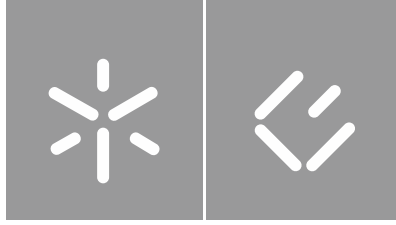


Universidade do Minho
Escola de Economia e Gestão

Maria João Miranda Marques

Equity Research Report
Vestas Wind Systems A/S



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Equity Research Report

Vestas Wind Systems A/S

Master's Project

Master in Finance

Supervised by

Professora Doutora Florinda Silva

April 2025

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RESUMO

Este *Equity Research Report* é o resultado do Projeto de Mestrado realizado como parte do Mestrado em Finanças na Universidade do Minho. O relatório centra-se na Vestas Wind Systems A/S, uma empresa dinamarquesa que produz turbinas eólicas e presta serviços relacionados, reconhecida como um dos líderes globais em soluções de energia sustentável. À medida que a sustentabilidade ambiental ganha destaque na agenda global, esta análise oferece informações valiosas sobre um importante competidor da indústria, enquanto examina a transição para a energia renovável e as suas implicações no panorama energético global.

Estruturado de acordo com as diretrizes do CFA Institute, o relatório começa com um Resumo de Investimento destacando os principais catalisadores da Vestas. Em seguida, apresenta uma Descrição detalhada do Negócio, abrangendo as operações por segmento e alcance geográfico, bem como os planos estratégicos da empresa para os próximos anos. Adicionalmente, oferece uma análise aprofundada do desempenho e objetivos da Vestas em relação a fatores de ESG, juntamente com uma Visão Abrangente da Indústria de Energia Eólica, com foco nos Fatores de Oferta, Procura e Posicionamento Competitivo. A Análise Financeira baseia-se principalmente em dados dos Relatórios Anuais da Vestas (2019-2023) e do Relatório Financeiro Intercalar do Terceiro trimestre de 2024. Nas secções seguintes, são apresentadas as metodologias de Avaliação, sendo o método do Fluxos de Caixa Descontados a abordagem principal, complementado por uma Análise de Sensibilidade, uma Análise de Cenários e uma Simulação de Monte Carlo. Para garantir uma avaliação abrangente, esta metodologia é ainda suportada por uma Avaliação Relativa e uma Avaliação por Opções. Os dados para a avaliação foram atualizados pela última vez em 5 de fevereiro de 2025, sem ajustes subsequentes. O relatório conclui com uma avaliação dos riscos de investimento, considerando tanto a probabilidade de ocorrência quanto o impacto potencial.

É emitida uma recomendação de **COMPRA** para a Vestas Wind Systems A/S, com um preço-alvo de 19,40€ no final de 2025, refletindo um potencial de valorização de 32% face ao preço de fecho de 14,67€ em 5 de fevereiro de 2025. Esta recomendação é apoiada por três principais catalisadores: i) Tecnologia Avançada: Aumentando Capacidade e Preços; ii) Lucros impulsionados pela Expansão *Offshore*; e iii) Posicionamento Estratégico para a Transição Energética Renovável.

Em conclusão, este *Equity Research Report* destaca o papel pioneiro da Vestas na tecnologia inovadora, que aumenta a capacidade de produção e o poder de definição de preços. Combinado com as suas ambições de expansão *Offshore* e o posicionamento estratégico no setor de energia renovável, a Vestas apresenta-se como uma oportunidade de investimento atrativa no setor de energias renováveis.

Palavras-Chave: Avaliação, Equity Research, Preço-Alvo, Renovável, Vestas.

ABSTRACT

This Equity Research Report is the outcome of the Master's Project conducted as part of the Master in Finance at the University of Minho. It focuses on Vestas Wind Systems A/S, a Danish manufacturer and service provider of wind turbines, recognized as one of the global leaders in sustainable energy solutions. As environmental sustainability gains prominence on the global agenda, this analysis offers valuable insights into a key industry player while examining the transition to renewable energy and its implications for the global energy landscape.

Structured in accordance with CFA Institute guidelines, the report begins with an Investment Summary highlighting Vestas' key catalysts. It proceeds with a detailed Business Description, covering operations by segment and geographic reach, as well as the company's strategic plans for the coming years. Additionally, it provides an in-depth analysis of Vestas' ESG performance and goals, along with a comprehensive Overview of the Wind Energy Industry, focusing on Supply and Demand Drivers, and Competitive Positioning. The Financial Analysis primarily relies on data from Vestas' Annual Reports (2019-2023) and the Interim Financial Report for the Third quarter 2024. In the subsequent sections, Valuation methodologies are presented, being the Discounted Cash Flow method the primary approach, complemented by a Sensitivity Analysis, a Scenario Analysis, and a Monte Carlo Simulation. To ensure a comprehensive assessment, this methodology is further supported by a Relative Valuation, and an Option Valuation. Valuation figures were last updated on February 5th, 2025 with no subsequent adjustments. The report concludes with an evaluation of investment risks, considering both their likelihood of occurrence and the potential impact.

A **BUY** recommendation is issued for Vestas Wind Systems A/S, with a target price of 19.40€ at the end of 2025, reflecting a 32% upside potential compared to the closing price of 14.67€ on February 5th, 2025. This recommendation is supported by three main catalysts: i) Edge of Advanced Technology: Driving Pricing and Capacity; ii) Driving Profitability with Offshore Expansion; and iii) Strategically Positioned for the Renewable Energy Shift.

In conclusion, this Equity Research Report underscores Vestas' pioneering role in innovative technology that enhances output capacity and pricing power. Coupled with its Offshore expansion ambitions and strategic positioning within the renewable energy landscape, Vestas presents a compelling investment opportunity in the renewable energy sector.

Keywords: Equity Research, Renewable, Target Price, Valuation, Vestas.

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LIST OF ABBREVIATIONS

°C - Degrees Celsius	GW – Gigawatt
ASP – Average Selling Price	GWEC – Global Wind Energy Council
B.Sc. – Bachelor of Sciences	IMD – International Institute for Management Development
bn – Billions	IEA - International Energy Agency
CAGR – Compound Annual Growth Rate	IFA – Intangible Fixed Assets
CAPEX – Capital Expenditures	IFRS - International Financial Reporting Standards
CAPM – Capital Asset Pricing Model	IRENA – International Renewable Energy Agency
CDP - Carbon Disclosure Project	ISS - Institutional Shareholder Services
CEDEP – European Centre for Executive Development	IT – Information Technology
CEO – Chief Executive Officer	JV – Join Venture
CFA – Chartered Financial Analyst	k – Thousands
CFO – Chief Financial Officer	Kd – Cost of Debt
CHP – Combined Heat and Power	kW – Kilowatt
CNBC – Consumer News and Business Channel	kWh – Kilowatt-hour
CO ₂ e – Carbon Dioxide Equivalent	LCOE - Levelized Cost of Electricity
COGS – Cost of Goods Sold	m – Million
CSO – Chief Strategy Officer	M.Sc. – Master of Sciences
CSP – Concentrated Solar Power	MBA – Master of Business Administration
CTO – Chief Technology Officer	MSCI - Morgan Stanley Capital International
CTOO - Chief Technology and Operations Officer	MV – Market Value
D/E – Debt to Equity	MW - Megawatt
D&A – Depreciation and Amortization	NOPAT – Net Operating Profit After Tax
DCF – Discounted Cash Flow	OEM - Original Equipment Manufacturer
DJSI - Dow Jones Sustainability Indices	P – Price
E – Equity	PhD. – Doctor of Philosophy
EBT – Profit Before Tax	PPA - Power Purchase Agreement
EBIT – Earnings Before Interest, and Taxes	PPE - Property, Plant, and Equipment
EBITDA - Earnings Before Interest, Taxes, Depreciation, and Amortization	PV – Photovoltaic
EMEA – Europe, Middle East, and Africa	Q3 – Third Quarter
EPS – Earnings per Share	R&D – Research and Development
ESG – Environmental, Social & Governance	ROA – Return on Assets
ERP – Equity Risk Premium	ROE – Return on Equity
EU – European Union	S&P – Standard and Poor's
EUR (€) - Euro	SVP – Senior Vice President
EV – Enterprise Value	SWOT – Strengths, Weaknesses, Opportunities, and Threats
EVP – Executive Vice President	TFA – Tangible Fixed Assets
FCFF - Free Cash Flow to the Firm	TRIR – Total Recordable Injury Rate
FY – Fiscal Year	UK – United Kingdom
GBP - British Pound Sterling	US – United States
GDP – Gross Domestic Product	USD (\$) – US Dollar
GE – General Electric	WACC - Weighted Average Cost of Capital
GSVP – Group Senior Vice President	

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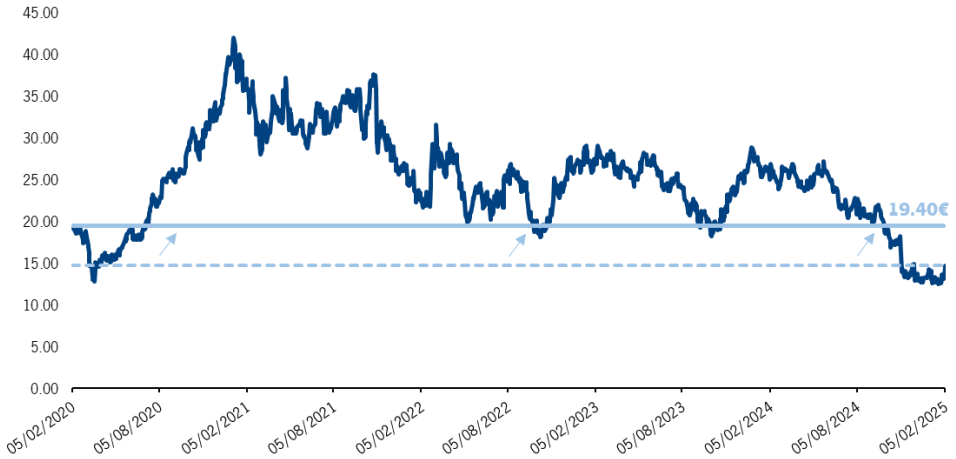
Table 1: Vestas Investment Highlights

Recommendation	BUY
Current price (05/02/2025)	14.67 €
Target price (FY 2025)	19.40 €
Exchange rate (05/02/2025)	0.13 €
Upside	32.18%
52-week range	12.41€ - 27.14€
Industry	Renewable Energy
Sector	Wind
Ticker	VWS
Stock exchange	Nasdaq Copenhagen
Shares outstanding (m)	1 009.87
Market capitalization (bn)	14.82 €
EPS (2024)	0.33 €
Free Float	100%

Source: Author, Company Data

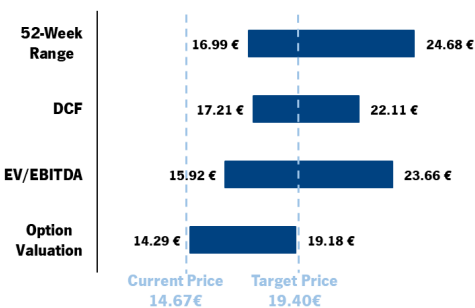
Vestas Wind Systems A/S is a key player in the Green & Renewable Energy industry with a focus on the wind sector and a strong global market presence. Looking at Figure 1, it is noted that Vestas is going through a sensitive period, with a significant drop in share price from November 2024, the lowest values since 2020. This drop is driven by the Interim Financial Report Third quarter 2024, where the company announced that the full-year operating profit (EBIT) margin would likely be at the lower end of its guided 4-5% range due to higher costs and warranty provisions (Vestas, 2024b). This news, combined with the uncertainty regarding the US presidential elections, put Vestas in trouble and caused setbacks. However, the company is determined to expand its Offshore market, increase its technological advantage and position itself as a global leader in sustainable energy manufacturing. Thus, it is estimated that Vestas' intrinsic value exceeds its current market value (Table 1).

Figure 1: Vestas Daily Stock Price Evolution



Source: Investing.com, Refinitiv Eikon

Figure 2: Valuation of Vestas



Source: Author, Company Data

INVESTMENT SUMMARY

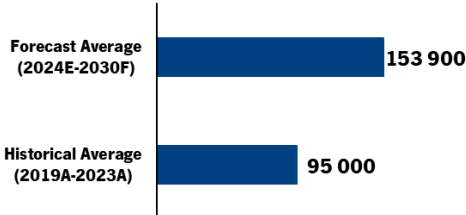
Based on the recommendation system presented in Appendix 1, this report issues a **BUY** recommendation for Vestas with a target price of 19.40€, presenting a 32% upside potential on the closing price of 14.67€ on February 5th, 2025. The target price is based on a DCF method, complemented by a Sensitivity Analysis, a Scenario Analysis, and a Monte Carlo Simulation. This valuation methodology is further supported by a Relative Valuation, and an Option Valuation (Figure 2). The investment recommendation relies on the following key catalysts:

Figure 3: LCOE Formula

$$LCOE = \frac{NPV \text{ of Total Costs over Lifetime}}{NPV \text{ of Electrical Energy Produced Over Lifetime}}$$

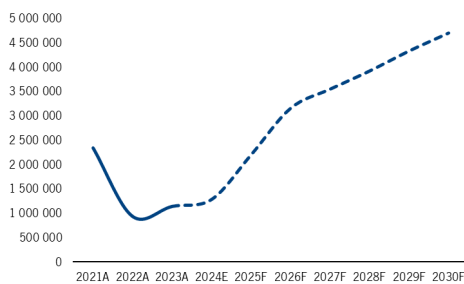
Source: Author

Figure 4: Vestas R&D Spending (k€)



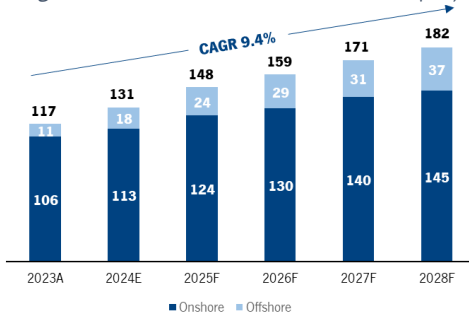
Source: Author, Company Data

Figure 5: Vestas Offshore Sales (k€)



Source: Author, Company Data

Figure 6: Installations Outlook 2024E-2028F (GW)



Source: Author, GWEC

EDGE OF ADVANCED TECHNOLOGY: DRIVING PRICING AND CAPACITY

Vestas is distinguished for its technological innovation, setting itself apart from other wind and energy manufacturers by consistently utilizing its R&D budget more effectively than its competitors. As renewable energy becomes increasingly crucial for decarbonization, it is essential for OEMs to innovate their products rapidly to meet market demands. Modularization gives Vestas a competitive edge, as it creates similarities between Onshore (land-based) and Offshore (sea-based) wind turbines, streamlining the development process for both types. This, in turn, enhances the potential to lower the LCOE¹ (Figure 3), giving Vestas an advantage over its rivals. Additionally, its highly integrated supply chain and strategic partnerships help the company to produce and deliver turbine components at lower costs while maintaining high quality. Therefore, Vestas is expected to benefit from these targeted technology investments (Figure 4), continuing to unlock its pricing and capacity potential in the future.

DRIVING PROFITABILITY WITH OFFSHORE EXPANSION

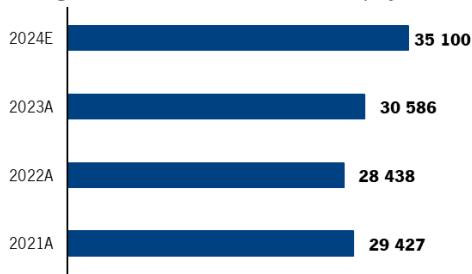
Vestas expects significant growth in Offshore revenue over the next two years, driven by the market entry of their new 15MW turbine in 2021. This increase in Offshore deliveries will boost the Service segment, as Offshore conditions demand more frequent maintenance, leading to higher Service volume. Additionally, their global service infrastructure and strategic partnerships provide Vestas with a competitive edge. Although initial costs may be higher, modularization and the use of the same components for Onshore and Offshore turbines will create synergies, further reduce costs over time, and enhance profitability through economies of scale. Vestas aims to grow in all three segments (Onshore, Offshore, and Service) however, the Offshore segment is expected to become the new revenue driver with a 22.47% CAGR between 2023 and 2030 (Figure 5), whereas Onshore is expected to grow only 8.03% CAGR in the same period.

STRATEGICALLY POSITIONED FOR THE RENEWABLE ENERGY SHIFT

Renewable energy is set for significant growth in the coming years, despite the election of US President Donald Trump. By 2028, it is anticipated to have 182 GW of new installations (Figure 6), driven by substantial investments from both governments and corporations committed to a sustainable future (GWEC, 2024b). Wind energy stands out as the most appealing renewable source due to its ability to generate electricity efficiently and lower LCOE, likely securing a large portion of renewable investments. As a global key player in Onshore wind energy, Vestas is well-positioned to benefit from international climate commitments. The company is dedicated to maintaining its impressive ESG performance, with targets to achieve carbon neutrality and zero-emission Onshore service vehicles by 2025 (Vestas,

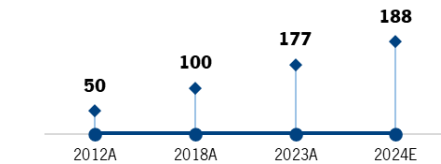
¹ LCOE refers to the constant minimum price at which electricity must be sold for the project to break even over its lifespan.

Figure 7: Total Number of Vestas Employees



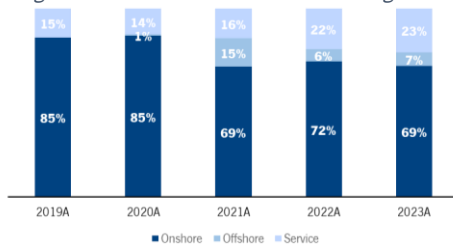
Source: Author, Company Data

Figure 8: Vestas' Installed Capacity Evolution (GW)



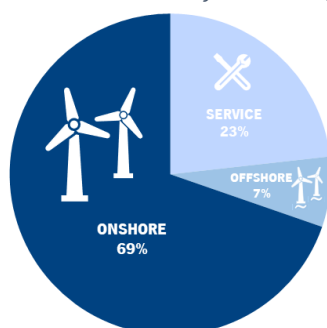
Source: Author, Company Data

Figure 9: Evolution of Vestas' Business Segments



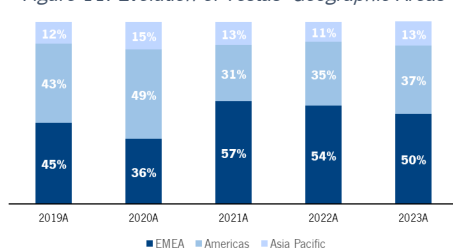
Source: Author, Company Data

Figure 10: 2023 Revenue by Business Segment



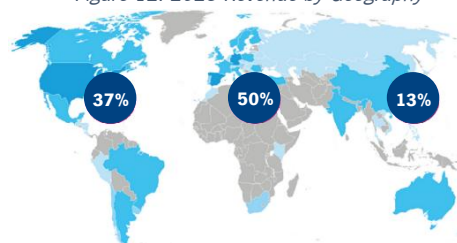
Source: Author, Company Data

Figure 11: Evolution of Vestas' Geographic Areas



Source: Author, Company Data

Figure 12: 2023 Revenue by Geography



Source: Author, Company Data

2023b). Currently, Vestas' pricing is comparable to other wind and solar OEMs. However, as a market competitor in wind energy with a prestigious ESG status and advanced technology, Vestas is poised to compete on a global scale, positioning itself as one of the preferred renewable energy players.

BUSINESS DESCRIPTION

Vestas Wind Systems A/S, headquartered in Aarhus, Denmark, is a global wind turbine manufacturer and service provider, considered one of the global leaders in sustainable energy solutions. The business began in 1898 with the acquisition of a local blacksmith shop in Denmark, producing industrial products, and in 1987 Vestas focused on manufacturing wind turbines. Currently, it has 35,000 employees (Figure 7), offices in 24 countries and it is characterized with high degree of vertical integration, because it designs, manufactures, installs, and maintains wind turbines around the world. Vestas, one of the global leaders in the renewable energy industry with over 40 years of experience in wind energy, plays an important role in the sustainable era, because it was the first company to achieve the 100 GW mark for installation and service of wind turbines (Figure 8). The values of this company are simplicity, collaboration, accountability, and passion; and they believe that their employees are the most important asset for the company's achievements (Vestas, 2024a).

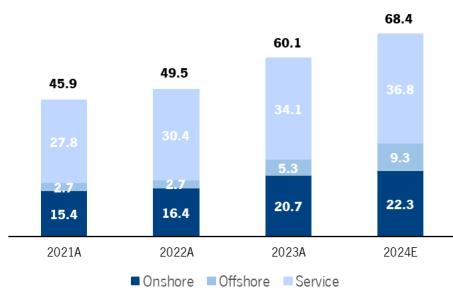
BUSINESS SEGMENTS AND GEOGRAPHIC REACH

In 2023, Vestas achieved a total revenue of 15.4 billion euros, with a growth of 6% compared to the previous year, largely driven by higher prices in the Power Solutions segment and continued growth in its Service segment (Figure 9). Thus, the company distinguishes two reporting groups: Power Solutions with 77% of total revenue (which covers revenue derived from 3 business areas: Onshore wind (69%), Offshore wind (7%), and Development), and Service with 23% of total revenue (Figure 10). Regarding geographic areas, Vestas' revenue is mainly driven by recent growth in EMEA region (Figure 11). In 2023, its revenues came from EMEA (50% of the total revenue), Americas (37% of the total revenue), and Asia Pacific (13% of the total revenue), as illustrated in Figure 12 (Vestas, 2023a). In addition to the wide geographic diversification of customers, it has many global sub-suppliers, which increases its global production capacity. This helped Vestas avoid supply chain issues during the Covid-19 pandemic. To date, Vestas has more than 188 GW of wind power installations in 88 different countries, more than 155 GW under service, and an all-time high total order backlog of 68.4 billion euros (Figure 13), corresponding to a growth of 14% compared to the last year (Vestas, 2024a).

COMPANY STRATEGY

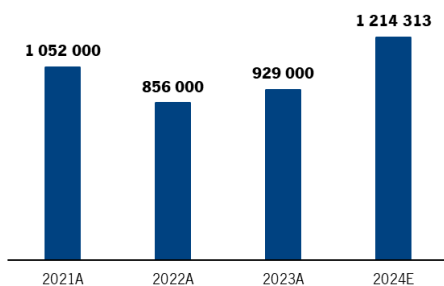
The company's strategy is to establish itself as a global leader in sustainable energy manufacturing. For that, Vestas plans to invest more in competitive technology to

Figure 13: Vestas Total Order Backlog (bn€)



Source: Author, Company Data

Figure 14: Vestas Total Investments (k€)



Source: Author, Company Data

Table 2: 2024 ESG Scorecard

ESG Ratings	Vestas	Siemens Energy	Nordex	Goldwind	Ming Yang
Corporate Knights Global 100	3	NA	5	NA	NA
CDP Climate	A-	A	B	B	F
S&P Global DJSI	69	53	45	35	18
Sustainalytics	16.2	11.3	17.6	26.3	24.6
MSCI	AAA	BBB	A	BBB	NA
ISS ESG	B+	B-	B+	B-	NA
EcoVadis	69	75	70	60	NA

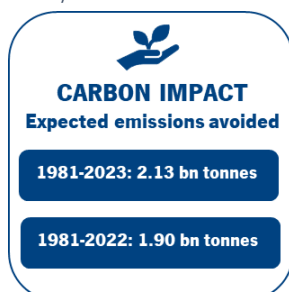
Source: Author, CDP Climate, Corporate Knights Global 100, EcoVadis, ISS ESG, MSCI, S&P Global DJSI, Sustainalytics

Table 3: 2024 Vestas' ESG Ratings

ESG Refinitiv	Vestas
Environment	76
Social	71
Governance	69
Total	72

Source: Author, Refinitiv Eikon

Figure 15: Expected CO2e Emissions Avoided



Source: Author, Company Data

stay ahead of competition and respond to growing global energy demand. In 2024, total investments are expected to reach approximately 1 billion euros as shown in Figure 14 (Vestas, 2024b). Through innovation, partnerships, modularization, and digital solutions, the company is focused on maturing the industry, consolidating commercial discipline and preparing to future growth.

ENVIRONMENTAL, SOCIAL & GOVERNANCE

Vestas' ESG performance is remarkable. The company has been ranked in the top 3 of the Corporate Knights Global 100 for the past four years, holds an “AAA” rating from MSCI for the last five years, has received an “A-” rating from CDP climate and is included in the Dow Jones Sustainability Index. Compared to its competitors, Vestas stands out as one of the top companies in terms of ESG risk rating (Table 2). This strong performance is expected to continue due to the company's ongoing efforts and improvements (Appendix 2). Table 3 highlights the ESG score across various pillars, as detailed in the subsequent ESG analysis based on the Vestas Sustainability Report (Vestas, 2023b).

ENVIRONMENTAL

Climate change mitigation | Vestas' technology is crucial to the energy transition and an important driver in addressing climate change. Vestas has objectives to avoid and reduce greenhouse gas emission, such as carbon neutrality target (Figure 15) and Onshore service vehicles zero emission from 2025.

Pollution prevention | The company incorporates a management system to control chemicals and hazardous substances used in the development, manufacture and maintenance of wind turbines.

Water and marine resources | Vestas is concerned about fresh water being a finite and vulnerable resource, which is why it believes wind energy as a sustainable solution, especially in regions with water scarcity.

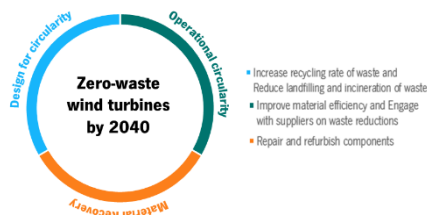
Biodiversity and ecosystems | Wind farms are nature-based solutions and by mitigating the damage caused by technology, they can have a positive impact on nature.

Resource and circular economy | Vestas supports 3 areas: Design for circularity, Operational circularity and Material recovery. One of its goals is to produce zero waste turbines by 2024 (Figure 16).

SOCIAL

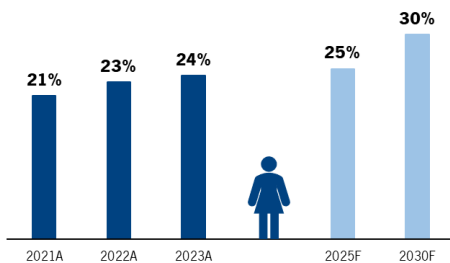
Human rights assessment and policy | In 2023, Vestas was ranked as the number one turbine manufacturer in the Renewable Energy & Human Rights benchmark, demonstrating its commitment to human rights.

Figure 16: Circularity Roadmap



Source: Author, Company Data

Figure 17: Women in Leadership Positions



Source: Author, Company Data

Figure 18: Number of Nationalities



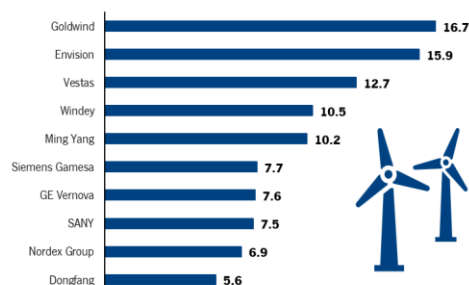
Source: Author, Company Data

Figure 19: Vestas' Governance Structure



Source: Author, Company Data

Figure 20: 2023 Top 10 Wind Turbine Suppliers (GW)



Source: Author, GWEC

Own workforce | The company has more than 35,000 employees and aims to create a safe, healthy, diverse, and inclusive workplace for everyone (Figure 17 and 18). Vestas believes that its success lies in its workforce being committed to sustainability and the search for solutions to accelerate the energy transition.

Workers in the value chain | Suppliers are very important in helping Vestas to develop, deliver, and service sustainable solutions. Therefore, to manage risks in the value chain, Vestas has applied its Human Rights Policy to its suppliers and developed Vestas Conflict Minerals, with a 98% response rate, and the Supplier Code of Conduct.

Affected communities | Vestas wants to build strong relationships with the communities impacted by its operations. Therefore, there are Social Due Diligence tools during construction and a Social Management Plan to understand, prevent and mitigate social risks, and maximize local opportunities.

GOVERNANCE

Business conduct | Vestas' governance structure, shown in Figure 19 and detailed in Appendices 3 and 4, believes that integrity is a key pillar for building stable stakeholder relationships and being a reliable partner in the energy transition. Thus, the company has implemented measures to prevent and to detect corruption and bribery, including EthicsLine, a whistleblower system with 667 cases in 2023.

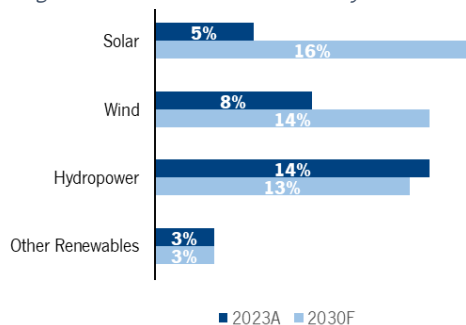
Political engagement | Vestas is considered a pioneer in renewable energy, since it creates and shapes new markets around the world. It also has contributed to the development of policies and regulations that encourage the role of wind energy in the clean energy transition (Anchustegui & Hunter, 2024).

INDUSTRY OVERVIEW AND COMPETITIVE POSITIONING

The market structure of global wind turbine makers is composed by a small group of large participants, so it is considered an oligopoly. None of the players holds more than a 20% share of the production market, meaning that none has the ability to influence energy prices. In 2023, thirty wind turbine manufacturers collectively installed a record-breaking 120.7 GW of new capacity. Among the top 10 (Figure 20), Vestas ranks third with 12.7 GW, making a drop of two positions compared to 2022. Goldwind is the number one turbine supplier with 16.7 GW, while Envision has climbed up three positions to secure second place. Windey and Ming Yang rank fourth and fifth positions, respectively, with Ming Yang recognized as the world's largest Offshore wind turbine supplier in 2023 (GWEC, 2024c).

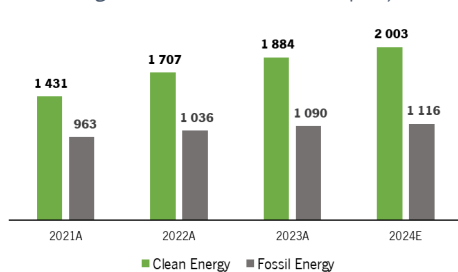
The global power mix will be transformed in the coming years. In 2023, the global electricity generation from renewable energy technologies was 30%, distributed as follows: 14% from hydropower, 8% from wind, 5% from solar PV and 3% from other

Figure 21: Global Renewable Electricity Generation



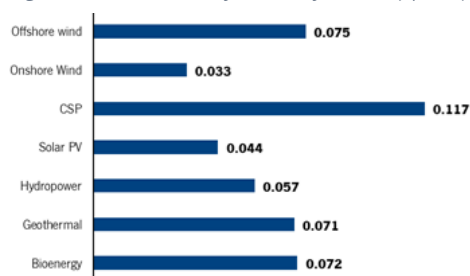
Source: Author, IEA

Figure 22: Global Investments (bn\$)



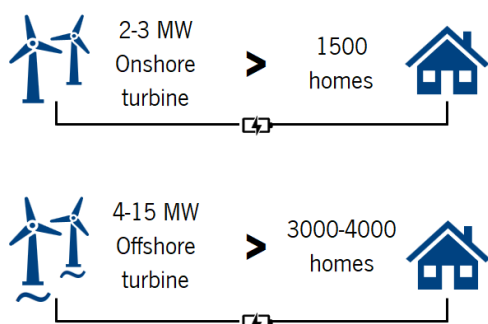
Source: Author, IEA

Figure 23: 2023 LCOE by Electricity Source (\$/kWh)



Source: Author, IRENA

Figure 24: Onshore vs Offshore Turbines Power



Source: Author, Business Norway

renewables (Figure 21). Over the forecasted years, several milestones are expected: In 2024, combined solar PV and wind generation will surpass hydropower; By 2025, renewable electricity generation will exceed coal-fired power; In 2026, both wind and solar power generation will overtake nuclear; In 2027, solar PV electricity generation will surpass wind; By 2029, solar PV will become the largest renewable power source, overtaking hydropower; Finally, in 2030, wind generation will surpass hydropower (IEA, 2024a).

DEMAND DRIVERS

Global Green Transaction | To create a sustainable world, it is required a shift to energy sources with zero carbon emissions in sectors of the energy distribution, as well as special incentives for the main electricity consumers. The Paris Agreement and legislation promoting carbon neutrality and the energy transition establish a promising long-term outlook for the renewable energy sector. According to IEA (2024b), the 2024 program for total global energy investment is set to exceed 3 trillion dollars for the first time, with 2 trillion dollars allocated to clean technologies - including renewable energy, electric vehicles and nuclear power - and 1 trillion dollars directed toward coal, gas, and oil (Figure 22). Clean energy investment in the European Union has increased as governments respond to the global energy crisis and the reduction in Russian gas supplies.

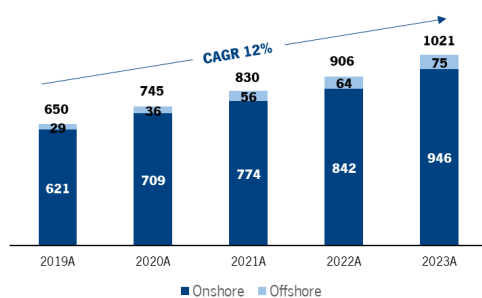
Cost reductions | Despite the energy crisis and the rising prices, the LCOE continues to fall. This happens due to the combination of technological progress, growth in installation capacity, supply chain integration, and economies of scale. In 2023, Onshore wind was the cheapest form of clean energy production, with a global average levelized cost of 0.033 €/kWh (Figure 23). Although the Offshore wind sector is currently cost-intensive, as it expands, it will become cost-competitive (IRENA, 2024).

Offshore Growth | Although Offshore wind turbines require more durability, energy transport and installation costs, they also provide faster returns in the long run, given their bigger turbine size and higher wind speeds (Figure 24). Thus, more companies want to invest in Offshore wind turbines, because they can reach more power than Onshore turbines.

SUPPLY DRIVERS

Wind Capacity | Wind electricity generation has achieved the highest growth among all renewable energies in recent years. Globally, in 2023, the total installed wind capacity was 1,021 GW, with a growth of 13% (Figure 25). New installations in the Onshore wind market surpassed 100 GW, while new Offshore wind capacity reached nearly 11 GW last year. This made 2023 the highest year on record for new Onshore wind installations and the second highest for Offshore wind capacity (GWEC, 2024b). The global Offshore wind market outlook predicts that more than

Figure 25: Historic Total Installations (GW)



Source: Author, GWEC

410 GW of Offshore wind capacity is expected to be added until 2033 (GWEC, 2024a).

Technological Progress | Technology plays an important role in enhancing farm efficiency and boosting energy production, which contributes to higher cash flows and increases the global consumption of renewable energy. Furthermore, this progress is improving the outlook for Offshore wind. The Service segment is increasingly dependent on technology and forecasted analysis to reduce maintenance costs and increase turbine availability.

Entry Barriers | The turbine production industry requires a large investment, as well as high specialization, making the entry of new competitors unfavourable. Inflation and the Russia/Ukraine conflict increase the prices of raw materials such as steel, thus increasing the cost of producing the turbines (Anchustegui & Hunter, 2024). In the energy transition, oil giants looking to move to renewable energy have entered the wind market as developers, saturating the buyer side and bringing their financial strength as wind customers.

Figure 26: Porter's Five Forces Analysis



Source: Author

COMPETITIVE POSITIONING

When examining the top 10 wind turbine manufacturers, Vestas' competitors are selected based on their similarities in industry, business description, growth, profitability, risk, and size. As result, Vestas' peer group includes Siemens Energy, Nordex, Goldwind, Ming Yang, Ørsted, Inox Wind, and SANY (Appendix 5). To further enhance the competitive analysis, Porter's Five Forces (Figure 26) are presented below, while the SWOT analysis, summarized in Figure 27, is presented in more detail in Appendix 6.

Suppliers' Bargaining Power – High (4)

There are many supplier options for wind turbine components, but to be a global leader in sustainable solutions, it is crucial to have a network of professional suppliers that align with the company's goals and values. Additionally, certain national regulations and funding sources require that some components be manufactured in specific countries, which limits Vestas' supplier options. Therefore, establishing long-term partnerships with suppliers that meet the company's specific needs is essential and can reduce exposure to suppliers' bargaining power.

Customers' Bargaining Power – Low (2)

Although customers are becoming more sophisticated, there are few alternative wind turbine OEMs, resulting in more customers than producers. Additionally, the length of service contracts locks customers in and PPAs establish long-term contracts, thereby reducing customer's bargaining power. Furthermore, customers

Figure 27: SWOT Analysis



Source: Author

tend to prefer Vestas' products over those of competitors' due to their superior technology.

Competitive Rivalry – High (4)

In the renewable energy industry, the five major wind turbine OEMs that dominate the market based on capacity are Goldwind, Envision, Vestas, Windey, and Ming Yang. The competition is intense, with each company striving to produce Onshore and Offshore turbines with the lowest LCOE. To achieve this, these industry leaders are making significant investments in R&D to develop superior turbines. While all of them focus on offering integrated, data-driven services, and maintenance warranties, Vestas seems to focus more intensively on this strategy.

Threat of New Entrants – Low (2)

The threat of new entrants is considered low, as providing quality products requires significant investment in expensive and highly specialized equipment, as well as specially trained engineers and technicians, to support development and ensure safety. Additionally, making substantial investment in R&D is essential for continuous innovation and staying ahead of the competition. However, this threat may increase due to growing incentives and subsidies in the renewable industry, combined with the commitment of oil and gas companies to reduce their polluting activities and diversify into the renewable sector.

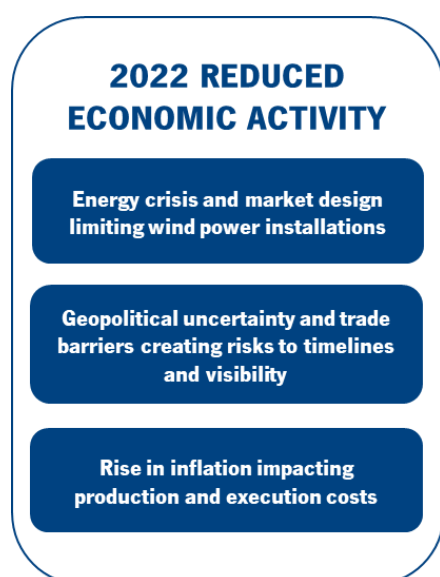
Threat of Substitutes – Moderate (3)

In the renewable energy sector, wind energy, solar energy, natural gas and nuclear energy all compete directly to achieve the lowest LCOE. However, in the pursuit of decarbonization, no single renewable source can succeed alone. The key will be hybrid solutions that enable more consistent and predictable energy production.

FINANCIAL ANALYSIS

Over the past five historical years (2019-2023), Vestas has demonstrated positive sales growth and it has worked to stabilize its margins. However, in 2022 the net income was negative, marked by reduced economic activity (Figure 28). Offshore revenue in 2022 declined due to the Russia/Ukraine conflict and project delays, although this was partially offset by Service revenue. The company faced decreases in both gross margin and EBIT, primarily driven by lower profitability in Power Solutions caused by impairments, warranty provisions, and supply chain instability. Thus, as evident in the company's ratios comparing to the previous years, Vestas' performance in 2022 was negatively impacted (Vestas, 2022). Despite this, Vestas did the biggest investment in Ukraine in 2025, since the war broke out in February 2022. Throughout the forecast period (2024-2030), the company is expected to continuously enhance profitability, driven by increased revenue from higher

Figure 28: 2022 Headwinds



Source: Author, Company Data

volumes and rising average prices on turbine deliveries in Power Solutions. An increase in gross margin is also anticipated due to higher activity levels and better underlying performance in the Power Solutions business, slightly offset by lower profitability in the Services segment (Table 4).

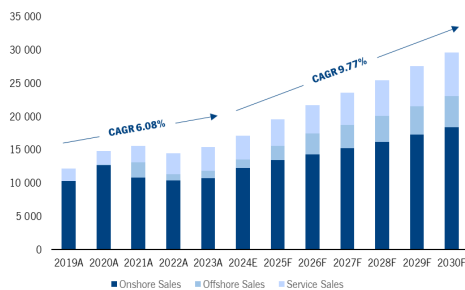
In early 2025, US President Donald Trump declared an energy emergency, aiming to cut subsidies for renewable energy and prioritize oil. However, according to Vestas CEO Henrik Andersen, this is a normal action, given the heavy subsidies the industry has received for years. Vestas has 45 GW installed in the US, representing a significant portion of the country's wind installations. While Trump's policies may impact projects on federal lands, projects on private lands remain largely unaffected. Additionally, Offshore wind projects may face significant challenges, but the Onshore backlog is robust and expected to continue well in the coming years. Regarding potential tariffs on EU products entering the US, Vestas is prepared to deal with such regulatory and macroeconomic changes due to its strong market presence and diversified portfolio, along with existing supply chains. It is also important to note that the global average temperature has surpassed the 1.5°C mark compared to pre-industrial levels, highlighting the urgency for continued efforts in renewable energy. The world is undergoing a major energy transition, the largest ever seen, so Vestas' earnings are expected to remain stable due to growing demand for renewable energy, despite temporary setbacks (CNBC, 2025). The forecasted financial statements are presented in Appendices 7, 8, 9, 10, and 11.

Table 4: Vestas Key Financials: Actual Values for 2021-2023, Expected Values for 2024 and Forecasted Values for 2025-2030

KEY FINANCIALS (thousands €)	FY 2021A	FY 2022A	FY 2023A	FY 2024E	FY 2025F	FY 2026F	FY 2027F	FY 2028F	FY 2029F	FY 2030F
Onshore sales	10 766 000	10 398 000	10 680 000	12 255 300	13 388 915	14 259 195	15 186 042	16 173 135	17 224 389	18 343 974
Offshore sales	2 337 000	933 000	1 134 000	1 275 750	2 191 101	3 144 229	3 537 258	3 908 670	4 319 081	4 686 202
Service sales	2 484 000	3 155 000	3 568 000	3 568 000	4 005 080	4 275 423	4 835 503	5 372 244	5 968 563	6 511 703
Total sales	15 587 000	14 486 000	15 382 000	17 099 050	19 585 096	21 678 847	23 558 804	25 454 049	27 512 033	29 541 879
EBIT	289 000	-1 596 000	292 000	640 000	1 366 088	1 748 000	2 354 735	2 544 168	2 749 866	2 952 752
Net income	134 000	-1 572 000	77 000	330 827	894 445	1 164 482	1 600 872	1 723 142	1 855 514	1 984 128
MARGINS										
Gross profit margin	12.81%	3.40%	10.53%	13.85%	17.08%	18.17%	20.10%	20.10%	20.10%	20.10%
EBITDA margin	8.15%	-3.51%	5.99%	9.34%	12.57%	13.66%	15.59%	15.59%	15.59%	15.59%
EBIT margin	1.85%	-11.02%	1.90%	3.74%	6.98%	8.06%	10.00%	10.00%	10.00%	10.00%
Net margin	0.86%	-10.85%	0.50%	1.93%	4.57%	5.37%	6.80%	6.77%	6.74%	6.72%
PROFITABILITY RATIOS										
Payout ratio	37.68%	0.00%	0.00%	0.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%
Net operating profit margin	1.45%	-8.59%	1.48%	2.92%	5.44%	6.29%	7.80%	7.80%	7.80%	7.80%
ROE	5.52%	-40.74%	7.35%	13.72%	25.94%	27.73%	30.69%	27.75%	25.54%	23.68%
Operating ROA	6.07%	-40.04%	7.32%	12.60%	22.49%	24.47%	28.93%	27.48%	26.28%	25.00%
SOLVENCY RATIOS										
D/E	30.57%	79.31%	111.34%	73.74%	73.74%	73.74%	73.74%	73.74%	73.74%	73.74%
Interest coverage ratio	3.75	17.35	1.06	3.11	9.05	9.77	10.93	9.58	8.60	7.82
Net debt-EBITDA ratio	-0.77	-0.10	0.07	0.37	0.30	0.26	0.11	0.02	-0.06	-0.13
LIQUIDITY RATIOS										
Current ratio	1.01	1.01	1.06	0.99	1.05	1.11	1.20	1.29	1.37	1.45
Cash ratio	0.19	0.18	0.24	0.13	0.14	0.17	0.24	0.30	0.36	0.42
OPERATING & ASSET MANAGEMENT										
CAPEX/Sales	7.51%	6.58%	6.78%	8.34%	6.81%	7.50%	7.40%	7.69%	7.66%	7.97%
Operating working capital	2 918 000	3 564 000	4 097 000	4 588 946	5 256 137	5 818 046	6 322 578	6 831 214	7 383 524	7 928 282
Depreciation and amortization rate	6.30%	7.51%	5.05%	5.59%	5.59%	5.59%	5.59%	5.59%	5.59%	5.59%
Accounts receivable turnover	10.18	11.32	11.79	10.25	10.25	10.25	10.25	10.25	10.25	10.25
Inventory turnover	2.40	2.20	2.11	2.00	1.93	1.90	1.86	1.86	1.86	1.86
Accounts payable turnover	3.64	3.54	4.12	3.86	3.86	3.86	3.86	3.86	3.86	3.86

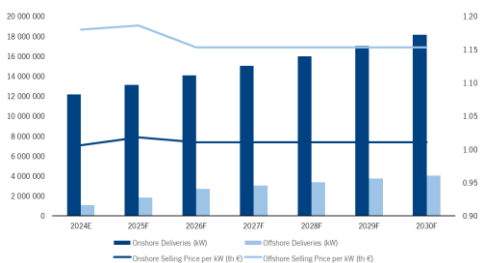
Source: Author, Company Data

Figure 29: Total Sales Evolution in 2019A-2030F (m€)



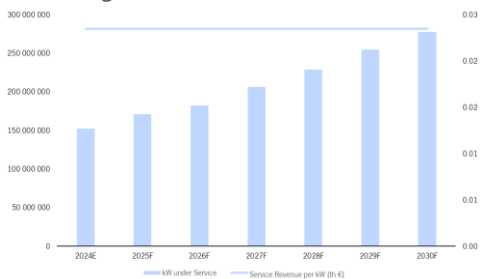
Source: Author, Company Data

Figure 30: Onshore and Offshore Sales Breakdown



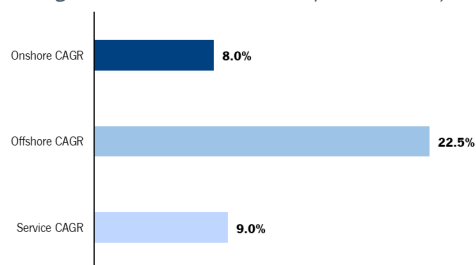
Source: Author, Company Data

Figure 31: Service Sales Breakdown



Source: Author, Company Data

Figure 32: Vestas' Sales CAGR (2024E-2030F)



Source: Author, Company Data

REVENUE GROWTH WITH OFFSHORE EXPANSION

The historical 5-year (2019-2023) CAGR of total sales is 6.08%, including a growth rate of -7.06% for 2022, which reflects the poor performance during that year, mainly in the Offshore segment. Based on the extrapolated data from Vestas (2024b), the projected total sales for FY 2024 indicate a growth rate of 11.16%. For the forecast period (2024-2030), a CAGR of 9.77% is estimated (Figure 29). Vestas' revenue is driven by its three segments – Onshore, Offshore, and Service, which are forecasted separately and are in line with the company's projections. Onshore and Offshore revenues are determined by kW deliveries and selling prices, based on Vestas' information and supplemented with the market expectations. For deliveries, positive growth is applied until 2030 (6.5% in the Onshore and 21.9% in the Offshore), which aligns with the analysts' estimates (Vestas, 2024a). For selling prices, beyond 2026, the assumption is to use the estimated price in 2026 as a proxy for the future (1.01k€ per kW in the Onshore and 1.15k€ per kW in the Offshore). In the Offshore segment, a reduction in selling prices is expected, so that Vestas can compete in terms of price with other renewable energies and achieve competitive LCOE (Figure 30). In the Service segment (Figure 31), the revenue is determined by the kW under service, which is assumed to have a positive growth during the forecasted period (9.0%), and the Service revenue per kW, which is assumed to remain equal to the one in 2023 (0.02k€ per kW).

Vestas has managed to grow in the three segments, with Onshore being the one that contributes the most to revenue. In 2023, the Onshore segment contributed to 69% of revenue within Power Solutions division, which accounts for 77% of Vestas's total revenue. The growth in the Onshore segment is expected to slow down in the upcoming years as subsidies are phased out, reaching a CAGR of 8%. However, the Offshore segment is expected to achieve a CAGR of approximately 22.5%, expanding rapidly with strong growth in the years 2025 and 2026. In the Service segment, a CAGR of 9% is expected, thereby increasing Service revenue by 1.8 times, reflecting a growth in kW under service due to the boom in the Offshore segment and the significant potential of the renewable energy sector (Figure 32). Therefore, by 2030, total revenue is expected to be approximately 30 billion euros (Appendix 12).

MARGINS

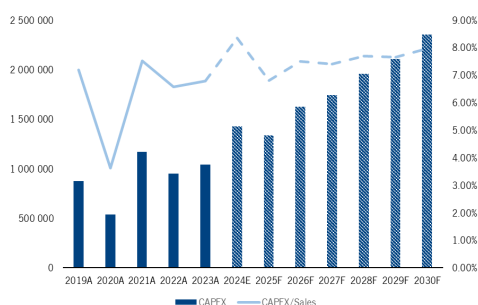
Vestas' 5-year historical averages of EBITDA, EBIT, and net margin are relatively low at 6.60%, 1.20%, and 0.29%, respectively. These low margins are due to rising costs, geopolitical uncertainty, warranty provisions, and Service segment challenges in the recent years. However, compared to its peers, Vestas has slightly higher margins. Over the forecast period, Vestas is expected to significantly increase its margins, with anticipated increases in the first four forecast years and thereafter reaching constant margin levels of 15.59%, 10%, and 6.72% by 2030.

Figure 33: Margins Trend (2019A-2030F)



Source: Author, Company Data

Figure 34: CAPEX Spending from 2019A-2030F (k€)



Source: Author, Company Data

Figure 35: Turnover Ratios Trend (2019A-2030F)



Source: Author, Company Data

Figure 36: Profitability Ratios Trend (2019A-2030F)



Source: Author, Company Data

This improvement is driven by operational efficiency, a strong order backlog, Service segment recovery, strategic priorities, and growing market demand. The gross profit margin has historically been low, but it is expected to gradually increase until 2027, stabilizing at 20.10% through 2030. This growth will primarily be driven by supply chain automation, production synergies, and falling raw material costs, such as steel. Moreover, productivity gains from Offshore expansion, economies of scale, modularization, and technological advancements are expected to enhance cost competitiveness and profitability. External factors, including stabilized inflation, improved geopolitical conditions, and a reduced risk of economic recession, are also anticipated to support this positive trajectory (Figure 33).

CAPEX, DEPRECIATION & AMORTIZATION, OPERATING WORKING CAPITAL AND CASH FLOWS

The expected increase in margins and profitability will allow the company to sustain significantly higher R&D spending compared to its peers, thereby maintaining its technological advantage. Overall CAPEX has been increasing throughout the historical period and in 2024 it is expected to be around 1 billion euros, which aligns with the company's assumptions (Vestas, 2024b). By 2030, investment is expected to double, reaching approximately 2 billion euros, achieving a CAGR of 12.33%. Vestas is committed to making substantial investment annually during the forecast period, resulting in a CAPEX of 8% as a percentage of total sales (Figure 34). This commitment is driven by the need to remain technological leader, expand the Offshore segment, and compete effectively in terms of costs with its competitors.

For the forecast period, depreciation and amortization are expected to remain stable at the 5-year historical averages. Vestas will maintain a negative operating working capital position, leveraging supplier credit while receiving upfront payments from customers. Operating working capital is based on accounts payable, accounts receivable, and inventory turnovers, which are functions of sales growth and are also expected to remain stable at the 5-year historical averages (Figure 35). Overall, strong cash flow growth is expected by the end of the forecast period, following initial negative cash flows in the historical years and in 2024 (Appendix 13).

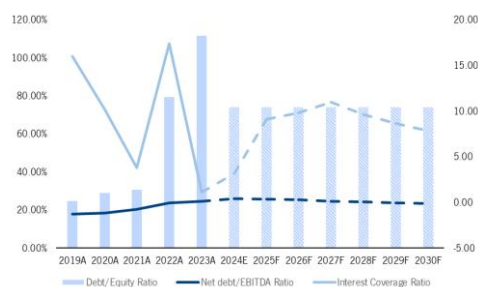
PROFITABILITY, SOLVENCY AND LIQUIDITY

In terms of profitability, Vestas' operating ROA and ROE are expected to show a consistent growth after 2022, recovering from a level of around -40% caused by economic disruptions that impacted the business that year. By 2030, ROA is expected to reach 25.00% and ROE to reach 23.68% (Figure 36). The leverage effect on ROE is negative during the historical period and 2024, but it is expected to turn positive after 2024, which means that borrowing additional debt can increase shareholders' return. The payout ratio is anticipated to be 0% in 2024, as

Vestas did not distribute dividends in the last two years due to poor performance. Between 2025 and 2030, the payout ratio is expected to be 30%, aligning with the years when Vestas distributed dividends.

Regarding solvency, Vestas demonstrates a healthy capital structure and appears well equipped to pursue Offshore expansion. The D/E ratio is expected to remain at its 3-year historical average. The net debt to EBITDA ratio, which has been negative historically, turned positive in 2022 at 0.07 and increased to 0.37 in 2023. Between 2024 and 2028, Vestas is expected to reduce this ratio, returning to negative in 2029 and 2030. This negative value in the last two years aligns with the historical period and reflects the company's negative net debt, which supports its leverage capacity. The interest coverage ratio increases until 2028 and slightly decrease in the last two years of the forecast period. Overall, this trend suggests the company's ability to meet its interest obligations improves (Figure 37). In relation to liquidity, Vestas' current ratio is expecting to increase from 0.99 in 2024 to 1.45 in 2030, compared to the historical average of 1.06, meaning that Vestas ensures minimal financing risk in the short term. Overall, Vestas demonstrates solid solvency and liquidity, with expectations for further improvement. For more details on assumptions, please refer to Appendix 14.

Figure 37: Solvency Ratios Trend (2019A-2030F)



Source: Author, Company Data

Table 5: FCFF and Terminal Value Estimates

Free Cash Flows to Firm (thousands €)	
FY 2026F	387 960
FY 2027F	905 810
FY 2028F	943 553
FY 2029F	1 025 108
FY 2030F	1 057 375
Terminal Value	22 714 369

Source: Author

VALUATION

The **BUY** recommendation for Vestas is backed by a 2025 year-end target price of 19.40€, which indicates a 32% upside potential from the closing price of 14.67€ on February 5th, 2025. This recommendation is supported by a DCF analysis, designed to incorporate premiums derived from leading technology, synergies from Offshore expansion and Vestas' strong position in the renewable transition. To ensure the robustness of the DCF and incorporate the investment risks detailed in the following section, a Sensitivity Analysis, a Scenario Analysis, and a Monte Carlo Simulation are carried out. This analysis is further supported by a Relative Valuation, and an Option Valuation, both of which corroborate the buy recommendation.

DISCOUNTED CASH FLOW VALUATION

The DCF valuation incorporates the FCFF methodology to estimate the cash flows over the projected period and the Gordon Growth Model to determine the Terminal Value (Table 5). This model aligns with Vestas' innovative profile, enabling the incorporation of the company's high future growth prospects (Appendix 15), independent of its capital structure. Consequently, this approach yields an Enterprise Value of 19.4 billion euros and an Equity Value per share of 19.40€ at the end of 2025 as illustrated in table 6.

A WACC of 7.27% (Table 7) is used to calculate the present value of FCFF from 2026 to 2030 and the Terminal Value. The pre-tax cost of debt is determined by

Table 6: Vestas DCF Valuation Price FY 2025

DCF Valuation FY 2025 (thousands €)	
Enterprise value	19 421 153
Market value of debt	3 067 713
Value of cash and cash equivalents	2 209 969
MV Investments in JV and associates	1 049 610
MV Non-controlling interests	26 550
Value of equity	19 586 468
Value of equity per share	19.40 €
Result	Undervalued

Source: Author

Table 7: Vestas WACC FY 2024

Weighted Average Cost of Capital FY 2024	
Market value of equity (k€)	13 281 118.84
Market value of debt (k€)	3 318 150.00
D/V	19.99%
E/V	80.01%
Cost of debt (pre-tax)	3.56%
Tax rate (marginal)	22.00%
After tax cost of debt	2.78%
Risk free rate (10y bond yield)	2.36%
Market risk premium	5.84%
Relevered beta	1.03
Cost of equity	8.40%
WACC	7.27%

Source: Author

adding the default spread of Vestas' average bond rating to the risk-free rate (2.36%), which corresponds to the 10-year German government bond yield. The tax rate applied (22%) is the same used to compute the NOPAT and it is the Denmark's marginal tax, retrieved from Damodaran (2024). Using the CAPM formula, the cost of equity is calculated with the risk-free rate, a re-levered beta of 1.03 based on the selected peers, and an equity risk premium weighted by operating region sales FY 2024 (5.84%). The market debt to equity ratio stands at 19.99%, reflecting long-term expectations for Vestas' debt level. For this ratio, the market value of equity (13.28 billion euros) is computed at the end of 2024 and the market value of debt² (3.32 billion euros) is based on its traded bonds and non-bond debt. Furthermore, an alternative WACC is calculated using the unlevered beta of the Green & Renewable Energy industry (Damodaran, 2024). By keeping all the other variables constant, a WACC of 5.80% is obtained, which is relatively low compared to the WACC derived from the primary approach (Appendix 16).

Based on the euro interest rate swap forward curve for 2030, sourced from the European Central Bank (2024), the terminal growth rate is projected to stabilize at 2.50% after 2030. This rate serves as a proxy for the risk-free rate and reflects the perpetual growth expected for Vestas. Consequently, the Terminal Value is estimated at 22.71 billion euros, with an implied exit multiple EV/EBITDA of 4.22x. The present value of the Terminal Value comprises 82.33% of the Enterprise Value.

SENSITIVITY ANALYSIS

A Sensitivity Analysis is conducted to assess the robustness of the DCF model and to understand the impact of critical variables on the buy recommendation. This analysis focuses on key inputs, including WACC, terminal growth rate, kW deliveries, average selling price, and COGS/Revenues ratio.

Based on this analysis and considering a high-risk perspective for Vestas, a 1% increase in WACC or a 1% decrease in the terminal growth rate would change the recommendation to reduce and hold, respectively. A common variation in these two variables would lead to a sell recommendation (Table 8). However, Vestas is an already established company with advanced technology and it is playing a key role in the renewable transition, poised to grow faster than the economy. Thus, it is more likely that the Terminal Value poses an upside potential rather than a downside threat. Using an alternative WACC, based on Damodaran's industry beta, a 1% variation in WACC would result in a strong buy recommendation. However, the WACC obtained with this approach is considered low, given the company's fundamentals (Appendix 17).

Table 8: Sensitivity Analysis: WACC and LTGR

WACC (Bottom-Up Approach)	Terminal Growth Rate					
	1.50%	2.00%	2.50%	3.00%	3.50%	
	6.27%	20.10 €	22.11 €	24.66 €	27.98 €	32.51 €
	6.77%	18.14 €	19.74 €	21.72 €	24.22 €	27.48 €
	7.27%	16.52 €	17.82 €	19.40 €	21.33 €	23.79 €
	7.77%	15.17 €	16.24 €	17.51 €	19.06 €	20.96 €
	8.27%	14.01 €	14.91 €	15.96 €	17.21 €	18.73 €

Source: Author

Table 9: Sensitivity Analysis: WACC and kW Deliveries

WACC (Bottom-Up Approach)	KW Deliveries					
	-15.00%	-5.00%	0.00%	5.00%	15.00%	
	6.27%	22.88 €	24.07 €	24.66 €	25.25 €	26.43 €
	6.77%	20.29 €	21.24 €	21.72 €	22.19 €	23.14 €
	7.27%	18.25 €	19.01 €	19.40 €	19.78 €	20.54 €
	7.77%	16.59 €	17.21 €	17.51 €	17.82 €	18.44 €
	8.27%	15.22 €	15.71 €	15.96 €	16.21 €	16.70 €

Source: Author

² An alternative approach is also applied to calculate the market value of debt. However, the market value of debt (3.74 billion euros) and the WACC (7.15%) derived from this approach do not differ significantly from those obtained in the primary method. In this approach, it is assumed that the total debt would be structured as a single coupon bond, with the coupon rate set to align with Vestas' interest expenses and the maturity determined based on the weighted average maturity of the company's debt.

Table 10: Sensitivity Analysis: WACC and ASP

		Average Selling Price				
		-15.00%	-5.00%	0.00%	5.00%	15.00%
WACC (Bottom-Up Approach)	6.27%	24.45 €	24.59 €	24.66 €	24.73 €	24.86 €
	6.77%	21.52 €	21.65 €	21.72 €	21.78 €	21.91 €
	7.27%	19.21 €	19.33 €	19.40 €	19.46 €	19.58 €
	7.77%	17.34 €	17.46 €	17.51 €	17.57 €	17.69 €
	8.27%	15.80 €	15.90 €	15.96 €	16.01 €	16.12 €

Source: Author

Table 11: Sensitivity Analysis: WACC and COGS

		COGS/Revenues				
		-2.00%	-1.00%	0.00%	1.00%	2.00%
WACC (Bottom-Up Approach)	6.27%	36.23 €	30.45 €	24.66 €	18.87 €	13.08 €
	6.77%	32.01 €	26.87 €	21.72 €	16.57 €	11.42 €
	7.27%	28.68 €	24.04 €	19.40 €	14.75 €	10.11 €
	7.77%	25.98 €	21.74 €	17.51 €	13.28 €	9.05 €
	8.27%	23.74 €	19.85 €	15.96 €	12.07 €	8.17 €

Source: Author

Regarding the uncertainty on the revenue, even with a significant decline of 15% in the kW deliveries (Table 9) or in the average selling price (Table 10), the buy recommendation would still remain justified, due to Vestas' consistent pricing discipline and continually expanding order backlog. On the other hand, a 2% increase in the COGS/Revenues (Table 11) over the forecasted period would result in a downgrade of the recommendation to sell, while a 2% decrease would lead to a strong buy recommendation. Nonetheless, these scenarios are highly unlikely, as Vestas manages these risks through a combination of customer indexing, fixed-price agreements with suppliers, and commodity contracts.

SCENARIO ANALYSIS

A Scenario Analysis is conducted to examine how simultaneous changes in kW deliveries, average selling price, COGS/Revenues ratio, and WACC impact the outcomes of two potential scenarios: pessimistic case and optimistic case. For the different scenarios, the analysis considers whether Vestas fails or succeeds in sustaining its technological leadership, expanding in the Offshore market, and competing on cost with renewable alternatives.

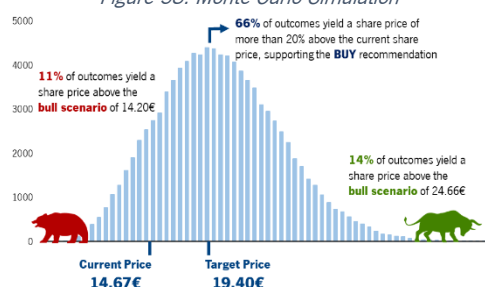
In the pessimistic case, Vestas fails to sustain its technological leadership, expand in the Offshore market, and compete on cost globally with renewable alternatives. This scenario results in a percentage change in the current price of -3.20%, leading to a sell recommendation. In the base case, Vestas manages to successfully maintain its technological advantage, partially expand in the Offshore market, and operate in a market where wind and solar energy have comparable LCOE and complement each other. In the optimistic case, Vestas succeeds in widening its technological gap with peers, totally expanding in the Offshore market, and competing on costs globally with renewable alternatives, with wind becoming the new preferred source of energy. This scenario results in a percentage change in the current price of 68.07%, leading to a strong buy recommendation (Table 12).

Table 12: Scenario Analysis

Scenarios	Pessimistic Case	Base Case	Optimistic Case
Δ KW deliveries	-3.00%	0%	3.00%
Δ Average selling price	-2.00%	0%	2.00%
Δ COGS/Revenues	0.75%	0%	-0.25%
Δ WACC	0.50%	0%	-0.50%
Value of equity per share (€)	14.20 €	19.40 €	24.66 €
% change from current price	-3.20%	32.18%	68.07%
Recommendation	SELL	BUY	STRONG BUY

Source: Author

Figure 38: Monte Carlo Simulation



Source: Author

A Monte Carlo simulation using 100,000 trials is also conducted to provide a more comprehensive view of the trajectory of Vestas' share price under conditions of uncertainty. The key variables analysed are WACC, terminal growth rate, kW deliveries, average selling price, and COGS/Revenues ratio. The analysis reveals that 65.67% of simulations yield a share price equal to or greater than 20% of the current price and only 13.62% of simulations suggest a sell recommendation, further strengthening the buy recommendation presented in this report. Furthermore, there is a 13.87% probability of the share price being equal to or above the bull case and an 11.14% probability of being equal to or below the bear case (Figure 38). Therefore, this analysis reveals a substantial likelihood for significant share price growth (Appendix 18).

Table 13: Vestas' Peer Companies

Name	Industry	Business Description	Growth	Profitability	Risk	Size
			1-year revenue growth	EBITDA margin	Debt/Equity	EV
Vestas	Renewable Energy	Appendix 5	14.5%	6.6%	N/A	15 358.8
Siemens Energy	Renewable Energy	Appendix 5	8.6%	3.4%	N/A	38 766.3
Nordex	Renewable Energy	Appendix 5	5.3%	3.9%	N/A	2 359.6
Goldwind	Renewable Energy	Appendix 5	15.4%	8.2%	69.7%	10 129.3
Ming Yang	Renewable Energy	Appendix 5	57.4%	1.4%	17.0%	4 054.8
Ørsted	Renewable Energy	Appendix 5	18.0%	32.9%	38.3%	28 158.7
Inox Wind	Renewable Energy	Appendix 5	164.2%	16.1%	N/A	3 034.5
SANY	Renewable Energy	Appendix 5	39.1%	12.1%	N/A	4 428.7

Source: Author, S&P Capital IQ

Table 14: Vestas Relative Valuation Price FY 2025

Relative Valuation FY 2025				
	Vestas	Peers Average	Share price	Result
EV/EBITDA	6.44x	9.37x	23.00 €	Undervalued
EV/EBIT	10.76x	14.25x	19.44 €	Undervalued
EV/MW	0.08x	0.15x	27.36 €	Undervalued
P/E	14.68x	12.11x	10.76 €	Overvalued
		Average	20.14 €	Undervalued

Source: Author

Table 15: Vestas Option Valuation Price FY 2025

Option Valuation FY 2025	
S = Enterprise value (k€)	19 421 153
K = Face value of outstanding debt (k€)	2 948 919
t = Weighted average of debt maturity	2.759
v = Variance in firm value	0.067081
r = Germany 3Y treasury bond	2.02%
d1	4.726431
d2	4.296261
Probability of default	0.00%
Value of equity (k€)	16 632 063
Value of equity per share	16.47 €
Result	Undervalued

Source: Author

RELATIVE VALUATION

To support Vestas' buy recommendation, a Relative Valuation is performed, comparing it with seven peer companies with similar industry, business description, growth, profitability, risk, and size (Table 13). Using the EV/EBITDA metric, the implied price target is 23.00€, which represents an upside of 57% and supports a strong buy recommendation. EV/EBITDA is the most appropriate multiple as it accounts for discrepancies related to capital structure, accounting practices, and non-cash expenses, ensuring consistent comparisons between different companies. In addition to this multiple, other metrics such as EV/EBIT, EV/MW, and P/E are also considered. The EV/MW metric is particularly useful for valuing renewable energy assets as it provides an estimate of portfolio value by considering the installed power generation capacity, expressed in MW. This metric is increasingly used because it applies to fundamental project characteristics such as stage of development, technology, and location, while requiring minimal externally available information (Deloitte, 2014).

Regarding the average of the five multiples, the share price of 20.14€ suggests that the stock is undervalued compared to the current price of 14.67€ as of February 5th, 2025. The EV/EBITDA, EV/EBIT, and EV/MW ratios follow the same trend, indicating undervaluation. However, when using an equity-related metric such as the P/E ratio, the result suggests overvaluation. A similar conclusion is reached when comparing Vestas' ratios with the averages of its peers for each multiple. For instance, Vestas' EV/EBITDA is 6.44, which is lower than the peers' average of 9.37, indicating it is undervalued (Table 14).

The discrepancy between the traditional EV multiples (EV/EBITDA, EV/EBIT, and EV/MW) and the P/E ratio can be attributed to differences in the capital structures of the peer companies. This is because the equity multiple is derived from after-debt cash flows, which vary based on each company's capital structure (Appendix 19).

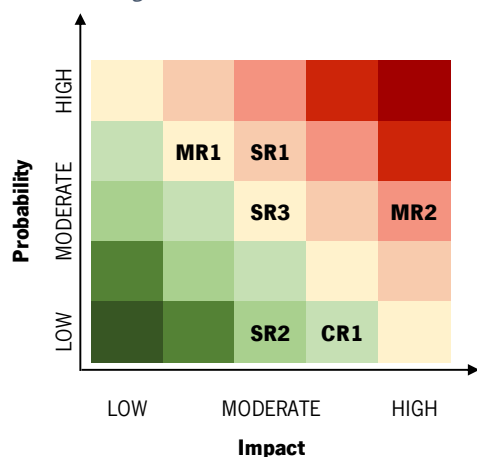
OPTION VALUATION

Moreover, the Option Valuation method is conducted to calculate the intrinsic value of Vestas and the Black-Scholes model for European options is applied to value Vestas' equity as a call option at the end of 2025. This method yields a share price of 16.47€ (Table 15), representing a 12.24% upside, further supporting the investment recommendation (Appendix 20).

INVESTMENTS RISKS

Vestas is a global company, which means it faces several risks inherent to its industry and the countries in which it operates (Figure 39). In this way, Enterprise Risk Management aims to manage these risks, support the fulfilment of its

Figure 39: Vestas' Risk Matrix



Source: Author

Table 16: SR Key Risks and Mitigation Summary

STRATEGIC RISKS	
Risks	Mitigation
SR1. Geopolitics & Regulatory Framework	- Global supply chain - Multiple supplier hubs - Adaptability to geopolitical and regulatory changes
SR2. Cyber	- Investment in cybersecurity capabilities - Development of commercial cybersecurity services
SR3. Scalability	- Industrialization - Standardization - Modularization

Source: Author

operational and strategic objectives, and protect and create value for shareholders. Based on the Annual Report of the company (Vestas, 2023a), the risks can be divided into: strategic risks (Table 16), market risks (Table 17), and climate risks (Table 18). While these threats have the potentially to harm profitability and reduce return on investment, high probability-high impact risks are not anticipated.

STRATEGIC RISKS (SR)

Geopolitics & Regulatory Framework (SR1) | Probability: Moderate high - Impact: Moderate

Vesta faces geopolitical tensions, high inflation, and trade restrictions (such as tariffs and other barriers to trade), which lead to higher costs and impact the ability to operate cost-effectively. Valuation impact: This is reflected in the Monte Carlo Simulation, where several inputs are varied simultaneously. This risk can impact the overall market share, including factors such as deliveries and COGS. However, in this analysis only 13.62% leads to a sell recommendation. Mitigation: Vestas operates around the world and has a global supply chain with multiple supplier hubs, enabling it to adapt for geopolitical drivers and regulatory changes.

Cyber (SR2) | Probability: Low - Impact: Moderate

Vestas, as a global provider of equipment and services for energy producers and infrastructure, is a potential target for cybercrime. Valuation impact: The sensitivity analysis shows that an increase in WACC of 1% leads to a stock price of 15.96€, representing 8.76% upside, which results in a reduce recommendation. Mitigation: The company continues to invest in its cybersecurity capabilities for medium and long-term solutions. Additionally, Vestas is in the process of providing certain commercial cybersecurity services, supporting customers with their needs and responsibilities.

Scalability (SR3) | Probability: Moderate - Impact: Moderate

There has been a growing gap between the governments' projected targets for wind energy and the pace at which projects are being carried out. Vestas considers that there is a risk related to the ability of governments to support renewable development ambitions and to support a sustainable and scalable supply chain. Valuation Impact: This risk is reflected in the bear scenario, where Vestas fails to compete on cost globally with renewable alternatives, resulting in a share price of 14.20€. This leads to a reduce recommendation with a -3.20% change from the current share price. Mitigation: Industrialization, standardization, and modularization strategies to enable a wide range of products and, at the same time, increase efficiency in the supply chain.

MARKET RISKS (MR)

Foreign exchange risk (MR1) | Probability: Moderate high - Impact: Moderate low

Table 17: MR Key Risks and Mitigation Summary

MARKET RISKS	
Risks	Mitigation
MR1. Foreign exchange risk	- Currency forward contracts - Currency swaps
MR2. Commodity price risk	- Customer indexing - Fixed price agreements with suppliers - Commodity contracts

Source: Author

Payments to suppliers can be in different currencies and revenue can come from different countries. The biggest exposure is to the EUR/USD exchange rate, as 37% of its 2023 Revenue come from Americas (Vestas, 2023a). Valuation Impact: This is reflected in the sensitivity analysis, which shows that a 15% decrease in average selling price leads to a stock price of 19.21€, representing a 30.93% upside. In that way, the buy recommendation present in this report would still remain justified. Mitigation: To mitigate risk, Vestas uses currency forward contracts and currency swaps.

Commodity price risk (MR2) | Probability: Moderate - Impact: High

Vestas is largely exposed to the volatility of the prices of its raw materials. Specifically, since wind turbines are mostly made of steel, fluctuations in steel price pose a substantial risk to the company. Valuation Impact: This risk is measured with the sensitivity analysis, which shows that a 2% increase in the COGS/Revenues ratio would result in a downgrade of the recommendation to sell, as the stock price would decrease to 10.11€, representing a -31.08% downside. Mitigation: This risk is managed through a combination of customer indexing, fixed price agreements with suppliers, and commodity contracts.

CLIMATE RISKS (CR)

Climate changes (CR1) | Probability: Low - Impact: Moderate high

Table 18: CR Key Risks and Mitigation Summary

CLIMATE RISKS	
Risks	Mitigation
CR1. Climate changes	- Grid modernization - Weather protection systems - Risk management processes

Source: Author

Extreme temperatures and natural disasters have the potential to impact Vestas' assets (turbines), but it also affects its operations and supply chains. Valuation Impact: The sensitivity analysis shows that a 15% drop in deliveries leads to a stock price of 18.25€, representing a 24.36% upside and supporting a buy recommendation. Therefore, even with a drop in deliveries, the buy recommendation presented in this report remains viable. Mitigation: The company assesses and monitors these risks through grid modernizations and weather protection systems. Climate change scenarios are also integrated into risk management processes.

In addition to the risks mentioned above, Vestas also identifies people as a strategic risk, interest rate risk as market risk, and liquidity and credit risk as financial risks (Appendix 21).

REFERENCES

- Anchustegui, I. H., & Hunter, T. S. (2024). *Offshore Wind Licensing*. Edward Elgar Publishing. <https://doi.org/10.4337/9781800886278>
- Börse Frankfurt. (2024). *Frankfurt Stock Exchange: Quotes, Charts and News*. <https://www.boerse-frankfurt.de/en>
- Business Norway. (2024). *Wind turbines and energy production*. <https://businessnorway.com/articles/wind-turbines-and-energy-production>
- CDP Climate. (2024). *CDP Scores and A Lists*. <https://www.cdp.net/en/data/scores>
- Citigroup. (2024). *Citi / Global Investment Bank and Financial Services*. <https://www.citigroup.com/global>
- CNBC. (2025). *Vestas CEO says Trump's climate retreat has been overblown*. <https://www.cnbc.com/video/2025/01/23/vestas-ceo-says-trumpas-climate-retreat-has-been-overblown.html>
- Corporate Knights. (2024). *The Global 100 list: How the world's most sustainable corporations are driving the green transition*. <https://www.corporateknights.com/rankings/global-100-rankings/2024-global-100-rankings/the-20th-annual-global-100/>
- Damodaran, A. (2024). *NYU Data Sets*. https://pages.stern.nyu.edu/~adamodar/New_Home_Page/data.html
- Deloitte. (2014). *A market approach for valuing wind farm assets: Global results*. <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Energy-and-Resources/gx-er-deloitte-valuing-wind-farm-assets-global-2014.pdf>
- EcoVadis. (2024). *ESG Scores*. EcoVadis. <https://ecovadis.com/glossary/esg-environmental-social-governance-investing/>
- European Central Bank. (2024). *Euro area yield curves*. https://www.ecb.europa.eu/stats/financial_markets_and_interest_rates/euro_area_yield_curves/html/index.en.html
- Goldwind. (2024). *GOLDWIND / Global Clean Energy Solutions_Wind Turbine Manufacturer & Wind Farm Solutions Provider*. <https://www.goldwind.com/en/>
- GWEC. (2024a). *GLOBAL OFFSHORE WIND REPORT 2024*. <https://www.gwec.net/reports/globaloffshorewindreport>
- GWEC. (2024b). *GLOBAL WIND REPORT 2024*. <https://www.gwec.net/reports/globalwindreport>
- GWEC. (2024c). *Wind Turbine Manufacturers See Record Year Driven by Growth in Home Markets*. <https://www.gwec.net/>
- IEA. (2024a). *Renewables 2024*. <https://iea.blob.core.windows.net/assets/17033b62-07a5-4144-8dd0-651cdb6caa24/Renewables2024.pdf>
- IEA. (2024b). *World Energy Investment 2024*. <https://iea.blob.core.windows.net/assets/60fcd1dd-d112-469b-87de-20d39227df3d/WorldEnergyInvestment2024.pdf>
- Inox Wind. (2024). *Inox Wind: Greening India*. <https://inoxwind.com/>
- Investing.com. (2025). *Investing.com—Stock Market Quotes & Financial News*. <https://www.investing.com/>
- IRENA. (2024). *Renewable Power Generation Costs in 2023*. https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2024/Sep/IRENA_Renewable_power_generation_costs_in_2023.pdf
- ISS ESG. (2024). *ESG Ratings & Rakings*. <https://www.issgovernance.com/esg/ratings/>

Lui, D., Markov, S., & Tamayo, A. (2012). Equity Analysts and the Market's Assessment of Risk. *Journal of Accounting Research*, 50(5), 1287–1318. <https://doi.org/10.1111/j.1475-679X.2012.00462.x>

Ming Yang. (2024). *Mingyang Intelligence—Innovative Clean Energy, Benefiting Human Society*. <https://www.myse.com.cn/en/>

MSCI. (2024). *ESG Ratings & Climate Search Tool*. <https://www.msci.com/our-solutions/esg-investing/esg-ratings-climate-search-tool>

Nordex SE. (2024). *Home / Nordex SE*. <https://www.nordex-online.com/en/>

Orbis. (2024). *Orbis / Home*. <https://login.bvdinfo.com/R1/Orbis>

Ørsted. (2024). *Ørsted—Love your home*. <https://orsted.com>

Refinitiv Eikon. (2024). *LSEG Workspace*. <https://www.lseg.com/en/data-analytics/products/eikon-trading-software>

SANY. (2024). *SANY R.E. Global*. <https://en.sanyre.com.cn/>

Siemens Energy AG. (2024). *Home / Siemens Energy AG*. <https://www.siemens-energy.com/global/en/home.html>

S&P Capital IQ. (2024). *S&P Capital IQ Pro*. S&P Global Market Intelligence. <https://www.spglobal.com/market-intelligence/en/solutions/products/sp-capital-iq-pro>

S&P Global DJSI. (2024). *ESG Scores: Rating company ESG performance / S&P Global*. <https://www.spglobal.com/esg/solutions/esg-scores-data>

Sustainalytics. (2024). *Company ESG Risk Ratings and scores—Sustainalytics*. <https://www.sustainalytics.com/esg-ratings>

Vestas. (2019). *Annual Report 2019*.

Vestas. (2020). *Annual Report 2020*. https://www.vestas.com/content/dam/vestas-com/global/en/investor/reports-and-presentations/financial/2020/210210_01_Annual_Report_2020.pdf.coredownload.inline.pdf

Vestas. (2021). *Annual Report 2021*. <https://www.vestas.com/content/dam/vestas-com/global/en/investor/reports-and-presentations/financial/2021/vestas-annual-report-2021.pdf.coredownload.inline.pdf>

Vestas. (2022). *Annual Report 2022*.

Vestas. (2023a). *Annual Report 2023*. <https://www.vestas.com/content/dam/vestas-com/global/en/investor/reports-and-presentations/financial/2023/2023-annual-report/Annual%20Report%202023.pdf.coredownload.inline.pdf>

Vestas. (2023b). *Sustainability Report 2023*. <https://www.vestas.com/content/dam/vestas-com/global/en/investor/reports-and-presentations/financial/2023/2023-annual-report/Sustainability%20Report%202023.pdf.coredownload.inline.pdf>

Vestas. (2024a). *Global Leader in Sustainable Energy / Vestas*. <https://www.vestas.com/en>

Vestas. (2024b). *Interim Financial Report Third quarter 2024*. https://www.vestas.com/content/dam/vestas-com/global/en/investor/reports-and-presentations/financial/2024/q3-2024/241105_16_Company_Announcement.pdf.coredownload.inline.pdf

APPENDICES

APPENDIX 1: INVESTMENT RECOMMENDATION SYSTEM

Vestas’ investment recommendation is based on the following system:

Level of Risk	SELL	REDUCE	HOLD/NEUTRAL	BUY	STRONG BUY
High Risk	≤ 0%	> 0% & ≤ 10%	> 10% & ≤ 20%	> 20% & ≤ 45%	> 45%
Medium Risk	≤ -5%	> -5% & ≤ 5%	> 5% & ≤ 15%	> 15% & ≤ 30%	> 30%
Low Risk	≤ -10%	> -10% & ≤ 0%	> 0% & ≤ 10%	> 10% & ≤ 20%	> 20%

Source: Author, Citigroup

APPENDIX 2: ESG TARGETS

Long-term sustainability ambitions	FY 2025F	FY 2030F
Scope 1 & 2 emissions	-25%	-100%
Scope 3 emissions	-	-45%
Material efficiency rate	1.2	0.2
Share of women in leadership positions	25%	30%
Injury rate (TRIR)	1.5	0.6

Source: Author, Company Data

APPENDIX 3: OVERVIEW OF BOARD DIRECTORS

Name	Position	Member since	Independent	Shares (2023)	Resident	Education	Work Experience
Anders Runevad	Chair	2020	No	40,480	Sweden	- MBA studies, University of Lund - Master of Science in Electrical Engineering, University of Lund	- Professional board member - Chair of the board of Peab AB. Member of the board of Schneider Electric SE
Karl-Henrik Sundström	Deputy Chair	2020	Yes	8,200	Sweden	- Advanced Management Program, Harvard Business School - Trainee Financial Management, LM Ericsson Group - Business Administration, specialising in Finance and Accounting, Uppsala University	- Professional board member - Chair of the board of Boliden AB. Member of the board of NXP Semiconductors NV
Eva Merete Søfelde Berneke	Member	2019	Yes	17,295	France	- MBA program, INSEAD - Master of Mechanical Engineering, Technical University of Denmark - Master studies in Economics, École Centrale Paris	- Chief Executive Officer, Eutelsat SA - Member of the boards of École Polytechnique and LEGO A/S
Helle Thorning-Schmidt	Member	2019	Yes	2,770	UK	- Master's Degree in European Studies, College of Europe in Bruges - Master's Degree in Political Science, University of Copenhagen	- Professional board member - Chair of the Danish Football Union (DBU) Governance and Development Committee
Henriette Thygesen	Member	2024	Yes	N/A	Denmark	- Executive MBA "E-MBA Global", Columbia University New York /London Business School - Ph.D. in Applied Mathematics, Copenhagen Business School	- President & CEO, Terma A/S - Executive Vice President and Chief Customer Delivery Officer, A.P. Møller - Mærsk A/S
Lena Olving	Member	2022	Yes	730	Sweden	- Master of Science in Mechanical Engineering, Chalmers University of Technology	- Founder & Partner of Olving & Ohberg AB - Member of the boards of Assa Abloy AB, Investment AB Latour, and NXP Semiconductor NV
Claus Skov Christensen	Employee representative	2022	No	N/A	Denmark	- Industry technician trainee, Rubens Maskinfabrik A/S	- Lead Technician – Shop Steward for Danish Service Technicians, Vestas Northern Europe A/S - Member of the board of DM Skjern-Ringkøbing P/S.
Michael Abildgaard Lisbjerg	Employee representative	2008	No	N/A	Denmark	- Quality Optimization with Six Sigma, Erhvervsakademi MidtVest - Economy and Logistics, Erhvervsakademi MidtVest	- Skilled Worker – Production and Shop Steward, Vestas Manufacturing A/S - Deputy chair of the boards of DM Skjern-Ringkøbing P/S and DMSR af 24.
Sussie Dvinge	Employee representative	2005	No	N/A	Denmark	- IT Administrator, Ringkøbing Business College/Vestjysk Business College, Skjern - Language secretary (German and English) - Open education at HIH Herning	- Management Assistant, Power Solutions, Quality Improvements, and Processes, Vestas Wind Systems A/S.
Louise B. Schmidt Nielsen	Employee representative	2024	No	N/A	Denmark	- Project Management, Vestas Wind Systems A/S - Forwarder, Shipping & Logistics, University of Aarhus	- Supply Chain & Transport HSE Specialist Shop Steward - White Collars Denmark Vestas Wind Systems A/S - Global QHSE Business Partner to Global Supply Chain & Transport

Source: Author, Company Data

APPENDIX 4: OVERVIEW OF EXECUTIVE MANAGEMENT



Group President & CEO
Henrik Andersen



Interim EVP & CFO
Rasmus Gram



EVP & CSO (Service)
Christian Venderby



EVP & CSO (Sales)
Javier Rodriguez Diez



EVP & CTOO
Anders Nielsen



EVP Digital Solutions and Development
Thomas Alsbjerg



EVP People & Culture
Anne Pearce

Source: Author, Company Data

Name	Position	Appointed	Shares (2023)	Resident	Education	Work Experience
Henrik Anderson	Group President & CEO	2019	144,071	Denmark	- Graduate Diploma in International Business, Aarhus School of Business - Master in Law, University of Aarhus	- Group President & CEO, Hempel A/S - Group Chief Operating Officer, EMEA, ISS A/S
Rasmus Gram	Interim Executive Vice President & CFO	2024	N/A	Denmark	- Bachelor of Economics and Business Administration Copenhagen Business School	- Senior Vice President, Vestas Asia Pacific - Vice President, Vestas Service Finance
Christian Venderby	Executive Vice President & CSO, Service	2019	42,529	Denmark	- Business Program at IMD - General Management Program at CEDEP - Graduate Diploma, Finance, Copenhagen Business School	- Group Senior Vice President, Service, Vestas Wind Systems A/S - Chief Operating Officer, Vestas-American Wind Technology, Inc.
Javier Rodriguez Diez	Executive Vice President & CSO, Sales	2021	8,981	Denmark	- Executive Development Program, IMD, Lausanne - Executive MBA, IE Business School, Madrid - Industrial Engineer, Electromechanical, University Carlos III Madrid	- President, Vestas Mediterranean A/S - SVP Global Sales, Vestas Wind Systems A/S
Anders Nielsen	Executive Vice President Vestas Power Solutions & CTO, Technology	2020	12,743	Sweden	- B.Sc. in Industrial Engineering from the University of Linköping	- CTO Traton Group - CEO MAN Truck & Bus AG
Thomas Alsbjerg	Executive Vice President, Vestas Digital Solutions and Vestas Development	2022	5,120	Denmark	- M.Sc. Engineering, Technical University of Denmark - B.Sc. Finance, Copenhagen Business School	- Group Senior Vice President, Head of Vestas Development, Vestas - GSVP, interim Chief Procurement Officer, Vestas
Anne Pearce	Executive Vice President, Vestas People and Culture	2024	N/A	Denmark	- MBA, Melbourne Business School - Bachelor of Commerce, University of Melbourne	- Vice President human Resources, Shell, London, UK - Vice President Human Resources, Shell, The Hague, Netherlands

Source: Author, Company Data

Siemens Energy AG, a global energy technology company based in Germany, operates through four main segments: Gas Services, Siemens Gamesa, Grid Technologies, and Industrial Transformation. The company provides a comprehensive range of energy solutions for power generation, transmission, and renewable energy, including turbines, compressors, electrolyzers, grid infrastructure, and wind energy systems. Through Siemens Gamesa, a leading provider of wind turbine technology and services for Onshore and Offshore wind energy, Siemens Energy positions itself as a strong competitor to Vestas in the renewable energy sector (Siemens Energy AG, 2024).

Nordex SE, a Germany-based company, specializes in developing, manufacturing, and distributing wind power systems, particularly Onshore and Offshore wind turbines. In addition to wind turbines production, the company provides project development services, acquiring rights, and building infrastructure for wind power installations. With a global presence, Nordex also holds stakes in several wind energy projects, including Beebe Wind LLC and Flat Rock Wind LLC, positioning it as a significant competitor to Vestas (Nordex SE, 2024).

Goldwind Science & Technology Co Ltd, a China-based company and an important peer to Vestas, provides overall solutions for wind turbines, wind power services, and wind farm development. It operates through four segments: wind turbine manufacturing and sales, wind power services (including consulting, construction, and maintenance), wind farm development, and other services such as financial leasing and water treatment, development, and operation business. The company conducts its businesses both in the domestic and international market (Goldwind, 2024).

Ming Yang Smart Energy Group Limited, based in China, specializes in high-end equipment manufacturing, as well as the investment and operation of new energy power plants. The company operates in two main segments: the manufacturing of high-end wind turbines and core components, and the development of wind and photovoltaic power plants. Its products include Onshore and large Offshore wind turbine units, designed to perform under various temperature conditions and adapt to different environments, wind conditions, and power generation requirements. Ming Yang mainly operates in China, with a presence in overseas markets (Ming Yang, 2024).

Ørsted A/S, a Denmark-based global player in renewable energy, specializes in the ownership, development, construction, and operation of wind farms, solar farms, energy storage, renewable hydrogen facilities, and bioenergy plants. It operates through three key segments: Offshore, Onshore, and Bioenergy & Other. Ørsted manages Offshore wind farms in Europe, the United States, and the Asia Pacific; Onshore wind and solar farms in the United States and Europe; and Bioenergy & Other, which generates heat and power from CHP plants in Denmark. Formerly known as DONG Energy, Ørsted positions itself as a significant competitor to Vestas in the renewable energy space (Ørsted, 2024).

Inox Wind Limited, based in India, focuses on manufacturing and selling wind turbine generators and components, including nacelles, hubs, rotor blades, and tubular towers. The company also offers services such as wind resource assessment, site acquisition, infrastructure development, erection, procurement and commissioning, and long-term operations and maintenance of wind power projects. With its strong presence in India, Inox Wind serves independent power producers, utilities and private investors, making it a notable Vestas peer in the Indian wind energy market (Inox Wind, 2024).

SANY Renewable Energy Co., Ltd, a China-based renewable energy company, engages in the research, development, manufacture, and sale of wind turbines and generators, alongside the development, management, and operation of wind farms. SANY contributes to China's growing renewable energy market and competes with Vestas as a manufacturer of advanced wind turbines (SANY, 2024).

APPENDIX 6: SWOT ANALYSIS

S STRENGHTS	W WEAKNESSES	O OPPORTUNITIES	T THREATS
- Global presence in 88 countries; - Remarkable ESG performance; - Superior technology and R&D investments, leading to lower energy costs and more efficient turbines; - Robust customer relationships; - Strong, long-term relationships with suppliers, supported by strategic partnerships; - Integrated and efficient supply chain; - Strong financial strength and a healthy balance sheet; - Higher profitability driven by strict pricing discipline.	- Limited market share in offshore wind; - Challenges in entering the Chinese market; - Continued reliance on government incentives in the wind market; - Energy production heavily dependent on weather conditions; - Negative impact on wildlife and human communities.	- Post-acquisition growth in offshore markets; - Technological developments; - Favourable policies and significant investments; - Increased demand for renewable energy due to decarbonization; - Emphasis on ESG standards by investors; - Phase-out of coal and nuclear energy.	- Competition within wind energy and alternative renewable sources; - Price volatility; - Protests against the development of Onshore and Offshore wind farms in certain areas; - Potential cyberattacks; - Complicated and time-consuming bureaucratic procedures.

Source: Author

APPENDIX 7: BALANCE SHEET

Balance Sheet IFRS (thousands €)	FY 2021A	FY 2022A	FY 2023A	FY 2024E	FY 2025F	FY 2026F	FY 2027F	FY 2028F	FY 2029F	FY 2030F	CAGR
Net inventory	5 673 000	6 373 000	6 530 000	7 351 102	8 419 885	9 320 016	10 128 233	10 943 024	11 827 777	12 700 434	9.97%
Accounts receivable	1 531 000	1 280 000	1 305 000	1 668 519	1 911 107	2 115 414	2 298 860	2 483 797	2 684 615	2 882 686	11.99%
Cash and cash equivalents	2 420 000	2 378 000	3 318 000	1 899 394	2 209 969	2 792 763	3 963 208	5 184 761	6 501 898	7 862 770	13.12%
Short-term investments	142 000	26 000	33 000	33 000	33 000	33 000	33 000	33 000	33 000	33 000	0.00%
Other current assets	3 098 000	3 571 000	3 735 000	3 735 000	3 735 000	3 735 000	3 735 000	3 735 000	3 735 000	3 735 000	0.00%
Total current assets	12 864 000	13 628 000	14 921 000	14 687 015	16 308 960	17 996 193	20 158 301	22 379 582	24 782 290	27 213 891	8.96%
Tangible fixed assets	2 091 000	1 752 000	1 911 000	2 051 886	2 154 361	2 384 673	2 355 880	2 418 135	2 476 083	2 658 769	4.83%
Goodwill	1 508 000	1 514 000	1 507 000	1 723 810	1 731 392	1 772 616	2 073 409	2 376 648	2 705 925	3 030 701	10.50%
Other intangible assets	1 554 000	1 551 000	1 696 000	1 696 000	1 696 000	1 696 000	1 696 000	1 696 000	1 696 000	1 696 000	0.00%
Intangible fixed assets	3 062 000	3 065 000	3 203 000	3 419 810	3 427 392	3 468 616	3 769 409	4 072 648	4 401 925	4 726 701	5.72%
Investments in JV and associates	609 000	646 000	593 000	593 000	593 000	593 000	593 000	593 000	593 000	593 000	0.00%
Other non-current assets	1 022 000	999 000	1 886 000	1 886 000	1 886 000	1 886 000	1 886 000	1 886 000	1 886 000	1 886 000	0.00%
Total non-current assets	6 784 000	6 462 000	7 593 000	7 950 696	8 060 752	8 332 289	8 604 289	8 969 783	9 357 008	9 864 470	3.81%
Total assets	19 648 000	20 090 000	22 514 000	22 637 711	24 369 713	26 328 482	28 762 590	31 349 365	34 139 298	37 078 360	7.39%
Financial debt	704 000	248 000	163 000	319 870	379 248	456 554	562 829	677 222	800 403	932 121	28.29%
Trade payables	4 286 000	4 089 000	3 738 000	4 430 675	5 074 855	5 617 384	6 104 515	6 595 607	7 128 868	7 654 838	10.78%
Other payables	6 180 000	6 937 000	7 995 000	7 995 000	7 995 000	7 995 000	7 995 000	7 995 000	7 995 000	7 995 000	0.00%
Income tax payable	75 000	58 000	176 000	176 000	176 000	176 000	176 000	176 000	176 000	176 000	0.00%
Other current liabilities	1 455 000	2 181 000	1 948 000	1 948 000	1 948 000	1 948 000	1 948 000	1 948 000	1 948 000	1 948 000	0.00%
Current liabilities	12 700 000	13 513 000	14 020 000	14 869 545	15 573 103	16 192 938	16 786 344	17 391 829	18 048 271	18 705 959	4.21%
Financial debt	732 000	2 179 000	3 224 000	2 167 339	2 569 671	3 093 469	3 813 560	4 588 649	5 423 282	6 315 766	10.08%
Deferred tax liabilities	362 000	158 000	164 000	164 000	164 000	164 000	164 000	164 000	164 000	164 000	0.00%
Provisions	686 000	944 000	1 225 000	1 225 000	1 225 000	1 225 000	1 225 000	1 225 000	1 225 000	1 225 000	0.00%
Other non-current liabilities	471 000	236 000	839 000	839 000	839 000	839 000	839 000	839 000	839 000	839 000	0.00%
Non-current liabilities	2 251 000	3 517 000	5 452 000	4 395 339	4 797 671	5 321 469	6 041 560	6 816 649	7 651 282	8 543 766	6.63%
Total liabilities	14 951 000	17 030 000	19 472 000	19 264 884	20 370 774	21 514 406	22 827 904	24 208 479	25 699 552	27 249 725	4.92%
Share capital	27 000	27 000	27 000	27 000	27 000	27 000	27 000	27 000	27 000	27 000	0.00%
Retained earnings	4 635 000	3 002 000	3 102 000	3 432 827	4 058 939	4 874 076	5 994 686	7 200 886	8 499 746	9 888 635	18.01%
Non shareholders' equity	22 000	15 000	-102 000	-102 000	-102 000	-102 000	-102 000	-102 000	-102 000	-102 000	0.00%
Non-controlling interests	13 000	16 000	15 000	15 000	15 000	15 000	15 000	15 000	15 000	15 000	0.00%
Total equity	4 697 000	3 060 000	3 042 000	3 372 827	3 998 939	4 814 076	5 934 686	7 140 886	8 439 746	9 828 635	18.24%
Total liabilities and shareholders' equity	19 648 000	20 090 000	22 514 000	22 637 711	24 369 713	26 328 482	28 762 590	31 349 365	34 139 298	37 078 360	7.39%

Source: Author, Company Data

APPENDIX 8: COMMON SIZE BALANCE SHEET

Balance Sheet IFRS	FY 2021A	FY 2022A	FY 2023A	FY 2024E	FY 2025F	FY 2026F	FY 2027F	FY 2028F	FY 2029F	FY 2030F
Net inventory	28.87%	31.72%	29.00%	32.47%	34.55%	35.40%	35.21%	34.91%	34.65%	34.25%
Accounts receivable	7.79%	6.37%	5.80%	7.37%	7.84%	8.03%	7.99%	7.92%	7.86%	7.77%
Cash and cash equivalents	12.32%	11.84%	14.74%	8.39%	9.07%	10.61%	13.78%	16.54%	19.05%	21.21%
Short-term investments	0.72%	0.13%	0.15%	0.15%	0.14%	0.13%	0.11%	0.11%	0.10%	0.09%
Other current assets	15.77%	17.78%	16.59%	16.50%	15.33%	14.19%	12.99%	11.91%	10.94%	10.07%
Total current assets	65.47%	67.83%	66.27%	64.88%	66.92%	68.35%	70.09%	71.39%	72.59%	73.40%
Tangible fixed assets	10.64%	8.72%	8.49%	9.06%	8.84%	9.06%	8.19%	7.71%	7.25%	7.17%
Goodwill	7.68%	7.54%	6.69%	7.61%	7.10%	6.73%	7.21%	7.58%	7.93%	8.17%
Other intangible assets	7.91%	7.72%	7.53%	7.49%	6.96%	6.44%	5.90%	5.41%	4.97%	4.57%
Intangible fixed assets	15.58%	15.26%	14.23%	15.11%	14.06%	13.17%	13.11%	12.99%	12.89%	12.75%
Investments in JV and associates	3.10%	3.22%	2.63%	2.62%	2.43%	2.25%	2.06%	1.89%	1.74%	1.60%
Other non-current assets	5.20%	4.97%	8.38%	8.33%	7.74%	7.16%	6.56%	6.02%	5.52%	5.09%
Total non-current assets	34.53%	32.17%	33.73%	35.12%	33.08%	31.65%	29.91%	28.61%	27.41%	26.60%
Total assets	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Financial debt	3.58%	1.23%	0.72%	1.41%	1.56%	1.73%	1.96%	2.16%	2.34%	2.51%
Trade payables	21.81%	20.35%	16.60%	19.57%	20.82%	21.34%	21.22%	21.04%	20.88%	20.65%
Other payables	31.45%	34.53%	35.51%	35.32%	32.81%	30.37%	27.80%	25.50%	23.42%	21.56%
Income tax payable	0.38%	0.29%	0.78%	0.78%	0.72%	0.67%	0.61%	0.56%	0.52%	0.47%
Other current liabilities	7.41%	10.86%	8.65%	8.61%	7.99%	7.40%	6.77%	6.21%	5.71%	5.25%
Current liabilities	64.64%	67.26%	62.27%	65.68%	63.90%	61.50%	58.36%	55.48%	52.87%	50.45%
Financial debt	3.73%	10.85%	14.32%	9.57%	10.54%	11.75%	13.26%	14.64%	15.89%	17.03%
Deferred tax liabilities	1.84%	0.79%	0.73%	0.72%	0.67%	0.62%	0.57%	0.52%	0.48%	0.44%
Provisions	3.49%	4.70%	5.44%	5.41%	5.03%	4.65%	4.26%	3.91%	3.59%	3.30%
Other non-current liabilities	2.40%	1.17%	3.73%	3.71%	3.44%	3.19%	2.92%	2.68%	2.46%	2.26%
Non-current liabilities	11.46%	17.51%	24.22%	19.42%	19.69%	20.21%	21.00%	21.74%	22.41%	23.04%
Total liabilities	76.09%	84.77%	86.49%	85.10%	83.59%	81.72%	79.37%	77.22%	75.28%	73.49%
Share capital	0.14%	0.13%	0.12%	0.12%	0.11%	0.10%	0.09%	0.09%	0.08%	0.07%
Retained earnings	23.59%	14.94%	13.78%	15.16%	16.66%	18.51%	20.84%	22.97%	24.90%	26.67%
Other shareholders' equity	0.11%	0.07%	-0.45%	-0.45%	-0.42%	-0.39%	-0.35%	-0.33%	-0.30%	-0.28%
Non-controlling interests	0.07%	0.08%	0.07%	0.07%	0.06%	0.06%	0.05%	0.05%	0.04%	0.04%
Total equity	23.91%	15.23%	13.51%	14.90%	16.41%	18.28%	20.63%	22.78%	24.72%	26.51%
Total liabilities and shareholders' equity	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Author, Company Data

APPENDIX 9: INCOME STATEMENT

Income Statement IFRS (thousands €)	FY 2021A	FY 2022A	FY 2023A	FY 2024E	FY 2025F	FY 2026F	FY 2027F	FY 2028F	FY 2029F	FY 2030F	CAGR
Onshore sales	10 766 000	10 398 000	10 680 000	12 255 300	13 388 915	14 259 195	15 186 042	16 173 135	17 224 389	18 343 974	8.03%
Offshore sales	2 337 000	933 000	1 134 000	1 275 750	2 191 101	3 144 229	3 537 258	3 908 670	4 319 081	4 686 202	22.47%
Service sales	2 484 000	3 155 000	3 568 000	3 568 000	4 005 080	4 275 423	4 835 503	5 372 244	5 968 563	6 511 703	8.97%
Total sales	15 587 000	14 486 000	15 382 000	17 099 050	19 585 096	21 678 847	23 558 804	25 454 049	27 512 033	29 541 879	9.77%
Cost of sales	-13 591 000	-13 994 000	-13 762 000	-14 731 215	-16 239 961	-17 740 230	-18 823 484	-20 337 786	-21 982 114	-23 603 961	8.01%
Gross profit	1 996 000	492 000	1 620 000	2 367 835	3 345 134	3 938 617	4 735 320	5 116 264	5 529 919	5 937 918	20.39%
Research & development expenses	-119 000	-97 000	-114 000	-112 029	-128 317	-142 034	-154 351	-166 768	-180 252	-193 551	7.86%
Net other operating expenses	-606 000	-903 000	-584 000	-659 189	-755 030	-835 746	-908 221	-981 285	-1 060 623	-1 138 876	10.01%
EBITDA	1 271 000	-508 000	922 000	1 596 617	2 461 788	2 960 837	3 672 747	3 968 211	4 289 044	4 605 491	25.83%
Amortization and depreciation	-982 000	-1 088 000	-777 000	-956 617	-1 095 700	-1 212 837	-1 318 012	-1 424 043	-1 539 178	-1 652 739	11.38%
Unusual income (expenses)	0	0	147 000	0	0	0	0	0	0	0	-100.00%
Operating profit (EBIT)	289 000	-1 596 000	292 000	640 000	1 366 088	1 748 000	2 354 735	2 544 168	2 749 866	2 952 752	39.17%
Financial income	19 000	37 000	205 000	68 203	39 330	45 651	57 513	81 335	106 197	133 004	-5.99%
Financial expense	-77 000	-92 000	-275 000	-205 567	-150 956	-178 978	-215 461	-265 616	-319 601	-377 733	4.64%
Financial result	-58 000	-55 000	-70 000	-137 364	-111 626	-133 327	-157 948	-184 281	-213 404	-244 729	19.58%
Other non-operating and financial income (expenses)	-7 000	-45 000	-120 000	-57 333	-57 333	-57 333	-57 333	-57 333	-57 333	-57 333	-10.01%
Profit before tax (EBT)	224 000	-1 696 000	102 000	445 303	1 197 128	1 557 339	2 139 453	2 302 553	2 479 129	2 650 690	59.26%
Income tax expense	-81 000	124 000	-24 000	-111 475	-299 684	-389 857	-535 581	-576 411	-620 614	-663 562	60.68%
Profit after tax (Net Income)	143 000	-1 572 000	78 000	333 827	897 445	1 167 482	1 603 872	1 726 142	1 858 514	1 987 128	58.81%
Minority interest	-9 000	0	-1 000	-3 000	-3 000	-3 000	-3 000	-3 000	-3 000	-3 000	16.99%
Net profit attributable to shareholders	134 000	-1 572 000	77 000	330 827	894 445	1 164 482	1 600 872	1 723 142	1 855 514	1 984 128	59.07%
Dividends (ordinary and preferred)	-50 000	0	0	0	-268 333	-349 345	-480 262	-516 943	-556 654	-595 238	N/A

Source: Author, Company Data

APPENDIX 10: COMMON SIZE INCOME STATEMENT

Income Statement IFRS	FY 2021A	FY 2022A	FY 2023A	FY 2024E	FY 2025F	FY 2026F	FY 2027F	FY 2028F	FY 2029F	FY 2030F
Onshore sales	69.07%	71.78%	69.43%	71.67%	68.36%	65.77%	64.46%	63.54%	62.61%	62.09%
Offshore sales	14.99%	6.44%	7.37%	0.074609	0.111876	0.145037	0.150146	0.153558	0.156989	0.158629
Service sales	15.94%	21.78%	23.20%	0.208667	0.204496	0.197216	0.205252	0.211057	0.216944	0.220423
Total sales	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Cost of sales	-87.19%	-96.60%	-89.47%	-86.15%	-82.92%	-81.83%	-79.90%	-79.90%	-79.90%	-79.90%
Gross profit	12.81%	3.40%	10.53%	13.85%	17.08%	18.17%	20.10%	20.10%	20.10%	20.10%
Research & development expenses	-0.76%	-0.67%	-0.74%	-0.66%	-0.66%	-0.66%	-0.66%	-0.66%	-0.66%	-0.66%
Net other operating expenses	-3.89%	-6.23%	-3.80%	-3.86%	-3.86%	-3.86%	-3.86%	-3.86%	-3.86%	-3.86%
EBITDA	8.15%	-3.51%	5.99%	9.34%	12.57%	13.66%	15.59%	15.59%	15.59%	15.59%
Amortization and depreciation	-6.30%	-7.51%	-5.05%	-5.59%	-5.59%	-5.59%	-5.59%	-5.59%	-5.59%	-5.59%
Unusual income (expenses)	0.00%	0.00%	0.96%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Operating profit (EBIT)	1.85%	-11.02%	1.90%	3.74%	6.98%	8.06%	10.00%	10.00%	10.00%	10.00%
Financial income	0.12%	0.26%	1.33%	0.40%	0.20%	0.21%	0.24%	0.32%	0.39%	0.45%
Financial expense	-0.49%	-0.64%	-1.79%	-1.20%	-0.77%	-0.83%	-0.91%	-1.04%	-1.16%	-1.28%
Financial result	-0.37%	-0.38%	-0.46%	-0.80%	-0.57%	-0.62%	-0.67%	-0.72%	-0.78%	-0.83%
Other non-operating and financial income (expenses)	-0.04%	-0.31%	-0.78%	-0.34%	-0.29%	-0.26%	-0.24%	-0.23%	-0.21%	-0.19%
Profit before tax (EBT)	1.44%	-11.71%	0.66%	2.60%	6.11%	7.18%	9.08%	9.05%	9.01%	8.97%
Income tax expense	-0.52%	0.86%	-0.16%	-0.65%	-1.53%	-1.80%	-2.27%	-2.26%	-2.26%	-2.25%
Profit after tax (Net Income)	0.92%	-10.85%	0.51%	1.95%	4.58%	5.39%	6.81%	6.78%	6.76%	6.73%
Minority interest	-0.06%	0.00%	-0.01%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%
Net profit attributable to shareholders	0.86%	-10.85%	0.50%	1.93%	4.57%	5.37%	6.80%	6.77%	6.74%	6.72%
Dividends (ordinary and preferred)	-0.32%	0.00%	0.00%	0.00%	-1.37%	-1.61%	-2.04%	-2.03%	-2.02%	-2.01%

Source: Author, Company Data

APPENDIX 11: CASH FLOW STATEMENT

Cash flow Statement IFRS (thousands €)	FY 2021A	FY 2022A	FY 2023A	FY 2024E	FY 2025F	FY 2026F	FY 2027F	FY 2028F	FY 2029F	FY 2030F
Profit after tax (Net income)	143 000	-1 572 000	78 000	333 827	897 445	1 167 482	1 603 872	1 726 142	1 858 514	1 987 128
Financial result	65 000	100 000	190 000	194 697	168 959	190 661	215 282	241 614	270 737	302 062
Depreciation, depletion & amortization	982 000	1 088 000	789 000	956 617	1 095 700	1 212 837	1 318 012	1 424 043	1 539 178	1 652 739
Change in inventories	-705 000	-763 000	91 000	-821 102	-1 068 783	-900 131	-808 218	-814 791	-884 754	-872 657
Change in receivables	-117 000	135 000	-78 000	-363 519	-242 587	-204 308	-183 446	-184 937	-200 817	-198 072
Change in liabilities	678 000	-197 000	-351 000	692 675	644 180	542 529	487 131	491 093	533 261	525 970
Change in other assets/liabilities	153 000	633 000	371 000	0	0	0	0	0	0	0
Other cash flow items	-178 000	481 000	127 000	0	0	0	0	0	0	0
Cash flows from operating activities	1 021 000	-95 000	1 217 000	993 196	1 494 913	2 009 070	2 632 634	2 883 164	3 116 120	3 397 170
Investments in intangible assets, PPE and acquisitions	-1 052 000	-856 000	-929 000	-1 314 313	-1 205 757	-1 484 373	-1 590 012	-1 789 536	-1 926 403	-2 160 201
Change in other investments	153 000	177 000	147 000	0	0	0	0	0	0	0
Cash flows from investing activities	-899 000	-679 000	-782 000	-1 314 313	-1 205 757	-1 484 373	-1 590 012	-1 789 536	-1 926 403	-2 160 201
Proceeds from issue common & preferred stock	-34 000	0	-11 000	0	0	0	0	0	0	0
Change in long term borrowings	-453 000	896 000	754 000	-1 056 661	402 332	523 798	720 091	775 090	834 632	892 484
Cash dividends paid	-228 000	-50 000	0	-3 000	-271 333	-352 345	-483 262	-519 943	-559 654	-598 238
Financial result	-65 000	-100 000	-190 000	-194 697	-168 959	-190 661	-215 282	-241 614	-270 737	-302 062
Change in other financing activities	0	0	0	156 870	59 379	77 305	106 276	114 393	123 180	131 718
Cash flows from financing activities	-780 000	746 000	553 000	-1 097 488	21 418	58 098	127 823	127 925	127 421	123 902
Effect of exchange rate on cash and cash equivalents	15 000	-14 000	-48 000	0	0	0	0	0	0	0
Net change in cash and cash equivalents	-643 000	-42 000	940 000	-1 418 606	310 574	582 795	1 170 445	1 221 553	1 317 137	1 360 872
Cash and cash equivalents at opening date	3 063 000	2 420 000	2 378 000	3 318 000	1 899 394	2 209 969	2 792 763	3 963 208	5 184 761	6 501 898
Cash and cash equivalents at closing date	2 420 000	2 378 000	3 318 000	1 899 394	2 209 969	2 792 763	3 963 208	5 184 761	6 501 898	7 862 770

Source: Author, Company Data

APPENDIX 12: VESTAS' SALES BREAKDOWN

Sales Breakdown (thousands €)	FY 2023A	FY 2024E	FY 2025F	FY 2026F	FY 2027F	FY 2028F	FY 2029F	FY 2030F	Company projections (CAGR)	Actual CAGR
Onshore deliveries (kW)	11 670 000	12 179 000	13 150 000	14 105 000	15 021 825	15 998 244	17 038 129	18 145 608		
Selling price per kW	0.92	1.01	1.02	1.01	1.01	1.01	1.01	1.01		
Onshore sales	10 680 000	12 255 300	13 388 915	14 259 195	15 186 042	16 173 135	17 224 389	18 343 974	8.00%	8.0%
Offshore deliveries (kW)	1 015 000	1 081 000	1 847 000	2 726 000	3 066 750	3 388 759	3 744 578	4 062 868		
Selling price per kW	1.12	1.18	1.19	1.15	1.15	1.15	1.15	1.15		
Offshore sales	1 134 000	1 275 750	2 191 101	3 144 229	3 537 258	3 908 670	4 319 081	4 686 202	22.50%	22.5%
KW under service	152 000 000	152 000 000	170 620 000	182 136 850	205 996 777	228 862 420	254 266 148	277 404 368		
Service revenue per kW	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02		
Service sales	3 568 000	3 568 000	4 005 080	4 275 423	4 835 503	5 372 244	5 968 563	6 511 703	9.00%	9.0%
Total sales	15 382 000	17 099 050	19 585 096	21 678 847	23 558 804	25 454 049	27 512 033	29 541 879		

	FY 2023A	FY 2024E	FY 2025F	FY 2026F	FY 2027F	FY 2028F	FY 2029F	FY 2030F	Forecasted period
Onshore sales as % of Total sales	69.43%	71.67%	68.36%	65.77%	64.46%	63.54%	62.61%	62.09%	64.97%
Offshore sales as % of Total sales	7.37%	7.46%	11.19%	14.50%	15.01%	15.36%	15.70%	15.86%	14.03%
Service sales as % of Total sales	23.20%	20.87%	20.45%	19.72%	20.53%	21.11%	21.69%	22.04%	21.00%

Source: Author, Company Data

APPENDIX 13: FREE CASH FLOW STATEMENT

Free Cash flow Statement (thousands €)	FY 2021A	FY 2022A	FY 2023A	FY 2024E	FY 2025F	FY 2026F	FY 2027F	FY 2028F	FY 2029F	FY 2030F
NOPAT	225 420	-1 244 880	227 760	499 200	1 065 548	1 363 440	1 836 694	1 984 451	2 144 896	2 303 147
Depreciation and amortization	982 000	1 088 000	789 000	956 617	1 095 700	1 212 837	1 318 012	1 424 043	1 539 178	1 652 739
Changes in working capital	-144 000	-825 000	-338 000	-491 946	-667 191	-561 909	-504 532	-508 635	-552 310	-544 759
Capital expenditures	-1 171 000	-953 000	-1 043 000	-1 426 342	-1 334 073	-1 626 407	-1 744 364	-1 956 305	-2 106 655	-2 353 751
Free Cash Flows to Firm (FCFF)	-107 580	-1 934 880	-364 240	-462 471	159 985	387 960	905 810	943 553	1 025 108	1 057 375

Source: Author, Company Data

APPENDIX 14: VESTAS' KEY FINANCIAL ASSUMPTIONS

The estimation of Vestas' financial statements relies on the following assumptions:

- Total sales have a CAGR of 9.77% and are computed based on a breakdown by segment. For the forecasted period (2024-2030), the CAGR obtained for the Onshore segment is 8.03% (compared to the company's assumptions of 7-9%), for the Offshore segment is 22.47% (compared to the company's assumptions of 20-25%), and for the Service segment is 8.97% (compared to the company's assumptions of 8-10%);
- Cost of sales/Sales is inversely correlated with the EBIT margin (EBIT/Sales) and is lower than the historical average;
- EBIT margin (EBIT/Sales) is expected to be 4-5% in 2024 and 10% in mid-term, which is aligned with the company's assumptions. Net margin is calculated by dividing net income by sales;
- From 2024 to 2026, sales and EBIT margin align with the consensus estimates provided by analysts on Vestas (2024a);
- Net other operating expenses margin remains stable at the 5-year historical average of 3.86%;
- In 2024, the payout ratio (Dividend per share/EPS) is 0% and the retention ratio is 100%. After 2024, the payout ratio is 30% and the retention ratio is 70%. Dividends are computed based on the estimated payout ratio and the net profit attributable to shareholders;
- Operating ROA is calculated by multiplying the net operating profit margin (NOPAT/Sales) by the net operating asset turnover (Sales/Invested capital). ROE is the sum of operating ROA and financial leverage gain;
- Interest rates for income and expenses, as well as the effective tax rate remain stable at the 5-year historical averages of 2.04%, 6.07%, and 25.03%, respectively. Financial income is adjusted based on the interest rate (income), short term investments, and cash and cash equivalents, while financial expenses are adjusted based on the interest rate (expenses)

and total interest-bearing debt. Interest coverage ratio is calculated with the formula EBIT/Financial expenses. Tax expenses in the projected income statement are obtained using the effective tax rate;

- Short-term, long-term, and total debt to equity (D/E) remain stable at the 3-year historical averages of 9.48%, 64.26%, and 73.74%, respectively. The projected balance sheet figures for debt are computed based on these ratios and the growth in total equity;
- Current ratio is calculated by dividing total current assets by current liabilities, while the cash ratio is calculated by dividing cash and cash equivalents by current liabilities.
- Research & development expenses/Sales stable at the 5-year historical average of 0.66%;
- CAPEX of approximately 1 billion euros in 2024, with a CAPEX/Sales ratio of around 7.6% for the forecast period;
- Tangible fixed assets/Sales and Intangible fixed assets/Sales vary according to CAPEX/Sales. Goodwill, a subcategory of IFA, is computed by subtracting the value of other intangible assets from the total IFA. The value of other intangible assets is assumed to remain equal with the FY 2023 figure throughout the forecast period;
- Turnover ratios (Sales/Accounts receivable, Sales/Accounts payable, and Cost of sales/Inventory), and depreciation and amortization rate (D&A/Sales) remain stable at their 5-year historical average of 10.25, 2.33, 3.86, and 5.59%, respectively;
- Retained earnings are computed by adding the previous year's value to the current year's net profit attributable to shareholders, which is multiplied by the current year's retention ratio;
- Cash and cash equivalents is estimated by subtracting the individual asset categories from the overall total assets;
- Unusual income (expenses) is assumed to be equal to 0 for the all-forecast period;
- Other non-operating and financial income (expenses) is assumed to remain at the 5-year historical average;
- Minority interest is assumed to remain at the 5-year historical average, excluding FY 2022.

APPENDIX 15: DISCOUNTED CASH FLOW MODEL

At the end of 2025, Vestas' Equity Value per share is calculated by starting with the Enterprise Value. This value is adjusted by deducting the estimated 2025 market value of debt and non-controlling interests, followed by the addition of cash and cash equivalents, along with the market value of investments in joint ventures and associates. The resulting amount is divided by the total number of outstanding shares (assumed to be the same as in 2023 and Q3 2024), resulting in an Equity Value per share of 19.40€. For the market value of debt in 2025, the total debt is structured as a single coupon bond. The bond's coupon rate is aligned with Vestas' interest expenses, while its maturity is determined based on the weighted average maturity of the company's existing debt. Forecasted figures for 2025 are used for all inputs except for the cost of debt, which is taken from the WACC. Due to the absence of more recent data, the debt maturity is assumed to reflect the average bond maturity reported by Vestas (2023a). Additionally, the market value of non-controlling interest and investments in joint ventures and associates for 2025 is obtained by applying the price-to-book ratio of 1.77, which corresponds to the Green & Renewable Energy industry (Damodaran, 2024), to the forecasted figures for that year.

DCF Valuation						
thousands €	FY 2025F	FY 2026F	FY 2027F	FY 2028F	FY 2029F	FY 2030F
NOPAT	1 065 548	1 363 440	1 836 694	1 984 451	2 144 896	2 303 147
Depreciation and amortization	1 095 700	1 212 837	1 318 012	1 424 043	1 539 178	1 652 739
Changes in working capital	-667 191	-561 909	-504 532	-508 635	-552 310	-544 759
Capital expenditures	-1 334 073	-1 626 407	-1 744 364	-1 956 305	-2 106 655	-2 353 751
Free Cash Flows to Firm (FCFF)	159 985	387 960	905 810	943 553	1 025 108	1 057 375
PV of FCFF's in the end of 2025		361 655	787 139	764 343	774 103	16 733 912
					Terminal value	22 714 369
					Implied Exit Multiple EV/EBITDA	4.22x

Source: Author, Company Data

DCF Valuation FY 2025 (thousands €)	
Enterprise value	19 421 153
Market value of debt	3 067 713
Value of cash and cash equivalents	2 209 969
MV Investments in JV and associates	1 049 610
MV Non-controlling interests	26 550
Value of equity	19 586 468
Number of shares	1 009 867
Value of equity per share	19.40 €
Result	Undervalued

Source: Author, Company Data

Market Value of Debt FY 2025		3 067 713 €
Face value		2 948 919
Interest expense		-150 956
Cost of debt		3.56%
Average Maturity		2.76

Source: Author, Company Data

APPENDIX 16: WACC COMPUTATION

The WACC is calculated using data as of the end of 2024. For the market value of equity, it is assumed that the total number of shares outstanding at the end of 2024 would be equal to the total shares reported in the Interim Financial Report Third quarter 2024 (Vestas, 2024b). The market value of traded bonds is calculated based on data available on Vestas (2024a) and Börse Frankfurt (2024). The market value of non-bond debt is assumed to be equal to the carrying value of lease liabilities, credit facilities, and contingent consideration as reported in Vestas (2023a). For the cost of equity, the re-levered beta is calculated using a bottom-up approach with eight peer companies. The levered beta and the book value of debt to the equity of these peers are sourced from S&P Capital IQ (2024). The beta is then re-levered using Vestas' capital structure and the same marginal tax rate employed in the WACC and NOPAT calculations. Additionally, the equity risk premium is calculated based on the weight of operating region sales. This weight is derived from the total sales (Vestas, 2023a) and the ERP (GDP weighted) is sourced from Damodaran (2024). For the calculation of the cost of debt, Vestas' credit rating is based on Moody's ratings available on Vestas (2024a), the default spread is provided by Damodaran (2024), and the risk-free rate is taken from the 10-year German government bond yield, retrieved from S&P Capital IQ (2024).

Market Value of Equity FY 2024	
Stock price	13.15 €
Total shares (thousands)	1 009 867.26
Market cap (thousands)	13 281 118.84 €

Market Value of Debt FY 2024	
Bonds (thousands)	1 913 150 €
Non-bond debt (thousands)	1 405 000 €
Market value (thousands)	3 318 150 €

Market Value of Debt FY 2023 - Alternative Approach	
Average maturity	2.76
Kd	3.56%
Face value	3 387 000.00 €
Interest expense	275 000.00 €
Market value	3 786 014.65 €
< 1 year	292 000.00 €
1-2 years	213 000.00 €
> 2 years	3 237 000.00 €
Total value of cash outflows (k€)	3 742 000.00 €

Cost of Equity					
Beta Bottom-Up Approach FY 2024					
Firms (tickers)	Stock Exchange	Levered Beta	Debt/Equity	Unlevered Beta	Relevered Beta
Vestas Wind Systems A/S (CPSE:VWS)	Copenhagen Stock Exchange (CSE)		25.06%	N/A	1.03
Siemens Energy AG (XTRA:ENR)	Frankfurt Stock Exchange (Xetra)	1.84	9.48%	1.71	N/A
Nordex SE (XTRA:NDX1)	Frankfurt Stock Exchange (Xetra)	1.79	15.95%	1.59	N/A
Goldwind Science & Technology Co. Ltd. (SZSE:002202)	Shenzhen Stock Exchange (SZSE)	0.67	107.67%	0.36	N/A
Ming Yang Smart Energy Group Limited (SHSE:601615)	Shanghai Stock Exchange (SHSE)	0.5	60.91%	0.34	N/A
Ørsted A/S (CPSE:ORSTED)	Copenhagen Stock Exchange (CSE)	0.78	75.44%	0.49	N/A
Inox Wind Limited (NSEI:INOXWIND)	National Stock Exchange of India (NSEI)	1	15.01%	0.90	N/A
SANY Renewable Energy Co. Ltd. (SHSE:688349)	Shanghai Stock Exchange (SHSE)	0.72	12.12%	0.66	N/A
Average				0.86	

Cost of Equity		
ERP weighted by operating region sales FY 2024		
Region	Weight	ERP (GDP weighted)
Europe, Middle East and Africa (EMEA)	50.00%	6.33%
Americas	37.00%	5.25%
Asia Pacific	13.00%	5.64%

Cost of Debt FY 2024		
Year	2024	
Moody's credit rating	Baa2	Stable
Default spread	1.20%	
Risk free rate (10y Bond Yield)	2.36%	
Cost of debt (pre-tax)	3.56%	

Weighted Average Cost of Capital FY 2024	
Market value of equity (thousands)	13 281 118.84 €
Market value of debt (thousands)	3 318 150.00 €
D/V	19.99%
E/V	80.01%
Cost of debt (pre-tax)	3.56%
Tax rate (marginal)	22.00%
After Tax Cost of Debt	2.78%
Risk free rate (10y bond yield)	2.36%
Market risk premium	5.84%
Relevered beta	1.03
Cost of Equity	8.40%
WACC	7.27%

Weighted Average Cost of Capital FY 2024		
	Market Value of Debt FY 2023 Alternative Approach	Damodaran Industry Unlevered Beta Alternative Approach
Market value of equity (thousands)	13 281 118.84 €	13 281 118.84 €
Market value of debt (thousands)	3 786 014.65 €	3 318 150.00 €
D/V	22.18%	19.99%
E/V	77.82%	80.01%
Cost of debt (pre-tax)	3.56%	3.56%
Tax rate (marginal)	22.00%	22.00%
After Tax Cost of Debt	2.78%	2.78%
Risk free rate (10y bond yield)	2.36%	2.36%
Market risk premium	5.84%	5.84%
Relevered beta	1.03	0.72
Cost of Equity	8.40%	6.55%
WACC	7.15%	5.80%

Source: Author, Company Data

APPENDIX 17: SENSITIVITY ANALYSIS

The sensitivity table below is created to evaluate the impact of varying an alternative WACC, based on Damodaran's industry beta, and the terminal growth rate on the DCF valuation price.

		Terminal Growth Rate				
		1.50%	2.00%	2.50%	3.00%	3.50%
WACC (Damodaran Industry Beta)	4.80%	29.36 €	34.08 €	40.86 €	51.41 €	70.13 €
	5.30%	25.42 €	28.83 €	33.46 €	40.11 €	50.46 €
	5.80%	22.40 €	24.96 €	28.31 €	32.85 €	39.37 €
	6.30%	20.00 €	22.00 €	24.51 €	27.80 €	32.26 €
	6.80%	18.06 €	19.65 €	21.61 €	24.08 €	27.30 €

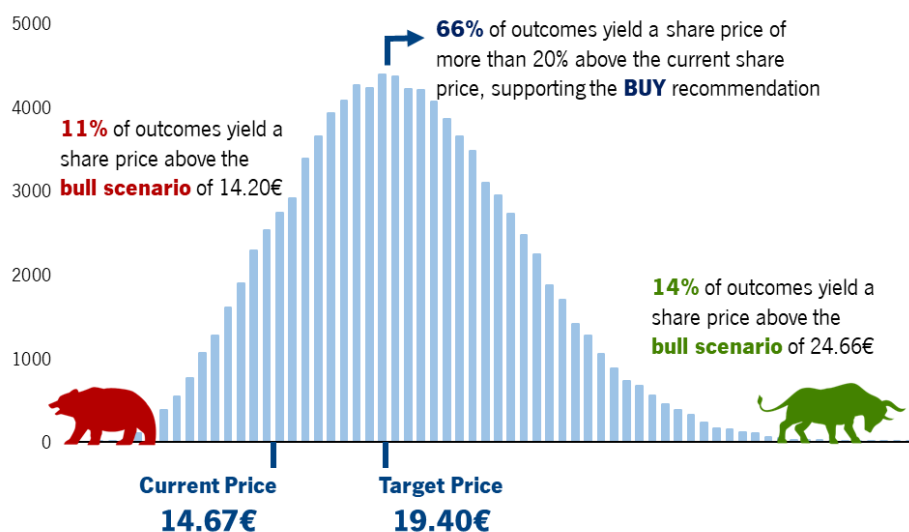
Source: Author

APPENDIX 18: MONTE CARLO SIMULATION

To evaluate how Vestas' share price responds to uncertainty, a Monte Carlo Simulation is performed, using a triangular distribution to vary parameters such as WACC, terminal growth rate, kW deliveries, average sales price, and the COGS/Revenues ratio. The input ranges are defined by the sensitivity analysis: WACC ranged from 6.27% to 8.27%, terminal growth rate from 1.50% to 3.50%, kW deliveries and average selling price from -15.0% to 15.0%, and the COGS/Revenues ratio from -2% to 2%.

Simulation Statistics	
Trials	100,000
Target price	19.40 €
Min	7.80 €
25th percentile	16.44 €
Mean	19.69 €
Median	19.43 €
75th percentile	22.64 €
Max	41.70 €
Standard deviation	4.52 €
Coefficient of variation	22.96%
Skewness	0.36
Kurtosis	0.03
% ≥ Bull scenario	13.87%
% ≤ Bear scenario	11.14%
% ≥ 20% Current share price	65.67%
% ≤ Current share price	13.62%

Source: Author



APPENDIX 19: RELATIVE VALUATION

The peers selected are based on those used in the WACC calculation; however, some are excluded as they are considered statistical outliers (Inox Wind is excluded for the average in the EV/EBITDA and EV/EBIT ratios, Ørsted is excluded for the average in the EV/MW and P/E ratios and Siemens Energy and SANY are also excluded in the P/E ratio). EV/EBITDA, EV/EBIT, and P/E ratios are retrieved from S&P Capital IQ (2024) at the end of 2024 and represent the estimated values for the 12 months ending 31/12/2025. The numerators (EV and P) are based on year-end 2024 values, while the denominators (EBITDA, EBIT, and Earnings) are projections for year-end 2025. For EV/MW, EV is also taken from S&P Capital IQ (2024) and represents the value at the end of 2024. An exchange rate (as of 12/31/2024) from Investing.com (2025) is applied to obtain the EV in euros, as all results in this report are presented in euros. The installed capacity (MW) is sourced from each company's website, representing the total installed capacity to date. For Siemens Energy, the installed capacity is based on the renewable energy related segment, which is Siemens Gamesa. The average of each multiple obtained from the peers is multiplied by Vestas' projected metrics for 2025. This result is then divided by the total number of shares to calculate the final share price. Additionally, EV multiples are also adjusted using the same calculations applied in the DCF methodology to determine the company's stock price.

Relative Valuation FY 2025										
S&P Capital IQ - Data of 31/12/2024	Vestas Wind Systems A/S and Peer Companies								Average	Share price
	Vestas	Siemens Energy	Nordex	Goldwind	Ming Yang	Ørsted	Inox Wind	SANY		
EV/EBITDA (12 months 31/12/2025E)	6.44x	14.13x	4.88x	8.14x	6.99x	7.26x	34.80x	14.80x	9.37x	23.00 €
EV/EBIT (12 months 31/12/2025E)	10.76x	25.64x	8.40x	16.88x	11.04x	11.20x	41.86x	12.32x	14.25x	19.44 €
EV/MW (12 months 31/12/2025E)	0.08x	0.33x	0.04x	0.08x	0.07x	1.55x	0.20x	0.15x	0.15x	27.36 €
P/E (12 months 31/12/2025E)	14.68x	69.93x	17.59x	13.41x	10.07x	1.57x	7.36x	2.37x	12.11x	10.76 €
									Average	20.14 €
										Undervalued

EV/MW Multiple FY 2025								
Company	Vestas	Siemens Energy	Nordex	Goldwind	Ming Yang	Ørsted	Inox Wind	SANY
Country	Denmark	Germany	Germany	China	China	Denmark	India	China
EV (m€)	15 358.79	38 766.30	2 359.60	10 129.30	4 054.82	28 158.69	3 034.52	4 428.68
Installed capacity (MW)	188 000	117 000	57 000	135 000	55 000	18 170	15 000	29 000
EV/MW	0.08x	0.33x	0.04x	0.08x	0.07x	1.55x	0.20x	0.15x

Source: Author, S&P Capital IQ

APPENDIX 20: OPTION VALUATION

The inputs used for Option Valuation at the end of FY 2025 are as follows:

- Enterprise Value (S): Value calculated in the DCF valuation;
- Face value of outstanding debt (K): The financial debt on Vestas' forecast balance sheet in FY 2025;
- Weighted average of debt maturity (t): Assumed to be the bond's average maturity from the FY 2023 reported by Vestas (2023a), due to the absence of more recent data. This assumption is also taken into account in the alternative approach for calculating the market value of the debt FY 2023, which is applied to the WACC, as well as for determining the market value of debt for FY 2025 within the DCF methodology;
- Variance in firm value (v): Obtained from Damodaran (2024) and assumed to be the figure for the Green Renewable Energy industry;
- Risk-free rate (r): Retrieved from S&P Capital IQ (2024) and assumed to be the FY 2024 Germany 3-year treasury bond (corresponding to the debt maturity).

Finally, the Equity Value is divided by the total number of shares to determine the final share price.

Option Valuation FY 2025	
S = Enterprise value (k€)	19 421 153
K = Face value of outstanding debt (k€)	2 948 919
t = Weighted average of debt maturity	2.759
v = Variance in firm value	0.067081
r = Germany 3Y treasury bond	2.02%
d1	4.726431
d2	4.296261
Probability of default	0.00%
Value of equity (k€)	16 632 063
Number of shares	1 009 867
Value of equity per share	16.47 €
Result	Undervalued

Source: Author

APPENDIX 21: INVESTMENTS RISKS

STRATEGIC RISK

People | Probability: Moderate low - Impact: Low

As renewable energy is a hot topic, competition for talent and specialized labour among industry players increases. Mitigation: Vestas conducts surveys to obtain employee feedback and to identify specific issues that may exist. The company also provides talent development programs to support employee engagement and retention.

MARKET RISK

Interest rate risk | Probability: Low - Impact: Moderate low

This risk primarily relates to debt bearing floating interest rates, interest rate derivatives used for hedging, and cash and cash equivalents. Mitigation: Vestas uses fixed interest loans and interest rate derivatives. For example, in 2023, 81% of Vestas' long-term debt financing in the form of bonds and loans had fixed interest rates (Vestas, 2023a).

FINANCIAL RISKS

Liquidity risk | Probability: Low - Impact: Moderate

For Vestas, this risk relates to the potential lack of sufficient and diversified financial resources to service its financial obligations. Mitigation: To address this risk, Vestas maintains cash and cash equivalents, supplemented by the availability of committed credit lines and borrowing facilities.

Credit risk | Probability: Low – Impact: Moderate

The company is exposed to credit risks stemming from cash and cash equivalents, including money market deposits, investments in marketable securities, derivative financial instruments, trade receivables, and other accounts receivable. Mitigation: Risk is mitigated through diversification of bank exposure, setting credit limits, and using guarantees.