Draw/(Paydown) of Credit facility	111	(85)	(103)	(100)	(25)	0	0	0	0	0	0	0	0	0	0
Issuance/(Repayment) of LT debt	(8)	(40)	(0)	1	1	1	0	0	0	0	0	0	0	0	0
Dividends	(54)	(14)	0	(34)	(42)	(50)	(58)	(65)	(73)	(82)	(93)	(104)	(117)	(132)	(148)
Repurchases	(143)	(25)	0	0	(30)	(120)	(252)	(267)	(346)	(360)	(423)	(438)	(532)	(529)	(633)
Other	3	(15)	6	3	4	0	0	0	0	0	0	0	0	0	0
Net cash used for financing activities	**(91)**	**(179)**	**(97)**	**(130)**	**(93)**	**(169)**	**(310)**	**(332)**	**(419)**	**(442)**	**(516)**	**(542)**	**(649)**	**(661)**	**(781)**
Effect of exchange rate changes on cash and cash equivalents	(1)	4	(3)	(4)	1	0	0	0	0	0	0	0	0	0	0
Net increase in cash and cash equivalents	**32**	**39**	**24**	**(16)**	**115**	**52**	**5**	**2**	**13**	**8**	**13**	**5**	**16**	**0**	**10**
Cash and cash equivalents - beginning of period	33	64	103	128	112	227	279	284	286	299	307	320	325	341	342
Cash and cash equivalents - end of period	**64**	**103**	**128**	**112**	**227**	**279**	**284**	**286**	**299**	**307**	**320**	**325**	**341**	**342**	**351**

Source: Team Consensus

22. CASE ASSUMPTIONS

Base Case Assumptions

Revenue Growth

- **Commercial Aerospace**: Based on expected build rates for commercial aerospace OEMs.
- **Space & Defense**: Based on US and certain Western European military procurement and defense spending data.
- **Industrial**: Based on company guidance and growth in automotive end market.

Margins

- **Total Gross Margin**: 35% incremental gross margin based on historical average of 37.2% incremental gross margin when sales increases.
- **Composite Materials EBIT Margin**: Historical average CM incremental EBIT margin is 33% when sales increase. We forecast an incremental margin of 35% in 2024 with incremental margin deteriorating 5% each year.
- **Engineered Products EBIT Margin**: Historical average EP incremental EBIT margin is 20% when sales increase. We forecast an incremental margin of 20% in 2024 with incremental margin deteriorating 5% each year.
- **Corporate & Other Expenses**: Grow at 20% of total sales growth rate.
- **R&T (as % of operating expenses)**: Company forecasts a future annual growth rate of 10% for Research & Technology expenses.
- **Tax rate**: Straight-line 2022 tax rate.

Working Capital

- **Days sales outstanding**: Gradually normalize days sales outstanding back to pre-pandemic levels by deteriorating 1.5% each year.
- **Days of inventory on hand**: Gradually normalize days of inventory on hand back to pre-pandemic levels by deteriorating 2.5% each year.
- **Prepaid expenses and other current assets (% of sales)**: Grow with sales.
- **Days payables outstanding**: Gradually normalize Days Payable Outstanding back to pre-pandemic levels by deteriorating DPI by 1.0% each year.
- **Accrued compensation and benefits (% of COGS)**: Grow with cost of sales.
- **Accrued liabilities (% of COGS)**: Grow with cost of sales.

Cash Uses

- **Maintenance CapEx**: Explicit assumption based on management commentary that maintenance will be $60-70mm at full utilization. As capacity utilization grows and new facilities are open, we expect maintenance CapEx to grow above $70mm.
- **Growth CapEx**: Explicit assumption based on management commentary including (1) capital expenditures will be under $100mm over the next few years and (2) growth CapEx plans are not as intensive as 2015-2018.
- **Dividends**: Explicit assumptions in 2024-2026 and then grow dividends by 12.5% thereafter.
- **Share repurchases**: Explicit assumption in 2024 and then share buybacks are 80% of FCF thereafter.

- **Stock-based compensation**: Grow with sales.

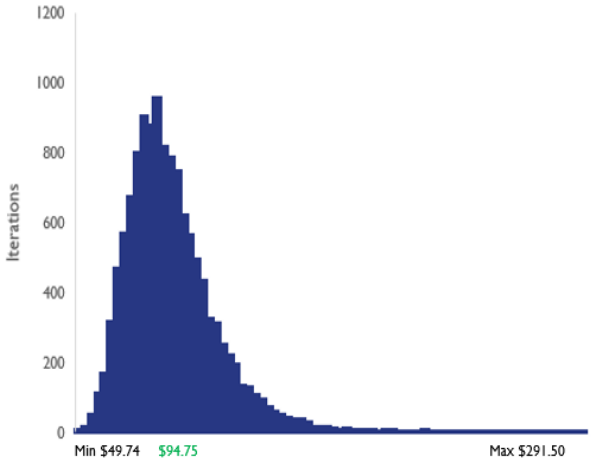
Bull Case Assumptions

- **Commercial Aerospace**: +500bps base case
- **Space & Defense**: +300bps base case
- **Industrial**: +300bps base case
- **Margins**: Margins are forecasted on an incremental basis, therefore margins will adjust upward given revenue growth decline
- **Net operating cycle**: -7 days relative to base
- **Total Capital Expenditures**: -$20mm relative to base
- **Corporate & other expenses**: -5 relative to base

Bear Case Assumptions

- **Commercial Aerospace**: -500bps base case
- **Space & Defense**: -300bps base case
- **Industrial**: -300bps base case
- **Margins**: Margins are forecasted on an incremental basis, therefore margins will adjust downward given revenue growth decline
- **Net operating cycle**: +7 days relative to base
- **Total Capital Expenditures**: +$20mm relative to base
- **Corporate & other expenses**: +5 relative to base

23. MONTE CARLO SIMULATION (DCF)

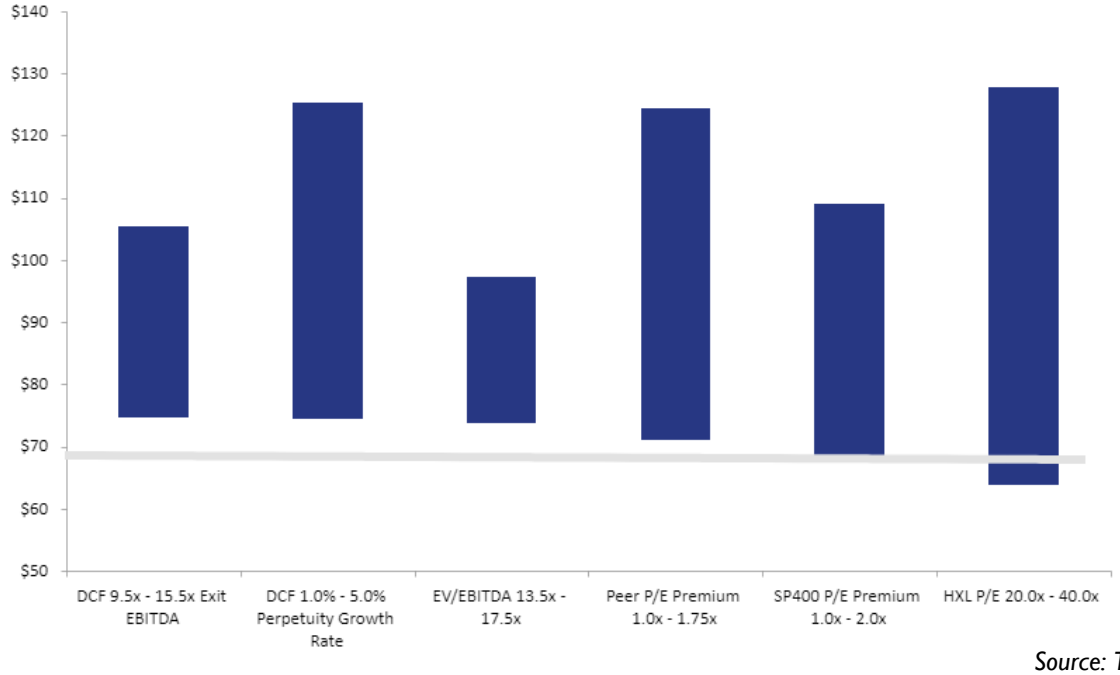


Summary Statistics	
Minimum	49.74
Maximum	291.50
Mean	94.75
Median	91.36
Standard Deviation	20.57
Variance	423.05
Coefficient of Variation	0.22
Skewness	1.30
Kurtosis	3.87
Iterations	12,500

Percentile	Output Price ($)
1.00%	60.85
2.50%	64.84
5.00%	68.08
10.00%	72.17
15.00%	75.36
20.00%	78.09
25.00%	80.58
30.00%	82.63
35.00%	84.89
40.00%	87.12
45.00%	89.12
50.00%	91.36
55.00%	93.85
60.00%	96.25
65.00%	98.78
70.00%	101.75
75.00%	105.21
80.00%	109.18
85.00%	114.43
90.00%	121.23
95.00%	132.84
97.50%	144.24
99.00%	158.60

Source: Team Consensus

24. Football Field Analysis



Source: Team Consensus

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