AlsterResearch

Nordex SE

Germany | Industrial Goods & Services | MCap EUR 2,522m

10 July 2023

INITIATION

Shifting gears towards profitable growth; Initiate to BUY

BUY (INITIATION)

Target price	**EUR 24.00 (none)**
Current price	EUR 11.25
Up/downside	113.3%

ResearchHub

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What's it all about?

We initiate coverage of Nordex SE with a BUY recommendation and a PT of 24.00 offering an upside potential of 113.3%. The company is well positioned to benefit from the expected replacement of ageing power generation infrastructure, mainly in Europe and the US, but also increasingly in emerging markets, through the introduction of advanced wind technologies. In particular, its high-efficiency turbines are ideal for space-constrained markets and regions with limited grid capacity. The company is well placed to continue to grow while margins look set to improve gradually.

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alsterresearch.com
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Shifting gears towards profitable growth; Initiate to BUY

Disproportionate growth. Nordex has achieved remarkable growth in recent years, particularly in its core market of Germany. The company has also made significant progress in Europe (particularly Spain) and North America. Research indicates that the onshore wind industry will continue to flourish as a result of the ongoing drive towards climate neutrality, leading to significant growth opportunities in the foreseeable future. With its highly competitive and flexible turbines, Nordex is well positioned to benefit from the diminishing availability of optimal wind sites and is therefore poised for accelerated its expansion, ideally above overall market growth.

Margins still terrible. Margins in 22E and Q1 23E were impacted by supply challenges and escalating costs. However, there are encouraging signs of a positive turnaround from the second half of 23E. Management has now placed greater emphasis on prioritizing margins over growth to reduce risk. This will be achieved by winning new customers on better terms, implementing cost reduction strategies and strategically repositioning the overall market, which is currently facing reduced profitability. As a result, we expect Nordex's EBITDA margin to increase by a strong 10pp (22-25E).

Order books remain full Despite recent headwinds from the introduction of future US government subsidies (which led to order delays) and the transition from a state subsidized to a less favorable auction system in Germany, Nordex continues to benefit from strong order momentum. In fact, the book-to-bill ratio for '22 was a healthy 1.1x, which points to further sales growth in the future. In view of the increasing climate protection initiatives in Nordex's primary markets, positive surprises are seen possible, which would ultimately push up the company's order intake even further and could be taken as a positive surprise by capital markets.

Attractive valuation, BUY. With its strong market position, Nordex will benefit from both, market growth and improved margins. The market has the potential to become a supplier's market as a result of strong demand and manufacturers' focus on margins. In addition, there is a chance that the major shareholder Acciona will further increase its stake, which could ultimately lead to a complete takeover of Nordex. For investors, an investment in Nordex therefore represents an attractive value proposition from both an operational and strategic perspective. We therefore initiate coverage with a BUY rating and a PT of EUR 24.00.

Nordex SE	2020	2021	2022	2023E	2024E	2025E
Sales	4,651	5,444	5,694	6,035	6,518	7,235
Growth yoy	41.6%	17.1%	4.6%	6.0%	8.0%	11.0%
EBITDA	94	53	-244	48	293	456
EBIT	-62	-107	-427	-120	104	258
Net profit	-130	-230	-498	-100	43	148
Net debt (net cash)	127	-305	-80	-234	-176	-438
Net debt/EBITDA	1.3x	-5.8x	0.3x	-4.9x	-0.6x	-1.0x
EPS reported	-1.21	-1.68	-2.71	-0.44	0.18	0.63
DPS	0.00	0.00	0.00	0.00	0.00	0.00
Dividend yield	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Gross profit margin	11.8%	15.2%	8.5%	17.0%	20.5%	22.2%
EBITDA margin	2.0%	1.0%	-4.3%	0.8%	4.5%	6.3%
EBIT margin	-1.3%	-2.0%	-7.5%	-2.0%	1.6%	3.6%
ROCE	-3.2%	-5.9%	-25.2%	-6.2%	4.4%	9.9%
EV/EBITDA	28.2x	42.1x	-10.0x	47.4x	8.0x	4.6x
EV/EBIT	-42.6x	-20.7x	-5.7x	-19.0x	22.7x	8.1x
PER	-9.3x	-6.7x	-4.2x	-25.3x	61.3x	17.9x
FCF yield	-42.0%	-2.1%	-25.7%	-4.2%	-1.2%	11.4%

Source: Company data, AlsterResearch

Source: Company data, AlsterResearch

High/low 52 weeks	15.63 / 7.23
Price/Book Ratio	2.4x

Ticker / Symbols

ISIN	DE000A0D6554
WKN	A0D655
Bloomberg	NDX1:GR

Changes in estimates

		Sales	EBIT	EPS
2023E	old	6,035	-120	-0.44
	Δ	0.0%	na%	na%
2024E	old	6,518	104	0.18
	Δ	0.0%	0.0%	0.0%
2025E	old	7,235	258	0.63
	Δ	0.0%	0.0%	0.0%

Key share data

Number of shares: (in m pcs) 224.20
Book value per share: (in EUR) 4.77
Ø trading volume: (12 months) 1,000,000

Major shareholders

Acciona, S.A.	47.1%
Free Float	52.9%

Company description

Nordex SE's core competence lies in the development, production, project management and maintenance of onshore wind turbines. The focus of the product portfolio is on high-performance turbines, currently in the 3 to 6+ MW class, for markets with limited space and for regions with limited grid capacity, with the aim of continuously reducing the cost of electricity.

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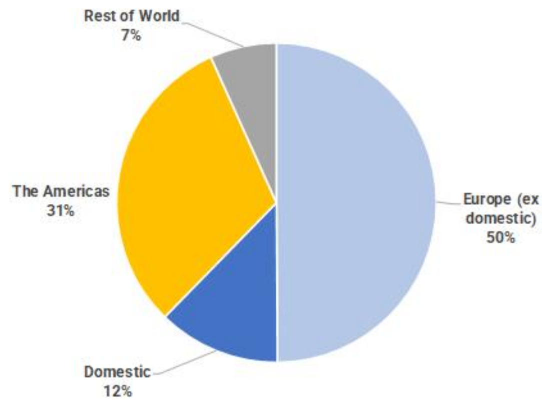
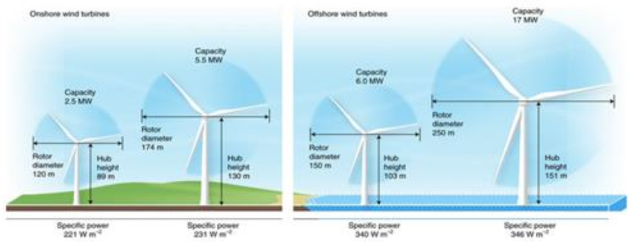
Investment case in six charts

Products & services

Regional sales in %

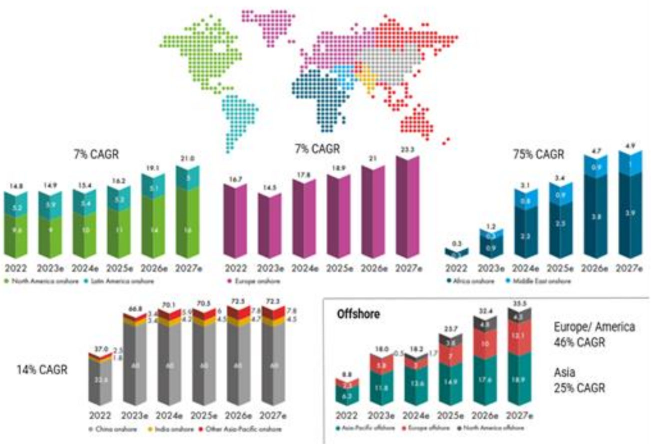


Several different systems



	Mid-range	Flexibility	Strong	Strong	Huge	
Vestas	2 - 4,5 MW	6 MW	7,2 MW	9,5 MW	15 MW	New
Siemens Gamesa	3,4 - 4,4 MW	5 - 6 MW	7 MW	8 & 11 MW	14 MW	New
GE	2 - 3 MW		6,3 MW	6 MW	12 - 14 MW	
Nordex	3,4 - 4,4 MW	5 - 6 MW	6,2 MW			
Enercon	2 -4 MW	5,5 MW				
Wind power	Middle	Inconsistent	Consistent strong	Consistent strong	Consistent very strong	
Locations	Standard	Complicated	Perfect	Standard Coasts near	Coast	

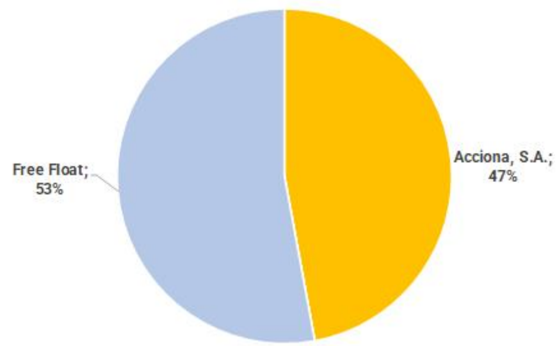
Global wind market outlook new installations in GW



Guidance & Outlook

	2023 guidance
Sales:	EUR 5.6 - 6.1bn
EBITDA margin:	-2% to +3%
Working capital ratio:	below -9%
CAPEX:	approx. EUR 200m

Major shareholder



Source: Company data; AlsterResearch, Global Wind Report 2023; GWEC, Expected turbine size from 2019; Springer Nature

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Company background

Products & services

Nordex's business is the development, design, manufacture, supply and installation of onshore wind power systems comprising rotor blades, turbines and purchased towers. Moreover, the company places significant emphasis on pioneering technological products such as efficient rotor blades and innovative flexible turbine systems to capture more wind energy. It operates mainly in Europe and North America, but also has operations in Latin America and is gradually establishing a manufacturing presence in India.

The company has several product series in its portfolio, with the focus on the new Delta4000 series. Nordex's Delta4000 N149/4.0-4.5, as shown in the picture on the right from the "New Product Series", was the world's first turbine with flexible rated power as part of its design and operating strategy. This design approach, combined with a variety of operating modes, allows each Delta4000 to be tailored to the individual requirements of the grid operator, local wind conditions and noise restrictions.

As the older Delta series with a lower output of 3 MW will be completely phased out in the next few years due to inferior rotor blades and poorer adaptation to wind conditions, only turbines in the higher MW range between 5 and 6 MW will be available.

New Product Series: Delta4000 Portfolio

Old Product Series: Delta Portfolio

Source: Company data; AlsterResearch

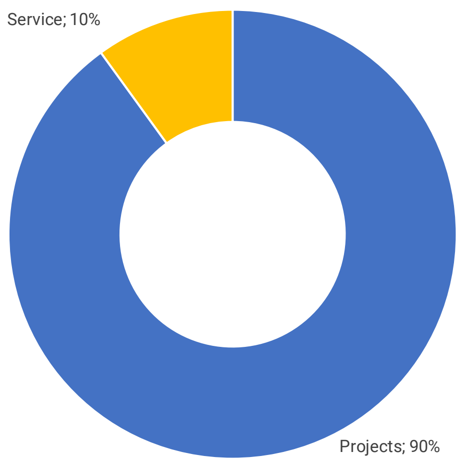
Segments

Nordex itself divides its business into two segments, Projects and Service, with Projects being the most important, accounting for 90% of sales.

The projects segment encompasses all fresh orders, whereas the service segment encompasses all maintenance measures and problem-solving tasks.

The Service segment represents a continuous source of revenue as it is virtually impossible for other suppliers to offer this service for Nordex turbines, whereas the Project segment is characterised by one-off orders. As a result, the project segment can be highly unpredictable and therefore vulnerable to market volatility. In addition, the emergence of alternative green power sources and competitors with lower production costs poses a potential threat to this segment.

Sales by segment in %



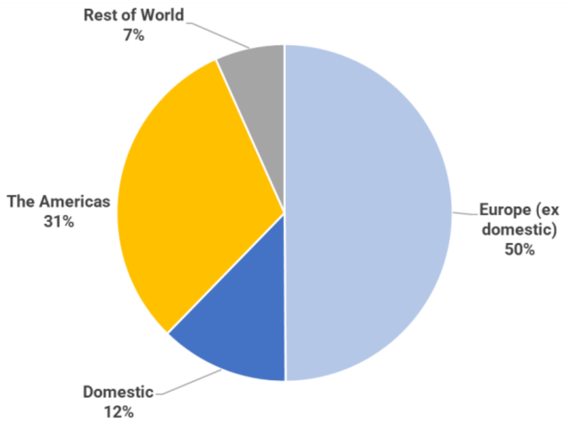
Source: Company data; AlsterResearch

Regional distribution

The company has its largest share of sales and also its largest market share and sales growth in Europe, especially in its home market of Germany, where Nordex is the market leader in terms of installations with a third of the market in 2022. Nordex also has a strong position in Spain and Finland.

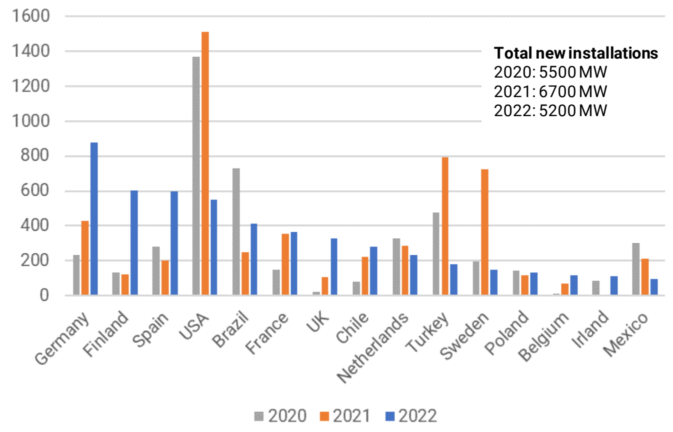
The company also has a stable business in the Americas but the US market collapsed in 2022 due to external factors related to future government subsidies, which have had a negative impact on investment now but should have a positive effect in the future. In the rest of the world, sales are stable but installations are declining due to the current higher prices per MW.

Regional sales in %



Source: Company data; AlsterResearch

Main markets new installations in MW



Source: Company data; AlsterResearch

Regional sales split (EURm)	2020	2021	2022	2023E	2024E	2025E
Domestic	321	548	707	905	978	1,085
Europe (ex domestic)	2,144	2,977	2,841	2,957	3,194	3,545
The Americas	1,873	1,624	1,762	1,811	2,021	2,243
Asia	0	0	0	0	0	0
Rest of World	313	295	383	362	326	362
Sales	**4,651**	**5,444**	**5,694**	**6,035**	**6,518**	**7,235**

Source: Company data; AlsterResearch

History

Nordex has been active in the wind business for more than 35 years and began in 1985 with the development and production of rotor blades for wind turbines. In the years that followed, Nordex expanded its business and began developing onshore wind turbines in the 1 MW range, but also entered the 2.5 MW segment around 2000. In 2001, the company IPO'ed on the German stock exchange. With the introduction of the new Delta 4000 series in 2017, Nordex, together with Vestas, became the world's first supplier to enter the 4 MW segment.

In 2016, Nordex merged with Spanish wind turbine manufacturer Acciona Windpower, a subsidiary of Acciona, the company's current majority shareholder, in a cash and share deal, with Acciona ending up with a 29.9% stake in Nordex. Both companies were strong in different markets: Nordex, particularly in Germany, and Acciona Windpower in Spain, and together they could benefit from synergies and economies of scale in global markets such as the US and Latin America. The merger also strengthened the company's global presence and broadened its product portfolio.

In 2017, Nordex acquired its Danish rotor blade supplier SSP Technology A/S and brought into the company special technology for the rotor blades that are important to its competitiveness.

Merger

NORDEX

acciona Windpower

Source: Company data; AlsterResearch

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Management

The management team consists of José Luis Blanco, CEO since 2017 and COO prior to 2016, Dr Ilya Hartmann, CFO since 2021 and with Nordex since 2017, and Patxi Landa, CSO since 2016. All three have their roots at Acciona or Acciona Windpower and joined Nordex following the merger of Nordex and Acciona Windpower in 2016.

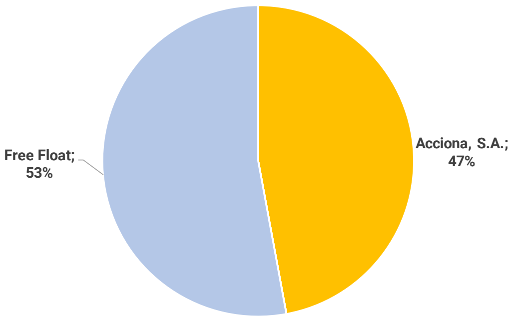
		
José Luis Blanco CEO since 2017; Nordex 2016 Acciona Windpower 2012; Siemens Gamesa 1997; Industrias Ferri	**Dr. Ilya Hartmann** CFO since 2021; Nordex 2017 Acciona Energy; North America 2012; Acciona Energy Germany 2007; Lawyer	**Patxi Landa** CSO since 2016; Nordex 2016 Acciona Windpower 2007; Acciona 2002; Guascor and Azkoyen

Source: Company data; AlsterResearch

Shareholders

Nordex has a major shareholder, Acciona, which holds 47% and has increased its stake in recent years. In 2019, when Acciona's stake rose above the mandatory offer threshold of 30%, it had to make a takeover bid to the remaining shareholders at a price of EUR 10.34, which was largely rejected.

Major shareholder



Source: Company data; AlsterResearch

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Quality

Customers

Nordex has a broad customer base and is growing throughout the Western Hemisphere. Customers range from large international utilities and independent power producers to medium-sized project developers, municipal utilities and community wind farms, particularly in Germany.

In 2022, the ten largest individual customers accounted for around 45% of order intake. Acciona is one of the largest customers and also the largest shareholder with a sales share of around 5% in 2022.

As already described in the previous chapter the market for onshore wind turbines is characterized by the fact that orders are placed via auctions with the manufacturers that have the products with the lowest electricity production costs. This can be achieved through increasingly efficient turbines or compromising on margins. This means that customer loyalty is low and the market is mostly driven by the electricity production costs. This also explains the poor margins of wind turbine manufacturers in the past. Geographical factors also play a role, as certain producers are favoured due to their ability to generate electricity at the lowest cost in specific geographical areas. Good customer relations will also become more and more important in the future, as old wind turbines will have to be replaced.

In the service sector, on the other hand, it is very difficult to change because the systems can usually only be optimally maintained by the manufacturers, which gives them negotiating power.

Some clients

Source: Company data; AlsterResearch

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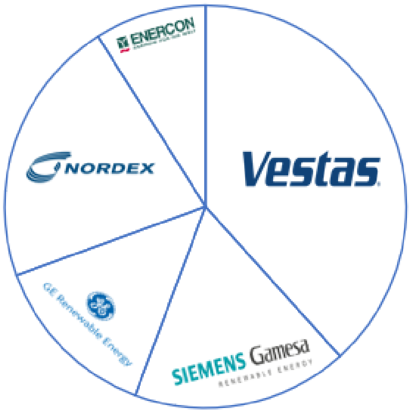
Competition

The main competitors in the main market Europe are Vestas wind system as the market leader, Nordex in second place, Siemens Gamesa in third place, GE Renewable Energy is on the fourth place and Enercon is on the fifth. The market is therefore an oligopoly, with the top 5 suppliers already accounting for around 97% of the market, but the barriers to entry are also high, due to the need for approvals and regulatory requirements.

In addition, many of the wind turbines built in previous decades are now being replaced with newer ones, often by the same manufacturer, which should also improve customer loyalty in the future and it did not exist before, because new wind farms, as they used to be mainly installed, used to be auctioned.

Other major onshore wind turbine manufacturers have the strongest presence in the Chinese market, as China is the largest wind market in the world, accounting for around 50% of new installations. In China are wind farms also much larger with far less regulations, making this more attractive to Chinese manufacturers than expanding in Western markets due to economies of scale.

Distribution Europe onshore market



Source: Company data; AlsterResearch

In the other major market, North America, Vestas Wind System, Siemens Gamesa, GE Renewable Energy and Nordex are also the leading players. Barriers to entry are high, as production must be local due to the complexity of approvals and regulatory requirements and requires a high level of expertise, highly complex factories and highly skilled employees. Hence, the likelihood of Chinese suppliers making significant inroads into Nordex's primary markets is relatively low. This is because they are focused on catering to the rapidly expanding Chinese market and face substantial barriers to entry in other markets.

However, if wind turbine growth continues at the current rate, this market will certainly become more of a supplier's market, as production capacity is already inadequate because there are not enough skilled workers and installers but also because there are not enough production facilities for the rotor blades and the towers. In addition, the offshore sector is experiencing significant growth, so competing manufacturers operating in both the offshore and onshore sectors need to be adequately prepared for this emerging market if they are to be successful and cannot focus so much on the onshore sector. Over the next five years, some 14GW of offshore capacity is expected to be added in Europe and the Americas alone, surpassing the existing 31.5GW of onshore capacity in these regions. This may result in market gaps for Nordex in the onshore sector

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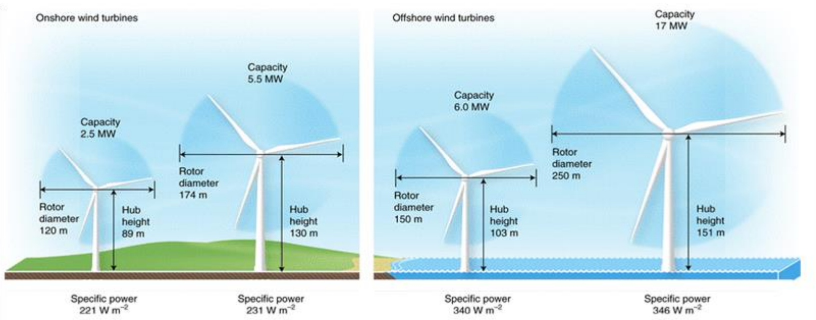
Differentiation major manufacturers

Major manufacturers exhibit various differences in their offerings. One significant distinction lies in whether they solely produce onshore turbines or also venture into offshore turbines. Siemens Gamesa and GE Renewable Energy, in particular, excel in both the onshore and offshore sectors.
The offshore sector requires the use of particularly large turbines, due to the consistently strong and directional winds at certain altitudes, while onshore, other factors also play a role. The markets have few synergies and require different wind turbine designs.

Several different systems



	Mid-range	Flexibility	Strong	Strong	Huge	
Vestas	2 - 4,5 MW	6 MW	7,2 MW	9,5 MW	15 MW	*New*
SIEMENS Gamesa	3,4 - 4,4 MW	5 - 6 MW	7 MW	8 & 11 MW	14 MW	*New*
GE Renewable Energy	2 - 3 MW		6,3 MW	6 MW	12 - 14 MW	
NORDEX	3,4 - 4,4 MW	5 - 6 MW	6,2 MW			
ENERCON	2 -4 MW	5,5 MW				
Wind power	Middle	Inconsistent	Consistent strong	Consistent strong	Consistent very strong	
Locations	Standard	Complicated	Perfect	Standard Coasts near	Coast	

Source: Expected turbine size from 2019; Springer Nature, Company data; AlsterResearch

As the largest player in the market, Vestas is able to serve all areas effectively. Their product range includes not only strong turbines, with which they are currently expanding into the offshore sector, but also medium and flexible turbines. Although they cover a broad spectrum, their focus remains primarily on strong and in the future on huge turbines.

Siemens Gamesa is known for manufacturing these strong and huge turbines in the range of more than 8 - 14 MW, which are modified also suitable for onshore applications with up to 7 MW, in order to ensure maximum performance under optimal conditions, including high wind speeds from a constant direction.

GE Renewable Energy also has a strong position in the offshore sector in the 6-14 MW range, while focusing more on mid-range turbines in the 2-5 MW range for onshore environments, especially for the US market, where there is a lot of space available and mass market products in the mid-range are often most advantageous.

However, onshore conditions vary and can be different from the norm. The wind can blow from different directions, at different strengths or even at different heights. Turbines used in these different onshore locations therefore require a high degree of flexibility. This is where Nordex leads the way with its highly flexible turbines, which can adapt to different heights, wind directions and speeds while maintaining high efficiency thanks to their large and aerodynamic rotor blades in the 5-6 MW range.

Enercon, on the other hand, stands out as an outlier, focusing specifically on low-wind turbines but also operating in the mid-range and slowly moving into the higher range with its 5.5 MW turbine, but focusing more on local markets such as Germany, which also puts it in strong competition with Nordex.

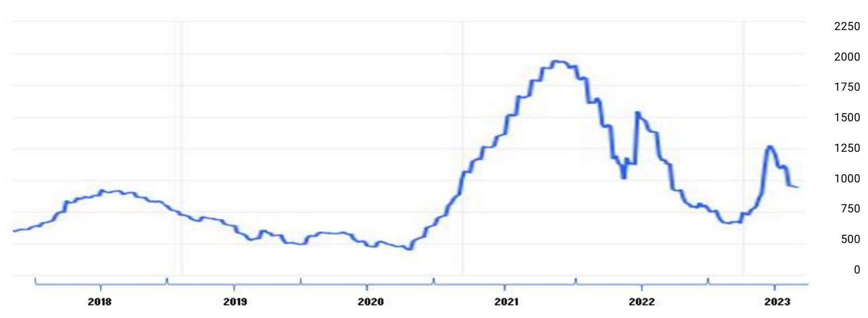
Suppliers (Materials)

The main categories of direct materials are large steel structures, cables, measuring instruments and raw materials such as copper and steel. In principle, there are no individual dependencies here as Nordex has a very broad international supplier base. However, there is a significant dependency on the price of steel, as steel is the key material for the tower structures.

The rise in steel prices in 2021 and early 2022 had a significant impact on Nordex's cost of materials. As a result, the impact on the cost of materials ratio was felt with a time lag due to the production period, particularly in 2022, and the COGS deteriorated to 96.7 %. As a result, the gross margin fell from around 20% in 2020 and 2021, to 3% in 2022. The same happened from 2018 to 2019, where the gross margin decreased from 30% to 6%. Other major factors were the sharp rise in freight costs and delays in deliveries, which resulted in contractual penalties being imposed on Nordex.

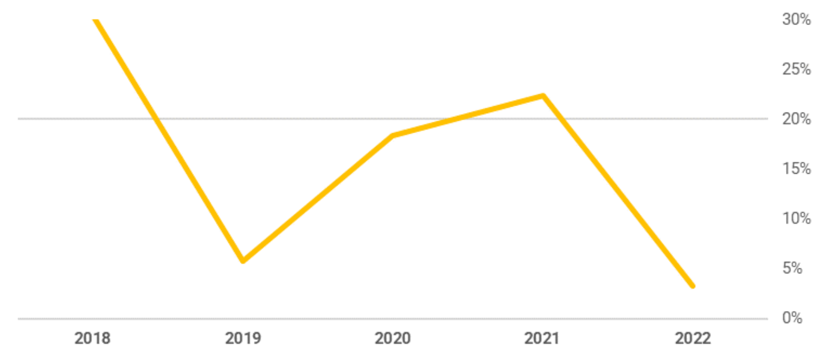
However, Nordex is now attempting to reduce this dependency by agreeing escalator clauses with its customers to pass on higher steel prices, which we believe will be successfully implemented as all manufacturers are likely to implement similar tools to reduce the impact of raw material price fluctuations.

Steel Price (USD/T)



Source: Company data; AlsterResearch

Gross Margin



Source: Company data; AlsterResearch

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Suppliers (Intermediates)

Moreover, rotor blades and turbines play a crucial role in minimizing energy generation expenses, thereby enhancing competitiveness and profit margins. As the cost of manufacturing wind turbines has remained stable, the falling cost of generating electricity has given companies the opportunity to sell their products at higher prices, ultimately increasing future profitability. While this was not the case in the past as the market was in a price war, this is now changing as manufacturers are no longer willing to cut prices at any cost and therefore no longer pass on the efficiency gains to the customers.

With the acquisition of the Danish rotor blade supplier SSP Technology A/S in 2017, Nordex secured important expertise in the area of significantly reducing energy production costs.

In addition, the company is focusing exclusively on onshore wind turbines and developing the most efficient rotor blades and turbines possible, while its competitors, who are also strong in the offshore sector, are trying to produce ever larger turbines.

Nordex currently produces 20-30% of its rotor blades in-house and has a very broad research base in this area. In the case of the turbines, the pre-products are bought in, but the turbines are assembled in-house, so here too there are signs of continuous development thanks to intensive research. The towers, on the other hand, are made of concrete or steel. The concrete towers are produced in-house, but the steel towers are 100% purchased; new forms of contract are intended to pass on material prices directly to customers, as described above.

Construction

Source: Company data; AlsterResearch

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SWOT analysis

Strengths

- Cutting edge turbines for space constrained and grid constrained regions
- High barriers to entry in key sales markets for new competitors
- Market leader in Germany and top two in Europe
- Major shareholder and key customer: Acciona
- Focus exclusively on the onshore market
- Strong position in new growth markets
- Steady growth in turnover, especially in the main market of Europe and particularly Germany

Weaknesses

- Legacy contracts with high exposure to raw material prices
- High dependency on transport costs and stable supply chains
- Weak margins due to auctions in the awarding of contracts
- Customer loyalty is low or has to be bought at low prices

Opportunities

- The wind turbines market is growing and may become a supply market
- Short-term market slump in the US due to future government subsidies
- Increasing sales by capitalising on a specific market type
- Outsourcing to low-cost countries like India improves efficiency
- Acquisition of rotor blade supplier in 2017 offers development opportunities and reduces energy production costs
- Higher order throughput and turbine efficiency increase revenue per MW.
- More Nordex turbines in operation lead to increased service orders, strengthening the overall margin
- Repowering old wind turbines with newer models enhances customer loyalty
- Using escalator clauses to mitigate material price dependency.
- Focusing on onshore markets provides a competitive edge with effective utilization of changing wind patterns, while competitors focus on offshore sectors

Threats

- Strong growth could attract additional competition
- Auction system may require continued investment in more efficient technology
- Conflicts of interest with major shareholder and customer Acciona.

Growth

The company has experienced remarkable organic sales growth in recent years from 2018 to 2022 of 23% CAGR, driven primarily by the rapid expansion of the wind turbine market, particularly in the key markets of Europe and North America. However, the company expects a relatively less robust growth trajectory in the future due to an increased focus on margins, capacity constraints and supplier challenges.

Nordex is confident that the global wind power market will continue to grow strongly. Major markets, especially Germany, Spain, and US, are expected to grow exponentially. In addition, growth markets such as Latin American are expected to gain further momentum. Conversely, business prospects in North America are expected to either stagnate or decline and take several years to gain momentum.

Nordex should benefit strongly from this thanks to its highly competitive wind turbines with their specific orientation and high turbine efficiency. It also benefits from its good market position in the main growth markets, the fact that competition is concentrating on the offshore sector and the high barriers to entry.

Overall, new installations grew from 5.5 GW in 2020 to 6.7 GW in 2021 and then fell to 5.2 GW in 2022 and are therefore in line with the global trend for new installations, with the US effect being particularly significant.

However, the price per MW increased from EUR 0.72 per MW in 2021 to EUR 0.84 per MW in 2022 for order intakes. This can be seen partly as an inflationary adjustment related to the sharp rise in short-term costs, as in the case of steel, but also, with the new strategy, as a result of general price increases and the phasing out of the older Delta series, which have lower sales due to their lower MW generation.

Growth table (EURm)	2020	2021	2022	2023E	2024E	2025E
Sales	4,651	5,444	5,694	6,035	6,518	7,235
Sales growth	41.6%	17.1%	4.6%	6.0%	8.0%	11.0%
EBIT	-62	-107	-427	-120	104	258
EBIT margin	-1.3%	-2.0%	-7.5%	-2.0%	1.6%	3.6%
Net profit	-130	-230	-498	-100	43	148

Source: Company data; AlsterResearch

P&L data	Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023
Sales	1,445.4	1,259.6	1,487.7	933.0	1,193.3	1,747.2	1,820.1	1,217.1
yoy growth in %	33.4%	12.5%	0.3%	-25.4%	-17.4%	38.7%	22.3%	30.5%
Gross profit	139.4	91.0	24.8	-7.4	-22.1	69.9	-115.5	-39.3
Gross margin in %	9.6%	7.2%	1.7%	-0.8%	-1.8%	4.0%	-6.3%	-3.2%
EBITDA	68.3	41.8	-35.8	-79.4	-74.9	-17.0	-34.6	-105.0
EBITDA margin in %	4.7%	3.3%	-2.4%	-8.5%	-6.3%	-1.0%	-1.9%	-8.6%
EBIT	22.5	-4.1	-97.7	-130.5	-130.9	-68.9	-96.4	-165.7
EBIT margin in %	1.6%	-0.3%	-6.6%	-14.0%	-11.0%	-3.9%	-5.3%	-13.6%
EBT	-4.9	-47.7	-116.0	-151.6	-148.4	-95.8	-126.6	-212.6
taxes paid	4.2	-7.8	10.5	-1.1	-15.8	-7.4	-0.4	2.2
tax rate in %	-87.3%	16.4%	-9.0%	0.7%	10.6%	7.7%	0.3%	-1.0%
net profit	-9.1	-39.9	-126.5	-150.5	-132.7	-88.4	-126.2	-214.8
yoy growth in %	na%	na%	na%	na%	na%	na%	na%	na%
EPS	**-0.07**	**-0.28**	**-0.77**	**-0.88**	**-0.77**	**-0.49**	**-0.60**	**-1.01**

Source: Company data; AlsterResearch

Market character & outlook

In the onshore wind turbine market, turbine manufacturers face a challenging landscape of minimal profit margins. Orders are allocated through auctions, favoring manufacturers with products that offer the most competitive electricity production costs. This can be accomplished by enhancing turbine efficiency or low prices and thus lower electricity generation costs.

The global market for onshore wind turbines has experienced robust growth in recent years, with a notable resurgence in the past three years. Current studies indicate that this growth trajectory is likely to continue in the future. Notably, China has emerged as a standout market; however, access to the Chinese market remains limited for foreign manufacturers.

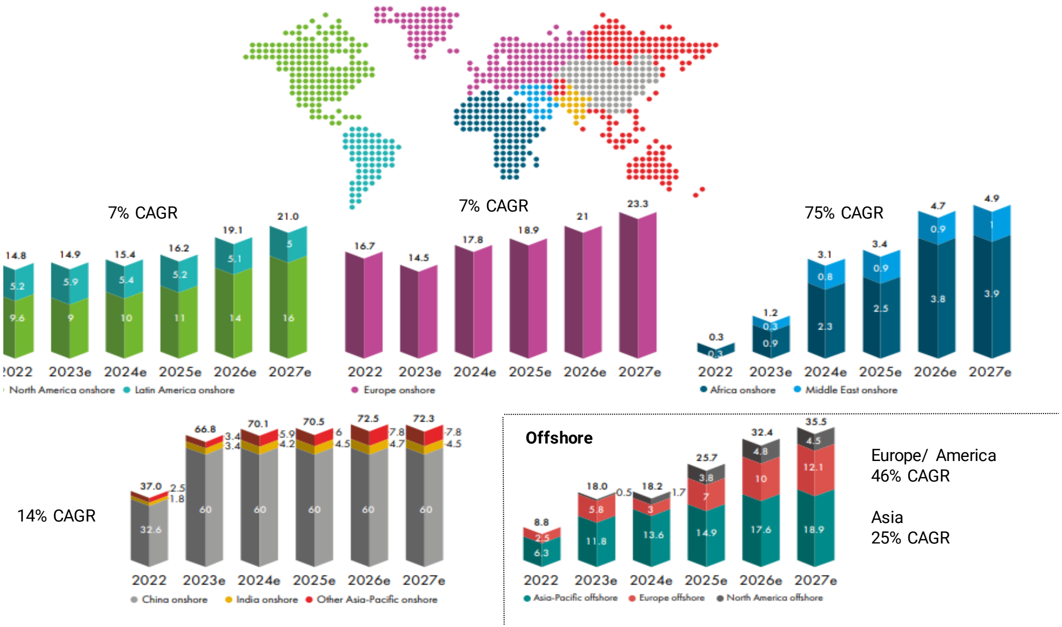
In the western hemisphere, specifically North America and Europe, the expansion of onshore wind power is anticipated to face challenges in 2023E, characterized by supply bottlenecks and high costs, resulting in stagnation or even decline. However, a strong resurgence is projected to begin in 2024E especially in Germany, Europe in general, and later years in US due to government efforts to combat climate change.

For example, new onshore installations in Europe are expected to grow by 1-2 GW per year from 2024E and in the US by 1-3 GW per year. According to the German government, even Germany is targeting growth of 5-8 GW per annum, which in our view, and in line with global studies, is unlikely and probably closer to 4 GW per annum.

On the other hand, Latin America, once considered a growth market, is more likely to experience stagnation except for Brazil because the government here has set targets for the development of wind power, with a view to exporting energy in the form of hydrogen in the future. In the rest of Latin America, this is due to inflation and the associated increase in costs, which cannot be offset by an increase in electricity prices for operators.

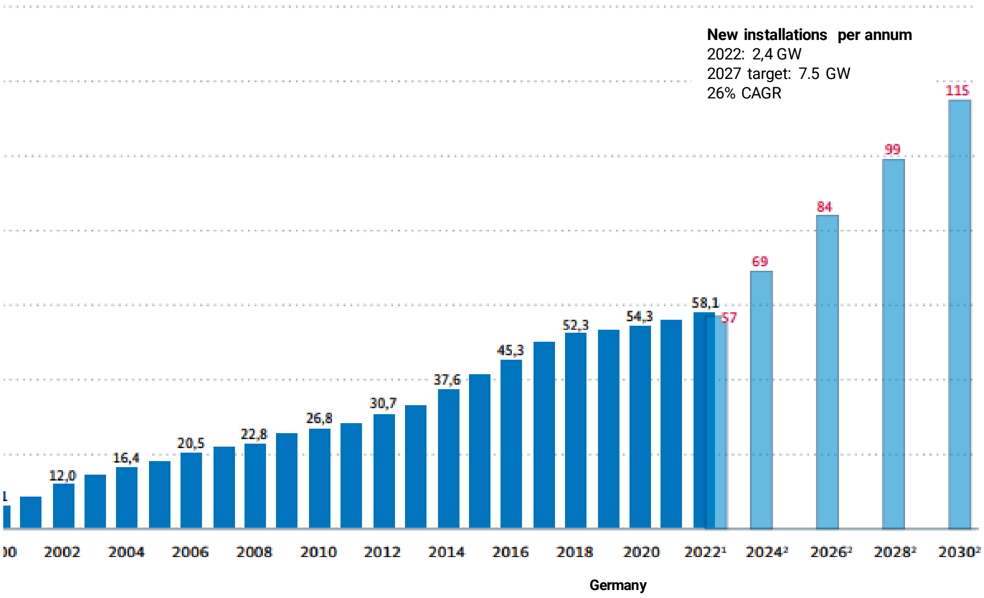
The offshore sector is mainly represented in China, while it is still very small in Europe and non-existent in the Americas, with only 2.5 GW of new installations. However, in the next few years up to 2027E, it is expected to grow strongly by 14.1 GW to 16.6 GW of new installations, which, by comparison, currently represents the entire onshore sector in Europe.

Global wind market outlook new installations in GW



Source: Global Wind Report 2023; GWEC

German government wind market target installed systems in GW



Source: Windenergie-an-Land-Strategie; Bundesministerium für Wirtschaft und Klimaschutz

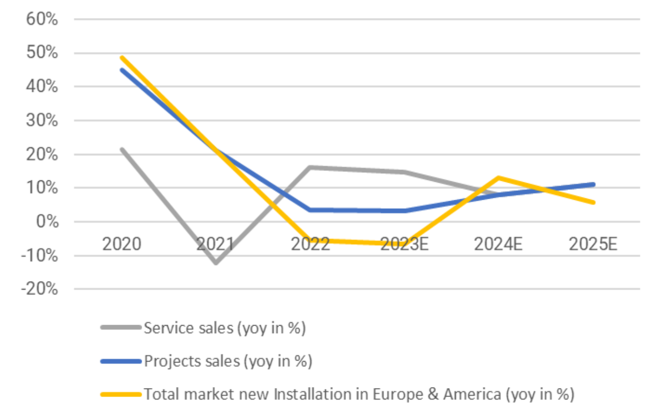
Comparison of growth rates

Based on our projection, Nordex's expansion in new installations between 2023E and 2025E is expected to maintain the growth rates anticipated in the Globe Wind Report 2023E (excluding China) for Nordex's key markets in Europe, particularly Germany and Spain, as well as in the Americas, specifically the United States and Brazil. Sales should increase proportionally more and onshore market share should be gained.

We expect this to be the case, as Nordex will now seek to increase its margins rather than grow at all costs, but nevertheless try to maintain its market share in a strongly growing market. However, given that Nordex's new turbines are in great demand among customers, there could be positive growth adjustments in our case if Nordex can continue to sell its turbines so well at higher prices.

In addition, competition is increasingly focused on the offshore sector, which is expected to grow strongly in the future and requires a different technology from the onshore sector.

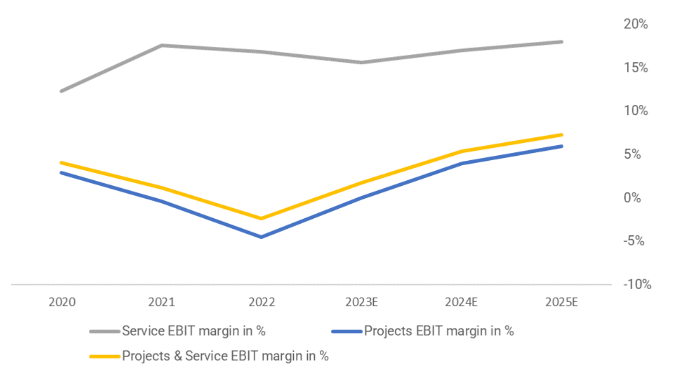
Growth rates Nordex SE to the major markets



Source: Company data; AlsterResearch

The increasing number of Nordex turbines in operation directly correlates with a rise in service orders received by the company. With the service segment boasting a high EBIT margin of 17%, it provides a stable and secure source of business. The steady annual EBIT growth of EUR 20m is expected to have an exponential positive impact in the future, bolstering the overall EBIT margin. Additionally, this growth enables better management of costs for central areas and restructuring, further strengthening the company's financial position.

Segments EBIT Margin in %

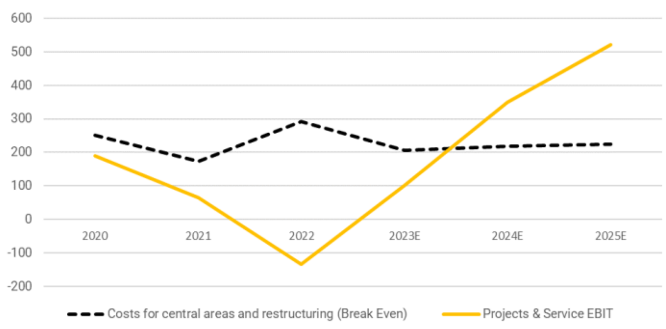


Source: Company data; AlsterResearch

On the other hand, also there are projections for the Project segment to witness an improvement in EBIT margins, approaching in the next few years. Although this segment constitutes a larger portion in absolute terms, it remains an uncertain business venture. The Management has now placed greater emphasis on prioritising margins over growth as we have mentioned more often.

The break-even point should therefore be reached by mid-2023E, covering the costs of the central areas. In addition, these overheads are expected to decrease as a result of a reduction in production retooling costs, which have risen sharply due to plant closures and workforce reductions as a result of outsourcing and supply difficulties and amounted to almost EUR 300m in 2022.

Break Even in EURm



Source: Company data; AlsterResearch

Efficiency increase per Order

Nordex is prioritizing the acceleration of order processing to enhance efficiency. This strategic focus aims not only to expedite the handling of current orders but also to address the significant backlog of older orders, which often yield lower margins. To overcome this challenge, Nordex plans to augment its capacity and workforce while simultaneously reducing the personnel cost ratio by outsourcing production to cost-effective countries like India. This outsourcing strategy focuses on components with high labour, energy and logistics requirements, such as turbines but also rotor blades.

From 2018 to 2022, the overall book-to-bill ratio has witnessed a decline, dropping from 1.7x to 1.1x but the order intake has risen sharply in absolute terms. This shift can be attributed to the expedited handling of less lucrative legacy contracts and the uncertainty surrounding future government subsidies in the United States. While these factors have momentarily impacted investment in the sector, it is anticipated that they will yield exponential positive effects in the future. The slump in Germany associated with the transition to an auction system also played a key role, derailing the successful turnaround in 2018. But even here there are signs of a new positive turnaround, as described in the previous section.

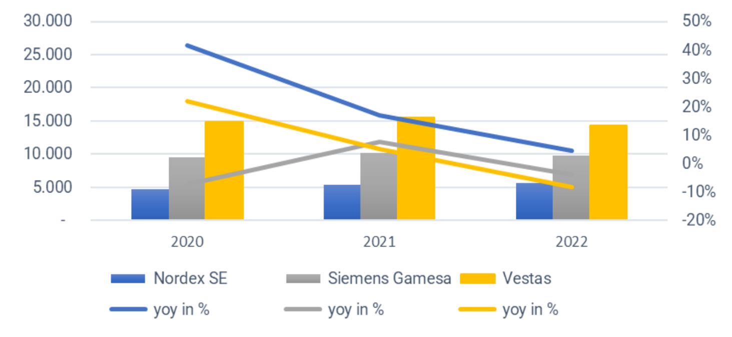
Order Book (EURm)	2018	2019	2020	2021	2022	CARG 2019 - 2022
Order Book Projects	3.869	5.534	5.298	6.178	6.535	14%
Order intake	3.637	4.415	4.218	5.681	5.344	10%
Book-to-Bill Ratio	1,7	1,6	1,0	1,1	1,0	-12%
Order Book Service	2.218	2.537	2.819	3.037	3.256	10%
Order intake	543	695	608	625	677	6%
Book-to-Bill Ratio	1,6	1,5	1,1	1,3	1,2	-7%
Total Book-to-Bill Ratio	1,7	1,6	1,0	1,2	1,1	-11%

Source: Company data; AlsterResearch

Comparison growth Competitors

In recent years, Nordex has experienced the strongest growth among its major competitors. It has more than doubled its revenues, while Siemens Gamesa has stagnated and Vestas, although growing as strongly as Nordex in absolute terms, has grown much more slowly in relative terms.

Peer-Group Revenue in EURm



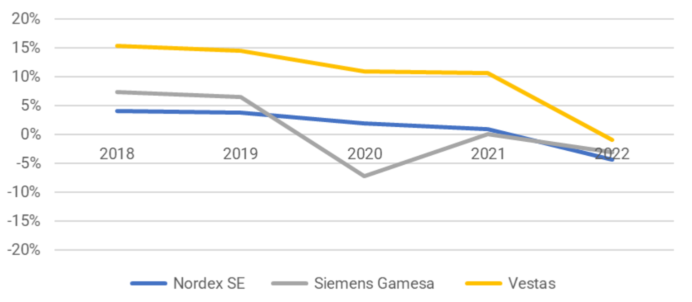
Source: Company data; AlsterResearch

Comparison Profitability

Vestas, as the largest manufacturer, is best positioned in terms of EBITDA margins, while both Nordex and Siemens Gamesa have performed particularly poorly in this area, especially in recent years. 2022 was a very challenging and loss-making year for all manufacturers, driven by external factors such as inflation and related cost increases, the war in Ukraine, generally high energy costs, as well as significantly higher steel prices.

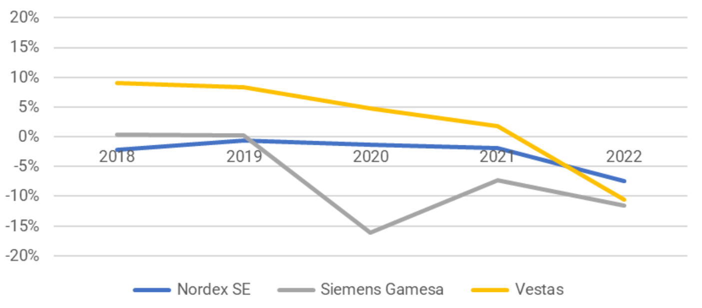
Nordex's announced goal was to gain market share, which we can see it has achieved in the form of higher sales growth than its competitors.

Peer-Group EBITDA Margin in %



Source: Company data; AlsterResearch

Peer-Group EBIT Margin in %



Source: Company data; AlsterResearch

Outlook

In addition, the company expects a significant improvement in margins as the supply chain situation improves. To achieve this, the company plans to implement strategies such as increasing sales prices and introducing sliding scale contracts. These contracts allow higher steel prices to be passed on directly to customers, thus ensuring a more profitable margin for the company.

For 2023E, Nordex expects further revenue growth and a gradual improvement in the EBITDA margin in the range of -2% to +3%. The working capital ratio is expected to increase slightly from -10% in 2022 to -9% in 2023E, while the company plans to maintain capital expenditure at a high level of EUR -200m.

Our estimates for 2023E are moderate, with projected revenues of EUR 6.035m, an EBITDA margin of 0,8%, a working capital ratio of -7.8% and capex of EUR -198m.

Guidance & Outlook

	2023 guidance
Sales:	EUR 5.6 - 6.1bn
EBITDA margin:	-2% to +3%
Working capital ratio:	below -9%
CAPEX:	approx. EUR 200m

Source: Annual financial Report 2022; Nordex SE

In the medium term, Nordex aims to achieve an EBITDA margin of 8% and an EBIT margin of 4%, which is broadly in line with our forecast and would put it on a par with its profitable competitor Vestas.

This should be possible as the market seems to be turning into a supply market and the focus is moving away from the growth that automatically comes from climate targets towards positive margins across the industry. What we are seeing across the board with all manufacturers is that contracts are being restructured and prices are rising sharply.
In addition, with its focus on the onshore market, Nordex is in a position to win orders in the flexibility range with more efficient turbines for complicated regions and get a higher price at the same time.

Theme

Given the current complex and uncertain business environment, characterised by factors such as inflation, supply chain disruptions, increased energy costs and the government's focus on renewables, it is possible that there will continue to be significant instability in 2023E. However, Nordex expects the situation to improve significantly from 2024E onwards, with greater stability and predictability.

In the coming quarters, the company expects negative effects from high costs due to supply chain challenges and general inflation. Order intake is also expected to be flat due to the focus on margins and the prevailing economic uncertainty. As a result, news is unlikely to be positive for the stock until stability is achieved in these areas. Positive margins are crucial to turn the tide and instill confidence in the company. In particular, significant new orders with improved contract terms could potentially support the share price.

In view of significant capital requirements, a EUR 333m convertible bond with a conversion price of EUR 15.73, maturing in 2030E and convertible in 2028E, was issued at a favourable coupon of around 4.25%. This significantly strengthens the company's liquidity position and is particularly important in the current high interest rate environment, which makes equity or blended financing more attractive to save on interest costs.

It is also worth noting that Acciona's stake in Nordex is growing, as is the cooperation between the two companies. Acciona currently holds a 47% stake. There may be plans to acquire full control of Nordex or to merge with the company to promote even closer cooperation, especially in view of the expected strong growth of the European wind market. On the other hand, this could deter other Nordex customers who compete with Acciona, and the takeover would probably cost Acciona a lot of money, around EUR 1.5bn to 2bn. In general, the shareholders of Nordex could benefit significantly from such a merger, which could lead to a higher takeover price.

Valuation

DCF Model

The DCF model results in a **fair value of EUR 24.30 per share**:

Top-line growth: We expect Nordex SE to grow revenues at a CAGR of 9.4% between 2023E and 2030E. The long-term growth rate is set at 2.0%.

ROCE. Returns on capital are developing from -6.2% in 2023E to 10.7% in 2030E.

WACC. Starting point is a historical equity beta of 1.10. Unlevering and correcting for mean reversion yields an asset beta of 0.95. Combined with a risk-free rate of 2.0% and an equity risk premium of 6.0% this yields cost of equity of 9.8%. With pre-tax cost of borrowing at 5.0%, a tax rate of 25% and target debt/equity of 0.5 this results in a long-term WACC of 7.8%.

DCF (EURm) (except per share data and beta)	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	Terminal value
NOPAT	-84	72	181	216	261	287	302	308	
Depreciation & amortization	169	190	197	210	227	250	274	299	
Change in working capital	-17	-96	127	135	185	94	99	88	
Chg. in long-term provisions	11	19	29	35	42	37	28	22	
Capex	-199	-215	-239	-267	-302	-332	-356	-373	
Cash flow	-121	-29	295	329	413	335	348	343	6,016
Present value	-117	-26	246	255	297	224	216	198	3,429
WACC	7.7%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.6%	7.8%

DCF per share derived from	
Total present value	4,722
Mid-year adj. total present value	4,899
Net debt / cash at start of year	-80
Financial assets	472
Provisions and off b/s debt	2
Equity value	5,448
No. of shares outstanding	224.2
Discounted cash flow / share	**24.30**
upside/(downside)	**116.0%**
Share price	**11.25**

DCF avg. growth and earnings assumptions	
Planning horizon avg. revenue growth (2023E-2030E)	9.4%
Terminal value growth (2030E - infinity)	2.0%
Terminal year ROCE	10.7%
Terminal year WACC	7.8%

Terminal WACC derived from	
Cost of borrowing (before taxes)	5.0%
Long-term tax rate	25%
Equity beta	1.10
Unlevered beta (industry or company)	0.95
Target debt / equity	0.5
Relevered beta	1.31
Risk-free rate	2.0%
Equity risk premium	6.0%
Cost of equity	9.8%

Sensitivity analysis DCF

Change in WACC (%-points)	Long term growth 1.0%	1.5%	2.0%	2.5%	3.0%
2.0%	17.0	17.6	18.3	19.1	20.0
1.0%	19.1	19.9	20.9	21.9	23.2
0.0%	21.8	23.0	24.3	25.9	27.8
-1.0%	25.5	27.1	29.2	31.7	34.8
-2.0%	30.6	33.3	36.6	40.9	46.8

Share of present value	
2023E-2026E	7.6%
2027E-2030E	19.8%
terminal value	72.6%

Source: AlsterResearch

FCF Yield Model

Due to the fact that companies rarely bear sufficient resemblance to peers in terms of geographical exposure, size or competitive strength and in order to adjust for the pitfalls of weak long-term visibility, an Adjusted Free Cash Flow analysis (Adjusted FCF) has been conducted.

The adjusted Free Cash Flow Yield results in a fair value between EUR -2.62 per share based on 2023E and EUR 26.31 per share on 2027E estimates.

The main driver of this model is the level of return available to a controlling investor, influenced by the cost of that investors' capital (opportunity costs) and the purchase price – in this case the enterprise value of the company. Here, the adjusted FCF yield is used as a proxy for the required return and is defined as EBITDA less minority interest, taxes and investments required to maintain existing assets (maintenance capex).

FCF yield in EURm	2023E	2024E	2025E	2026E	2027E
EBITDA	**48**	**293**	**456**	**519**	**600**
- Maintenance capex	169	190	197	210	227
- Minorities	0	0	0	0	0
- tax expenses	-43	19	64	74	93
= Adjusted FCF	**-78**	**85**	**195**	**235**	**279**
Actual Market Cap	**2,522**	**2,522**	**2,522**	**2,522**	**2,522**
+ Net debt (cash)	-234	-176	-438	-724	-1,094
+ Pension provisions	0	0	0	0	0
+ Off B/S financing	0	0	0	0	0
- Financial assets	472	472	472	472	472
- Acc. dividend payments	0	0	0	0	0
EV Reconciliations	-706	-647	-910	-1,195	-1,566
= Actual EV'	**1,816**	**1,875**	**1,613**	**1,327**	**957**
Adjusted FCF yield	**-4.3%**	**4.5%**	**12.1%**	**17.7%**	**29.2%**
base hurdle rate	7.0%	7.0%	7.0%	7.0%	7.0%
ESG adjustment	1.0%	1.0%	1.0%	1.0%	1.0%
adjusted hurdle rate	6.0%	6.0%	6.0%	6.0%	6.0%
Fair EV	**-1,293**	**1,415**	**3,248**	**3,910**	**4,656**
- EV Reconciliations	-706	-647	-910	-1,195	-1,566
Fair Market Cap	**-587**	**2,063**	**4,157**	**5,106**	**6,221**
No. of shares (million)	224	236	236	236	236
Fair value per share in EUR	**-2.62**	**8.72**	**17.58**	**21.59**	**26.31**
Premium (-) / discount (+)	**-123.3%**	**-22.5%**	**56.3%**	**91.9%**	**133.9%**

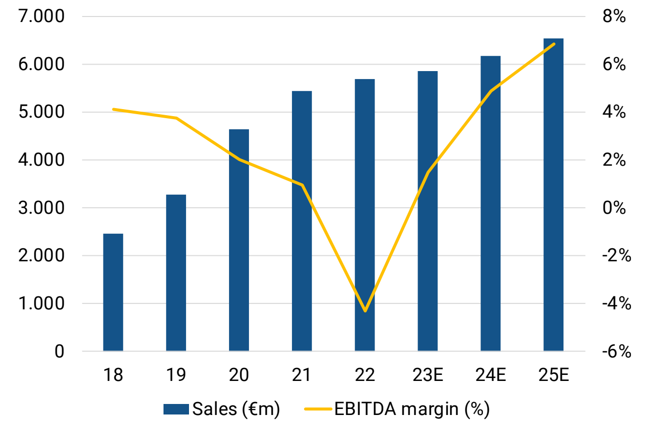
Sensitivity analysis FV						
	4.0%	-6	12	24	30	36
	5.0%	-4	10	20	25	30
Adjusted hurdle rate	**6.0%**	**-3**	**9**	**18**	**22**	**26**
	7.0%	-2	8	16	19	23
	8.0%	-1	7	14	17	21

Source: Company data; AlsterResearch

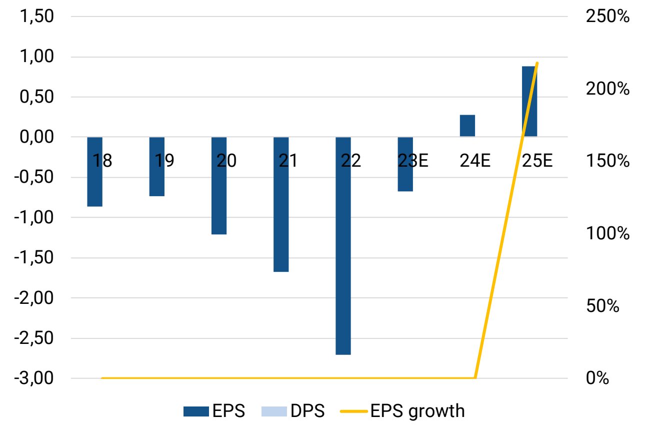
Simply put, the model assumes that investors require companies to generate a minimum return on the investor's purchase price. The required after-tax return equals the model's hurdle rate of 7.0%. Anything less suggests the stock is expensive; anything more suggests the stock is cheap. **ESG adjustments might be applicable. A high score indicates high awareness for environmental, social or governance issues and thus might lower the overall risk an investment in the company might carry. A low score on the contrary might increase the risk of an investment and might therefore trigger a higher required hurdle rate.**

Financials in six charts

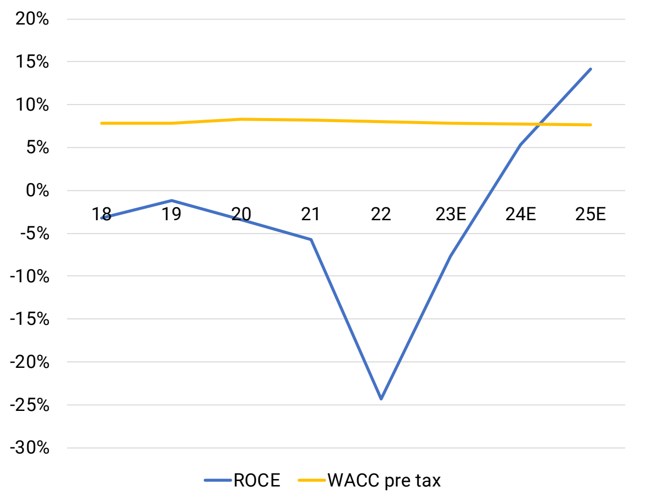
Sales vs. EBITDA margin development



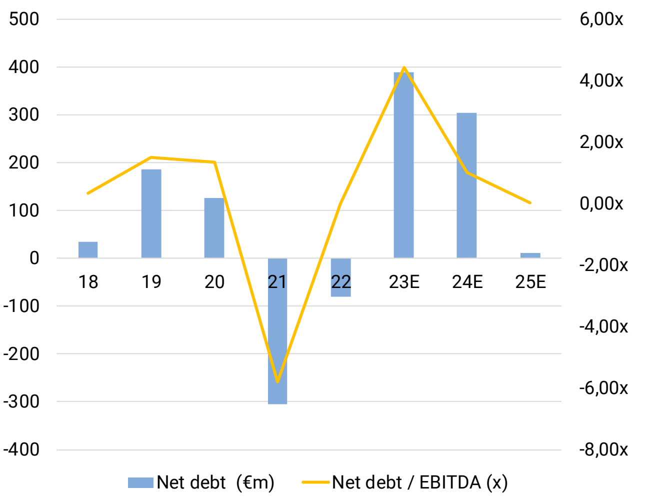
EPS, DPS in EUR & yoy EPS growth



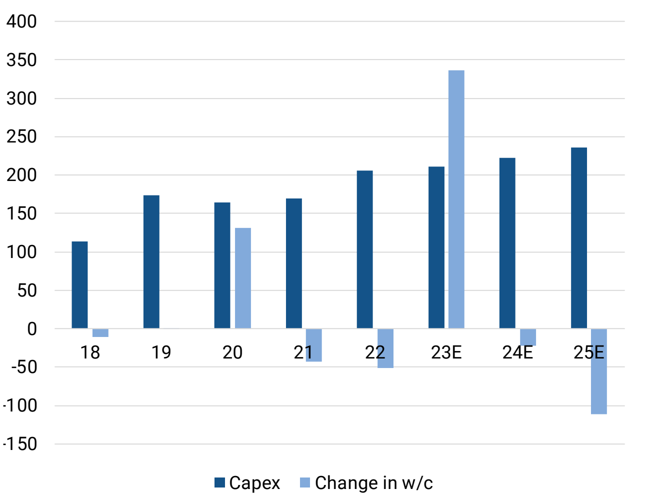
ROCE vs. WACC (pre tax)



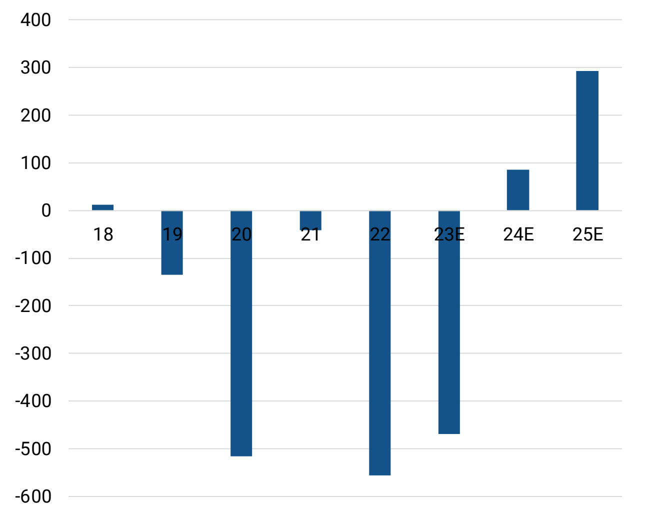
Net debt and net debt/EBITDA



Capex & chgn in w/c requirements in EURm



Free Cash Flow in EURm



Source: Company data; AlsterResearch

AlsterResearch

Financials

Profit and loss (EURm)	2020	2021	2022	2023E	2024E	2025E
Net sales	**4,651**	**5,444**	**5,694**	**6,035**	**6,518**	**7,235**
Sales growth	41.6%	17.1%	4.6%	6.0%	8.0%	11.0%
Change in finished goods and work-in-process	-305	-392	298	0	0	0
Total sales	**4,345**	**5,052**	**5,991**	**6,035**	**6,518**	**7,235**
Material expenses	3,798	4,225	5,505	5,009	5,182	5,629
Gross profit	**547**	**827**	**486**	**1,026**	**1,336**	**1,606**
Other operating income	451	113	418	151	163	181
Personnel expenses	434	474	561	567	600	658
Other operating expenses	471	414	588	561	606	673
EBITDA	**94**	**53**	**-244**	**48**	**293**	**456**
Depreciation	156	160	182	169	190	197
EBITA	-62	-107	-427	-120	104	258
Amortisation of goodwill and intangible assets	0	0	0	0	0	0
EBIT	**-62**	**-107**	**-427**	**-120**	**104**	**258**
Financial result	-88	-116	-96	-22	-41	-46
Recurring pretax income from continuing operations	-150	-224	-522	-142	62	212
Extraordinary income/loss	0	0	0	0	0	0
Earnings before taxes	-150	-224	-522	-142	62	212
Taxes	-21	6	-25	-43	19	64
Net income from continuing operations	-130	-230	-498	-100	43	148
Result from discontinued operations (net of tax)	0	0	0	0	0	0
Net income	**-130**	**-230**	**-498**	**-100**	**43**	**148**
Minority interest	0	0	0	0	0	0
Net profit (reported)	-130	-230	-498	-100	43	148
Average number of shares	107.58	137.22	183.97	224.20	236.45	236.45
EPS reported	**-1.21**	**-1.68**	**-2.71**	**-0.44**	**0.18**	**0.63**

Profit and loss (common size)	2020	2021	2022	2023E	2024E	2025E
Net sales	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Change in finished goods and work-in-process	-7%	-7%	5%	0%	0%	0%
Total sales	**93%**	**93%**	**105%**	**100%**	**100%**	**100%**
Material expenses	82%	78%	97%	83%	80%	78%
Gross profit	**12%**	**15%**	**9%**	**17%**	**21%**	**22%**
Other operating income	10%	2%	7%	3%	3%	3%
Personnel expenses	9%	9%	10%	9%	9%	9%
Other operating expenses	10%	8%	10%	9%	9%	9%
EBITDA	**2%**	**1%**	**-4%**	**1%**	**5%**	**6%**
Depreciation	3%	3%	3%	3%	3%	3%
EBITA	-1%	-2%	-7%	-2%	2%	4%
Amortisation of goodwill and intangible assets	0%	0%	0%	0%	0%	0%
EBIT	**-1%**	**-2%**	**-7%**	**-2%**	**2%**	**4%**
Financial result	-2%	-2%	-2%	-0%	-1%	-1%
Recurring pretax income from continuing operations	-3%	-4%	-9%	-2%	1%	3%
Extraordinary income/loss	0%	0%	0%	0%	0%	0%
Earnings before taxes	-3%	-4%	-9%	-2%	1%	3%
Taxes	-0%	0%	-0%	-1%	0%	1%
Net income from continuing operations	-3%	-4%	-9%	-2%	1%	2%
Result from discontinued operations (net of tax)	0%	0%	0%	0%	0%	0%
Net income	**-3%**	**-4%**	**-9%**	**-2%**	**1%**	**2%**
Minority interest	0%	0%	0%	0%	0%	0%
Net profit (reported)	**-3%**	**-4%**	**-9%**	**-2%**	**1%**	**2%**

Source: Company data; AlsterResearch

Balance sheet (EURm)	2020	2021	2022	2023E	2024E	2025E
Intangible assets (exl. Goodwill)	**187**	**180**	**174**	**174**	**174**	**174**
Goodwill	548	548	548	548	548	548
Property, plant and equipment	454	507	602	633	658	699
Financial assets	337	373	472	472	472	472
FIXED ASSETS	**1,526**	**1,608**	**1,795**	**1,826**	**1,851**	**1,893**
Inventories	1,202	722	1,103	1,235	1,278	1,384
Accounts receivable	128	706	898	496	536	595
Other current assets	722	238	266	266	266	266
Liquid assets	793	792	662	876	1,146	1,508
Deferred taxes	0	0	0	0	0	0
Deferred charges and prepaid expenses	39	40	31	30	33	36
CURRENT ASSETS	**2,884**	**2,500**	**2,961**	**2,903**	**3,258**	**3,789**
TOTAL ASSETS	**4,410**	**4,108**	**4,757**	**4,729**	**5,109**	**5,682**
SHAREHOLDERS EQUITY	**774**	**1,062**	**878**	**1,069**	**1,112**	**1,261**
MINORITY INTEREST	0	0	0	0	0	0
Long-term debt	412	450	222	272	600	700
Provisions for pensions and similar obligations	2	3	2	0	0	0
Other provisions	238	263	228	241	261	289
Non-current liabilities	**653**	**716**	**452**	**513**	**861**	**989**
short-term liabilities to banks	508	37	360	370	370	370
Accounts payable	1,096	1,033	1,519	1,414	1,462	1,588
Advance payments received on orders	1,082	975	1,092	1,026	978	1,085
Other liabilities (incl. from lease and rental contracts)	66	55	256	126	117	156
Deferred taxes	90	97	13	13	13	13
Deferred income	143	134	186	199	196	219
Current liabilities	**2,984**	**2,330**	**3,427**	**3,148**	**3,136**	**3,432**
TOTAL LIABILITIES AND SHAREHOLDERS EQUITY	**4,410**	**4,108**	**4,757**	**4,729**	**5,109**	**5,682**

Balance sheet (common size)	2020	2021	2022	2023E	2024E	2025E
Intangible assets (excl. Goodwill)	**4%**	**4%**	**4%**	**4%**	**3%**	**3%**
Goodwill	12%	13%	12%	12%	11%	10%
Property, plant and equipment	10%	12%	13%	13%	13%	12%
Financial assets	8%	9%	10%	10%	9%	8%
FIXED ASSETS	**35%**	**39%**	**38%**	**39%**	**36%**	**33%**
Inventories	27%	18%	23%	26%	25%	24%
Accounts receivable	3%	17%	19%	10%	10%	10%
Other current assets	16%	6%	6%	6%	5%	5%
Liquid assets	18%	19%	14%	19%	22%	27%
Deferred taxes	0%	0%	0%	0%	0%	0%
Deferred charges and prepaid expenses	1%	1%	1%	1%	1%	1%
CURRENT ASSETS	**65%**	**61%**	**62%**	**61%**	**64%**	**67%**
TOTAL ASSETS	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
SHAREHOLDERS EQUITY	**18%**	**26%**	**18%**	**23%**	**22%**	**22%**
MINORITY INTEREST	0%	0%	0%	0%	0%	0%
Long-term debt	9%	11%	5%	6%	12%	12%
Provisions for pensions and similar obligations	0%	0%	0%	0%	0%	0%
Other provisions	5%	6%	5%	5%	5%	5%
Non-current liabilities	**15%**	**17%**	**10%**	**11%**	**17%**	**17%**
short-term liabilities to banks	12%	1%	8%	8%	7%	7%
Accounts payable	25%	25%	32%	30%	29%	28%
Advance payments received on orders	25%	24%	23%	22%	19%	19%
Other liabilities (incl. from lease and rental contracts)	1%	1%	5%	3%	2%	3%
Deferred taxes	2%	2%	0%	0%	0%	0%
Deferred income	3%	3%	4%	4%	4%	4%
Current liabilities	**68%**	**57%**	**72%**	**67%**	**61%**	**60%**
TOTAL LIABILITIES AND SHAREHOLDERS EQUITY	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Source: Company data; AlsterResearch

Cash flow statement (EURm)	2020	2021	2022	2023E	2024E	2025E
Net profit/loss	-130	-230	-498	-100	43	148
Depreciation of fixed assets (incl. leases)	156	160	182	169	190	197
Amortisation of goodwill	0	0	0	0	0	0
Amortisation of intangible assets	0	0	0	0	0	0
Others	-248	155	-86	11	19	29
Cash flow from operations before changes in w/c	-221	85	-401	80	253	374
Increase/decrease in inventory	197	480	-381	-132	-43	-106
Increase/decrease in accounts receivable	-308	-46	-191	402	-40	-59
Increase/decrease in accounts payable	127	-63	487	-106	49	126
Increase/decrease in other w/c positions	-147	-328	136	-182	-62	166
Increase/decrease in working capital	-131	43	51	-17	-96	127
Cash flow from operating activities	**-352**	**128**	**-350**	**63**	**157**	**501**
CAPEX	-164	-170	-205	-199	-215	-239
Payments for acquisitions	0	0	0	0	0	0
Financial investments	10	0	16	0	0	0
Income from asset disposals	385	17	26	0	0	0
Cash flow from investing activities	**232**	**-152**	**-164**	**-199**	**-215**	**-239**
Cash flow before financing	-120	-25	-514	-136	-59	262
Increase/decrease in debt position	207	-309	4	60	328	100
Purchase of own shares	0	0	0	0	0	0
Capital measures	199	371	342	290	0	0
Dividends paid	0	0	0	0	0	0
Others	0	0	0	0	0	0
Effects of exchange rate changes on cash	-17	-32	17	0	0	0
Cash flow from financing activities	**389**	**31**	**363**	**350**	**328**	**100**
Increase/decrease in liquid assets	268	6	-151	214	270	362
Liquid assets at end of period	**778**	**784**	**634**	**847**	**1,117**	**1,480**

Source: Company data; AlsterResearch

Regional sales split (EURm)	2020	2021	2022	2023E	2024E	2025E
Domestic	321	548	707	905	978	1,085
Europe (ex domestic)	2,144	2,977	2,841	2,957	3,194	3,545
The Americas	1,873	1,624	1,762	1,811	2,021	2,243
Asia	0	0	0	0	0	0
Rest of World	313	295	383	362	326	362
Total sales	**4,651**	**5,444**	**5,694**	**6,035**	**6,518**	**7,235**

Regional sales split (common size)	2020	2021	2022	2023E	2024E	2025E
Domestic	6.9%	10.1%	12.4%	15.0%	15.0%	15.0%
Europe (ex domestic)	46.1%	54.7%	49.9%	49.0%	49.0%	49.0%
The Americas	40.3%	29.8%	31.0%	30.0%	31.0%	31.0%
Asia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Rest of World	6.7%	5.4%	6.7%	6.0%	5.0%	5.0%
Total sales	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Source: Company data; AlsterResearch

Ratios	2020	2021	2022	2023E	2024E	2025E
Per share data						
Earnings per share reported	-1.21	-1.68	-2.71	-0.44	0.18	0.63
Cash flow per share	-4.72	-0.24	-2.89	-0.47	-0.14	1.28
Book value per share	7.19	7.74	4.77	4.77	4.70	5.33
Dividend per share	0.00	0.00	0.00	0.00	0.00	0.00
Valuation						
P/E	-9.3x	-6.7x	-4.2x	-25.3x	61.3x	17.9x
P/CF	-2.4x	-47.6x	-3.9x	-23.8x	-80.2x	8.8x
P/BV	1.6x	1.5x	2.4x	2.4x	2.4x	2.1x
Dividend yield (%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FCF yield (%)	-42.0%	-2.1%	-25.7%	-4.2%	-1.2%	11.4%
EV/Sales	0.6x	0.4x	0.4x	0.4x	0.4x	0.3x
EV/EBITDA	28.2x	42.1x	-10.0x	47.4x	8.0x	4.6x
EV/EBIT	-42.6x	-20.7x	-5.7x	-19.0x	22.7x	8.1x
Income statement (EURm)						
Sales	4,651	5,444	5,694	6,035	6,518	7,235
yoy chg in %	41.6%	17.1%	4.6%	6.0%	8.0%	11.0%
Gross profit	547	827	486	1,026	1,336	1,606
Gross margin in %	11.8%	15.2%	8.5%	17.0%	20.5%	22.2%
EBITDA	94	53	-244	48	293	456
EBITDA margin in %	2.0%	1.0%	-4.3%	0.8%	4.5%	6.3%
EBIT	-62	-107	-427	-120	104	258
EBIT margin in %	-1.3%	-2.0%	-7.5%	-2.0%	1.6%	3.6%
Net profit	-130	-230	-498	-100	43	148
Cash flow statement (EURm)						
CF from operations	-352	128	-350	63	157	501
Capex	-164	-170	-205	-199	-215	-239
Maintenance Capex	156	160	182	169	190	197
Free cash flow	-516	-42	-555	-136	-59	262
Balance sheet (EURm)						
Intangible assets	734	728	722	722	722	722
Tangible assets	454	507	602	633	658	699
Shareholders' equity	774	1,062	878	1,069	1,112	1,261
Pension provisions	2	3	2	0	0	0
Liabilities and provisions	1,161	752	812	883	1,231	1,359
Net financial debt	127	-305	-80	-234	-176	-438
w/c requirements	-848	-578	-610	-708	-627	-695
Ratios						
ROE	-16.8%	-21.7%	-56.7%	-9.3%	3.9%	11.8%
ROCE	-3.2%	-5.9%	-25.2%	-6.2%	4.4%	9.9%
Net gearing	16.4%	-28.7%	-9.1%	-21.9%	-15.8%	-34.8%
Net debt / EBITDA	1.3x	-5.8x	0.3x	-4.9x	-0.6x	-1.0x

Source: Company data; AlsterResearch

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