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Biesse Group: A Comprehensive Equity Valuation

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Abstract

This thesis explores the equity valuation of Biesse Group, a global machinery manufacturer. We dive into the company's history, market dynamics, and competitive landscape. The valuation process combines discounted cash flow (DCF) analysis and multiple comparisons to assess Biesse Group's worth.

The results from DCF and multiple analysis, along with a sensitivity assessment, guide us in understanding Biesse Group's fair value. We also compare historical market trends and multiples to assess its current valuation.

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1. Biesse Group: Company Overview and Industry Analysis

Conducting equity valuation is a meticulous process that requires a deep understanding of the company's unique characteristics and its place within the industry. Every company is distinct, varying in size, geographic location, business model, customer base, and numerous other factors. It's essential to comprehend the company's nature, including whether it operates cyclically or countercyclically, its business partners, and whether it operates in a business-to-business or business-to-consumer capacity.

In this report, I aim to provide a comprehensive analysis of the company, the industry it operates in, and the key players in the market. I will elaborate on why I consider this company superior to its competitors and outline its competitive advantages. This thorough examination will aid in the accurate valuation of the company's equity.

1.1. Introduction to Biesse Group

Biesse Group is a multinational company that specializes in designing, manufacturing, and distributing machines and integrated systems primarily for the furniture, construction, automotive, and aerospace sectors. The company was founded in 1969 in Pesaro, Italy, by Giancarlo Selci, who remains a major shareholder and serves as the chairman of the company.

Initially, Biesse Group focused on producing woodworking machinery, which was primarily used in the housing and construction sectors. Over the years, the company achieved success in this field. However, in 1987, Biesse Group made a strategic decision to diversify its product offerings. This diversification involved expanding its production capabilities to include

manufacturing and distributing machines for processing glass and stone with the newborn Intermac (1987).

This expansion allowed Biesse Group to cater to a broader range of industries and applications, further solidifying its position as a leading provider of machinery and integrated systems for various sectors. The company's commitment to innovation and its ability to adapt to evolving market needs have contributed to its continued success and growth in the manufacturing and processing machinery industry.

Figure 1.1. - Biesse Group Logo

Expanding its product offerings and diversifying into new markets was a strategic move by Biesse Group to increase its market share and reach a wider customer base. As part of their international expansion efforts, in 1989 the company opened its first branch abroad in the United States.

As part of the strategy of always offering new client's solutions, in 1991 they created the Mechatronics division which as of today, is involved in the design, production, and distribution of electrospindles and technologically advanced components for machine tools for the processing of wood, metal, composite materials glass, and stone.

After reaching a considerable and consistent growth rate the management decided to list the company on the Italian stock exchange in 2001.

In the following years, Biesse consolidated its expansion abroad either with acquisitions (as with the Chinese market) or through the opening of new branches and production plants; the first one outside of Italy was opened in 2007 in the Indian city of Bangalore.

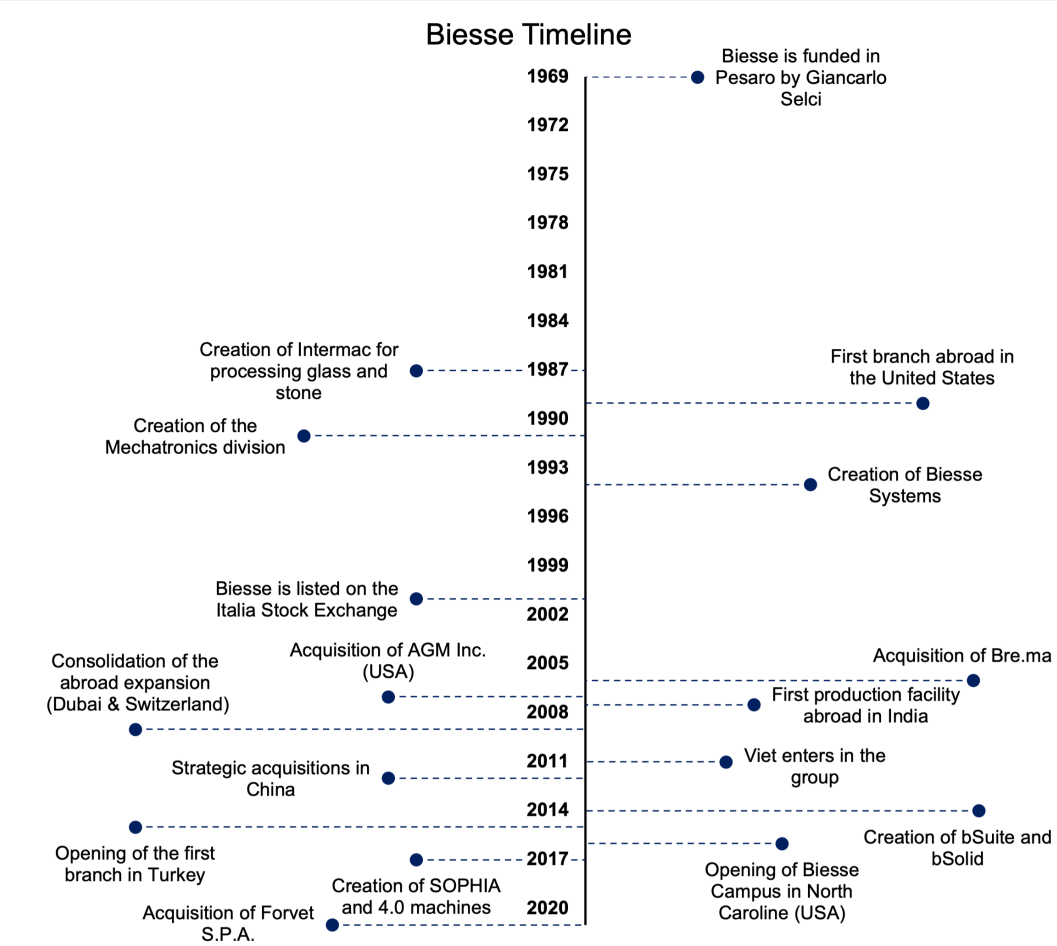

Figure 1.2. - Biesse Group Timeline

Biesse strategically leverages acquisitions, such as the 2006 acquisition of Brema, not only to penetrate new markets but also to obtain cutting-edge front-end technologies.

These acquisitions are made possible by the positive results achieved by the Group and the increasing financial resources at the disposal of Biesse S.p.A. This deliberate and careful expansion process is accelerating, aimed at enhancing the quality of the Group's product portfolio, particularly within the Wood Division, and delivering innovative solutions. This expansion aligns with a positive global market demand trend.

2019 marked another important year as the group opened a production facility on American soil (in Charlotte, North Carolina) to assemble diamond tools for glass, stone, and ceramic processing.

Target	Industry	Year	Price (mm)
Diamut s.r.l.	Glass and Stone Tools	2001	N/A
Bre.Ma	Wood Machinery	2006	N/A
AGM Inc.	Glass Machinery	2007	9,5
Centre Gain Group	Wood Machinery	2011	9,6
NURY BAYLAR A.S.	Wood Machinery	2015	1,9
Uniteam S.p.A	Wood carpentry market	2016	2,5
Movetro s.r.l.	Systems for glass handling	2017	N/A
Montresor & C. s.r.l	Edge polishers machinery	2017	N/A
Forvet s.r.l.	Glass Machinery	2021	N/A

Figure 1.3 – Acquisitions

1.1.2. Group Structure

As of today, Biesse generates approximately 80% of its total revenue from international markets[1], owing to its continuously expanding global

Figure 1.4 - Biesse Group Divisions and Brands

[1] *Company presentations*

presence which reached 160 countries, including 13 manufacturing sites and more than 30 showrooms.

The Group has more than 4,000 employees worldwide , spread among the four material brands and the two independent brands, Diamut (focused on glassworking machinery) and HSD Mechatronics (focused on mechatronics).

1.1.3. Corporate Strategy and Product Offering

Biesse, as a manufacturing company, is subject to the cyclical nature of the manufacturing industry. It experiences periods of growth during positive economic cycles when demand for machinery and equipment is high. However, it can face challenges and downturns during economic recessions when spending on capital equipment may decline.

Biesse's B2B model means that its success is closely tied to the confidence and financial health of its business clients. Business confidence plays a significant role in influencing companies' decisions to invest in machinery and equipment. In times of economic uncertainty, businesses may delay or reduce such investments, affecting Biesse's sales.

The business model of the group is centered around three key pillars: the sales and manufacturing of machinery, after-sales technical services (including selling spare components), and lastly mechatronics.

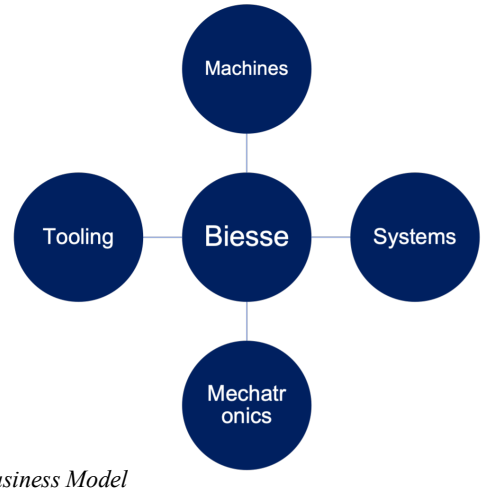

Figure 1.5 - Business Model

The Machine-Systems segment continues to be the primary revenue driver for Biesse Group, representing over 90% of the revenues for 2022[2]. This segment not only includes the designing, manufacturing, and selling of machinery but also engineering solution services focused on developing customized automated warehouse and factory systems to improve efficiency and optimize the manufacturing processes of their clients.

The mechatronics division consists of developing mechanical components (such as electro spindles) with electronic sensors that are designed to improve efficiency and automation. They can perform tasks more accurately, with higher speed, and more cost-effectively compared to traditional manual methods. This latter has experienced considerable growth in the years.

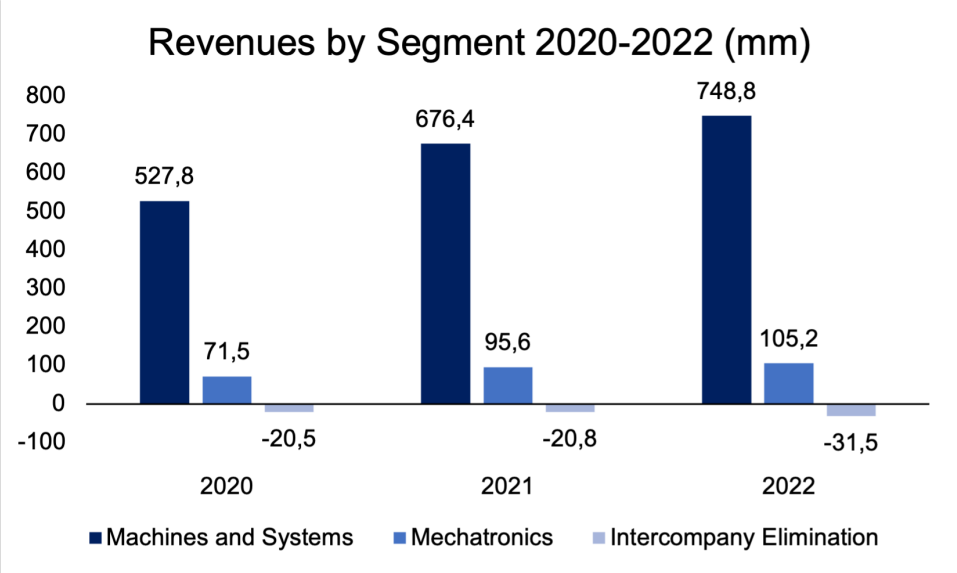

Figure 1.6. – Revenues by Business Segment

[2] *2022 Annual Report*

1.1.4. Business Model

Biesse's strategic move into different materials, while maintaining its core focus on woodworking machinery, underscores its commitment to diversifying its customer base and reducing reliance on a single industry segment. While woodworking machinery still accounts for over 65%[3] of sales, this segment remains crucial to Biesse's revenue.

However, rather than replacing existing revenue streams entirely, diversification is intended to complement them, creating a balanced approach that sustains stability while facilitating growth. Moreover, Biesse's extensive expertise in woodworking machinery serves as a potential competitive advantage as it enters new markets, allowing the company to leverage its proficiency in precision engineering and automation. The glassworking machinery segment contributed to 16,9% of revenue in 2020 from 14,5% in 2016.

In addition to diversifying its segments of operation, Biesse has successfully expanded its geographical reach as well. With a global presence spanning more than 30 showrooms worldwide, the company now operates in over 160 countries[4].

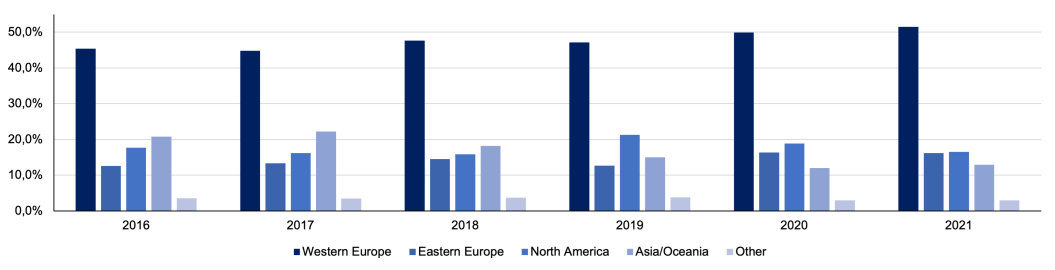

Figure 1.7 - Geographical Distribution Over the Years

[3] *Biesse 2022 Annual Report*
[4] *Biesse Company Presentation 2022*

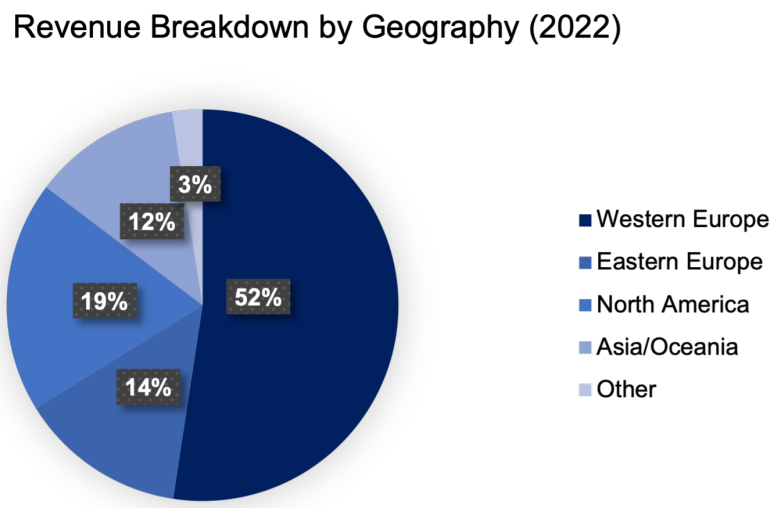

Figure 1.8 - Revenue Breakdown by Geography (2022)

Biesse has truly evolved into a multinational company, with more than 77% of its revenues generated outside Italy. While Europe remains the largest market for the group, significant growth has been witnessed in the United States. The investments made in the past are beginning to yield results, contributing to 19% of the company's sales in 2022. This diversification of geographical markets demonstrates Biesse's global presence and its ability to thrive in multiple regions, reducing dependence on any single market.

Biesse's performance from 2010 to 2020 reflects a company that has successfully navigated the challenges of its industry, expanded its operations, and maintained healthy profitability, positioning itself as a significant player in the market. During the period the group nearly doubled its revenue, highlighting the ability to expand its market presence. Moreover, with over 50 years of history, Biesse demonstrates its adaptability and capacity to evolve with changing market dynamics.

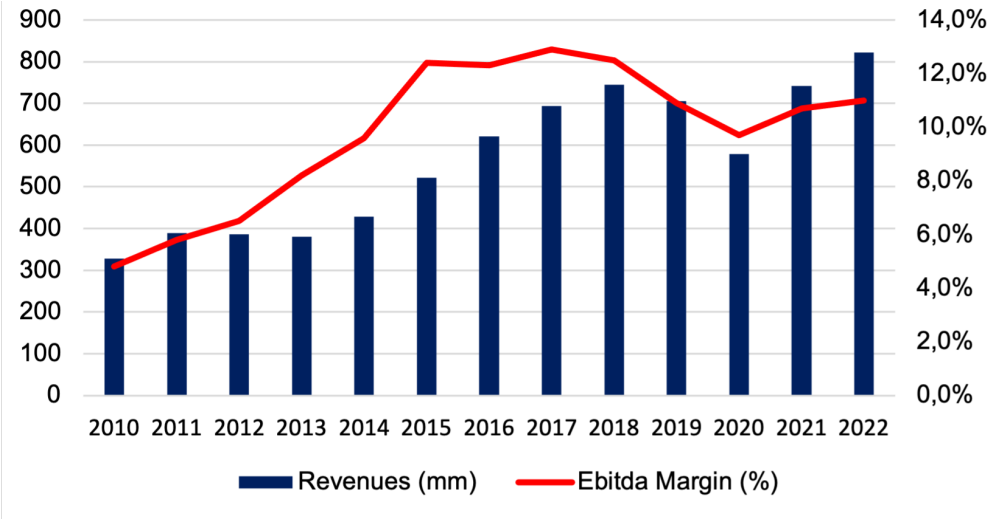

Figure 1.9 - Revenues and EBITDA Margins Over the Years

Growth in both revenues and margins achieved by the company over the years can be attributed not only to its product offerings but also to its investments in human capital. Biesse has a considerable ratio of revenue per employee[5] compared to cost per employee, underscoring the efficiency and productivity of its workforce.

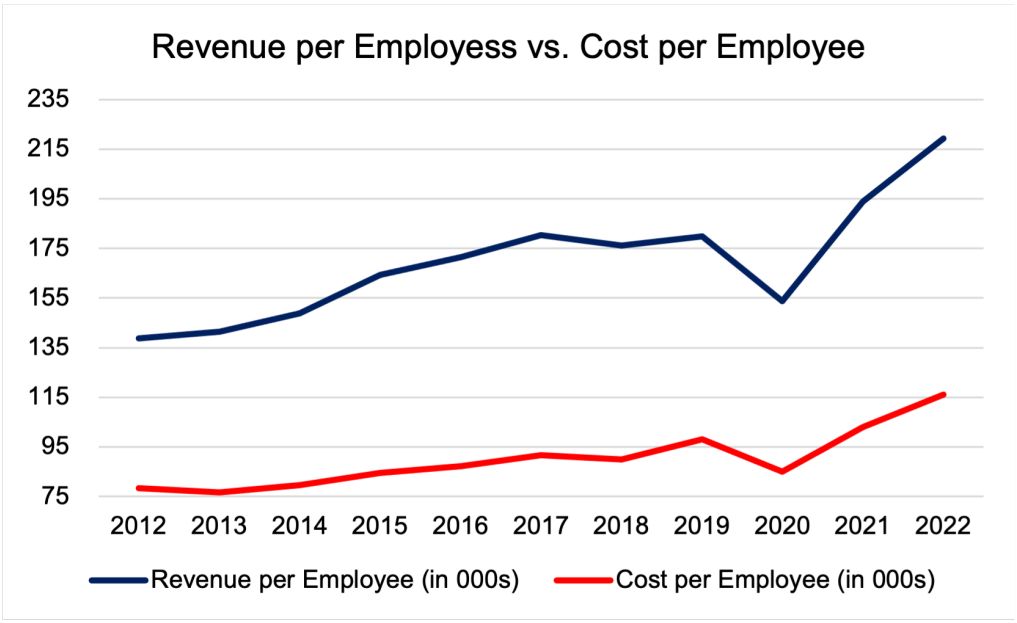

Figure 1.10 - Revenue per Employee vs. Cost per Employee

[5] *Personal estimatess*

This is highlighted by the employee distribution over the years, there has been a significant decrease of approximately 10,0% in the Production department[6], which suggests a strategic shift towards automated manufacturing and heightened operational efficiency that reflects the company's efforts to optimize its production processes. The decrease in the production department has been outbalanced by an increase in both the research and development (R&D) and Service and Aftersale departments, emphasizing the Group's commitment to innovation, likely driven by the need to stay competitive and adapt to changing market demands.

The increase in the workforce share allocated to the Service and Aftersales department, rising from 24.0% to 27.0% since 2018, is a clear indicator of the company's commitment to increasing its service offerings. This transition towards a more service-oriented business model aligns with modern industry trends where businesses increasingly recognize the importance of providing ongoing support and ensuring customer satisfaction for long-term success.

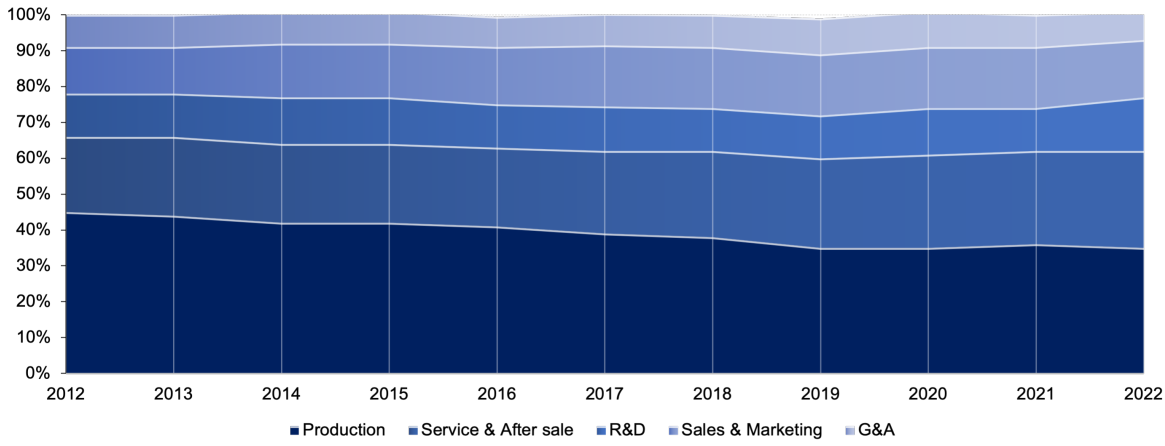

Figure 1.11 - Employees Distribution Over Time

[6] *Biesse Annual Reports*

1.2. Competitive Landscape and Market Positioning

In recent years, the manufacturing sector has faced challenges characterized by fluctuations tied to geopolitical uncertainties and disruptions within global supply chains. However, within this cyclicality, a range of favorable factors, such as the growth in global demand, persistent technological improvements, and growing investments in automation and digitalization, continue to have a strong impact on the sector, promising a favorable outlook for the industry.

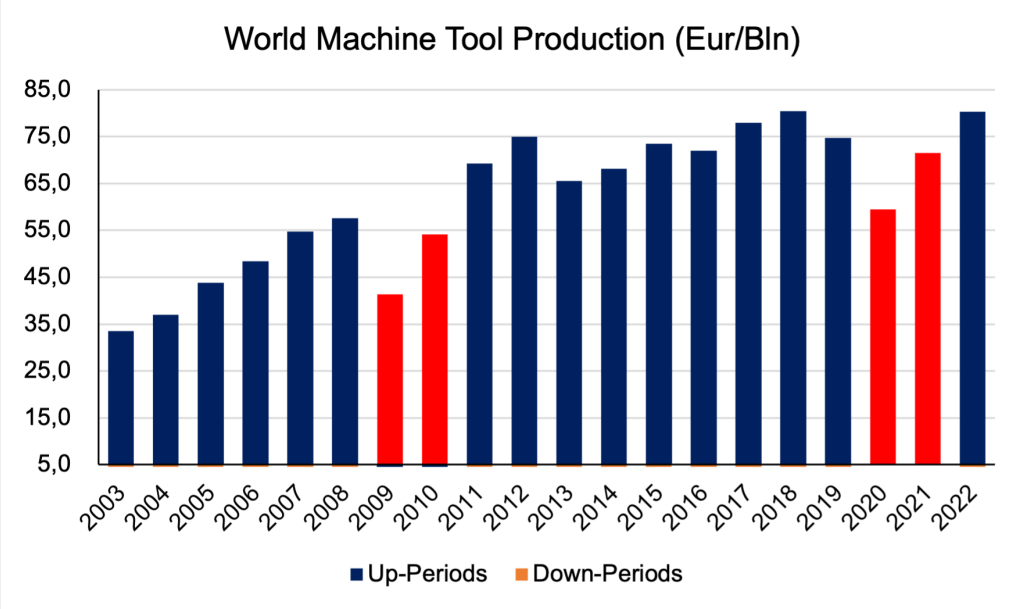

Figure 1.12 - World Machine Tool Production

Biesse holds a strong position in its key markets, with significant market share and promising growth rates. In the woodworking machinery sector, the group commands a 15.0%[7] market share. However, it's the mechatronics segment where the company truly excels, boasting an impressive 36.0% market share, which is anticipated to expand further following the inauguration of a new headquarters in Shanghai in March 2023.

[7] *Biesse Company Presentation 2020*

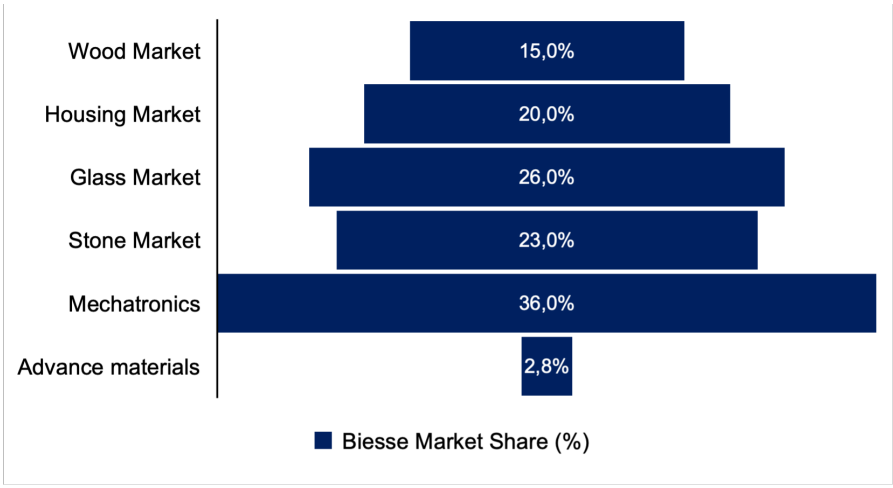

Figure 1.13 - Biesse Market Share

Biesse's strength lies in its multi-material competencies, extending beyond CNC (Computer Numerical Control) machines to encompass integrated production lines and comprehensive after-sales services. This versatile expertise provides Biesse with a distinct competitive advantage, setting it apart from the majority of its competitors who primarily specialize in single materials or industries.

The company's investments in digitalization and Industry 4.0 have been strategically aimed at delivering exceptional and efficient services to clients. In 2020, Biesse forged a strategic partnership with Salesforce[8] to establish a "One Company" model, placing data at its core. Thanks to this innovative approach, Biesse can now aggregate critical information and provide precise responses to clients worldwide.

This approach had already taken root within the company when, in 2017, the group introduced SOPHIA, an IIoT (Industrial Internet of Things) platform developed in collaboration with Accenture[9]. SOPHIA's purpose is to analyze production data and enable predictive maintenance for Biesse's clients.

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[8] *Biesse Website*
[9] *Accenture, Biesse Group IIoT builds new revenue streams*

1.2.1. Market Trends

Biesse generates a significant portion of its revenues from the woodworking machinery segment, mainly for the construction and furniture sectors. Specifically, in the construction sector, Biesse specializes in serving the mass timber niche. Mass timber is an engineered wood product that consists of large, solid wood panels, which are personalized based on the needs of the clients thanks to specific equipment. Mass timber is used in the modular construction market which involves the use of pre-fabricated building components or modules that are manufactured off-site in a factory and then transported to the construction site for assembly.

This type of construction has been gaining momentum in recent years due to several positive factors. Prefabricated buildings offer cost and time advantages, as they are more economical and quicker to assemble than traditional structures[10]. Furthermore, they are recognized for their enhanced environmental sustainability[11], generating less waste and enabling the reuse of timber modules.

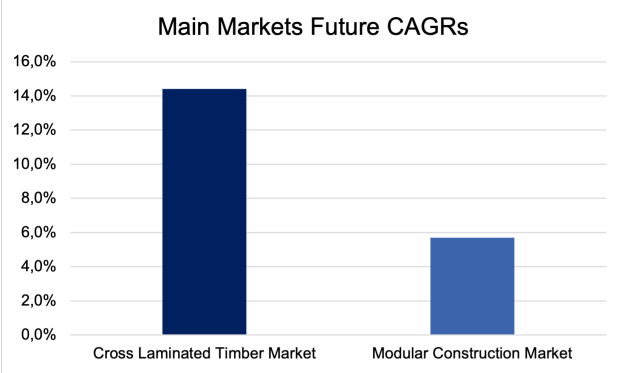


Figure 1.14 - Future Market Trends

As of 2022, the market size stood at approximately USD 90 billion, and it is projected to maintain a robust compound annual growth rate (CAGR) of 5.7% until 2027[12]. This growth is primarily underpinned by the rising adoption of cross-laminated timber as an environmentally friendly

[10] *Euromonitor International, Global Market Overview of Wood*
[11] *Codifab, Ambition Wood.Construction Plan 2030*
[12] *Market and Markets, Modular Construction Market*

material, extending its applications to both residential and non-residential projects. The cross-laminated timber market is expected to experience substantial growth with an impressive CAGR ranging between 8.4% and 14,4%[13] over the next decade, exceeding USD 3 billion in size. Biesse stands to benefit significantly from this expansion in these sectors, as the increasing demand for this material will inevitably drive the need for woodworking machinery and systems.

According to Homag, a significant competitor of Biesse in the wood segment, the market for systems dedicated to timber constructions is projected to experience an annual average growth rate of 11.0% until 2026[14].

Regarding the glass segment, market research indicates a slowdown in its growth trajectory, with expectations of stabilizing at around a 3.7% CAGR through 2026. This is a more segmented market compared to the previous one, with several smaller players, however, Biesse has established itself as a market leader in this segment, controlling approximately 15.0%[15] of the market share. Moreover, the company has demonstrated a strong market position by consistently increasing its market share by an average of 7.5%[16] annually in recent years, a sign of its successful expansion strategy.

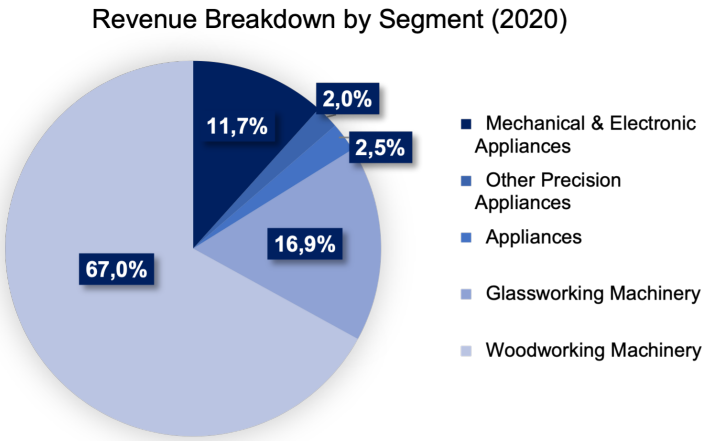


Figure 1.15 - Revenue Breakdown by Segment

[13] *Fortune Business Insights, Allied Market Research*
[14] *THE DÜRR GROUP Financial Reports and Company Presentations*
[15] *Biesse Compamy Presentation*
[16] *Personal Estimates*

As of 2020, Biesse reported that 16,9% of revenues were deriving from the glassworking machinery segment, amounting to EUR 119 million. Since then, the company has made two important acquisitions in this sector.

1.2.2. Competitors

Biesse operates in various material segments and offers a diverse range of products, each with its unique competitive landscape. In the market for woodworking machinery, both in residential and non-residential usages, a significant share is controlled by consolidated players, mainly located in Germany.

Segment	Competitor	Country
Wood	Homag	Germany
	SCM	Italy
	Weinmann	Germany
Housing	Essetre	Italy
	Hundegger	Germany

Figure 1.16 - Competitors in Wood and Housing Segment

The biggest competitor, both in terms of size and market share, is Homag, which is currently a part of the DÜRR Group, a leading mechanical engineering firm. The DÜRR Group has a wide-ranging presence across multiple sectors, including paint assembly systems, paint application technologies, and air pollution control systems under the DÜRR brand, as well as measuring and process systems through Schenck. The remaining part of the Group is represented by Homag, EUR 1.6 billion in sales revenue, representing a noteworthy 37,0% of the Group's total revenues[17]. Market

[17] *The DÜRR Group 2022 AnnuaL Report*

estimates suggest that Homag holds a substantial market share ranging between 25.0% and 35.0%, consolidating itself as a market leader.

In the housing market segment, German companies, Hundegger and Weinmann, have a significant market share. Hundegger, considered to be the market leader in the segment, and Weinmann are both privately held companies, making it challenging to obtain detailed information about them.

The Italian wood sector features a single competitor, SCM, another privately held company headquartered in Rimini. SCM's estimated market share stands at approximately 7.0%[18], contributing EUR 450 million in sales in 2021. Despite its relatively smaller market share, SCM remains a significant industry player because, like Biesse, it has diversified its product offerings beyond woodworking machinery, expanding into other materials.

Segment	Competitor	Country
Glass	CMS	Turkey
	Bottero	Italy
	Hegla	Germany
Stone	Breton	Italy
	Thibaut	France

Figure 1.17 - Competitors in Glass and Stone Segment

Biesse's other key segments, such as glass and mechatronics, have their own competitive dynamics. In the glass segment, Biesse competes with Italian company Bottero, which achieved EUR 155 million in revenue in 2022, marking a 21.2%[19] increase from the previous year.

Segment	Competitor	Country
Mechatronics	Kessler	Germany
	Ibag	Switzerland
	Gmn	Germany
	Weiss	Germany
	Step - Tec	Switzerland

Figure 1.18 - Competitors in Mechatronics Segment

[18] *Biesse Company Presentation*
[19] *AIDA*

Additionally, the German company Hegla poses a similar level of competition. However, one of the most significant threats to Biesse in this segment comes from CMS Glass Machinery, a Turkish multinational company with a global presence in over 120 countries. CMS Glass Machinery is widely recognized as one of the key vendors of glass machinery worldwide, backed by more than 25 years of industry experience.

Biesse's mechatronics segment, contributing to nearly 13.0% of its revenues (EUR 105 million in 2022)[20], positions the company as a leader, particularly in the tooling business.

This segment involves the development of electronic and mechanical components for industrial applications. Biesse faces competition from Weiss Group, a German multinational with EUR 3 billion in sales in 2022[21], which, however, primarily serves the automotive industry, a distinct sector from Biesse's. Another significant player is IBAG, a Swiss company established in 1941, renowned for being a leading manufacturer of high-frequency motor spindles and a direct competitor of Biesse.

[20] *Biesse Annual Report 2022*
[21] *The Weiss Group Company Presentation*

2. Financial Analysis of Biesse Group

2.1. Review of the Financial Statements

By examining the balance sheets, income statements, and cash flow statements, we aim to gain a deeper understanding of Biesse's financial health and its development over time.

Starting from the income statement, Biesse achieved total revenues of EUR 822 million in 2022, reflecting a significant 10.8% growth compared to the previous year. The company's impressive ability to maintain consistent growth has resulted in nearly doubling its sales within less than a decade.

	2018	2019	2020	2021	2022
Total Revenues	745,2	705,9	578,8	742,2	822,4
COGS	300,7	291,5	249,6	317,2	338,6
% Revenue	*40,4%*	*41,3%*	*43,1%*	*42,7%*	*41,2%*
Gross Profit	444,5	414,4	329,2	425,0	483,8
Operating Expenses	355,5	343,8	278,9	352,9	397,7
EBITDA	67,9	34,7	14,9	38,5	57,6
% Revenue	*9,1%*	*4,9%*	*2,6%*	*5,2%*	*7,0%*
Total D&A	25,1	41,1	40,6	41,4	37,2
EBIT	63,9	29,6	9,7	30,7	49,0
Income Tax	14,4	10,4	0,8	6,3	11,3
Net Income	43,7	13,0	2,5	34,0	30,2

Figure 2.1 - Snapshot of the Income Statement

The cost of goods sold has remained relatively stable over time, accounting for approximately 41.0% of the company's total revenues. In 2022, this cost amounted to EUR 338 million. This stability in the cost of goods sold is a noteworthy factor that can impact Biesse's overall financial performance and profitability.

R&D costs have exhibited stability, accounting for 3.0% of total revenues in 2022. This figure is consistent with the previous year and reflects a reduction of 100 basis points compared to earlier periods. These R&D expenditures are primarily managed by Biesse S.p.A. the parent company,

and encompass activities related to technological updates and the renewal of standard products[22].

It's important to note that the costs associated with the development and customization of existing products for specific clients are not included within this category, as they are directly invoiced to the respective clients.

Depreciation and amortization represent 4.5% of the company's revenue, which continues a declining pattern that began in 2020. This trend suggests that the company is effectively managing its assets and freeing up resources for future investments.

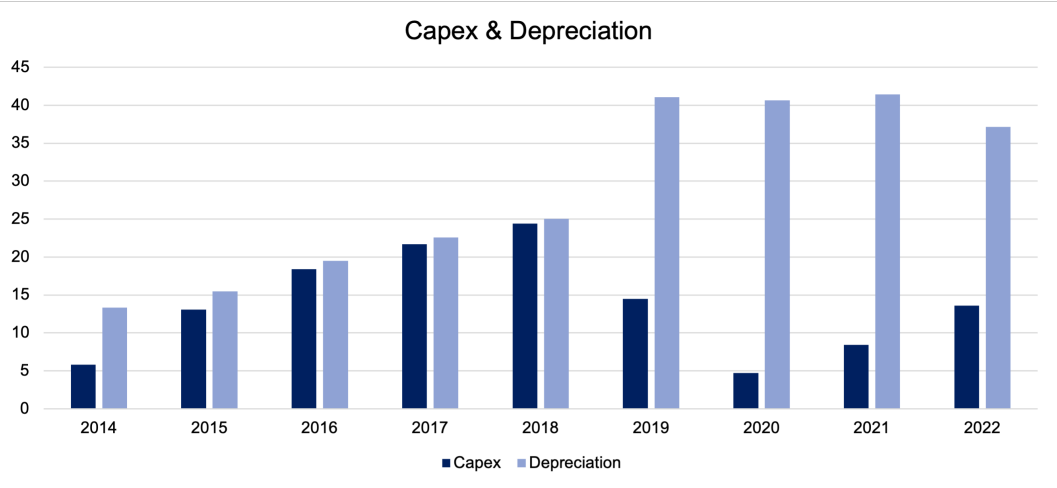


Figure 2.2 - Capex and Depreciation Over the Years

Over the years, Biesse has not only managed to boost its revenues but has also enhanced its profitability. In comparison to the previous year, EBITDA surged by 39.1% to reach EUR 68 million, and EBIT increased to EUR 40.9 million, marking a substantial 59.9% increase from 2021. This highlights the Group's ability to recover after the COVID-19 pandemic and pass on inflationary pressures to its clients without adversely affecting its

[22] *Biesse Annual Reports*

profitability. Nonetheless, net income for the year declined to EUR 30.2 million due to higher income tax expenses compared to 2021.

Passing on the balance sheet, 44,0% of current assets are represented by inventory items totaling approximately EUR 216 million the majority of which being devoted to the machines and systems operating segment, also responsible for the majority of revenues. The Group has experienced good order intake for the year and the order backlog suggests a positive outlook for 2023. Order intake refers to the number of bookings received by clients while order backlog refers to orders received but not yet fulfilled by the company.

The positive impact on contractual liabilities, resulting from the increase in revenues and the reduction in trade receivables, can be largely attributed to the utilization of a 40.0% Italian tax credit relief[23]. This tax credit relief has led to a decrease in the average number of days it takes for the company to collect payments from its customers.

	2018	2019	2020	2021	2022
Cash & Equivalents	83,0	86,1	163,4	154,2	125,0
Inventory	162,8	155,5	129,8	179,4	215,6
Total Current Assets	402,3	384,1	439,0	479,2	494,8
PP&E	102,8	139,7	125,1	117,2	115,1
Goodwill	23,5	23,6	23,5	46,7	46,8
Total Assets	604,5	623,0	658,3	722,8	727,1
Acount Payables	162,6	132,7	132,8	186,7	182,0
Short Term Debt	-	2,3	4,0	3,8	-
Total Current Liabilities	333,9	359,9	430,5	430,1	309,3
Long Term Debt	33,8	26,0	43,0	0,7	0,6
Total Liabilities	385,0	404,3	443,5	473,6	466,3
Paid In Capital	36,2	36,2	-	36,2	36,2
Retained Earnings	161,1	165,3	167,9	201,5	214,2
Minority Interests	0,9	0,9	0,8	0,8	0,2
Total Equity	219,5	218,7	214,8	249,2	260,8

Figure 2.3 - Snapshot of the Balance Sheet

In contrast, net fixed assets have experienced a decrease compared to the previous year. This decrease is primarily a result of lower investments made in comparison to depreciation and amortization expenses. In other words, Biesse has not made significant new capital investments in fixed assets that

[23] *Biesse 2022 Annual Report*

would offset the depreciation and amortization of existing assets, leading to a net reduction in the value of fixed assets.

This indicates a shift in the company's capital allocation strategy, with a focus on optimizing existing assets rather than making significant new capital expenditures. It can also suggest that Biesse is effectively managing its existing assets to generate revenue without a substantial need for additional capital investment.

Net Financial Position	
Short term Debt	(11,7)
Long term Debt	(17,1)
Cash & Cash equivalents	125,0
Net Cash (Debt)	96,26

Figure 2.4 - Net Financial Position

The positive net financial position of EUR 96.2 million for Biesse is indeed a strong indicator of the company's financial stability. With minimal levels of short-term and long-term debt totaling less than EUR 29 million, Biesse has a surplus of cash and assets to cover its financial obligations. A favorable net financial position implies robust financial stability for Biesse. This financial strength enables the company to make profitable investments, including strategic acquisitions, while also providing the flexibility to secure new debt under more favorable credit conditions.

Reviewing the cash flow statement, we observe that operating cash flow decreased to EUR 39.6 million from over EUR 100 million in the previous years. This reduction is primarily attributed to a significant decrease in accounts payable, which, consequently, led to a cash outflow for Biesse. The company also increased its capital expenditures to EUR 13.6 million. Furthermore, the payment of dividends, the first since 2019, resulted in an outflow of resources totaling just over EUR 17 million. Overall, the net

change in cash from the previous years shows a reduction of approximately EUR 2 million.

	2018	2019	2020	2021	2022
Cash from Operations	53,8	42,8	88,2	103,9	39,6
Capex	(24,4)	(14,5)	(4,7)	(8,4)	(13,6)
Cash from Investing	(44,8)	(34,6)	(38,4)	(8,4)	(11,1)
Debt Repaid	(0,3)	(22,0)	(84,8)	(132,1)	(12,0)
Dividends Paid	(13,1)	(13,1)	-	-	(17,1)
Cash from Financing	(4,9)	(5,3)	30,2	(132,7)	(30,2)
Chanche in Net Working Capital	23,7	19,8	(48,0)	(32,7)	16,3
Net Change in Cash	4,1	3,0	77,4	(36,3)	(2,1)

Figure 2.5 - Snapshot of the Cash Flow Statement

Biesse's status as a cash-rich company is evident, and this is further supported by the consistently positive trend in working capital over the years, with the exception of 2021. Effective cash flow management is a vital aspect for achieving long-term growth. Biesse is better prepared to invest part of its resources in new investments in both capex and R&D, moreover, cash availability provides greater stability in case of future financial downturn.

2.2. Ratio Analysis: Liquidity, Profitability, Efficiency and Solvency

Financial statements provide a broad overview of a company's performance. However, to gain a more in-depth understanding of a company's financial well-being and operational efficiency, a comprehensive set of ratios and metrics can be employed to quantitatively evaluate its performance.

I begin by assessing Biesse's overall liquidity. While the company boasts a healthy cash position, it's essential to determine how effectively it can convert its assets into meeting debt obligations. This can be done by

drawing items from the balance sheet to calculate the current and quick ratios.

$$Current\ Ratio = \frac{Current\ Assets}{Current\ Liabilities - Unearned\ Revenue}$$

As of December 2022, Biesse held current assets totaling EUR 495 million and total current liabilities of EUR 430 million, resulting in a current ratio of 1.7x. Unearned revenues are excluded from the short-term liabilities as they represent cash that the company has already received but for which it has yet to provide the service or deliver the product. It's important to note that the current ratio includes inventories, which typically take a longer time to be converted into cash. Therefore, for a more conservative assessment of the company's liquidity, I also computed the quick ratio.

$$Quick\ Ratio = \frac{Current\ Assets - Inventory}{Current\ Liabilities - Unearned\ Revenue}$$

By excluding EUR 216 million of inventory from the calculations, we arrive at a quick ratio of 1.0x. This figure suggests that Biesse maintains a robust liquidity position. In the event of a financial need, the company would have the capability to meet its short-term obligations.

From a short-term perspective, Biesse appears financially healthy. However, long-term solvency is also important as it can significantly impact future growth. A strong solvency position enables the company to consider increasing its debt to finance future ventures. As previously mentioned, Biesse maintains very low debt levels, resulting in an impressively low Debt-to-equity ratio of 2.04%.

$$Debt - to - Equity\ Ratio = \frac{Total\ Debt}{Book\ Value\ of\ Equity}$$

The almost non-existent debt has a positive impact on the interest coverage ratio, which is exceptionally high at 61.4x. In 2022, Biesse has incurred less than EUR 1 million in interest expenses compared to its EBIT of EUR 49.0 million. In my opinion, the company should consider taking on additional debt to increase its financial leverage and potentially reduce its cost of capital.

The value of a company is predominantly influenced by its profitability and its ability to create value for its shareholders. Return on Equity (ROE) is one of the most widely used metrics to gauge this value. It provides insights into investment returns and how efficiently Biesse utilizes its shareholders' capital to generate profits.

$$Return\ on\ Equity = \frac{Net\ Income}{Book\ Value\ of\ Equity_{t-1}}$$

By using the book value of equity from 2021, the calculated ROE for 2022 stands at 13.2%, slightly lower than the European industry average of 15,3%. This approach considers that today's income is assumed to be generated by yesterday's equity investment, providing a valuable perspective on Biesse's performance.

To understand how much the company has earned on each investment, I used the return on capital employed.

$$Return\ on\ Capital\ Employed = \frac{EBIT}{Tangible\ Capital\ Employed_{t-1}}$$

Tangible capital employed is a measure of the capital required to operate the business. It's calculated by adding fixed assets (Property, Plant, and Equipment) and accumulated depreciation to the net working capital (NWC). This formula is chosen because a company needs to finance its receivables and inventory (current assets), and its fixed assets to operate its business. Accumulated depreciation is added back as it's not an actual cash expense. This approach provides a comprehensive view of the capital investment needed for business operations.

$$NWC = Current\ Assets - Current\ Liabilities + Unearned\ Revenue$$

$$Tangible\ Capital\ Employed = NWC + PP\&E + Acc.Depreciation$$

In 2022 Biese reached a 15,7%[24] return on capital employed, in line with past years returns.

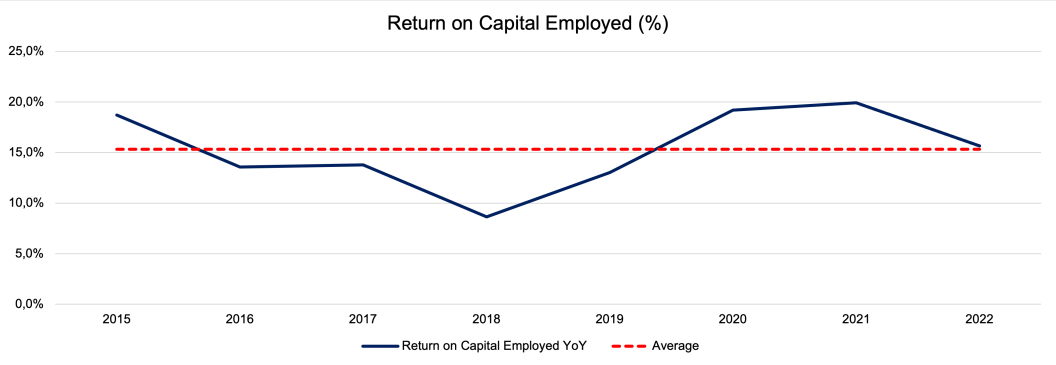


Figure 2.6 - Return on Capital Employed

2.3. Overview of the Valuation Approaches

To derive an enterprise value for Biesse, two market practice approaches have been used. The intrinsic value has been established using an income approach, also known as the discounted cash flow method. This approach takes into consideration the fundamentals of the company and how the company will grow in the future.

The second approach is the market valuation, also known as multiple valuation. In this case, the fundamentals of the company are benchmarked with a set of comparable companies in the market. The main idea is that we want to understand how the market is currently pricing Biesse compared to a set of similar companies. To do so, a set of financial ratios and metrics will be selected to determine the positioning of Biesse relative to its peers.

[24] *Personal Estimates*

Both approaches are valuable in assessing a company's value, providing a comprehensive view that considers both its internal financial health and its position in the broader market. The final enterprise value is often derived by considering the results from both methods and taking an average or weighted approach to arrive at a reasonable valuation

2.3.1. Discounted Cash Flow Valuation

I performed the first part of my valuation performing a Discounted cash flow model to derive an enterprise value for Biesse. When using this valuation technique high level of attention has to be dedicated to the inputs, especially growth rates and discount rates as they will have a strong impact on the final result.

Since we are interested in deriving the enterprise value, we will need to establish the unlevered free cash flows that will be discounted to the weighted average cost of capital.

When performing a valuation, it is important to create a model that is flexible to changes, the less static the model is, the easier it is for the analyst to make changes and have a general overview. For this reason, I created 3 possible scenarios, base, best, and worst case, which will help me make different assumptions and obtain different results.

In the best scenario, I made optimistic assumptions regarding revenue growth and margins, I took the management projections as a starting point and modified them according to my reasoning. While this is the most optimistic case, assumptions are still very conservative since my main objective is to derive the lowest valuation possible. Being conservative is extremely important since it is way better to undervalue a company (and therefore its stock price) rather than making simplistic and extremely positive assumptions that will lead to an overvaluation, paying a higher price for what it is worth.

I began my analysis with the historical performance of the company, starting from 2017 I imported the most important items of the income statement. Revenue and profit margins, ebitda margins are important to derive our net operating profit after taxes which will then be used to derive our levered free cash flow.

2.3.2. Growth rate estimation

Has previously mentioned, it's important to understand the historical performance of the business to better estimate future growth rates. Indeed, past performance is not an indicator of future performance, but thanks to company presentations and management estimates, we can have an idea of how reasonable it is to project past performance in the future.

Biesse is a cyclical company, for this reason, it is crucial to understand the performance of the company during a normalized cycle, which means looking at periods that are not heavily influenced by extreme events or market conditions. For this reason, I focused my attention on the 2010 – 2018 period, just after the 2008 crisis and before the Covid-19 pandemic.

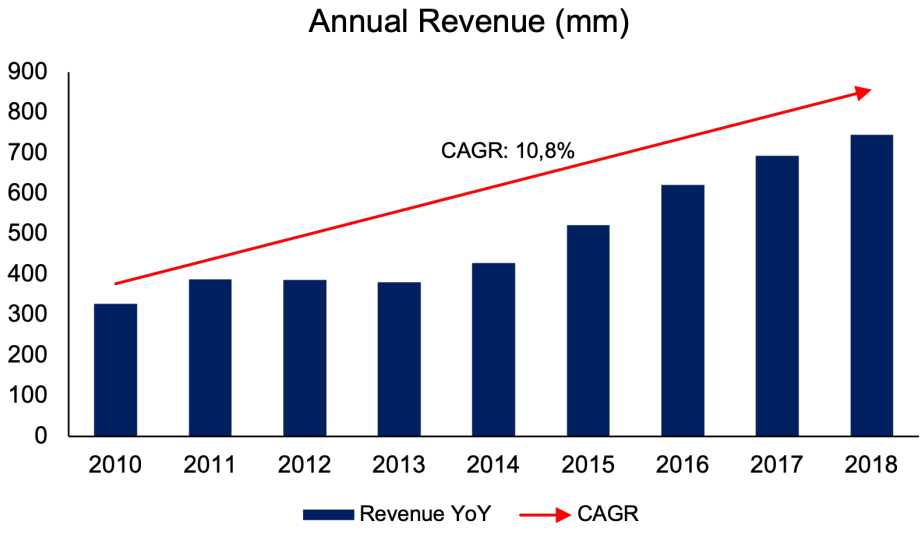
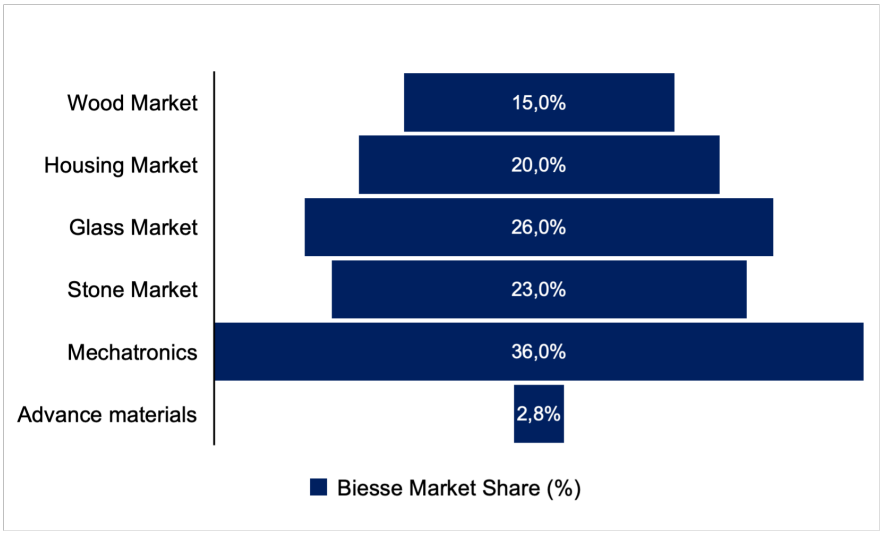


Figure 2.7 - Biesse Revenue YoY

During this time frame, Biesse has been able to grow consistently at a 10,8% compounded growth rate (CAGR). The consistent growth in sales has been fueled by the continuous effort of the management in offering different solutions to their clients, especially in the woodworking machinery business, in addition to the extensive international presence of more than 30 subsidiaries (in 2010). Just between 2010 and 2011 Biesse launched 22 new products and developed 6 new technologies for the glass and stone sector.

So, historically, Biesse has been able to grow at double digits CAGR but I don't believe that is sustainable in the future, this is not a tech company and they have been on the market for almost 50 years. Moreover, in the last couple of years, the company has benefitted from tax incentives provided by the Italian Government for the purchase of capital goods, contributing to the record year of sales in 2022.

I therefore look at the market, as we have mentioned earlier the group generates almost 70% of the business by selling and producing woodworking machinery, mainly for laminated timber which is the most common type of wood used for construction and manufacturing. The market for such products is expected to grow considerably, therefore higher demand will translate into an increase in sales for companies that produce industrial machinery to work with wood. I take this factor into account also because Biesse is a heavy player, they have years of experience, important clients, and most importantly, around 15% of the market share in the wood market and 20% in the housing market.



By looking at the market share, we see the optimal positioning in the mechatronics segment which includes high-speed and high-power cutting technologies for machine tools builders.

Biesse is well positioned in a growing market, given the possible recession in the first half of 2024 and the tightening of the post-pandemic government incentives, I believe it is reasonable to expect a diminishing the growth rate to 7,5% (in line with the first half of 2023) both in the base and optimistic scenario.

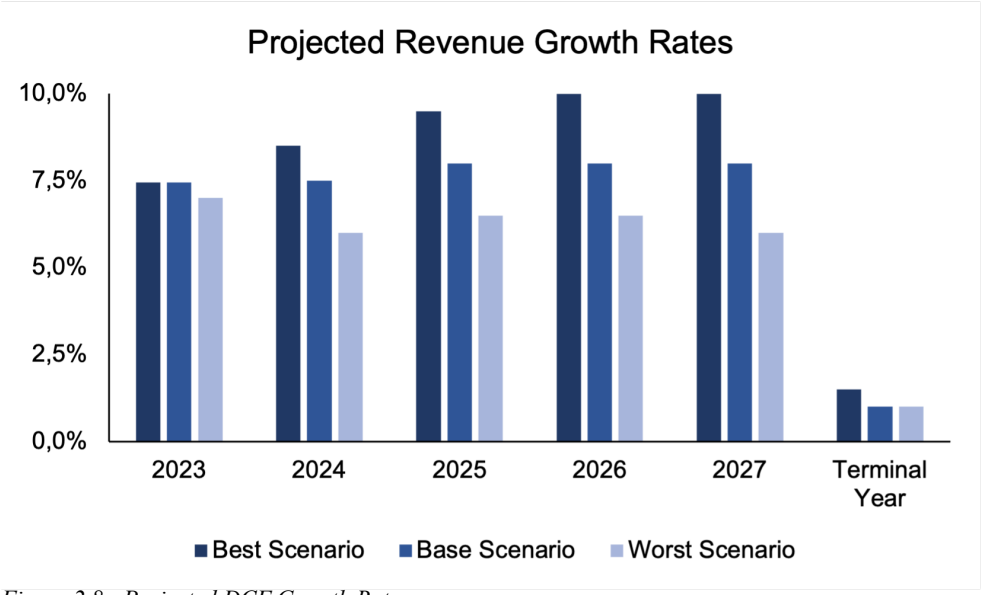


Figure 2.8 - Projected DCF Growth Rates

The base scenario is set to be stagnant at around 7,5% growth also for 2024 to stabilize at 8,0% for the following years. The terminal value is set to be at 1,0%, slightly lower than the expected growth rate of the economy.

On the other hand, the optimistic case shows increasing growth that reaches 9,5% in 2025 and stabilizes at 10,0% for 2027 and 2028. The terminal value growth rate in this case has been assumed to be slightly higher at 1,5%.

Lastly, in the pessimistic scenario, I assumed that Biesse would not be able to maintain the growth trend achieved in the past and that the management

would miss the projections made in the industrial plan. For 2023 I decreased growth to 7,0% and kept it constant at 6,0% until the terminal year.

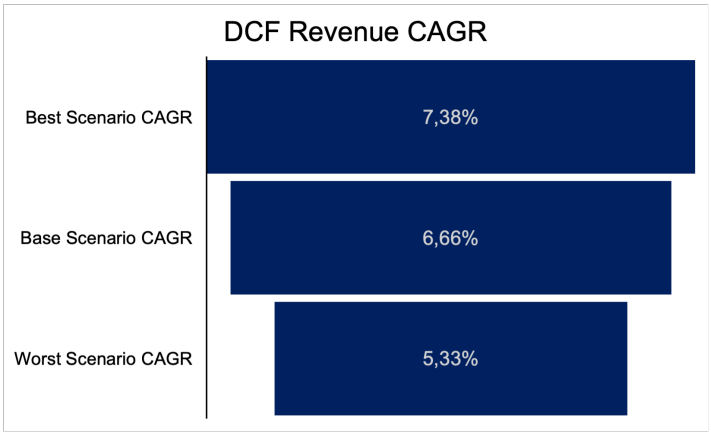


Figure 2.9 - DCF Scenarios Revenue CAGRs

Overall, I've been very conservative in setting up the growth rates, even in the most optimistic case the CAGR is lower than what is expected from both management and market research. Please refer to Appendix D,E and F.

2.3.3. Gross margins

Historically Biesse has maintained an average gross profit margin of around 59,0%, for this reason, I believe it to be reasonable to assume this trend will

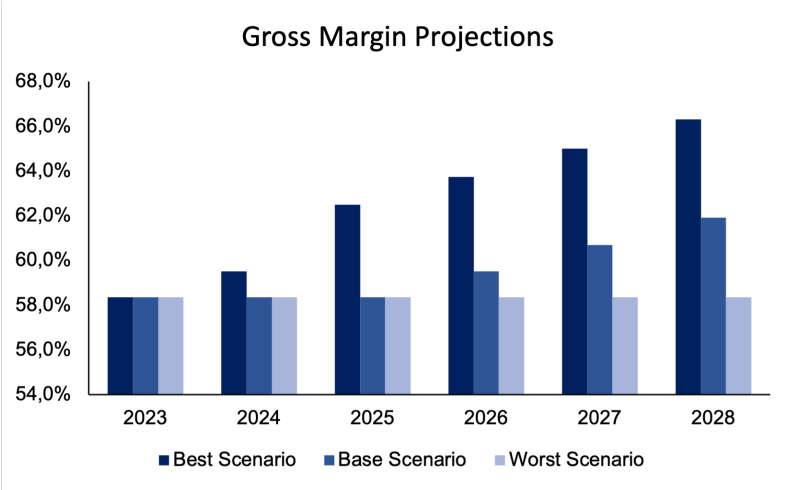


Figure 2.10 - Projected DCF Gross Margins

be kept also for the coming years. Moreover, the management has stated in their 2021 -2023 business plan the intention of keeping the incident of COGS on sales below the 42,0% threshold.

Also in this case I opted for three scenarios with a considerable increase in gross margin for the optimistic case, reaching 66,3%, and a more stable rate of roughly 60,0% in the base case. The worst-case scenario is equal to the base case until 2025 however, for the following years I estimated a constant trend at 58,3% gross margin.

Biesse has invested heavily in automation and Industry 4.0, aiming at a more lean and efficient business model in which the supply chain and the production are well integrated. I tried to incorporate such strategy, which I believe will repay in the coming years, in the optimistic case where gross margins increase from 58,0% to 66,3%. I might sound unreasonable; however, the company has been able to increase its margins also in the inflationary environment that has characterized this last economic period, transferring the increase in raw materials and production costs to its customers through price increases.

2.3.4. Unlevered Free Cash Flows

The enterprise value of Biesse is obtained by discounting the unlevered free cash flows (FCFF) by the weighted average cost of capital.

Unlevered free cash flows can be defined as the amount that is left to capital providers (both debt and equity providers) net of all the cash outflows of the operating period. It is an important measure since it gives us a clear idea on how much cash is available for future investments and growth. The breakdown of the key components can be described as follows:

$$FCFF = NOPAT + D\&A - CAPEX - \Delta WC$$

where

$$NOPAT = EBIT\ (1 - tax\ rate)$$

Depreciation and amortization expenses are added in the unlevered free cash flow formula since they are only accounting expenses, they don't coincide with a real cash outflow. In the projected period they have been set equal to the historical average of 4,9% of sales. Also in this case I tried to be as conservative as possible to minimize the free cash flow projections.

Regarding capital expenditure, I made a projection of 3,0% of revenues in 2023 that increases to 5,5% in the following years for both the base and optimistic scenario. Biesse has spent on average 5,2% of revenues in capex between 2017 and 2022 and, given the high level of attention to innovation of the company, I believe it to be reasonable to increase in the future. The management has also highlighted the importance of changing the organization of the group through a leaner model aimed at improving efficiency, which I believe will result in higher investments. In addition to these investments that will contribute to organic growth, the management has highlighted that capital expenditures will also be devoted to strategic acquisitions in key markets aimed at increasing market share and enhancing portfolio extensions. This is reasonable as highlighted by the acquisitions of Forvet in 2021 which was completed to increase the range of glass processing machines and integrate them with the solutions already developed by Biesse.

The last component used to project the unlevered free cash flow is the change in net working capital, calculated as the Inventory and trade receivables net of trade payables and contracted liabilities (non-interest-bearing short-term liabilities). The change in net working capital is a crucial factor when forecasting future cash flows as it measures the operational efficiency of the firm and the availability of funds for future projects net of the short-term obligations to its creditors.

To make future projections I analysed the cash cycle of Biesse through several historical financial metrics related to Days Sales Outstanding (DSO), Days Inventory Outstanding (DIO), Inventory Turns, and Days Payable

Outstanding (DPO). These metrics give me an insight into how the firm has been able to manage short-term cash obligations.

Days sales outstanding (DSO) tell us how long (in days) on average the firm takes to convert its accounts receivable into sales, the lower this metric the better since it shows that the company can collect cash from its customers in a short time, improving its liquidity.

$$DSO = \frac{Account\ Receivables}{Revenues} \times 365$$

Days inventory outstanding (*DIO*) is another important efficiency metric that indicates how a company manages its inventory and how long on average it takes to convert it into cost of goods sold. Also in this case, the lower the metric the better since inventory ties up capital and increases storage costs.

$$DIO = \frac{Total\ Inventory}{COGS} \times\ 365$$

Strictly related to DIO I also calculated the inventory turnover to better assess how many times the company replaces all its inventory during the operating period, this metric is used for manufacturing companies as it is crucial to meet storage levels with customer demand.

$$Inventory\ Turnover = \frac{COGS}{Total\ Inventory}$$

The last metric that I used to evaluate the cash cycle efficiency of Biesse is the days payable outstanding (DPO), it gives insight into the ability to postpone payments to use the current cash balance for other short-term needs

$$DPO = \frac{Trade\ Payables}{COGS} \times 365$$

Based on the historical metrics, I considered the average values from 2018 to 2022 (I excluded the 2020 figures as I consider them outliers due to the pandemic). Days payable outstanding have been reduced by 5,0% since I wanted to account for the increasing bargaining power of suppliers which is a cause of concern for the management.

Once I obtained the historical averages, which I believe to be reasonable for the coming years, I projected the working capital components using the sales and COGS projections previously estimated in the following way:

$$Inventories_{t+1} = \frac{Expected\ COGS_{t+1}}{Average\ Inventory\ Turnover}$$

$$Trade\ Receivables_{t+1} = \frac{Expected\ Sales_{t+1} \times Average\ DSO}{365}$$

$$Trade\ Payables_{t+1} = \frac{Average\ DPO}{365} \times Expected\ COGS_{t+1}$$

These calculations lead to a positive projected net working capital balance (in line with the management targets), with positive net changes on a yearly basis.

I believe these assumptions to be reasonable since the management has stated in their last company presentations how they intend to devote considerable attention to the trend of working capital in the future. This is also in line to shift to a more efficient and lean company structure which will enable better management of the cash cycle.

	2018	2019	2020	2021	2022	2023E	2024E	2025E	2026E	2027E	2028E
Inventories	162,8	155,5	60,5	179,4	215,6	208,57	220	223	237	252	246
Trade Receivables	128,0	117,0	107,6	126,0	112,5	142,27	154	169	186	205	208
Trade Payables	162,6	132,7	143,9	186,7	182,0	185,52	196	198	211	224	219
Contract Liabilities	75,7	67,5	-	127,1	138,2	114,88	125	136	150	165	168
	10,2%	*9,6%*	*0,0%*	*17,1%*	*16,8%*	*13,0%*	*13,0%*	*13,0%*	*13,0%*	*13,0%*	*13,0%*
Net Operating Working Capital	**52,5**	**72,3**	**24,3**	**(8,4)**	**7,9**	**50,4**	**54,0**	**57,2**	**62,0**	**67,2**	**67,2**
Change in Net Working Capital	23,7	19,8	(48,0)	(32,7)	16,3	42,5	3,6	3,2	4,8	5,2	(0,0)

Figure 2.11 - Net Working Capital Computations

I assumed the same changes in net working capital for all 3 scenarios since I believe them to be quite reasonable, moreover, I believe the change in intrinsic value in the 3 cases will be mainly driven by the ability of the company to grow and increase margins rather than in the management of the working capital. Please refer to Appendix B for full computations.

All the estimated figures are then summed up to obtain the unlevered free cash flow that will then be discounted to the appropriate discount factor, the weighted average cost of capital.

Please refer to Appendix C for all DCF Scenario Assumtions.

2.3.5. Weighted Average Cost of Capital

The discount factor used to actualize the unlevered free cash flows has been determined with the weighted average cost of capital (WACC). This measure tells us how expensive it is for Biesse to raise capital to finance its assets. Given that the capital structure of most companies is made from a debt and an equity component, it is important to understand the weight of each component and its cost to have a precise idea on the cost of raising capital. The formula used is the following:

$$WACC = \frac{D}{D+E} k_d(1-t) + \frac{E}{D+E} k_e$$

D = Market value of debt

E = Market value of equity

t = corporate tax rate (since interests on debt are tax deductible)

k_d = Cost of debt

k_e = Cost of equity

Cost of equity (k_e) is derived using the Capital Asset Pricing Model, the most common metric used to derive the required rate of return for a given investment with respect to a risk-free asset.

$$k_e = r_f + \beta_l (R_m - r_f)$$

The starting point for estimating the weighted average cost of capital is the risk-free rate (r_f); in this case I used the 10-year German government bond (Bund) which yields a 2,58% interest rate. I believe this proxy to be the most suitable since Biesse is a European company and Germany represents the healthiest economy in terms of bond rating (AAA rating from the major credit rating agencies).

Given the exposure of Biesse to several different geographies, I computed the equity premium (R_m) using a weighted average of the equity premiums of single geographies using the share of revenues generated in that market as weight. I have no information on the individual countries in which revenues are generated but only on the macro areas, for this reason, I used the equity premium of the country that, in my opinion, better represents the geographical area. By taking the difference between the equity premium and the risk-free we obtain the market risk premium which represents the return we expect to obtain on top of the risk-free investment. All premiums have been sourced using the dataset provided by Professor Aswad Damodaran from NY Stern University.

The remaining component of the cost of equity calculation is the levered beta (β_l), this is a measure of the asset risk compared to the market considering the capital structure of the firm. The most common approach to deriving this figure is by defining a set of publicly traded comparable companies from which we can derive a median unlevered beta (which means that the financial leverage of each individual company is not considered).

Beta is a measure of the asset risk; it is, therefore, important to factor in the financial leverage of Bieese. We do this by relevering the beta obtained from the comparables, this is done considering the debt-to-equity ratio of the company according to the following Hamada formula:

$$\beta_l = \beta_u \left(1 + \left((1 - t)\left(\frac{D}{E}\right)\right)\right)$$

The debt-to-equity ratio has been computed using the market value of equity, also known as the market capitalization, as the denominator, and the sum of long-term debt (including leases) and short-term debt (given by short-term borrowings, current portion of long-term debt and current portion of leases) as numerator. Biesse has very low debt which brings the debt-to-equity ratio to 1,67%.

The minimal debt burden is a positive indicator of the company's prospects. It suggests that the company has the potential to finance its future growth, primarily through strategic acquisitions, and by raising additional debt. This strategic move would serve to further reduce its cost of capital, bolstering its financial position.

The resulting levered beta of 1,2 is then used in the CAPM formula to obtain a cost of equity of 8,7%. Biesse is considered a mid-cap stock, and the market capitalization is below 500 million, for this reason, I believe it is reasonable to increase the cost of equity by a size premium of 1,5% to account for the higher risk typical of smaller companies. The resulting cost of equity obtained is therefore 10,2%.

Please refer to Appendix A for full computations.

Cost of Equity Calculation:	
Risk-Free Rate (Rf)	2,6%
Plus Equity Premiums:	7,15%
Equity Risk Premium (Rm-Rf)	4,6%
Unlevered Beta	1,1
Debt to Equity	2,04%
Relevered Equity Beta (Be)	1,2
Industry - Adjusted Equity Risk Premium	5,3%
Size Premium (SP)	1,5%
Cost of Equity (Re)	10,2%

Figure 2.12 - Cost of Equity Computations

Since there are no outstanding bonds issued in the market, the cost of debt (k_d). has been determined using a synthetic rating. This model considers factors such as the interest coverage ratio and assigns a rating, to which a corresponding cost of debt is associated. Additionally, the model can factor in operational leases, providing valuable insights into the company's financial position.

Biesse has very low interest expenses which bring the interest coverage ratio to 6.96x, this corresponds to a synthetic rating of A2 and a resulting pre-tax cost of debt of 3.9%, which is added to the country risk premium (in this case I chose Italy as it the country in which Biesse is based) of 3,3%. Also in this case I considered the corporate tax rate of 24,0% which will bring the overall aftertax cost of debt to 5,5%.

Cost of Debt Calculation:	
Pre-Tax Weighted Cost of Debt	3,94%
Country Risk Premium	3,3%
Adjusted Pre-tax Cost of Debt	7,3%
Estimated Tax Rate	24,0%
After-Tax Cost of Debt (Rd)	5,5%

Figure 2.13 - Cost of Debt Computations

After having estimated the cost of debt and capital I computed the weighted average. As mentioned earlier, the company has almost no debt which

means that the WACC is almost entirely driven by the cost of equity. The resulting WACC for Biesse is 9.7%, in line with consensus estimates[25].

Weighted Average Cost Of Capital Calculation:	
Debt % of Capital	9,9%
Cost of Debt	5,5%
Weighted Cost of Debt	**0,55%**
Market Capitalisation (m)	318,42
Book Value of Equity (m)	260,794
Equity % of Capital	90,1%
Cost of Equity	10,2%
Weighted Cost of Equity	9,2%
Weighted Average Cost of Capital	**9,7%**

Figure 2.14 - WACC Computations

2.3.6. Sensitivity Analysis

The Discounted Cash Flow (DCF) methodology is highly sensitive to its inputs, and even a small change in variables like the terminal value growth rate or the weighted average cost of capital (WACC) can significantly impact the final valuation. To account for this sensitivity, I conducted a sensitivity analysis to understand how changes in these variables affect the model's output.

Enterprise Value Sensitivity

Terminal Growth Rate \ WACC	7,9%	8,8%	9,8%	10,8%	11,8%
0,3%	411,0	364,8	323,7	290,3	260,2
0,5%	422,3	373,7	330,5	295,7	264,5
1,0%	447,5	393,0	345,4	307,4	273,6
1,5%	476,6	415,0	362,0	320,3	283,6

Figure 2.15 - EV Sensitivity Base Scenario

[25] *Borsa Italiana, Equity Research*

In the base scenario, the DCF valuation yielded an enterprise value of EUR 345 million. Assuming the same terminal value growth rate of 1.0%, a 10.0% increase in the WACC would result in a decrease in the enterprise value of approximately 12.4%[26] to EUR 307 million.

When considering the possibility of both a reduction in the terminal growth rate to 0.5% and a 10.0% increase in the WACC, the resulting valuation indicates a target price of EUR 14.3. This target price is still 25.0% higher than the price at the time of valuation (EUR 11.2). This suggests that, even with a more conservative scenario that incorporates these changes, the stock appears undervalued based on the DCF model.

Implied Share Price Sensitivity

Terminal Growth Rate \ WACC	7,9%	8,8%	9,8%	10,8%	11,8%
0,3%	18,52 €	16,84 €	15,33 €	14,12 €	13,02 €
0,5%	18,93 €	17,16 €	15,58 €	14,31 €	13,17 €
1,0%	19,85 €	17,86 €	16,12 €	14,74 €	13,51 €
1,5%	20,91 €	18,67 €	16,73 €	15,21 €	13,87 €

Figure 2.16 - Share Price Sensitivity Base Scenario

2.4. Comparable Companies Analysis

Comparable companies' analysis is probably the most common methodology used to value a target company. It's not only used for investment decisions but also plays a crucial role in M&A transactions and during IPOs. The premise of this methodology is that similar assets in the market should, theoretically, be priced similarly. While each company possesses its unique traits, firms of similar size and shared characteristics ideally shouldn't exhibit significant disparities in market valuation.

[26] *Personal Estimates*

The process of selecting comparable companies began by defining the industry from which I could derive a universe of comparable companies. To accomplish this, To achieve this, I employed two distinct methods. Initially, I relied on an automatic sample of comparables for Biesse, sourced from S&P Capital IQ. However, this initial approach resulted in a relatively small sample of companies, some of which exhibited substantial differences from the target company, both in terms of their business models and industries.

In the second phase, still utilizing S&P Capital IQ, I conducted a company screening of all publicly traded companies categorized as belonging to the following industries:

- Machinery Components
- Metalworking Machinery and Equipment
- Metal Cutting Machine Tools
- Sawmill and Woodworking Machinery

This process yielded a very large sample of companies (168 companies), I therefore narrowed the sample by by exclusively choosing European firms. This decision was primarily influenced by the fact that a majority of Biesse's competitors are European, and the company generates the bulk of its revenues within Europe.

The initial sample of 168 companies has now been reduced to 102, which is still a substantial number. To further refine my selection, considering that Biesse has annual revenues exceeding EUR 800 million, I chose to focus on companies that generated revenues within the range of EUR 200 million to EUR 2.5 billion. I also included only companies with a market capitalization lower than EUR 2 billion, resulting in a final sample of 26 companies. I then proceeded to check all the companies sampled to verify that they were similar in terms of industry and business model, this procedure eliminated 9 companies from the sample, reducing the overall comparables to 15.

Please refer to Appendix G.

The multiple analysis is usually made by using 3 important metrics, EV/EBITDA multiple, EV/Revenues multiple, and Price-to-earning ratio.

The Enterprise Value over Ebitda multiple is probably the most important metric used to compare companies within the same industry, especially for companies with large fixed assets such as manufacturing, where a significant portion of non-cash expenses, like depreciation, can impact reported earnings.

$$EBITDA\ Multiple = \frac{Enterprise\ Value}{EBITDA}$$

This metric is also important because it is independent from the capital structure of the firm and since we are dealing mainly with multinational companies, it is also independent of taxes, these factors make our selection process more harmonized.

Enterprise Value over Revenues is another common metric used in valuation, it consists of simply dividing the enterprise value by the sales. Usually, when this metric is below 1, the company is considered to be a cheap investment compared to the market.

$$Revenue\ Multiple = \frac{Enterprise\ Value}{Total\ Revenues}$$

The final metric utilized is the Price-to-Earnings (P/E) ratio, specifically the trailing P/E ratio, which uses the last reported earnings per share as the denominator. This metric provides insights into investor expectations for a particular company and indicates how much an investor is willing to pay for each euro of earnings generated. While it's not typically used for valuation purposes, the P/E ratio is employed to gain a better understanding of how the market perceives a company and its future potential. A low P/E ratio may suggest that a company is undervalued in the eyes of investors.

$$Trailing\ Price\ to\ Earning\ Ratio = \frac{Stock\ Price}{Trailing\ Earnings\ per\ Share}$$

Having selected comparable companies for Biesse, I determined the lowest, median, and highest values for the mentioned multiples. Regarding the EV/EBITDA multiple, the median value is 8.8x, with a range spanning from the lowest at 2.4x to the highest at 16.7x. This result is considerably higher than what is shown by Biesse, which has a multiple of 2,9x.

By multiplying the highest and lowest multiples of the comparables by Biesse's 2022 EBITDA, an Enterprise value range is calculated, spanning from EUR 138 million to EUR 961 million. Due to the wide range, the median value of EUR 507 million has been retained, implying a share price of EUR 18.5. This suggests that Biesse is potentially undervalued compared to its comparables, considering its current share price, which falls within the 11–12 euro range. I conducted similar calculations using the median EV/Revenue multiple and multiplied it by the 2022 revenues.

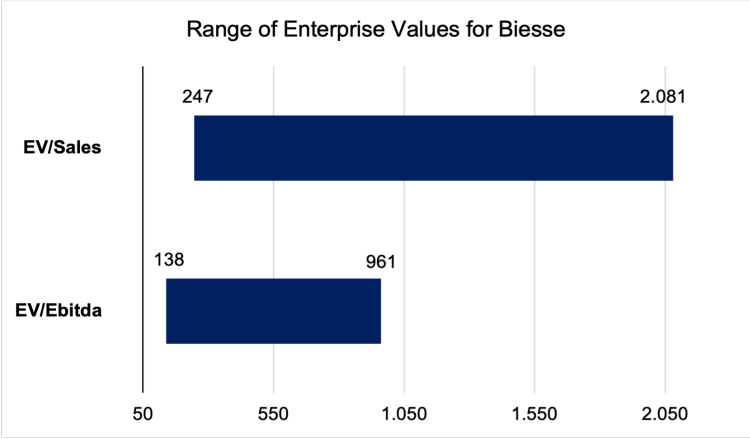


Figure 2.17 - EV from Market Multiples

Once again, a broad range for the enterprise value was obtained, ranging from a minimum of EUR 247 million to EUR 2 billion. The median value is EUR 650 million, which suggests a share price of EUR 23.7[27].

[27] *Personal Estimates*

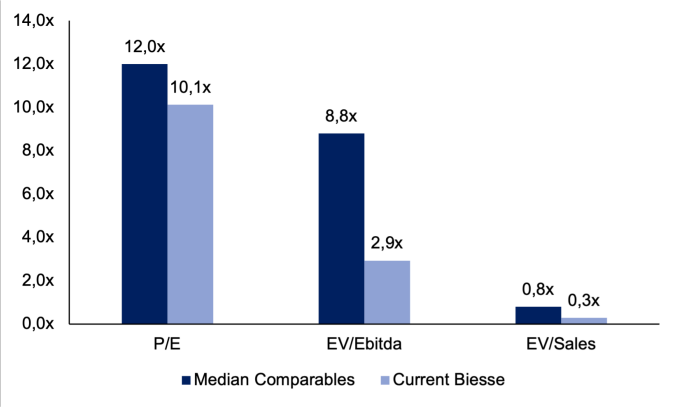


Figure 2.18 - Market Multiples vs. Current Multiple

I then proceeded to derive the equity value and calculated an implied share price. I used the earnings per share (EPS) achieved by Biesse in 2022, which was EUR 1.1 per share, and multiplied it by the P/E ratio of the comparables. This calculation resulted in a price range from EUR 4.5 to EUR 26.2. Once again, the median value has been considered for the implied share price.

The final implied share price was calculated by averaging the median prices obtained from the three methodologies. This resulted in a target price of EUR 20.82[28], which closely aligns with the result obtained in the DCF model's best-case scenario.

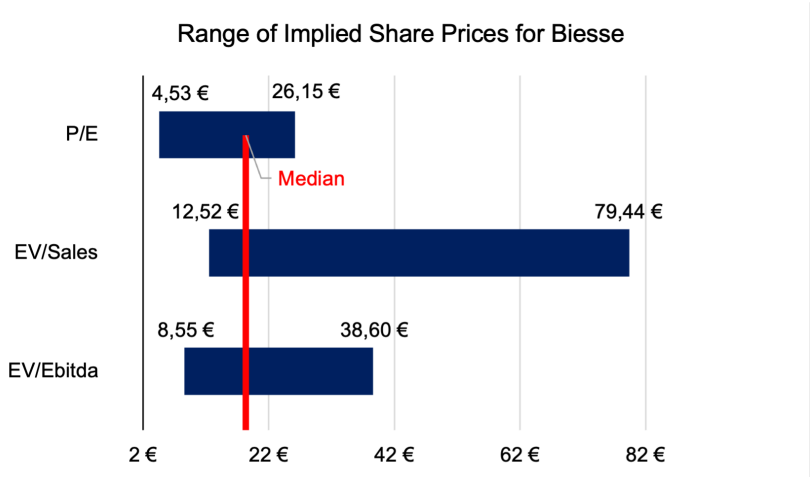


Figure 2.19 - Share Prices from Comparables Valuation (Personal estimates)

[28] *Personal Estimates*

3. Results and Discussion

Both valuation methodologies have their limitations. The DCF model is highly sensitive to assumptions that may not hold in the future, while the market approach relies on market perceptions rather than the company's fundamentals. Therefore, it's important to derive a final valuation that takes into account the results from both methodologies. This approach helps provide a more comprehensive and balanced assessment of a company's intrinsic value.

3.1. Interpretation of the Valuation Results

Given that my DCF valuation incorporates a three-scenario approach, I've chosen to allocate probabilities to each scenario. By doing so, I can calculate the implied share price through a weighted average of the results in each scenario.

I've assigned a 55.0% probability to the base scenario, which I consider to be conservative and well-founded. Additionally, I've allocated a 30.0% weight to the optimistic scenario, a reasonable choice based on the company's historical performance and management's capabilities. Despite the challenging economic environment for cyclical firms, I have confidence in the management's ability to navigate potential recessions.

Conversely, the worst-case scenario assumptions are notably pessimistic, leading me to assign a 15.0% probability to account for this downside risk. This approach allows for a comprehensive assessment of the company's intrinsic value, considering various potential outcomes and their associated probabilities.

I believe that this procedure will lead to a more comprehensive view of the company's valuation, considering both potential positive and negative

outcomes., and obtaining a more realistic assessment of the company's intrinsic value.

Scenario	Probability	Implied share price	Potential Upside
Base	55,0%	16,1 €	43,1%
Best	30,0%	20,8 €	84,4%
Worst	15,0%	7,9 €	-30,1%
Weighted Implied Share Price		**16,3 €**	**44,5%**

Figure 3.1- DCF Weighted Share Price

The chosen methodology leads to a final share price of EUR 16,3 which implies a potential upside of 44,7% from the current price of EUR 11,3 (as of 22.09.23).

To incorporate the comparable valuation into my analysis, I've chosen to apply a weighted average as well. However, in this case, I've assigned a slightly higher weight to the multiple analysis, 60,0%. I believe that the current market conditions make it challenging to have a clear short-term outlook. With this choice, I'm placing greater importance on the market's perception and how it's pricing companies like Biesse.

Methodology	Weight	Implied share price	Potential Upside
DCF	40,0%	16,3 €	44,5%
Market Multiples	60,0%	20,8 €	84,7%
Weighted Implied Share Price		**19,0 €**	**68,6%**

Figure 3.2 - DCF and Market Multiples Weighted Price

3.2. Comparison with Historical Trend

To better assess whether Biesse is undervalued in the market, I've compared the historical trends of the chosen multiples to today's values. When examining multiples from the past 10 years, it's evident that the company is currently at historically low levels. In terms of EV/Sales, the stock is currently trading at 0.3x, a substantial discount compared to the 10-year average of 0.7x.

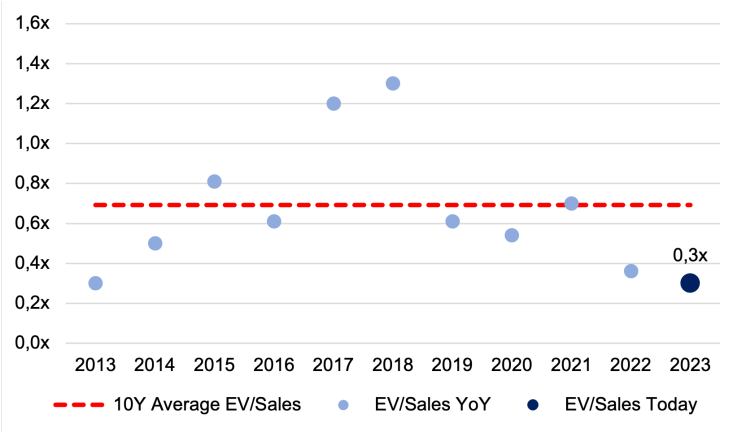


Figure 3.3 - Historical EV/Sales Multiple

By examining the P/E multiple, it's evident that Biesse's current trading values are significantly lower than its historical averages. This observation could suggest a potential undervaluation of the stock in comparison to the broader market or perhaps reflect reduced confidence in the growth prospects for the group.

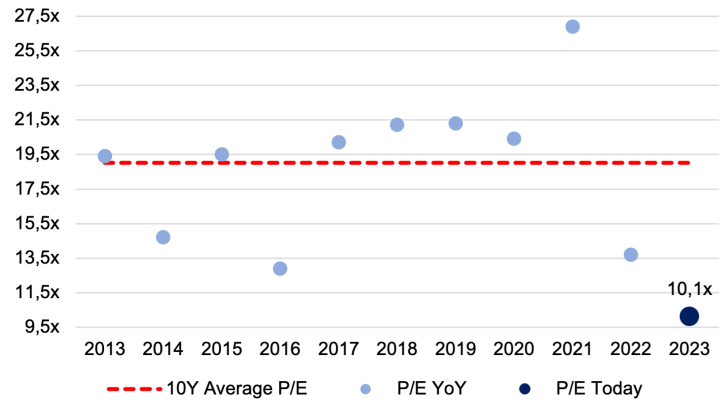


Figure 3.4 - Historical P/E Multiple

Moreover, when we consider the EV/EBITDA multiple, it's worth noting that it, too, is currently below the historical average. This suggests that the market may not fully recognize the company's potential, given the lower valuation multiples across multiple key metrics. Such deviations from historical norms could raise questions about market sentiment and the degree of optimism or skepticism about the company's future performance.

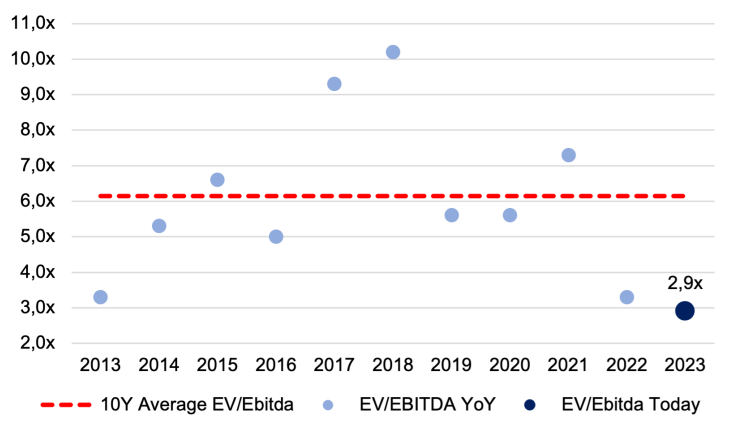


Figure 3.5 - Historical EV/Ebitda Multiple

Assessing whether Biesse's stock is undervalued is a complex task, but several important considerations come into play. Biesse operates as a cyclical company, and it's reasonable to assume that this cyclicality is reflected in its current stock price. However, it appears that the discount applied to Biesse's stock is more significant when compared to its industry peers.

The primary reason for this disparity likely lies in the composition of Biesse's customer base. The company predominantly serves medium-sized businesses operating within highly cyclical industries. These industries are exceptionally sensitive to the overall health of the economy. While it's true that the majority of Biesse's revenues are generated outside of Italy, a potential economic slowdown in the key markets where the company operates can significantly impact its customer base. Consequently, the market may apply a more substantial discount to account for the additional cyclical risk stemming from the nature of Biesse's clients.

Furthermore, it's essential to emphasize that market consensus is rarely a meaningful metric for long-term investments. Analysts often have a short-term perspective, primarily driven by EPS forecasts. This approach significantly differs from a value-oriented approach, where more emphasis is placed on the company's overall performance over the years. I consider this approach to be more meaningful for medium to long-term value investments. Additionally, I find it to be more suitable for cyclical companies, where predicting short-term performance can be exceptionally challenging.

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5. Appendix

Weighted Average Cost of Capital

Cost of Equity Calculation:	
Risk-Free Rate (Rf)	2,6%
Plus Equity Premiums:	7,15%
Equity Risk Premium (Rm-Rf)	4,6%
Unlevered Beta	1,1
Debt to Equity	2,04%
Relevered Equity Beta (Be)	1,2
Industry - Adjusted Equity Risk Premium	5,3%
Size Premium (SP)	1,5%
Cost of Equity (Re)	10,2%

Cost of Debt Calculation:	
Pre-Tax Weighted Cost of Debt	3,94%
Country Risk Premium	3,3%
Adjusted Pre-tax Cost of Debt	7,3%
Estimated Tax Rate	24,0%
After-Tax Cost of Debt (Rd)	5,5%

Weighted Average Cost Of Capital Calculation:	
Debt % of Capital	9,9%
Cost of Debt	5,5%
Weighted Cost of Debt	**0,55%**
Market Capitalisation (m)	318,42
Book Value of Equity (m)	260,794
Equity % of Capital	90,1%
Cost of Equity	10,2%
Weighted Cost of Equity	9,2%
Weighted Average Cost of Capital	**9,7%**

Net Financial Position	
Short term Debt	(11,7)
Long term Debt	(17,1)
Cash & Cash equivalents	125,0
Net Cash (Debt)	96,26

Synthetic Rating	
Ebit	49,0
Interest expenses	0,80
Interest Coverage ratio	61,24

Appendix B – Working Capital Computations

Projections NWC	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average
Sales	328	389	386	381	429	522	621	693	745,2	706	579	742	822	
DSO	101	105	94	73	69	74	72	64	63	60	68	62	50	**58,8**
Inventory	81	88	90	86	98	111	50	54	163	155	61	179	216	
COGS	140	171	164	159	174	210	250	276	301	291	250	317	339	
DIO	212	189	201	199	205	194	73	72	198	195	88	206	232	**207,8**
Inventory Turns	1,72	1,94	1,81	1,84	1,78	1,88	5,01	5,08	1,85	1,87	4,13	1,77	1,57	**1,8**
DPO	289	241	239	256	258	267	196	194	197	166	210	215	196	**183,9**

Net Operating Working Capital

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023E	2024E	2025E	2026E	2027E	2028E
Inventories	81,3	88,5	90,3	86,3	98,1	111,4	49,9	54,4	162,8	155,5	60,5	179,4	215,6	208,57	220	223	237	252	246
Trade Receivables	90,4	112,2	99,5	76,2	80,7	105,4	122,1	121,3	128,0	117,0	107,6	126,0	112,5	142,27	154	169	186	205	208
Trade Payables	111,1	113,1	107,3	111,1	123,2	153,3	134,8	146,9	162,6	132,7	143,9	186,7	182,0	185,52	196	198	211	224	219
Contract Liabilities	-	-	-	-	-	-	-	-	75,7	67,5	-	127,1	138,2	114,88	125	136	150	165	168
									10,2%	*9,6%*	*0,0%*	*17,1%*	*16,8%*	*13,0%*	*13,0%*	*13,0%*	*13,0%*	*13,0%*	*13,0%*
Net Operating Working Capital	**60,6**	**87,5**	**82,5**	**51,4**	**55,6**	**63,4**	**37,2**	**28,8**	**52,5**	**72,3**	**24,3**	**(8,4)**	**7,9**	**50,4**	**54,0**	**57,2**	**62,0**	**67,2**	**67,2**
Change in Net Working Capital		27,0	(5,1)	(31,1)	4,2	7,8	(26,2)	(8,4)	23,7	19,8	(48,0)	(32,7)	16,3	42,5	3,6	3,2	4,8	5,2	(0,0)

Appendix C – DCF Assumptions

Assumptions:	Average	Dec 31, '17	Dec 31, '18	Dec 31, '19	Dec 31, '20	Dec 31, '21	Dec 31, '22	Dec 31, '23	Dec 31, '24	Dec 31, '25	Dec 31, '26	Dec 31, '27	Dec 31, '28	Average
Revenues Growth YoY	5,8%	11,7%	7,5%	-5,3%	-18,0%	28,2%	10,8%	7,5%	8,5%	9,5%	10,0%	10,0%	1,5%	7,83%
Best								7,5%	8,5%	9,5%	10,0%	10,0%	1,5%	
Base								7,5%	7,5%	8,0%	8,0%	8,0%	1,0%	
Worst								7,0%	6,0%	6,0%	6,0%	6,0%	1,0%	
Gross Margin	58,6%	60,2%	59,6%	58,7%	56,9%	57,3%	58,8%	58,3%	59,5%	62,5%	63,7%	65,0%	66,3%	62,6%
Best								58,3%	59,5%	62,5%	63,7%	65,0%	66,3%	
Base								58,3%	58,3%	58,3%	59,5%	60,7%	61,9%	
Worst								58,3%	58,3%	58,3%	58,3%	58,3%	58,3%	
EBITDA Margin	7,9%	11,1%	10,4%	6,4%	4,5%	6,6%	8,3%	10,1%	10,6%	10,5%	10,8%	11,0%	11,0%	10,7%
Best								10,1%	10,6%	10,5%	10,8%	11,0%	11,0%	
Base								10,1%	9,0%	10,0%	10,0%	10,0%	9,0%	
Worst								10,1%	9,1%	8,2%	7,4%	6,6%	6,0%	
EBIT Margin	5,6%	9,3%	8,6%	4,2%	1,7%	4,1%	6,0%	5,2%	6,0%	6,9%	7,9%	9,1%	10,5%	7,6%
Best								5,2%	6,0%	6,9%	7,9%	9,1%	10,5%	
Base								5,2%	5,6%	6,0%	6,4%	6,8%	7,3%	
Worst								5,2%	5,4%	5,5%	5,7%	5,9%	6,0%	
Capex (% Revenue)	5,2%	5,5%	6,3%	5,0%	6,9%	4,6%	2,8%	3,0%	5,5%	5,5%	5,5%	5,5%	5,5%	5,1%
Best								3,0%	5,5%	5,5%	5,5%	5,5%	5,5%	
Base								3,0%	5,5%	5,5%	5,5%	5,5%	5,5%	
Worst								5,0%	5,0%	5,0%	5,0%	5,0%	5,0%	

Appendix D – DCF Base Scenario

BIEESSE S.P.A.

EUR (mm)			Dec 31, '17	Dec 31, '18	Dec 31, '19	Dec 31, '20	Dec 31, '21	Dec 31, '22	Dec 31, '23	Dec 31, '24	Dec 31, '25	Dec 31, '26	Dec 31, '27	Terminal
										1	2	3	4	5
Net Revenue			693	745	706	579	742	822	884	950	1.026	1.108	1.197	1.209
% Revenue Growth Rate			*na*	*7,5%*	*-5,3%*	*-18,0%*	*28,2%*	*10,8%*	*7,5%*	*7,5%*	*8,0%*	*8,0%*	*8,0%*	*1,0%*
Cost of Goods Sold			(276)	(301)	(291)	(250)	(317)	(339)	(368)	(396)	(427)	(449)	(470)	(460)
Gross Profit			**417,2**	**444,5**	**414,4**	**329,2**	**425,0**	**483,8**	**515,6**	**554,3**	**598,6**	**659,4**	**726,4**	**748,4**
Gross Profit Margin %			*60,2%*	*59,6%*	*58,7%*	*56,9%*	*57,3%*	*58,8%*	*58,3%*	*58,3%*	*58,3%*	*59,5%*	*60,7%*	*61,9%*
Sales & Marketing			(221)	(239)	(235)	(198)	(242)	(264)	(289)	(311)	(335)	(362)	(391)	(395)
% Sales		**32,7%**	*31,8%*	*32,1%*	*33,3%*	*34,2%*	*32,6%*	*32,2%*	*33%*	*33%*	*33%*	*33%*	*33%*	*33%*
General & Administrative														
Research & Development			-	-	-	-	-	-						
Other Operating Expenses			(109)	(116)	(108)	(81)	(111)	(133)	(137)	(158)	(161)	(186)	(216)	(244)
Earnings Before Interest, Tax, Depreciation & Amortisation (EBITDA)			**87,26**	**88,98**	**70,65**	**50,30**	**72,12**	**86,1**	**89,5**	**85,5**	**102,6**	**110,8**	**119,7**	**108,8**
EBITDA Margin %			*12,6%*	*11,9%*	*10,0%*	*8,7%*	*9,7%*	*10,5%*	*10,1%*	*9,0%*	*10,0%*	*10,0%*	*10,0%*	*9,0%*
Depreciation & Amortisation			(23)	(25)	(41)	(41)	(41)	(37)	(44)	(47)	(51)	(55)	(59)	(60)
Amortisation			-	-	-	-	-	-						
		4,9%	*3,3%*	*3,4%*	*5,8%*	*7,0%*	*5,6%*	*4,5%*						
Earnings Before Interest & Taxes (EBIT)			**64,70**	**63,93**	**29,57**	**9,66**	**30,68**	**48,99**	**45,96**	**38,70**	**52,06**	**56,22**	**60,72**	**49,24**
EBIT Margin %			*9,3%*	*8,6%*	*4,2%*	*1,7%*	*4,1%*	*6,0%*	*5,2%*	*5,6%*	*6,0%*	*6,4%*	*6,8%*	*7,3%*
Income Tax			(18)	(14)	(10)	(1)	(6)	(11)	(11)	(9)	(12)	(13)	(15)	(12)
Effective Income Tax Rate %			*27,8%*	*22,6%*	*35,3%*	*7,9%*	*20,5%*	*23,1%*	*24,0%*	*24,0%*	*24,0%*	*24,0%*	*24,0%*	*24,0%*
Net Operating Profit After Tax (NOPAT)			**46,7**	**49,5**	**19,1**	**8,9**	**24,4**	**37,7**	**34,9**	**29,4**	**39,6**	**42,7**	**46,1**	**37,4**
NOPAT %			*6,7%*	*6,6%*	*2,7%*	*1,5%*	*3,3%*	*4,6%*	*4,0%*	*3,1%*	*3,9%*	*3,9%*	*3,9%*	*3,1%*
Depreciation & Amortisation			23	25	41	41	41	37	44	47	51	55	59	60
		4,9%	3,3%	3,4%	5,8%	7,0%	5,6%	4,5%						
	% Revenue		*-5,5%*	*-6,3%*	*-5,0%*	*-6,9%*	*-4,6%*	*-2,8%*	*3,0%*	*5,5%*	*5,5%*	*5,5%*	*5,5%*	*5,5%*
Capital Expenditures	5,5%		(38)	(47)	(35)	(40)	(34)	(23)	(27)	(52)	(56)	(61)	(66)	(66)
Working Capital Balance			*28,8*	*52,5*	*72,3*	*24,3*	*(8,37)*	*7,9*	*50,4*	*54,2*	*58,6*	*62,4*	*66,5*	*66,3*
Balance as % of Revenue			*-4,2%*	*7,0%*	*10,2%*	*4,2%*	*-1,1%*	*1,0%*	*5,7%*	*5,7%*	*5,7%*	*5,6%*	*5,6%*	*5,5%*
Net Change in Working Capital			(8,4)	23,7	19,8	(48,0)	(32,7)	16,3	42,5	3,8	4,3	3,9	4,1	(0,3)
Free Cash Flow to Firm			**39,2**	**3,9**	**5,5**	**57,6**	**64,6**	**35,7**	**9,4**	**20,2**	**29,3**	**32,5**	**35,2**	
		5,0%	*5,7%*	*0,5%*	*0,8%*	*10,0%*	*8,7%*	*4,3%*	*1,1%*	*2,1%*	*2,9%*	*2,9%*	*2,9%*	
Terminal Value														**406**
Discount Period	*WACC*								*1*	*2*	*3*	*4*	*5*	*5*
Present Value Factor	9,7%								0,91	0,83	0,76	0,69	0,63	0,63
Present Value of Free Cash Flow to Firm									**8,6**	**16,8**	**22,2**	**22,4**	**22,1**	**255,3**

Present Value of Explicit Period Cash Flows	92,0
Present Value of Terminal Cash Flow	255,3
Indicated Enterprise Value from Operations	347,4
Minority Interest	0,2
Net Cash (Debt)	96,3
Equity Value	443,9
Number of shares outstanding	27,4
Implied share price	16,20 €

Terminal Growth Rate	1,0%
Residual Value at Terminal Year	406
Present Value Factor	0,63
Present Value of Terminal Cash Flow	**255**

Appendix E – DCF and Sensitivity Best Scenario

BIEESSE S.P.A.

EUR (mm)		Dec 31, '17	Dec 31, '18	Dec 31, '19	Dec 31, '20	Dec 31, '21	Dec 31, '22	Dec 31, '23	Dec 31, '24	Dec 31, '25	Dec 31, '26	Dec 31, '27	Terminal
								-	1	2	3	4	5
Net Revenue		693	745	706	579	742	822	884	959	1.050	1.155	1.270	1.289
% Revenue Growth Rate		*na*	*7,5%*	*-5,3%*	*-18,0%*	*28,2%*	*10,8%*	*7,5%*	*8,5%*	*9,5%*	*10,0%*	*10,0%*	*1,5%*
Cost of Goods Sold		(276)	(301)	(291)	(250)	(317)	(339)	(368)	(388)	(394)	(419)	(445)	(434)
Gross Profit		**417,2**	**444,5**	**414,4**	**329,2**	**425,0**	**483,8**	**515,6**	**570,6**	**656,1**	**736,1**	**825,9**	**855,1**
Gross Profit Margin %		*60,2%*	*59,6%*	*58,7%*	*56,9%*	*57,3%*	*58,8%*	*58,3%*	*59,5%*	*62,5%*	*63,7%*	*65,0%*	*66,3%*
Sales & Marketing		(221)	(239)	(235)	(198)	(242)	(264)	(289)	(313)	(343)	(378)	(415)	(422)
% Sales	**32,7%**	*31,8%*	*32,1%*	*33,3%*	*34,2%*	*32,6%*	*32,2%*	*33%*	*33%*	*33%*	*33%*	*33%*	*33%*
General & Administrative													
Research & Development		-	-	-	-	-	-						
Other Operating Expenses		(109)	(116)	(108)	(81)	(111)	(133)	(137)	(155)	(203)	(234)	(271)	(292)
Earnings Before Interest, Tax, Depreciation & Amortisation (EBITDA)		**87,26**	**88,98**	**70,65**	**50,30**	**72,12**	**86,1**	**89,5**	**102,0**	**110,2**	**124,2**	**139,7**	**141,8**
EBITDA Margin %		*12,6%*	*11,9%*	*10,0%*	*8,7%*	*9,7%*	*10,5%*	*10,1%*	*10,6%*	*10,5%*	*10,8%*	*11,0%*	*11,0%*
Depreciation & Amortisation		(23)	(25)	(41)	(41)	(41)	(37)	(44)	(47)	(52)	(57)	(63)	(64)
Amortisation		-	-	-	-	-	-						
	4,9%	*3,3%*	*3,4%*	*5,8%*	*7,0%*	*5,6%*	*4,5%*						
Earnings Before Interest & Taxes (EBIT)		**64,70**	**63,93**	**29,57**	**9,66**	**30,68**	**48,99**	**45,96**	**54,73**	**58,52**	**67,26**	**77,17**	**78,32**
EBIT Margin %		*9,3%*	*8,6%*	*4,2%*	*1,7%*	*4,1%*	*6,0%*	*5,2%*	*6,0%*	*6,9%*	*7,9%*	*9,1%*	*10,5%*
Income Tax		(18)	(14)	(10)	(1)	(6)	(11)	(11)	(13)	(14)	(16)	(19)	(19)
Effective Income Tax Rate %		*27,8%*	*22,6%*	*35,3%*	*7,9%*	*20,5%*	*23,1%*	*24,0%*	*24,0%*	*24,0%*	*24,0%*	*24,0%*	*24,0%*
Net Operating Profit After Tax (NOPAT)		**46,7**	**49,5**	**19,1**	**8,9**	**24,4**	**37,7**	**34,9**	**41,6**	**44,5**	**51,1**	**58,6**	**59,5**
NOPAT %		*6,7%*	*6,6%*	*2,7%*	*1,5%*	*3,3%*	*4,6%*	*4,0%*	*4,3%*	*4,2%*	*4,4%*	*4,6%*	*4,6%*
Depreciation & Amortisation		23	25	41	41	41	37	44	47	52	57	63	64
	4,9%	*3,3%*	*3,4%*	*5,8%*	*7,0%*	*5,6%*	*4,5%*						
	% Revenue	*-5,5%*	*-6,3%*	*-5,0%*	*-6,9%*	*-4,6%*	*-2,8%*	*3,0%*	*5,5%*	*5,5%*	*5,5%*	*5,5%*	*5,5%*
Capital Expenditures	5,5%	(38)	(47)	(35)	(40)	(34)	(23)	(27)	(53)	(58)	(64)	(70)	(71)
Working Capital Balance		*28,8*	*52,5*	*72,3*	*24,3*	*(8,37)*	*7,9*	*50,4*	*54,0*	*57,2*	*62,0*	*67,2*	*67,2*
Balance as % of Revenue		*-4,2%*	*7,0%*	*10,2%*	*4,2%*	*-1,1%*	*1,0%*	*5,7%*	*5,6%*	*5,4%*	*5,4%*	*5,3%*	*5,2%*
Net Change in Working Capital		(8,4)	23,7	19,8	(48,0)	(32,7)	16,3	42,5	3,6	3,2	4,8	5,2	(0,0)
Free Cash Flow to Firm		**39,2**	**3,9**	**5,5**	**57,6**	**64,6**	**35,7**	**9,4**	**32,5**	**35,3**	**39,7**	**46,2**	
	5,0%	*5,7%*	*0,5%*	*0,8%*	*10,0%*	*8,7%*	*4,3%*	*1,1%*	*3,4%*	*3,4%*	*3,4%*	*3,6%*	
Terminal Value													**569**
Discount Period	*WACC*							*1*	*2*	*3*	*4*	*5*	*5*
Present Value Factor	9,7%							0,91	0,83	0,76	0,69	0,63	0,63
Present Value of Free Cash Flow to Firm								**8,6**	**27,0**	**26,7**	**27,4**	**29,0**	**357,2**

Present Value of Explicit Period Cash Flows	118,6
Present Value of Terminal Cash Flow	357,2
Indicated Enterprise Value from Operations	475,8
Minority Interest	0,2
Net Cash (Debt)	96,3
Equity Value	572,3
Number of shares outstanding	27,4
Implied share price	20,88 €

Terminal Growth Rate	1,5%
Residual Value at Terminal Year	569
Present Value Factor	0,63
Present Value of Terminal Cash Flow	**357**

Sensitivity control

10,0% Discount rate change

50,0% Terminal growth rate change

Enterprise Value Sensitivity

Terminal Growth Rate \ WACC	7,9%	8,8%	9,7%	10,7%	11,8%
0,4%	547,3	484,9	429,4	384,5	344,1
0,8%	571,1	503,3	443,6	395,7	352,9
1,5%	627,1	545,7	475,8	420,8	372,4
2,3%	698,0	597,9	514,4	450,3	395,0

Implied Share Price Sensitivity

Terminal Growth Rate \ WACC	7,9%	8,8%	9,7%	10,7%	11,8%
0,4%	23,49 €	21,22 €	19,19 €	17,55 €	16,08 €
0,8%	24,36 €	21,89 €	19,71 €	17,96 €	16,40 €
1,5%	26,41 €	23,44 €	20,88 €	18,88 €	17,11 €
2,3%	28,99 €	25,34 €	22,29 €	19,95 €	17,94 €

Appendix F – DCF and Sensitivity Worst Scenario

BIEESSE S.P.A.

EUR (mm)			Dec 31, '17	Dec 31, '18	Dec 31, '19	Dec 31, '20	Dec 31, '21	Dec 31, '22	Dec 31, '23	Dec 31, '24	Dec 31, '25	Dec 31, '26	Dec 31, '27	Terminal
									-	1	2	3	4	5
Net Revenue			693	745	706	579	742	822	880	933	989	1.048	1.111	1.122
% Revenue Growth Rate			*na*	*7,5%*	*-5,3%*	*-18,0%*	*28,2%*	*10,8%*	*7,0%*	*6,0%*	*6,0%*	*6,0%*	*6,0%*	*1,0%*
Cost of Goods Sold			(276)	(301)	(291)	(250)	(317)	(339)	(367)	(389)	(412)	(437)	(463)	(467)
Gross Profit			**417,2**	**444,5**	**414,4**	**329,2**	**425,0**	**483,8**	**513,4**	**544,2**	**576,9**	**611,5**	**648,2**	**654,7**
Gross Profit Margin %			*60,2%*	*59,6%*	*58,7%*	*56,9%*	*57,3%*	*58,8%*	*58,3%*	*58,3%*	*58,3%*	*58,3%*	*58,3%*	*58,3%*
Sales & Marketing			(221)	(239)	(235)	(198)	(242)	(264)	(288)	(305)	(323)	(343)	(363)	(367)
% Sales		*32,7%*	*31,8%*	*32,1%*	*33,3%*	*34,2%*	*32,6%*	*32,2%*	*33%*	*33%*	*33%*	*33%*	*33%*	*33%*
General & Administrative														
Research & Development			-	-	-	-	-	-						
Other Operating Expenses			(109)	(116)	(108)	(81)	(111)	(133)	(137)	(154)	(173)	(191)	(211)	(221)
Earnings Before Interest, Tax, Depreciation & Amortisation (EBITDA)			**87,26**	**88,98**	**70,65**	**50,30**	**72,12**	**86,1**	**89,1**	**85,0**	**81,1**	**77,4**	**73,8**	**67,1**
EBITDA Margin %			*12,6%*	*11,9%*	*10,0%*	*8,7%*	*9,7%*	*10,5%*	*10,1%*	*9,1%*	*8,2%*	*7,4%*	*6,6%*	*6,0%*
Depreciation & Amortisation			(23)	(25)	(41)	(41)	(41)	(37)	(43)	(46)	(49)	(52)	(55)	(55)
Amortisation			-	-	-	-	-	-						
		4,9%	*3,3%*	*3,4%*	*5,8%*	*7,0%*	*5,6%*	*4,5%*						
Earnings Before Interest & Taxes (EBIT)			**64,70**	**63,93**	**29,57**	**9,66**	**30,68**	**48,99**	**45,77**	**39,07**	**32,40**	**25,75**	**19,09**	**11,83**
EBIT Margin %			*9,3%*	*8,6%*	*4,2%*	*1,7%*	*4,1%*	*6,0%*	*5,2%*	*5,4%*	*5,5%*	*5,7%*	*5,9%*	*6,0%*
Income Tax			(18)	(14)	(10)	(1)	(6)	(11)	(11)	(9)	(8)	(6)	(5)	(3)
Effective Income Tax Rate %			*27,8%*	*22,6%*	*35,3%*	*7,9%*	*20,5%*	*23,1%*	*24,0%*	*24,0%*	*24,0%*	*24,0%*	*24,0%*	*24,0%*
Net Operating Profit After Tax (NOPAT)			**46,7**	**49,5**	**19,1**	**8,9**	**24,4**	**37,7**	**34,8**	**29,7**	**24,6**	**19,6**	**14,5**	**9,0**
NOPAT %			*6,7%*	*6,6%*	*2,7%*	*1,5%*	*3,3%*	*4,6%*	*4,0%*	*3,2%*	*2,5%*	*1,9%*	*1,3%*	*0,8%*
Depreciation & Amortisation			23	25	41	41	41	37	43	46	49	52	55	55
		4,9%	*3,3%*	*3,4%*	*5,8%*	*7,0%*	*5,6%*	*4,5%*						
	% Revenue		*-5,5%*	*-6,3%*	*-5,0%*	*-6,9%*	*-4,6%*	*-2,8%*	*5,0%*	*5,0%*	*5,0%*	*5,0%*	*5,0%*	*5,0%*
Capital Expenditures	5,5%		(38)	(47)	(35)	(40)	(34)	(23)	(44)	(47)	(49)	(52)	(56)	(56)
Working Capital Balance			*28,8*	*52,5*	*72,3*	*24,3*	*(8,37)*	*7,9*	*50,2*	*53,2*	*56,4*	*59,8*	*63,4*	*64,0*
Balance as % of Revenue			*-4,2%*	*7,0%*	*10,2%*	*4,2%*	*-1,1%*	*1,0%*	*5,7%*	*5,7%*	*5,7%*	*5,7%*	*5,7%*	*5,7%*
Net Change in Working Capital			(8,4)	23,7	19,8	(48,0)	(32,7)	16,3	42,3	3,0	3,2	3,4	3,6	0,6
Free Cash Flow to Firm			**39,2**	**3,9**	**5,5**	**57,6**	**64,6**	**35,7**	**(8,2)**	**26,0**	**20,7**	**15,4**	**10,1**	
		5,0%	*5,7%*	*0,5%*	*0,8%*	*10,0%*	*8,7%*	*4,3%*	*-0,9%*	*2,8%*	*2,1%*	*1,5%*	*0,9%*	
Terminal Value														**117**
Discount Period	*WACC*								*1*	*2*	*3*	*4*	*5*	*5*
Present Value Factor	9,7%								0,91	0,83	0,76	0,69	0,63	0,63
Present Value of Free Cash Flow to Firm									**(7,5)**	**21,6**	**15,7**	**10,6**	**6,3**	**73,3**

Present Value of Explicit Period Cash Flows	46,7
Present Value of Terminal Cash Flow	73,3
Indicated Enterprise Value from Operations	120,0
Minority Interest	0,2
Net Cash (Debt)	96,3
Equity Value	216,5
Number of shares outstanding	27,4
Implied share price	7,90 €

Terminal Growth Rate	1,0%
Residual Value at Terminal Year	117
Present Value Factor	0,63
Present Value of Terminal Cash Flow	**73**

Sensitivity control

10,0% Discount rate change

50,0% Terminal growth rate change

Enterprise Value Sensitivity

Terminal Growth Rate \ WACC	7,9%	8,8%	9,7%	10,7%	11,8%
0,3%	140,1	126,2	113,7	103,5	94,2
0,5%	143,4	128,8	115,7	105,1	95,4
1,0%	150,7	134,4	120,0	108,5	98,1
1,5%	159,2	140,8	124,9	112,2	101,0

Implied Share Price Sensitivity

Terminal Growth Rate \ WACC	7,9%	8,8%	9,7%	10,7%	11,8%
0,3%	8,63 €	8,13 €	7,67 €	7,30 €	6,96 €
0,5%	8,76 €	8,22 €	7,74 €	7,36 €	7,00 €
1,0%	9,02 €	8,43 €	7,90 €	7,48 €	7,10 €
1,5%	9,33 €	8,66 €	8,08 €	7,62 €	7,21 €

Appendix G – Comparables Valuation

Company Name	Exchange:Ticker	Industry Classifications Geographic Locations	Country	TEV/LTM EBITDA	EBITDA Margin %	Market Capitalization (€EURmm)	Total Revenue (€EURmm)	TEV/LTM Total Revenues	P/E
Komax Holding AG	SWX:KOMN	Machinery Components (f Europe (Primary)	Switzerland	14,8x	14,0%	1.180,7	609,2	2,08x	15,08x
Beijer Alma AB	OM:BEIA B	Machinery Components (f Europe (Primary)	Sweden	14,1x	16,9%	1.126,4	542,1	2,53x	22,43x
Starrag Group Holding AG	SWX:STGN	Metalworking Machinery ‹ Europe (Primary)	Switzerland	13,1x	3,9%	187,3	321,4	0,51x	8,88x
Klingelnberg AG	SWX:KLN	Machinery Components (f Europe (Primary)	Switzerland	9,4x	9,1%	172,3	310,5	0,67x	7,80x
Piovan S.p.A.	BIT:PVN	Machinery Components (f Europe (Primary)	Italy	8,9x	10,9%	492,0	561,7	1,05x	11,70x
Maschinenfabrik Berthold Hermle AG	DB:MBH3	Machinery Components (f Europe (Primary)	Germany	8,7x	23,5%	1.130,0	475,5	2,05x	12,30x
Koenig & Bauer AG	XTRA:SKB	Printing Machinery and Eq Europe (Primary)	Germany	6,6x	4,3%	316,6	1.228,3	0,35x	15,31x
Bystronic AG	SWX:BYS	Metal Cutting Machine To Europe (Primary)	Switzerland	6,0x	14,5%	1.311,2	1.028,0	0,87x	23,77x
Mangata Holding S.A.	WSE:MGT	Machinery Components (f Europe (Primary)	Poland	4,6x	14,9%	141,2	227,5	0,71x	7,76x
Ringmetall SE	XTRA:HP3A	Machinery Components (f Europe (Primary)	Germany	4,2x	11,0%	89,0	213,5	0,50x	13,72x
Mikron Holding AG	SWX:MIKN	Machinery Components (f Europe (Primary)	Switzerland	3,8x	10,7%	189,9	313,1	0,40x	7,72x
EuroGroup Laminations S.p.A.	BIT:EGLA	Industrial Machinery and S Europe (Primary)	Italy	10,9x		393,18	851,0	1,40x	10,90x
Antares Vision S.p.A.	BIT:AV	Industrial Machinery and S Europe (Primary)	Italy	16,7x		286,16	224,06	2,20x	32,54x
Sogefi S.p.A.	BIT:SGF	Industrial Machinery and S Europe (Primary)	Italy	2,4x		168,17	1.550,0	0,30x	4,12x
High				**16,7x**	**23,5%**	**1.311,2**	**1.550,0**	**2,5x**	**23,8x**
Median				**8,8x**	**11,0%**	**316,6**	**508,8**	**0,8x**	**12,0x**
Average				**8,9x**	**12,2%**	**566,4**	**556,8**	**1,1x**	**13,9x**
Low				**2,4x**	**3,9%**	**89,0**	**213,5**	**0,3x**	**4,1x**
Biesse S.p.A. (BIT:BSS)	**BIT:BSS**	**Machinery Components Europe (Primary)**	**Italy**	**2,9x**	**8,3%**	**319,5**	**835,3**	**0,3x**	**10,1x**

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