

ABO Wind AG

Deutschland / Cleantech
 Börse München
 Bloomberg: AB9 GR
 ISIN: DE0005760029

Update

RATING **BUY**
PRICE TARGET **€ 106.00**
 Return Potential 141.5%
 Risk Rating High

ABO WIND AG WILL BECOME ABO ENERGY KGAA

At the annual general meeting, 87% voted in favour of the change in legal form and so ABO Wind AG will become ABO Energy KGaA. The change in legal form means that the two founders will retain their influence even if future capital increases dilute the current ca. 52% majority of the founding families. Operationally, ABO has recently impressed with positive news. In South Africa, the project rights for a construction-ready 100 MW solar park were sold. In Finland, ABO has reached further milestones and is now the country's leading wind power developer. In Germany, ABO's first hydrogen project is entering the next phase with the order for the electrolysis systems. An updated DCF model that takes into account the increased yield on risk-free assets results in a new price target of €106 (previously: €118). After the sharp share price decline of recent months, we see ABO as attractively valued and confirm our Buy recommendation.

Large majority votes in favour of change in legal form In addition to the change in legal form from an AG to a KGaA, ABO Wind will also be renamed ABO Energy to reflect its broader technological base (photovoltaics, battery storage and hydrogen in addition to wind). As shareholders declared their objection to the change in legal form at the AGM, it cannot yet be submitted to the commercial register for registration.

Construction-ready 100 MW solar project sold The project is part of a 300 MW PV cluster. ABO already sold the remaining 200 MW in 2022. The company is developing large wind, solar, battery and hydrogen projects in South Africa. At the branch in Cape Town, 19 employees are working on a project pipeline of more than 4,600 MW. The majority of the project portfolio is sufficiently advanced in terms of planning to participate in tenders.

(p.t.o.)

FINANCIAL HISTORY & PROJECTIONS

	2020	2021	2022	2023E	2024E	2025E
Revenue (€m)	149.16	127.11	231.66	267.25	304.13	343.06
Y-o-y growth	18.1%	-14.8%	82.3%	15.4%	13.8%	12.8%
EBIT (€m)	22.46	22.45	43.12	42.02	48.03	52.40
EBIT margin	15.1%	17.7%	18.6%	15.7%	15.8%	15.3%
Net income (€m)	13.12	13.80	24.59	23.95	27.30	31.21
EPS (diluted) (€)	1.54	1.50	2.67	2.60	2.96	3.38
DPS (€)	0.45	0.49	0.54	0.54	0.62	0.66
FCF (€m)	40.53	-54.05	-19.10	2.23	7.66	13.57
Net gearing	5.3%	45.0%	55.0%	54.2%	50.9%	45.4%
Liquid assets (€m)	52.80	18.47	87.08	79.72	98.11	104.15

RISKS

Main risks are project development, supply chain, financing, interest rate, and regulation.

COMPANY PROFILE

ABO Wind is a project developer for renewable energies and has developed green power and storage projects with a total capacity of ca. 5 GW since its establishment in 1996. The company also offers the management of wind farms, solar plants and storages. ABO Wind has ca. 1,100 employees. Its headquarters are in Wiesbaden, Germany.

MARKET DATA

As of 01 Nov 2023

Closing Price € 43.90
 Shares outstanding 9.22m
 Market Capitalisation € 404.80m
 52-week Range € 43.50 / 96.60
 Avg. Volume (12 Months) 4,538

Multiples	2022	2023E	2024E
P/E	16.5	16.9	14.8
EV/Sales	2.0	1.8	1.6
EV/EBIT	11.0	11.2	9.8
Div. Yield	1.2%	1.2%	1.4%

STOCK OVERVIEW



COMPANY DATA

As of 30 Jun 2023

Liquid Assets € 34.99m
 Current Assets € 441.17m
 Intangible Assets € 1.13m
 Total Assets € 460.62m
 Current Liabilities € 33.64m
 Shareholders' Equity € 173.97m

SHAREHOLDERS

Familie Ahn 26.0%
 Familie Bockholt 26.0%
 Mainova 10.0%
 Free Float 38.0%



Market leader in Finland With a project pipeline of 5.5 GW, ABO is the country's leading project developer according to the Finnish Wind Energy Association. ABO recently sold the 87 MW Pajuperänkangas wind farm. This is the first time that the company has covered the entire value chain of planning, financing and turnkey construction for a wind farm of this size. In addition to the Pajuperänkangas wind farm, the Illevara wind farm with a capacity of 30 MW will be connected to the grid at the end of the year. The 65 MW Urakkaneva project, which was pre-developed with co-operation partner Infinergies, is also ready for construction.

ABO's first German hydrogen project is making progress An electrolyser and a hydrogen filling station for buses and lorries are being built in a logistics park near Fulda. The facility, which is located directly at a motorway exit, will receive its green electricity directly from a wind turbine. ABO placed the order for the two electrolysis systems with the manufacturer FEST in October. These have a total capacity of 5 MW and can produce up to 90 kg of hydrogen per hour. ABO Wind and Air Liquide Advanced Technologies (ALAT) signed the supply contract for the hydrogen refuelling station and the filling system back in December 2022. Construction of the wind power plant with a capacity of 4.8 MW is scheduled to begin in February 2024. The project is funded by the Federal Ministry for Digital and Transport with a total of around €12m as part of the National Innovation Programme for Hydrogen and Fuel Cell Technology.

Estimates for 2023 confirmed ABO presented solid H1 figures at the end of August and confirmed its guidance (net result between €22m and €26m). Following the operating successes in the second half of the year so far, we maintain our estimates for 2023 and continue to expect a net result of €24m.

Buy confirmed at lowered price target The 10-year German government bond recently yielded 2.8%. Our updated DCF model, which takes into account this increased interest rate for risk-free investments, leads to a new price target of €106 (previously: €118). We assume that the controversies surrounding the change in legal form will calm down after the AGM vote and that the share will find calmer waters after the sharp price decline. Operationally, ABO remains very well positioned with its green power project pipeline of 22.2 GW and its hydrogen-based green power pipeline of 19.9 GW. ABO's most important market, Germany, is being boosted by the reforms of the coalition government and is growing strongly. With a 2024E P/E ratio of 15, we consider the share to be attractively valued in view of the growth prospects. We reiterate our Buy recommendation.



VALUATION MODEL

DCF valuation model								
All figures in EUR '000	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Net sales	267,249	304,129	343,058	384,225	461,070	509,273	558,579	608,344
NOPLAT	30,224	34,590	39,026	45,661	54,420	58,878	63,911	68,139
+ depreciation & amortisation	3,378	2,486	2,938	3,404	3,902	4,522	5,136	5,744
Net operating cash flow	33,602	37,076	41,964	49,065	58,322	63,400	69,047	73,883
- total investments (CAPEX and WC)	-31,372	-29,415	-28,392	-31,649	-52,306	-35,173	-36,151	-36,706
Capital expenditures	-3,741	-4,258	-4,803	-5,379	-6,350	-6,898	-7,439	-7,964
Working capital	-27,631	-25,157	-23,589	-26,270	-45,955	-28,275	-28,711	-28,742
Free cash flows (FCF)	2,230	7,661	13,573	17,416	6,016	28,226	32,896	37,177
PV of FCF's	2,206	7,082	11,730	14,072	4,544	19,929	21,713	22,941

All figures in thousands		
PV of FCFs in explicit period (2023E-2037E)	283,816	
PV of FCFs in terminal period	790,495	
Enterprise value (EV)	1,074,311	Terminal growth
+ Net cash / - net debt	-93,505	Terminal EBIT margin
+ Investments / minority interests	36	
Shareholder value	980,842	
Number of shares (diluted)	9,221	
Fair value per share in EUR	106.37	

WACC	7.0%	Terminal growth rate							
		2.0%	2.5%	3.0%	3.5%	4.0%	4.5%	5.0%	
Cost of equity	11.1%	5.5%	138.46	154.14	176.17	209.40	265.30	379.01	736.41
Pre-tax cost of debt	4.0%	6.0%	116.23	126.85	141.04	160.98	191.06	241.66	344.60
Tax rate	30.0%	6.5%	99.12	106.58	116.18	129.01	147.05	174.26	220.03
After-tax cost of debt	2.8%	7.0%	85.59	90.96	97.70	106.37	117.97	134.27	158.87
Share of equity capital	50.0%	7.5%	74.63	78.60	83.45	89.53	97.36	107.84	122.56
Share of debt capital	50.0%	8.0%	65.60	68.58	72.16	76.53	82.02	89.08	98.53
Price target in EUR	106.00	8.5%	58.04	60.31	63.00	66.22	70.17	75.11	81.47

* for layout purposes the model shows numbers only to 2030, but runs until 2037



INCOME STATEMENT

All figures in EUR '000	2020A	2021A	2022A	2023E	2024E	2025E
Revenues	149,155	127,109	231,658	267,249	304,129	343,058
Changes in inventory	20,206	60,346	76,434	72,157	82,115	88,166
Own work	0	0	0	0	0	0
Total output	169,361	187,455	308,092	339,406	386,244	431,224
Cost of goods sold	72,592	78,280	148,807	170,238	198,292	228,134
Gross profit	96,769	109,175	159,285	169,169	187,952	203,090
Personnel costs	50,776	63,397	77,730	86,586	96,200	103,800
Other operating income	6,362	5,141	5,111	6,526	6,083	6,861
Other operating expenses	17,593	20,440	29,694	33,406	36,496	39,452
EBITDA	34,762	30,479	56,972	55,702	61,339	66,700
Depreciation and amortisation	1,649	1,929	3,002	3,378	2,486	2,938
Depreciation of current assets	10,653	6,102	10,846	10,304	10,819	11,360
Operating income (EBIT)	22,460	22,448	43,124	42,021	48,034	52,401
Net financial result	-1,755	-1,485	-4,887	-6,273	-7,294	-7,815
Pre-tax income (EBT)	20,705	20,963	38,238	35,748	40,741	44,586
Income taxes	7,589	7,152	13,661	11,797	13,444	13,376
Minority interests	4	-6	13	0	0	0
Net income / loss	13,120	13,804	24,590	23,951	27,296	31,210
Diluted EPS (in €)	1.54	1.50	2.67	2.60	2.96	3.38
Ratios						
Gross margin on total output	57.1%	58.2%	51.7%	49.8%	48.7%	47.1%
EBITDA margin on revenues	23.3%	24.0%	24.6%	20.8%	20.2%	19.4%
EBIT margin on revenues	15.1%	17.7%	18.6%	15.7%	15.8%	15.3%
EBT margin on revenues	13.9%	16.5%	16.5%	13.4%	13.4%	13.0%
Net margin on revenues	8.8%	10.9%	10.6%	9.0%	9.0%	9.1%
Tax rate	36.7%	34.1%	35.7%	33.0%	33.0%	30.0%
Expenses as % of revenues						
Personnel costs	34.0%	49.9%	33.6%	32.4%	31.6%	30.3%
Depreciation and amortisation	1.1%	1.5%	1.3%	1.3%	0.8%	0.9%
Depreciation of current assets	7.1%	4.8%	4.7%	3.9%	3.6%	3.3%
Other operating expenses	11.8%	16.1%	12.8%	12.5%	12.0%	11.5%
Y-Y Growth						
Revenues	18.1%	-14.8%	82.3%	15.4%	13.8%	12.8%
Operating income	14.3%	-0.1%	92.1%	-2.6%	14.3%	9.1%
Net income/ loss	15.1%	5.2%	78.1%	-2.6%	14.0%	14.3%



BALANCE SHEET

All figures in EUR '000	2020A	2021A	2022A	2023E	2024E	2025E
Assets						
Current assets, total	236,761	282,609	437,621	462,137	509,525	543,242
Cash and cash equivalents	52,798	18,472	87,075	79,721	98,109	104,149
Short-term investments	9,331	11,684	8,775	8,775	8,775	8,775
Receivables	34,020	10,860	26,502	40,270	45,828	51,694
Inventories	64,398	133,019	124,152	142,253	165,696	187,507
Other current assets	74,825	105,708	187,664	187,664	187,664	187,664
Non-current assets, total	12,501	14,451	13,643	14,007	15,779	17,643
Property, plant & equipment	5,653	7,234	9,043	9,266	10,858	12,510
Goodwill & other intangibles	1,116	1,474	1,574	1,715	1,895	2,107
Financial assets	5,732	5,743	3,026	3,026	3,026	3,026
Other assets	0	0	0	0	0	0
Total assets	249,262	297,060	451,264	476,144	525,304	560,885
Shareholders' equity & debt						
Current liabilities, total	44,700	56,483	97,545	103,453	128,034	108,491
Short-term debt	8,594	8,997	10,331	12,000	32,000	8,000
Accounts payable	7,081	14,034	19,081	23,320	27,163	31,251
Current provisions	19,634	21,355	36,695	36,695	36,695	36,695
Other current liabilities	9,391	12,097	31,438	31,438	32,176	32,545
Long-term liabilities, total	64,446	90,713	183,661	183,661	186,661	216,661
Long-term debt	51,662	76,950	170,249	170,249	173,249	203,249
Deferred revenue	0	0	0	0	0	0
Other liabilities	12,784	13,763	13,412	13,412	13,412	13,412
Minority interests	30	41	36	36	36	36
Shareholders' equity	140,086	149,823	170,022	188,994	210,573	235,697
Share capital	9,221	9,221	9,221	9,221	9,221	9,221
Capital reserve	45,490	45,490	45,490	45,490	45,490	45,490
Other reserves	0	0	0	0	0	0
Loss carryforward / retained earnings	85,671	95,329	115,401	134,373	155,952	181,076
Total consolidated equity and debt	249,262	297,060	451,264	476,144	525,304	560,885
Ratios						
Current ratio (x)	5.30	5.00	4.49	4.47	3.98	5.01
Quick ratio (x)	3.86	2.65	3.21	3.09	2.69	3.28
Net debt	7,458	67,475	93,505	102,528	107,140	107,100
Net gearing	5.3%	45.0%	55.0%	54.2%	50.9%	45.4%
Book value per share (in €)	16.47	16.25	18.44	20.50	22.84	25.56
Equity ratio	56.2%	50.4%	37.7%	39.7%	40.1%	42.0%
Return on equity (ROE)	9.4%	9.2%	14.5%	12.7%	13.0%	13.2%
Return on assets (ROA)	6.2%	5.4%	6.7%	6.5%	6.7%	7.0%
Return on investment (ROI)	5.3%	4.6%	5.4%	5.0%	5.2%	5.6%
Return on average capital employed (ROCE)	14.2%	12.1%	17.7%	14.9%	15.5%	15.6%
Days of sales outstanding (DSO)	83	31	42	55	55	55
Days inventory outstanding (DIO)	324	620	305	305	305	300
Days in payables (DIP)	36	65	47	50	50	50



CASH FLOW STATEMENT

All figures in EUR '000	2020A	2021A	2022A	2023E	2024E	2025E
EBIT	22,460	22,448	43,111	42,021	48,034	52,401
Depreciation and amortisation *	1,649	1,929	3,002	3,378	2,486	2,938
EBITDA	24,109	24,377	46,113	45,399	50,520	55,340
Changes in working capital	28,412	-68,555	-61,723	-27,631	-25,157	-23,589
Other adjustments	-10,048	-6,558	1,761	-11,797	-13,444	-13,376
Operating cash flow	42,473	-50,736	-13,850	5,972	11,919	18,375
Investments in PP&E	-1,774	-2,941	-4,597	-3,207	-3,650	-4,117
Investments in intangibles	-173	-375	-654	-534	-608	-686
Free cash flow	40,526	-54,052	-19,101	2,230	7,661	13,573
Acquisitions & disposals, net	7	462	249	0	0	0
Other investments	-1,651	-1,004	2,872	0	0	0
Investment cash flow	-3,591	-3,858	-2,130	-3,741	-4,258	-4,803
Debt financing, net	-16,575	26,764	94,375	1,669	23,000	6,000
Equity financing, net	27,145	0	0	0	0	0
Dividends paid	-3,558	-4,149	-4,518	-4,979	-4,979	-5,717
Other financing	-2,573	-2,328	-5,650	-6,273	-7,294	-7,815
Financing cash flow	4,438	20,287	84,207	-9,584	10,727	-7,532
FOREX & other effects	-170	19	376	0	0	0
Net cash flows	43,150	-34,288	68,603	-7,354	18,388	6,040
Cash, start of the year	9,648	52,798	18,472	87,075	79,721	98,109
Cash, end of the year	52,798	18,510	87,075	79,721	98,109	104,149
EBITDA/share (in €)	4.09	3.31	6.18	6.04	6.65	7.23
Y-Y Growth						
Operating cash flow	n.m.	n.m.	n.m.	n.m.	99.6%	54.2%
Free cash flow	n.m.	n.m.	n.m.	n.m.	243.5%	77.2%
Financial cash flow	-84.8%	357.1%	315.1%	n.m.	n.m.	n.m.
EBITDA/share	14.2%	-19.1%	86.9%	-2.2%	10.1%	8.7%

* Depreciation of current assets are booked in "Changes in working capital".

Imprint / Disclaimer

First Berlin Equity Research

First Berlin Equity Research GmbH ist ein von der BaFin betreffend die Einhaltung der Pflichten des §85 Abs. 1 S. 1 WpHG, des Art. 20 Abs. 1 Marktmissbrauchsverordnung (MAR) und der Markets Financial Instruments Directive (MiFID) II, Markets in Financial Instruments Directive (MiFID) II Durchführungsverordnung und der Markets in Financial Instruments Regulations (MiFIR) beaufsichtigtes Unternehmen.

First Berlin Equity Research GmbH is one of the companies monitored by BaFin with regard to its compliance with the requirements of Section 85 (1) sentence 1 of the German Securities Trading Act [WpHG], art. 20 (1) Market Abuse Regulation (MAR) and Markets in Financial Instruments Directive (MiFID) II, Markets in Financial Instruments Directive (MiFID) II Commission Delegated Regulation and Markets in Financial Instruments Regulations (MiFIR).

Anschrift:

First Berlin Equity Research GmbH
Friedrichstr. 34
10117 Berlin
Germany

Vertreten durch den Geschäftsführer: Martin Bailey

Telefon: +49 (0) 30-80 93 9 680

Fax: +49 (0) 30-80 93 9 687

E-Mail: info@firstberlin.com

Amtsgericht Berlin Charlottenburg HR B 103329 B

UST-Id.: 251601797

Ggf. Inhaltlich Verantwortlicher gem. § 6 MDStV

First Berlin Equity Research GmbH

Authored by: Dr. Karsten von Blumenthal, Analyst

All publications of the last 12 months were authored by Dr. Karsten von Blumenthal.

Company responsible for preparation: First Berlin Equity Research GmbH, Friedrichstraße 69, 10117 Berlin

The production of this recommendation was completed on 2 November 2023 at 11:02

Person responsible for forwarding or distributing this financial analysis: Martin Bailey

Copyright© 2023 First Berlin Equity Research GmbH No part of this financial analysis may be copied, photocopied, duplicated or distributed in any form or media whatsoever without prior written permission from First Berlin Equity Research GmbH. First Berlin Equity Research GmbH shall be identified as the source in the case of quotations. Further information is available on request.

INFORMATION PURSUANT TO SECTION 85 (1) SENTENCE 1 OF THE GERMAN SECURITIES TRADING ACT [WPHG], TO ART. 20 (1) OF REGULATION (EU) NO 596/2014 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF APRIL 16, 2014, ON MARKET ABUSE (MARKET ABUSE REGULATION) AND TO ART. 37 OF COMMISSION DELEGATED REGULATION (EU) NO 2017/565 (MIFID) II.

First Berlin Equity Research GmbH (hereinafter referred to as: "First Berlin") prepares financial analyses while taking the relevant regulatory provisions, in particular section 85 (1) sentence 1 of the German Securities Trading Act [WpHG], art. 20 (1) of Regulation (EU) No 596/2014 of the European Parliament and of the Council of April 16, 2014, on market abuse (market abuse regulation) and art. 37 of Commission Delegated Regulation (EU) no. 2017/565 (MiFID II) into consideration. In the following First Berlin provides investors with information about the statutory provisions that are to be observed in the preparation of financial analyses.

CONFLICTS OF INTEREST

In accordance with art. 37 (1) of Commission Delegated Regulation (EU) no. 2017/565 (MiFID) II and art. 20 (1) of Regulation (EU) No 596/2014 of the European Parliament and of the Council of April 16, 2014, on market abuse (market abuse regulation) investment firms which produce, or arrange for the production of, investment research that is intended or likely to be subsequently disseminated to clients of the firm or to the public, under their own responsibility or that of a member of their group, shall ensure the implementation of all the measures set forth in accordance with Article 34 (2) lit. (b) of Regulation (EU) 2017/565 in relation to the financial analysts involved in the production of the investment research and other relevant persons whose responsibilities or business interests may conflict with the interests of the persons to whom the investment research is disseminated. In accordance with art. 34 (3) of Regulation (EU) 2017/565 the procedures and measures referred to in paragraph 2 lit. (b) of such article shall be designed to ensure that relevant persons engaged in different business activities involving a conflict of interests carry on those activities at a level of independence appropriate to the size and activities of the investment firm and of the group to which it belongs, and to the risk of damage to the interests of clients.

In addition, First Berlin shall pursuant to Article 5 of the Commission Delegated Regulation (EU) 2016/958 disclose in their recommendations all relationships and circumstances that may reasonably be expected to impair the objectivity of the financial analyses, including interests or conflicts of interest, on their part or on the part of any natural or legal person working for them under a contract, including a contract of employment, or otherwise, who was involved in producing financial analyses, concerning any financial instrument or the issuer to which the recommendation directly or indirectly relates.

With regard to the financial analyses of ABO Wind AG the following relationships and circumstances exist which may reasonably be expected to impair the objectivity of the financial analyses: The author, First Berlin, or a company associated with First Berlin reached an agreement with the ABO Wind AG for preparation of a financial analysis for which remuneration is owed.

Furthermore, First Berlin offers a range of services that go beyond the preparation of financial analyses. Although First Berlin strives to avoid conflicts of interest wherever possible, First Berlin may maintain the following relations with the analysed company, which in particular may constitute a potential conflict of interest:

- The author, First Berlin, or a company associated with First Berlin owns a net long or short position exceeding the threshold of 0.5 % of the total issued share capital of the analysed company;
- The author, First Berlin, or a company associated with First Berlin holds an interest of more than five percent in the share capital of the analysed company;

- The author, First Berlin, or a company associated with First Berlin provided investment banking or consulting services for the analysed company within the past twelve months for which remuneration was or was to be paid;
- The author, First Berlin, or a company associated with First Berlin reached an agreement with the analysed company for preparation of a financial analysis for which remuneration is owed;
- The author, First Berlin, or a company associated with First Berlin has other significant financial interests in the analysed company;

With regard to the financial analyses of ABO Wind AG the following of the aforementioned potential conflicts of interests or the potential conflicts of interest mentioned in Article 6 paragraph 1 of the Commission Delegated Regulation (EU) 2016/958 exist: The author, First Berlin, or a company associated with First Berlin reached an agreement with the ABO Wind AG for preparation of a financial analysis for which remuneration is owed.

In order to avoid and, if necessary, manage possible conflicts of interest both the author of the financial analysis and First Berlin shall be obliged to neither hold nor in any way trade the securities of the company analyzed. The remuneration of the author of the financial analysis stands in no direct or indirect connection with the recommendations or opinions represented in the financial analysis. Furthermore, the remuneration of the author of the financial analysis is neither coupled directly to financial transactions nor to stock exchange trading volume or asset management fees.

INFORMATION PURSUANT TO SECTION 64 OF THE GERMAN SECURITIES TRADING ACT [WPHG], DIRECTIVE 2014/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 15 MAY 2014 ON MARKETS IN FINANCIAL INSTRUMENTS AND AMENDING DIRECTIVE 2002/92/EC AND DIRECTIVE 2011/61/EU, ACCOMPANIED BY THE MARKETS IN FINANCIAL INSTRUMENTS REGULATION (MIFIR, REG. EU NO. 600/2014).

First Berlin notes that it has concluded a contract with the issuer to prepare financial analyses and is paid for that by the issuer. First Berlin makes the financial analysis simultaneously available for all interested security financial services companies. First Berlin thus believes that it fulfils the requirements of section 64 WpHG for minor non-monetary benefits.

PRICE TARGET DATES

Unless otherwise indicated, current prices refer to the closing prices of the previous trading day.

AGREEMENT WITH THE ANALYSED COMPANY AND MAINTENANCE OF OBJECTIVITY

The present financial analysis is based on the author's own knowledge and research. The author prepared this study without any direct or indirect influence exerted on the part of the analysed company. Parts of the financial analysis were possibly provided to the analysed company prior to publication in order to avoid inaccuracies in the representation of facts. However, no substantial changes were made at the request of the analysed company following any such provision.

ASSET VALUATION SYSTEM

First Berlin's system for asset valuation is divided into an asset recommendation and a risk assessment.

ASSET RECOMMENDATION

The recommendations determined in accordance with the share price trend anticipated by First Berlin in the respectively indicated investment period are as follows:

Category		1	2
Current market capitalisation (in €)		0 - 2 billion	> 2 billion
Strong Buy ¹	An expected favourable price trend of:	> 50%	> 30%
Buy	An expected favourable price trend of:	> 25%	> 15%
Add	An expected favourable price trend of:	0% to 25%	0% to 15%
Reduce	An expected negative price trend of:	0% to -15%	0% to -10%
Sell	An expected negative price trend of:	< -15%	< -10%

¹ The expected price trend is in combination with sizable confidence in the quality and forecast security of management.

Our recommendation system places each company into one of two market capitalisation categories. Category 1 companies have a market capitalisation of €0 – €2 billion, and Category 2 companies have a market capitalisation of > €2 billion. The expected return thresholds underlying our recommendation system are lower for Category 2 companies than for Category 1 companies. This reflects the generally lower level of risk associated with higher market capitalisation companies.

RISK ASSESSMENT

The First Berlin categories for risk assessment are low, average, high and speculative. They are determined by ten factors: Corporate governance, quality of earnings, management strength, balance sheet and financial risk, competitive position, standard of financial disclosure, regulatory and political uncertainty, strength of brandname, market capitalisation and free float. These risk factors are incorporated into the First Berlin valuation models and are thus included in the target prices. First Berlin customers may request the models.

RECOMMENDATION & PRICE TARGET HISTORY

Report No.:	Date of publication	Previous day closing price	Recommendation	Price target
Initial Report	12 April 2017	€7.80	BUY	€14.00
2...26	↓	↓	↓	↓
27	11 July 2022	€56.20	BUY	€92.00
28	2 September 2022	€56.20	BUY	€109.00
29	5 December 2022	€63.00	BUY	€112.00
30	26 January 2023	€83.00	BUY	€118.00
31	2 March 2023	€74.60	BUY	€118.00
32	21 March 2023	€72.00	BUY	€118.00
33	9 June 2023	€58.20	BUY	€118.00
34	7 September 2023	€49.40	BUY	€118.00
35	Today	€43.90	BUY	€106.00

INVESTMENT HORIZON

Unless otherwise stated in the financial analysis, the ratings refer to an investment period of twelve months.

UPDATES

At the time of publication of this financial analysis it is not certain whether, when and on what occasion an update will be provided. In general First Berlin strives to review the financial analysis for its topicality and, if required, to update it in a very timely manner in connection with the reporting obligations of the analysed company or on the occasion of ad hoc notifications.

SUBJECT TO CHANGE

The opinions contained in the financial analysis reflect the assessment of the author on the day of publication of the financial analysis. The author of the financial analysis reserves the right to change such opinion without prior notification.

Legally required information regarding

- key sources of information in the preparation of this research report
- valuation methods and principles
- sensitivity of valuation parameters

can be accessed through the following internet link: <https://firstberlin.com/disclaimer-english-link/>

SUPERVISORY AUTHORITY: Bundesanstalt für Finanzdienstleistungsaufsicht (German Federal Financial Supervisory Authority) [BaFin], Graurheindorferstraße 108, 53117 Bonn and Marie-Curie-Straße 24-28, 60439 Frankfurt am Main

EXCLUSION OF LIABILITY (DISCLAIMER)

RELIABILITY OF INFORMATION AND SOURCES OF INFORMATION

The information contained in this study is based on sources considered by the author to be reliable. Comprehensive verification of the accuracy and completeness of information and the reliability of sources of information has neither been carried out by the author nor by First Berlin. As a result no warranty of any kind whatsoever shall be assumed for the accuracy and completeness of information and the reliability of sources of information, and neither the author nor First Berlin, nor the person responsible for passing on or distributing the financial analysis shall be liable for any direct or indirect damage incurred through reliance on the accuracy and completeness of information and the reliability of sources of information.

RELIABILITY OF ESTIMATES AND FORECASTS

The author of the financial analysis made estimates and forecasts to the best of the author's knowledge. These estimates and forecasts reflect the author's personal opinion and judgement. The premises for estimates and forecasts as well as the author's perspective on such premises are subject to constant change. Expectations with regard to the future performance of a financial instrument are the result of a measurement at a single point in time and may change at any time. The result of a financial analysis always describes only one possible future development – the one that is most probable from the perspective of the author – of a number of possible future developments.

Any and all market values or target prices indicated for the company analysed in this financial analysis may not be achieved due to various risk factors, including but not limited to market volatility, sector volatility, the actions of the analysed company, economic climate, failure to achieve earnings and/or sales forecasts, unavailability of complete and precise information and/or a subsequently occurring event which affects the underlying assumptions of the author and/or other sources on which the author relies in this document. Past performance is not an indicator of future results; past values cannot be carried over into the future.

Consequently, no warranty of any kind whatsoever shall be assumed for the accuracy of estimates and forecasts, and neither the author nor First Berlin, nor the person responsible for passing on or distributing the financial analysis shall be liable for any direct or indirect damage incurred through reliance on the correctness of estimates and forecasts.

INFORMATION PURPOSES, NO RECOMMENDATION, SOLICITATION, NO OFFER FOR THE PURCHASE OF SECURITIES

The present financial analysis serves information purposes. It is intended to support institutional investors in making their own investment decisions; however in no way provide the investor with investment advice. Neither the author, nor First Berlin, nor the person responsible for passing on or distributing the financial analysis shall be considered to be acting as an investment advisor or portfolio manager vis-à-vis an investor. Each investor must form his own independent opinion with regard to the suitability of an investment in view of his own investment objectives, experience, tax situation, financial position and other circumstances.

The financial analysis does not represent a recommendation or solicitation and is not an offer for the purchase of the security specified in this financial analysis. Consequently, neither the author nor First Berlin, nor the person responsible for passing on or distributing the financial analysis shall as a result be liable for losses incurred through direct or indirect employment or use of any kind whatsoever of information or statements arising out of this financial analysis.

A decision concerning an investment in securities should take place on the basis of independent investment analyses and procedures as well as other studies including, but not limited to, information memoranda, sales or issuing prospectuses and not on the basis of this document.

NO ESTABLISHMENT OF CONTRACTUAL OBLIGATIONS

By taking note of this financial analysis the recipient neither becomes a customer of First Berlin, nor does First Berlin incur any contractual, quasi-contractual or pre-contractual obligations and/or responsibilities toward the recipient. In particular no information contract shall be established between First Berlin and the recipient of this information.

NO OBLIGATION TO UPDATE

First Berlin, the author and/or the person responsible for passing on or distributing the financial analysis shall not be obliged to update the financial analysis. Investors must keep themselves informed about the current course of business and any changes in the current course of business of the analysed company.

DUPLICATION

Dispatch or duplication of this document is not permitted without the prior written consent of First Berlin.

SEVERABILITY

Should any provision of this disclaimer prove to be illegal, invalid or unenforceable under the respectively applicable law, then such provision shall be treated as if it were not an integral component of this disclaimer; in no way shall it affect the legality, validity or enforceability of the remaining provisions.

APPLICABLE LAW, PLACE OF JURISDICTION

The preparation of this financial analysis shall be subject to the law obtaining in the Federal Republic of Germany. The place of jurisdiction for any disputes shall be Berlin (Germany).

NOTICE OF DISCLAIMER

By taking note of this financial analysis the recipient confirms the binding nature of the above explanations.

By using this document or relying on it in any manner whatsoever the recipient accepts the above restrictions as binding for the recipient.

QUALIFIED INSTITUTIONAL INVESTORS

First Berlin financial analyses are intended exclusively for qualified institutional investors.

This report is not intended for distribution in the USA and/or Canada.