

<b>Buy</b> <b>EUR 182.00</b> (EUR 170.00)  Price <b>EUR 136.50</b> <b>Upside 33.3 %</b>	<b>Value Indicators:</b> EUR DCF: 181.76	<b>Warburg ESG Risk Score: 2.2</b> ESG Score (MSCI based): 3.0 Balance Sheet Score: 3.5 Market Liquidity Score: 0.0	<b>Description:</b> Leading software company for stationary retailers
	<b>Market Snapshot:</b> EUR m Market cap: 0.0 No. of shares (m): 0.0 EV: 20.4 Freefloat MC: 0.0 Ø Trad. Vol. (30d): 625.82 th	<b>Shareholders:</b> Freefloat 41.6 % Rainer Gläß 29.2 % Stephan Kronmüller 23.0 % Wilhelm K.T. Zours 6.2 %	<b>Key Figures (WRe):</b> 2021e Beta: 1.3 Price / Book: 5.6 x Equity Ratio: 49 % Net Fin. Debt / EBITDA: 0.6 x Net Debt / EBITDA: 0.7 x

## Strong Q1

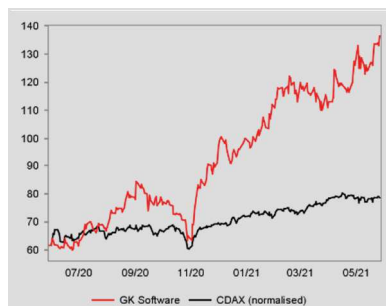
<b>Stated Figures Q1/2021:</b> in EUR m	<table border="1"> <thead> <tr> <th></th> <th>Q1/21</th> <th>Q1/21e</th> <th>Q1/20</th> <th>yoy</th> <th>2021e</th> <th>2020</th> <th>yoy</th> </tr> </thead> <tbody> <tr> <td><b>Sales</b></td> <td>30.5</td> <td>30.1</td> <td>29.0</td> <td>4.9%</td> <td>134.0</td> <td>117.6</td> <td>14.0%</td> </tr> <tr> <td><b>EBITDA</b></td> <td>5.1</td> <td>4.3</td> <td>3.3</td> <td>57.4%</td> <td>27.5</td> <td>19.7</td> <td>39.5%</td> </tr> <tr> <td><i>margin</i></td> <td>16.8%</td> <td>14.3%</td> <td>11.2%</td> <td></td> <td>20.5%</td> <td>16.7%</td> <td></td> </tr> </tbody> </table>		Q1/21	Q1/21e	Q1/20	yoy	2021e	2020	yoy	<b>Sales</b>	30.5	30.1	29.0	4.9%	134.0	117.6	14.0%	<b>EBITDA</b>	5.1	4.3	3.3	57.4%	27.5	19.7	39.5%	<i>margin</i>	16.8%	14.3%	11.2%		20.5%	16.7%		<b>Comment on Figures:</b> <ul style="list-style-type: none"> <li>GK Software SE (GK) presented the figures for the first quarter of 2021 on May 27.</li> <li>These exceeded the forecasts (WRe), particularly in terms of earnings, owing to the acquisition of new customers, strong business with existing customers and especially the continuation of efficiency programme measures, which led to a very attractive cost structure.</li> </ul>
	Q1/21	Q1/21e	Q1/20	yoy	2021e	2020	yoy																											
<b>Sales</b>	30.5	30.1	29.0	4.9%	134.0	117.6	14.0%																											
<b>EBITDA</b>	5.1	4.3	3.3	57.4%	27.5	19.7	39.5%																											
<i>margin</i>	16.8%	14.3%	11.2%		20.5%	16.7%																												

The acquisition of two new customers in Germany and Mexico, strong business with existing customers and the continuation of the efficiency programme can be clearly seen in the very good Q1 results. The strength of the first three months of the year is remarkable considering that one of the key earnings drivers for the current year, Deutsche Fiskal (technological leader in fiscalization via the cloud), will only be reflected in earnings from the second quarter onwards and will probably make a significantly positive contribution to annual earnings.

The long-term outlook also remains positive. The company recently confirmed its outlook of achieving sales of EUR 160-175m with 15% EBIT in 2023. This expectation does not include big data solutions that GK Software is developing under the name GK SPOT, which could account for sales of EUR 25-30m by 2023. While our estimates do not explicitly take this revenue stream into account either, we are at the upper end of the company's forecast. If product developments and customer relationships enable a specific view of these technologies, there may be further significant potential here. Also, the margin assumptions for Deutsche Fiskal could turn out to be at the lower end after the Q2 report (26.8.21). Both aspects imply the potential for further upgrades, but remain unchanged for now.

**The GK share continues to be rated Buy with a target price of EUR 182 (after EUR 170) following a roll-over and model update.**

<b>Changes in Estimates:</b> FY End: 31.12. in EUR m	<table border="1"> <thead> <tr> <th></th> <th>2021e (old)</th> <th>+ / -</th> <th>2022e (old)</th> <th>+ / -</th> <th>2023e (old)</th> <th>+ / -</th> </tr> </thead> <tbody> <tr> <td><b>Sales</b></td> <td>134.0</td> <td>0.0 %</td> <td>152.8</td> <td>0.0 %</td> <td>174.2</td> <td>0.0 %</td> </tr> <tr> <td><b>EBITDA</b></td> <td>24.1</td> <td>13.9 %</td> <td>30.6</td> <td>5.0 %</td> <td>37.4</td> <td>1.4 %</td> </tr> <tr> <td><b>EBIT</b></td> <td>15.0</td> <td>22.3 %</td> <td>20.2</td> <td>7.6 %</td> <td>25.6</td> <td>2.0 %</td> </tr> <tr> <td><b>DPS</b></td> <td>0.00</td> <td>0.0 %</td> <td>1.50</td> <td>0.0 %</td> <td>1.50</td> <td>0.0 %</td> </tr> </tbody> </table>		2021e (old)	+ / -	2022e (old)	+ / -	2023e (old)	+ / -	<b>Sales</b>	134.0	0.0 %	152.8	0.0 %	174.2	0.0 %	<b>EBITDA</b>	24.1	13.9 %	30.6	5.0 %	37.4	1.4 %	<b>EBIT</b>	15.0	22.3 %	20.2	7.6 %	25.6	2.0 %	<b>DPS</b>	0.00	0.0 %	1.50	0.0 %	1.50	0.0 %	<b>Comment on Changes:</b> <ul style="list-style-type: none"> <li>Sales forecasts remain unchanged despite the good Q1, as GK completed the sale of the small subsidiary AWEK microdata GmbH (less than 5% of sales).</li> <li>Earnings: The strong Q1 result together with the expected results of the subsidiary Deutsche Fiskal from Q2 onwards (WRe EBITDA EUR 4.5m for the remainder of the financial year) forms the basis for a further forecast increase.</li> </ul>
	2021e (old)	+ / -	2022e (old)	+ / -	2023e (old)	+ / -																															
<b>Sales</b>	134.0	0.0 %	152.8	0.0 %	174.2	0.0 %																															
<b>EBITDA</b>	24.1	13.9 %	30.6	5.0 %	37.4	1.4 %																															
<b>EBIT</b>	15.0	22.3 %	20.2	7.6 %	25.6	2.0 %																															
<b>DPS</b>	0.00	0.0 %	1.50	0.0 %	1.50	0.0 %																															

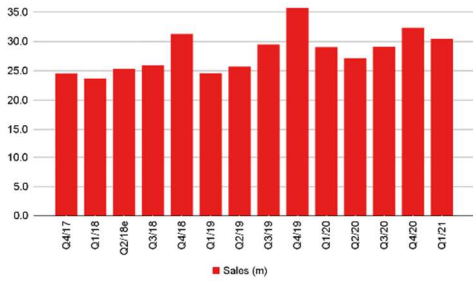


<b>Rel. Performance vs CDAX:</b>	
1 month:	10.6 %
6 months:	38.9 %
Year to date:	27.3 %
Trailing 12 months:	110.5 %

<b>Company events:</b>	
17.06.21	AGM
26.08.21	Q2
25.11.21	Q3

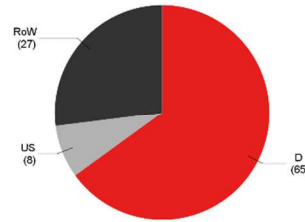
FY End: 31.12. in EUR m	CAGR (20-23e)	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021e</b>	<b>2022e</b>	<b>2023e</b>
<b>Sales</b>	14.0 %	90.5	106.2	115.4	117.6	134.0	152.8	174.2
Change Sales yoy		17.0 %	17.4 %	8.8 %	1.8 %	14.0 %	14.0 %	14.0 %
Gross profit margin		90.6 %	92.7 %	94.6 %	92.7 %	92.0 %	92.0 %	92.0 %
<b>EBITDA</b>	24.5 %	8.8	6.8	12.3	19.7	27.5	32.1	38.0
Margin		9.7 %	6.4 %	10.6 %	16.7 %	20.5 %	21.0 %	21.8 %
<b>EBIT</b>	35.4 %	5.0	1.6	3.4	10.5	18.4	21.7	26.1
Margin		5.5 %	1.5 %	3.0 %	9.0 %	13.7 %	14.2 %	15.0 %
<b>Net income</b>	38.9 %	3.9	0.9	-3.1	6.3	11.5	13.8	17.0
<b>EPS</b>	31.9 %	2.05	0.49	-1.55	3.00	4.67	5.62	6.89
EPS adj.	31.9 %	2.05	0.49	-1.55	3.00	4.67	5.62	6.89
<b>DPS</b>	-	0.00	0.00	0.00	0.00	0.00	1.50	1.50
Dividend Yield		n.a.	n.a.	n.a.	n.a.	n.a.	1.1 %	1.1 %
<b>FCFPS</b>		3.70	-9.27	-1.92	7.11	2.49	5.92	7.39
FCF / Market cap		3.9 %	-9.0 %	-2.8 %	10.3 %	1.8 %	4.3 %	5.4 %
<b>EV / Sales</b>		2.0 x	2.1 x	1.5 x	1.5 x	2.7 x	2.2 x	1.9 x
<b>EV / EBITDA</b>		20.9 x	32.3 x	14.1 x	8.7 x	13.0 x	10.6 x	8.6 x
<b>EV / EBIT</b>		36.7 x	138.3 x	50.4 x	16.4 x	19.4 x	15.7 x	12.5 x
<b>P / E</b>		46.0 x	210.4 x	n.a.	23.0 x	29.2 x	24.3 x	19.8 x
P / E adj.		46.0 x	210.4 x	n.a.	23.0 x	29.2 x	24.3 x	19.8 x
<b>FCF Potential Yield</b>		4.5 %	3.4 %	4.6 %	9.8 %	6.4 %	7.7 %	9.5 %
<b>Net Debt</b>		3.7	24.6	34.8	26.5	20.4	5.8	-8.7
<b>ROCE (NOPAT)</b>		10.6 %	16.1 %	n.a.	9.5 %	16.7 %	19.2 %	23.3 %
<b>Guidance:</b>	n.a.							

**Sales development**  
in EUR m



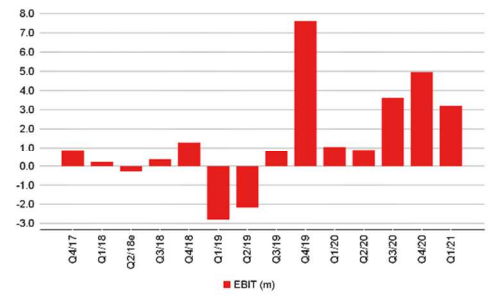
Source: Warburg Research

**Employees per location**  
2020; in %



Source: Warburg Research

**EBIT development**  
in EUR m



Source: Warburg Research

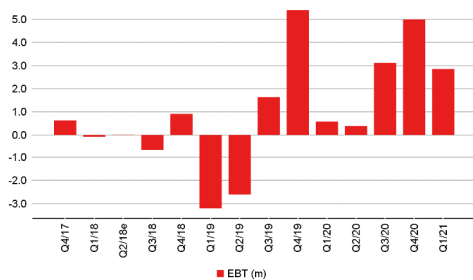
**Company Background**

- GK Software is the leading software supplier for retailers.
- As well as standard processes, GK Software solutions facilitate special requirements such as bonus programmes, the recording of fiscal details and the seamless integration in back-end solutions.
- The business activities of GK Software divides into two segments - the sale of product licences and the corresponding services.

**Competitive Quality**

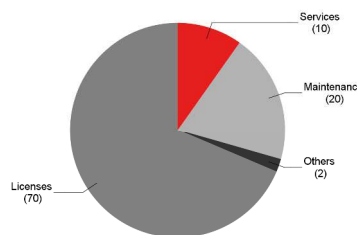
- The structural advantages of GK Software are compelling:
- GK Software's leading solution is completely Java-based, which makes it lean, platform independent and means it can be operated on the existing customer infrastructure.
- For many retail projects, GK competitors tend to undercalculate their bids and as a consequence are unable to complete the project on time and within budget.
- GK has outstanding reference clients (Hornbach, Kaufhof, Douglas, Netto, Tchibo, T-Punkt, Thalia, JYSK Nordic...)
- At the same time, GK Software's personnel costs are, depending on the location, often about 20% below those of a similar project team of a large system integrator.

**EBT development**  
in EUR m



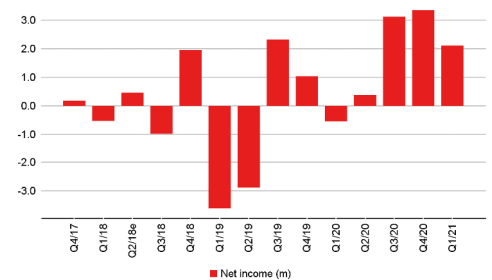
Source: Warburg Research

**Sales by segments**  
2021e; in %



Source: Warburg Research

**Net income development**  
in EUR m



Source: Warburg Research

## DCF model

Figures in EUR m	Detailed forecast period			Transitional period										Term. Value
	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e	2031e	2032e	2033e	
Sales	134.0	152.8	174.2	196.8	218.5	238.1	257.2	275.2	291.7	309.2	327.7	344.1	361.3	2.5 %
Sales change	14.0 %	14.0 %	14.0 %	13.0 %	11.0 %	9.0 %	8.0 %	7.0 %	6.0 %	6.0 %	6.0 %	5.0 %	5.0 %	
EBIT	18.4	21.7	26.1	29.5	33.9	38.1	41.1	46.8	49.6	52.6	55.7	58.5	61.4	17.0 %
EBIT-margin	13.7 %	14.2 %	15.0 %	15.0 %	15.5 %	16.0 %	16.0 %	17.0 %	17.0 %	17.0 %	17.0 %	17.0 %	17.0 %	
Tax rate (EBT)	29.0 %	29.0 %	29.0 %	29.0 %	29.0 %	29.0 %	29.0 %	29.0 %	29.0 %	29.0 %	29.0 %	29.0 %	29.0 %	
NOPAT	13.0	15.4	18.5	21.0	24.0	27.1	29.2	33.2	35.2	37.3	39.6	41.5	43.6	
Depreciation	9.1	10.4	11.8	13.8	10.9	9.5	7.7	8.3	8.8	9.3	9.8	10.3	10.8	
in % of Sales	6.8 %	6.8 %	6.8 %	7.0 %	5.0 %	4.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	
Changes in provisions	0.0	0.0	0.0	-2.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
Change in Liquidity from														
- Working Capital	9.6	4.3	4.8	5.1	4.9	4.4	4.3	4.1	3.7	3.9	4.2	3.7	3.9	
- Capex	5.0	5.5	6.0	6.9	8.7	7.1	7.7	8.3	8.8	9.3	9.8	10.3	10.8	
Capex in % of Sales	3.7 %	3.6 %	3.4 %	3.5 %	4.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	3.0 %	
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Free Cash Flow (WACC Model)	7.5	16.0	19.6	20.7	21.4	25.1	25.0	29.2	31.5	33.4	35.4	37.9	39.8	44
PV of FCF	7.2	14.0	15.8	15.4	14.6	15.8	14.5	15.6	15.5	15.1	14.7	14.5	14.0	252
share of PVs	8.44 %			34.11 %										57.45 %

## Model parameter

Derivation of WACC:		Derivation of Beta:	
Debt ratio	0.00 %	Financial Strength	1.30
Cost of debt (after tax)	4.2 %	Liquidity (share)	1.30
Market return	7.00 %	Cyclicality	1.30
Risk free rate	1.50 %	Transparency	1.30
		Others	1.30
<b>WACC</b>	<b>8.65 %</b>	<b>Beta</b>	<b>1.30</b>

## Valuation (m)

Present values 2033e	187		
Terminal Value	252		
Financial liabilities	33		
Pension liabilities	3		
Hybrid capital	0		
Minority interest	1		
Market val. of investments	0		
Liquidity	45	No. of shares (m)	2.5
<b>Equity Value</b>	<b>447</b>	<b>Value per share (EUR)</b>	<b>181.76</b>

## Sensitivity Value per Share (EUR)

Beta	WACC	Terminal Growth							Beta	WACC	Delta EBIT-margin						
		1.75 %	2.00 %	2.25 %	<b>2.50 %</b>	2.75 %	3.00 %	3.25 %			-1.5 pp	-1.0 pp	-0.5 pp	<b>+0.0 pp</b>	+0.5 pp	+1.0 pp	+1.5 pp
<b>1.48</b>	9.7 %	145.84	148.16	150.64	153.30	156.14	159.20	162.50	<b>1.48</b>	9.7 %	138.83	143.65	148.47	153.30	158.12	162.94	167.76
<b>1.39</b>	9.2 %	157.36	160.17	163.18	166.42	169.91	173.69	177.79	<b>1.39</b>	9.2 %	150.76	155.98	161.20	166.42	171.64	176.86	182.08
<b>1.35</b>	8.9 %	163.75	166.85	170.19	173.78	177.67	181.89	186.48	<b>1.35</b>	8.9 %	157.45	162.89	168.34	173.78	179.23	184.67	190.12
<b>1.30</b>	8.7 %	170.63	174.06	177.76	<b>181.76</b>	186.11	190.83	196.00	<b>1.30</b>	8.7 %	164.70	170.39	176.08	<b>181.76</b>	187.45	193.14	198.83
<b>1.25</b>	8.4 %	178.05	181.86	185.98	190.45	195.31	200.63	206.46	<b>1.25</b>	8.4 %	172.59	178.54	184.50	190.45	196.40	202.35	208.30
<b>1.21</b>	8.2 %	186.07	190.31	194.92	199.92	205.40	211.40	218.01	<b>1.21</b>	8.2 %	181.21	187.45	193.68	199.92	206.16	212.40	218.64
<b>1.12</b>	7.7 %	204.25	209.56	215.36	221.72	228.74	236.50	245.15	<b>1.12</b>	7.7 %	201.03	207.93	214.82	221.72	228.62	235.52	242.42

- GK has been able to grow strongly in recent years and, last but not least, convince in terms of profitability
- The technological leadership position and the cooperation with SAP form a good basis for further growth
- This leading position in the world provides considerable scope for sales and earnings

Valuation	2017	2018	2019	2020	2021e	2022e	2023e
Price / Book	4.6 x	5.0 x	3.3 x	3.0 x	5.6 x	4.6 x	3.9 x
Book value per share ex intangibles	7.02	4.82	6.71	10.68	15.82	23.78	31.98
EV / Sales	2.0 x	2.1 x	1.5 x	1.5 x	2.7 x	2.2 x	1.9 x
EV / EBITDA	20.9 x	32.3 x	14.1 x	8.7 x	13.0 x	10.6 x	8.6 x
EV / EBIT	36.7 x	138.3 x	50.4 x	16.4 x	19.4 x	15.7 x	12.5 x
EV / EBIT adj.*	36.7 x	138.3 x	50.4 x	16.4 x	19.4 x	15.7 x	12.5 x
P / FCF	25.5 x	n.a.	n.a.	9.7 x	54.9 x	23.0 x	18.5 x
P / E	46.0 x	210.4 x	n.a.	23.0 x	29.2 x	24.3 x	19.8 x
P / E adj.*	46.0 x	210.4 x	n.a.	23.0 x	29.2 x	24.3 x	19.8 x
Dividend Yield	n.a.	n.a.	n.a.	n.a.	n.a.	1.1 %	1.1 %
FCF Potential Yield (on market EV)	4.5 %	3.4 %	4.6 %	9.8 %	6.4 %	7.7 %	9.5 %

\*Adjustments made for: -

## Consolidated profit & loss

In EUR m	2017	2018	2019	2020	2021e	2022e	2023e
<b>Sales</b>	<b>90.5</b>	<b>106.2</b>	<b>115.4</b>	<b>117.6</b>	<b>134.0</b>	<b>152.8</b>	<b>174.2</b>
Change Sales yoy	17.0 %	17.4 %	8.8 %	1.8 %	14.0 %	14.0 %	14.0 %
Increase / decrease in inventory	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Own work capitalised	0.0	0.0	0.0	0.8	0.0	0.0	0.0
<b>Total Sales</b>	<b>90.5</b>	<b>106.2</b>	<b>115.4</b>	<b>118.4</b>	<b>134.0</b>	<b>152.8</b>	<b>174.2</b>
Material expenses	8.5	7.7	6.2	9.4	10.7	12.2	13.9
<b>Gross profit</b>	<b>81.9</b>	<b>98.4</b>	<b>109.2</b>	<b>109.0</b>	<b>123.3</b>	<b>140.6</b>	<b>160.2</b>
<i>Gross profit margin</i>	<i>90.6 %</i>	<i>92.7 %</i>	<i>94.6 %</i>	<i>92.7 %</i>	<i>92.0 %</i>	<i>92.0 %</i>	<i>92.0 %</i>
Personnel expenses	57.8	68.8	78.1	75.6	83.1	94.7	106.6
Other operating income	5.2	3.6	3.8	4.3	5.4	6.1	7.0
Other operating expenses	20.5	26.4	22.7	17.9	18.1	19.9	22.6
Unfrequent items	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>EBITDA</b>	<b>8.8</b>	<b>6.8</b>	<b>12.3</b>	<b>19.7</b>	<b>27.5</b>	<b>32.1</b>	<b>38.0</b>
<i>Margin</i>	<i>9.7 %</i>	<i>6.4 %</i>	<i>10.6 %</i>	<i>16.7 %</i>	<i>20.5 %</i>	<i>21.0 %</i>	<i>21.8 %</i>
Depreciation of fixed assets	1.4	2.7	2.0	2.0	2.4	2.8	3.1
<b>EBITA</b>	<b>7.4</b>	<b>4.1</b>	<b>10.3</b>	<b>17.7</b>	<b>25.1</b>	<b>29.3</b>	<b>34.8</b>
Amortisation of intangible assets	2.2	2.5	6.8	7.2	6.7	7.6	8.7
Goodwill amortisation	0.2	0.0	0.0	0.0	0.0	0.0	0.0
<b>EBIT</b>	<b>5.0</b>	<b>1.6</b>	<b>3.4</b>	<b>10.5</b>	<b>18.4</b>	<b>21.7</b>	<b>26.1</b>
<i>Margin</i>	<i>5.5 %</i>	<i>1.5 %</i>	<i>3.0 %</i>	<i>9.0 %</i>	<i>13.7 %</i>	<i>14.2 %</i>	<i>15.0 %</i>
<b>EBIT adj.</b>	<b>5.0</b>	<b>1.6</b>	<b>3.4</b>	<b>10.5</b>	<b>18.4</b>	<b>21.7</b>	<b>26.1</b>
Interest income	0.1	0.1	0.1	0.2	0.0	0.0	0.0
Interest expenses	0.8	1.6	2.3	1.6	2.0	2.0	2.0
Other financial income (loss)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>EBT</b>	<b>4.3</b>	<b>0.2</b>	<b>1.2</b>	<b>9.1</b>	<b>16.4</b>	<b>19.7</b>	<b>24.1</b>
<i>Margin</i>	<i>4.8 %</i>	<i>0.2 %</i>	<i>1.1 %</i>	<i>7.7 %</i>	<i>12.2 %</i>	<i>12.9 %</i>	<i>13.9 %</i>
Total taxes	0.5	-0.8	4.4	2.8	4.7	5.7	7.0
<b>Net income from continuing operations</b>	<b>3.9</b>	<b>0.9</b>	<b>-3.1</b>	<b>6.3</b>	<b>11.6</b>	<b>14.0</b>	<b>17.1</b>
Income from discontinued operations (net of tax)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Net income before minorities</b>	<b>3.9</b>	<b>0.9</b>	<b>-3.1</b>	<b>6.3</b>	<b>11.6</b>	<b>14.0</b>	<b>17.1</b>
Minority interest	0.0	0.0	0.0	-0.1	0.1	0.2	0.2
<b>Net income</b>	<b>3.9</b>	<b>0.9</b>	<b>-3.1</b>	<b>6.3</b>	<b>11.5</b>	<b>13.8</b>	<b>17.0</b>
<i>Margin</i>	<i>4.3 %</i>	<i>0.9 %</i>	<i>-2.7 %</i>	<i>5.4 %</i>	<i>8.6 %</i>	<i>9.1 %</i>	<i>9.7 %</i>
Number of shares, average	1.9	1.9	2.0	2.1	2.5	2.5	2.5
<b>EPS</b>	<b>2.05</b>	<b>0.49</b>	<b>-1.55</b>	<b>3.00</b>	<b>4.67</b>	<b>5.62</b>	<b>6.89</b>
EPS adj.	2.05	0.49	-1.55	3.00	4.67	5.62	6.89

\*Adjustments made for:

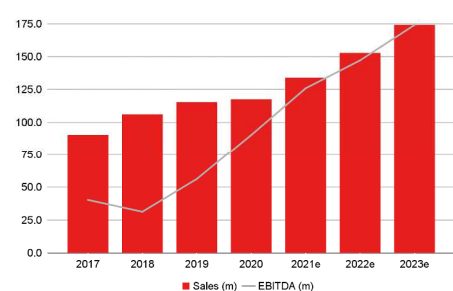
**Guidance: n.a.**

## Financial Ratios

	2017	2018	2019	2020	2021e	2022e	2023e
Total Operating Costs / Sales	90.3 %	93.6 %	89.4 %	84.0 %	79.5 %	79.0 %	78.2 %
Operating Leverage	1.6 x	-3.9 x	13.1 x	113.2 x	5.3 x	1.3 x	1.5 x
EBITDA / Interest expenses	11.2 x	4.4 x	5.4 x	12.0 x	13.7 x	16.0 x	19.0 x
Tax rate (EBT)	10.5 %	-439.8 %	354.6 %	31.1 %	29.0 %	29.0 %	29.0 %
Dividend Payout Ratio	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	26.4 %	21.5 %
Sales per Employee	201,806	232,188	247,572	247,158	276,236	308,734	345,056

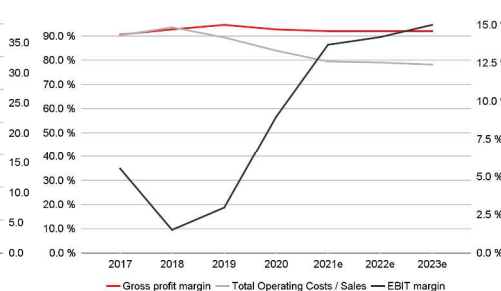
### Sales, EBITDA

in EUR m

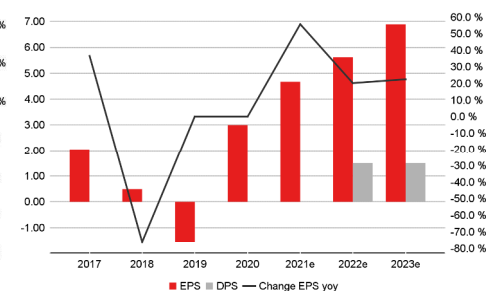


### Operating Performance

in %



### Performance per Share



Source: Warburg Research

Source: Warburg Research

Source: Warburg Research

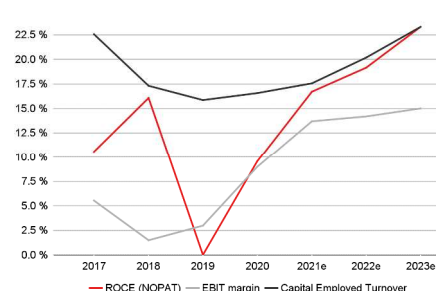
## Consolidated balance sheet

In EUR m	2017	2018	2019	2020	2021e	2022e	2023e
<b>Assets</b>							
Goodwill and other intangible assets	25.4	30.0	27.6	25.4	20.7	15.1	8.4
thereof other intangible assets	21.4	12.2	22.2	25.4	20.7	15.1	8.4
thereof Goodwill	4.0	17.9	5.4	0.0	0.0	0.0	0.0
Property, plant and equipment	14.2	22.7	33.0	31.1	31.7	32.4	33.3
Financial assets	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other long-term assets	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Fixed assets</b>	<b>39.6</b>	<b>52.8</b>	<b>60.7</b>	<b>56.6</b>	<b>52.4</b>	<b>47.5</b>	<b>41.7</b>
Inventories	1.0	0.5	0.3	0.2	1.3	1.5	1.7
Accounts receivable	17.7	26.0	24.0	24.0	33.0	37.7	42.9
Liquid assets	30.5	11.8	8.1	9.4	15.5	30.1	44.6
Other short-term assets	17.8	20.0	21.2	20.6	20.6	20.6	20.6
<b>Current assets</b>	<b>67.0</b>	<b>58.4</b>	<b>53.5</b>	<b>54.2</b>	<b>70.4</b>	<b>89.9</b>	<b>109.8</b>
<b>Total Assets</b>	<b>106.6</b>	<b>111.2</b>	<b>114.2</b>	<b>110.7</b>	<b>122.9</b>	<b>137.4</b>	<b>151.5</b>
<b>Liabilities and shareholders' equity</b>							
Subscribed capital	1.9	1.9	2.0	2.1	2.1	2.1	2.1
Capital reserve	20.5	21.4	27.3	28.7	28.7	28.7	28.7
Retained earnings	0.0	0.0	0.0	0.0	11.5	25.3	38.6
Other equity components	16.3	15.8	11.8	17.2	17.4	17.5	17.7
Shareholders' equity	38.7	39.2	41.2	47.9	59.6	73.6	87.0
Minority interest	0.0	1.1	1.1	0.7	0.7	0.7	0.7
<b>Total equity</b>	<b>38.7</b>	<b>40.3</b>	<b>42.3</b>	<b>48.7</b>	<b>60.4</b>	<b>74.3</b>	<b>87.8</b>
Provisions	3.7	3.1	4.2	3.5	3.5	3.5	3.5
thereof provisions for pensions and similar obligations	1.9	1.6	2.8	2.7	2.7	2.7	2.7
Financial liabilities (total)	32.3	34.8	40.1	33.2	33.2	33.2	33.2
Short-term financial liabilities	10.3	12.3	13.9	7.8	7.8	7.8	7.8
Accounts payable	1.8	2.4	2.5	3.6	4.1	4.7	5.3
Other liabilities	30.0	30.7	25.2	21.7	21.7	21.7	21.7
<b>Liabilities</b>	<b>67.9</b>	<b>70.9</b>	<b>71.9</b>	<b>62.0</b>	<b>62.5</b>	<b>63.1</b>	<b>63.7</b>
<b>Total liabilities and shareholders' equity</b>	<b>106.6</b>	<b>111.2</b>	<b>114.2</b>	<b>110.7</b>	<b>122.9</b>	<b>137.4</b>	<b>151.5</b>

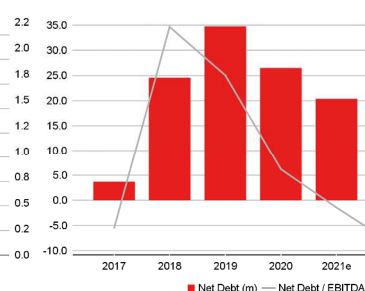
## Financial Ratios

	2017	2018	2019	2020	2021e	2022e	2023e
<b>Efficiency of Capital Employment</b>							
Operating Assets Turnover	3.0 x	2.3 x	2.1 x	2.3 x	2.2 x	2.3 x	2.4 x
Capital Employed Turnover	2.1 x	1.6 x	1.5 x	1.6 x	1.7 x	1.9 x	2.2 x
ROA	9.8 %	1.8 %	-5.2 %	11.2 %	21.9 %	29.1 %	40.7 %
<b>Return on Capital</b>							
ROCE (NOPAT)	10.6 %	16.1 %	n.a.	9.5 %	16.7 %	19.2 %	23.3 %
ROE	11.1 %	2.4 %	-7.8 %	14.2 %	21.3 %	20.8 %	21.1 %
Adj. ROE	11.1 %	2.4 %	-7.8 %	14.2 %	21.3 %	20.8 %	21.1 %
<b>Balance sheet quality</b>							
Net Debt	3.7	24.6	34.8	26.5	20.4	5.8	-8.7
Net Financial Debt	1.8	23.0	32.0	23.8	17.7	3.1	-11.4
Net Gearing	9.6 %	61.1 %	82.3 %	54.5 %	33.8 %	7.8 %	-9.9 %
Net Fin. Debt / EBITDA	21.0 %	337.0 %	261.2 %	120.8 %	64.3 %	9.6 %	n.a.
Book Value / Share	20.3	20.6	20.4	22.7	24.2	29.9	35.4
Book value per share ex intangibles	7.0	4.8	6.7	10.7	15.8	23.8	32.0

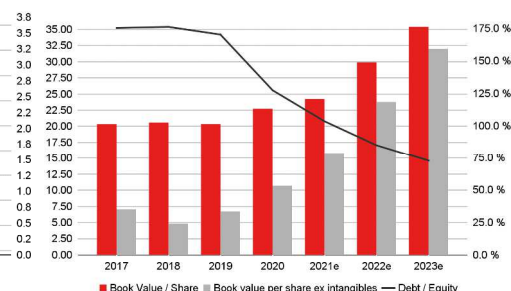
### ROCE Development



### Net debt in EUR m



### Book Value per Share in EUR



Source: Warburg Research

Source: Warburg Research

Source: Warburg Research

## Consolidated cash flow statement

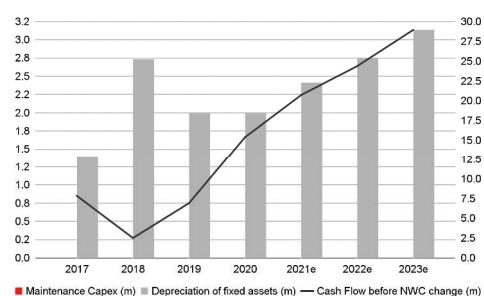
In EUR m	2017	2018	2019	2020	2021e	2022e	2023e
Net income	3.9	0.9	-3.1	6.3	11.6	14.0	17.1
Depreciation of fixed assets	1.4	2.7	2.0	2.0	2.4	2.8	3.1
Amortisation of goodwill	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Amortisation of intangible assets	2.2	2.5	6.8	7.2	6.7	7.6	8.7
Increase/decrease in long-term provisions	0.2	-0.3	1.2	0.0	0.0	0.0	0.0
Other non-cash income and expenses	0.0	-3.3	0.0	0.0	0.0	0.0	0.0
<b>Cash Flow before NWC change</b>	<b>7.9</b>	<b>2.5</b>	<b>6.9</b>	<b>15.4</b>	<b>20.7</b>	<b>24.4</b>	<b>29.0</b>
Increase / decrease in inventory	0.2	0.5	0.2	0.1	-1.1	-0.2	-0.2
Increase / decrease in accounts receivable	0.3	-8.3	2.0	0.0	-9.0	-4.7	-5.2
Increase / decrease in accounts payable	0.2	-0.3	0.1	1.1	0.5	0.6	0.6
Increase / decrease in other working capital positions	6.6	0.0	-9.6	1.1	0.0	0.0	0.0
Increase / decrease in working capital (total)	7.3	-8.2	-7.1	2.3	-9.6	-4.3	-4.8
<b>Net cash provided by operating activities [1]</b>	<b>15.2</b>	<b>-5.7</b>	<b>-0.2</b>	<b>17.7</b>	<b>11.1</b>	<b>20.1</b>	<b>24.2</b>
Investments in intangible assets	-0.3	-0.3	-0.5	-0.8	-2.0	-2.0	-2.0
Investments in property, plant and equipment	-7.9	-11.7	-3.1	-1.9	-3.0	-3.5	-4.0
Payments for acquisitions	0.0	-3.9	0.0	0.0	0.0	0.0	0.0
Financial investments	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Income from asset disposals	-1.1	0.2	0.0	-0.3	0.0	0.0	0.0
<b>Net cash provided by investing activities [2]</b>	<b>-9.3</b>	<b>-15.7</b>	<b>-3.6</b>	<b>-3.0</b>	<b>-5.0</b>	<b>-5.5</b>	<b>-6.0</b>
Change in financial liabilities	17.5	-0.9	5.3	-6.9	0.0	0.0	0.0
Dividends paid	0.0	0.0	0.0	0.0	0.0	0.0	-3.7
Purchase of own shares	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capital measures	0.0	0.6	0.0	0.0	0.0	0.0	0.0
Other	1.6	0.0	-5.2	-4.4	0.0	0.0	0.0
<b>Net cash provided by financing activities [3]</b>	<b>19.1</b>	<b>-0.3</b>	<b>0.1</b>	<b>-11.3</b>	<b>0.0</b>	<b>0.0</b>	<b>-3.7</b>
<b>Change in liquid funds [1]+[2]+[3]</b>	<b>25.1</b>	<b>-21.7</b>	<b>-3.8</b>	<b>3.4</b>	<b>6.1</b>	<b>14.6</b>	<b>14.5</b>
Effects of exchange-rate changes on cash	0.0	-0.1	0.0	0.0	0.0	0.0	0.0
<b>Cash and cash equivalent at end of period</b>	<b>27.9</b>	<b>8.7</b>	<b>2.3</b>	<b>5.7</b>	<b>15.5</b>	<b>30.1</b>	<b>44.6</b>

## Financial Ratios

	2017	2018	2019	2020	2021e	2022e	2023e
<b>Cash Flow</b>							
FCF	7.0	-17.6	-3.9	15.0	6.1	14.6	18.2
Free Cash Flow / Sales	7.8 %	-16.6 %	-3.4 %	12.8 %	4.6 %	9.5 %	10.4 %
Free Cash Flow Potential	8.3	7.6	7.9	16.9	22.7	26.4	31.0
Free Cash Flow / Net Profit	180.8 %	-1907.9 %	124.3 %	237.2 %	53.3 %	105.4 %	107.2 %
Interest Received / Avg. Cash	0.7 %	0.7 %	0.7 %	2.2 %	0.0 %	0.0 %	0.0 %
Interest Paid / Avg. Debt	3.3 %	4.7 %	6.1 %	4.5 %	6.0 %	6.0 %	6.0 %
<b>Management of Funds</b>							
Investment ratio	9.0 %	11.3 %	3.2 %	2.3 %	3.7 %	3.6 %	3.4 %
Maint. Capex / Sales	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Capex / Dep	215.8 %	228.7 %	41.3 %	29.3 %	54.9 %	52.9 %	50.7 %
Avg. Working Capital / Sales	18.1 %	18.9 %	19.9 %	18.0 %	18.9 %	21.2 %	21.2 %
Trade Debtors / Trade Creditors	964.6 %	1100.6 %	965.5 %	667.8 %	804.9 %	802.1 %	809.4 %
Inventory Turnover	8.6 x	14.8 x	21.9 x	47.2 x	8.2 x	8.1 x	8.2 x
Receivables collection period (days)	71	90	76	74	90	90	90
Payables payment period (days)	79	112	146	139	140	140	139
Cash conversion cycle (Days)	-1	2	-53	-57	-5	-5	-4

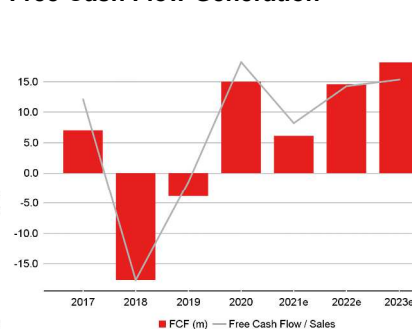
### CAPEX and Cash Flow

in EUR m



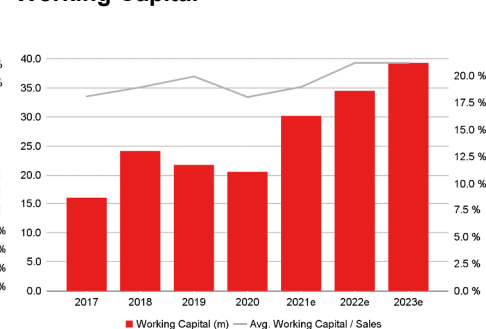
Source: Warburg Research

### Free Cash Flow Generation



Source: Warburg Research

### Working Capital



Source: Warburg Research

**LEGAL DISCLAIMER**

This research report ("investment recommendation") was prepared by the Warburg Research GmbH, a fully owned subsidiary of the M.M.Warburg & CO (AG & Co.) KGaA and is passed on by the M.M.Warburg & CO (AG & Co.) KGaA. It is intended solely for the recipient and may not be passed on to another company without their prior consent, regardless of whether the company is part of the same corporation or not. It contains selected information and does not purport to be complete. The investment recommendation is based on publicly available information and data ("information") believed to be accurate and complete. Warburg Research GmbH neither examines the information for accuracy and completeness, nor guarantees its accuracy and completeness. Possible errors or incompleteness of the information do not constitute grounds for liability of M.M.Warburg & CO (AG & Co.) KGaA or Warburg Research GmbH for damages of any kind whatsoever, and M.M.Warburg & CO (AG & Co.) KGaA and Warburg Research GmbH are not liable for indirect and/or direct and/or consequential damages. In particular, neither M.M.Warburg & CO (AG & Co.) KGaA nor Warburg Research GmbH are liable for the statements, plans or other details contained in these investment recommendations concerning the examined companies, their affiliated companies, strategies, economic situations, market and competitive situations, regulatory environment, etc. Although due care has been taken in compiling this investment recommendation, it cannot be excluded that it is incomplete or contains errors. M.M.Warburg & CO (AG & Co.) KGaA and Warburg Research GmbH, their shareholders and employees are not liable for the accuracy and completeness of the statements, estimations and the conclusions derived from the information contained in this investment recommendation. Provided a investment recommendation is being transmitted in connection with an existing contractual relationship, i.e. financial advisory or similar services, the liability of M.M.Warburg & CO (AG & Co.) KGaA and Warburg Research GmbH shall be restricted to gross negligence and wilful misconduct. In case of failure in essential tasks, M.M.Warburg & CO (AG & Co.) KGaA and Warburg Research GmbH are liable for normal negligence. In any case, the liability of M.M.Warburg & CO (AG & Co.) KGaA and Warburg Research GmbH is limited to typical, expectable damages. This investment recommendation does not constitute an offer or a solicitation of an offer for the purchase or sale of any security. Partners, directors or employees of M.M.Warburg & CO (AG & Co.) KGaA, Warburg Research GmbH or affiliated companies may serve in a position of responsibility, i.e. on the board of directors of companies mentioned in the report. Opinions expressed in this investment recommendation are subject to change without notice. All rights reserved.

**COPYRIGHT NOTICE**

This work including all its parts is protected by copyright. Any use beyond the limits provided by copyright law without permission is prohibited and punishable. This applies, in particular, to reproductions, translations, microfilming, and storage and processing on electronic media of the entire content or parts thereof.

**DISCLOSURE ACCORDING TO §85 OF THE GERMAN SECURITIES TRADING ACT (WPHG), MAR AND MIFID II INCL. COMMISSION DELEGATED REGULATION (EU) 2016/958 AND (EU) 2017/565**

The valuation underlying the investment recommendation for the company analysed here is based on generally accepted and widely used methods of fundamental analysis, such as e.g. DCF Model, Free Cash Flow Value Potential, NAV, Peer Group Comparison or Sum of the Parts Model (see also <http://www.mmwarburg.de/disclaimer/disclaimer.htm#Valuation>). The result of this fundamental valuation is modified to take into consideration the analyst's assessment as regards the expected development of investor sentiment and its impact on the share price.

Independent of the applied valuation methods, there is the risk that the price target will not be met, for instance because of unforeseen changes in demand for the company's products, changes in management, technology, economic development, interest rate development, operating and/or material costs, competitive pressure, supervisory law, exchange rate, tax rate etc. For investments in foreign markets and instruments there are further risks, generally based on exchange rate changes or changes in political and social conditions.

This commentary reflects the opinion of the relevant author at the point in time of its compilation. A change in the fundamental factors underlying the valuation can mean that the valuation is subsequently no longer accurate. Whether, or in what time frame, an update of this commentary follows is not determined in advance.

Additional internal and organisational arrangements to prevent or to deal with conflicts of interest have been implemented. Among these are the spatial separation of Warburg Research GmbH from M.M.Warburg & CO (AG & Co.) KGaA and the creation of areas of confidentiality. This prevents the exchange of information, which could form the basis of conflicts of interest for Warburg Research GmbH in terms of the analysed issuers or their financial instruments.

The analysts of Warburg Research GmbH do not receive a gratuity – directly or indirectly – from the investment banking activities of M.M.Warburg & CO (AG & Co.) KGaA or of any company within the Warburg-Group.

All prices of financial instruments given in this investment recommendation are the closing prices on the last stock-market trading day before the publication date stated, unless another point in time is explicitly stated.

M.M.Warburg & CO (AG & Co.) KGaA and Warburg Research GmbH are subject to the supervision of the Federal Financial Supervisory Authority, BaFin. M.M.Warburg & CO (AG & Co.) KGaA is additionally subject to the supervision of the European Central Bank (ECB).



---

**SOURCES**

All **data and consensus estimates** have been obtained from FactSet except where stated otherwise.

The **Warburg ESG Risk Score** is based on information © 2020 MSCI ESG Research LLC. Reproduced by permission. Although Warburg Research's information providers, including without limitation, MSCI ESG Research LLC and its affiliates (the "ESG Parties"), obtain information (the "Information") from sources they consider reliable, none of the ESG Parties warrants or guarantees the originality, accuracy and/or completeness, of any data herein and expressly disclaim all express or implied warranties, including those of merchantability and fitness for a particular purpose. The Information may only be used for your internal use, may not be reproduced or disseminated in any form and may not be used as a basis for, or a component, of any financial instruments or products indices. Further, none of the Information can in and of itself be used to determine which securities to buy or sell or when to buy or sell them. None of the ESG Parties shall have any liability for any errors or omissions in connection with any data herein, or any liability for any direct, indirect, special, punitive, consequential or any other damage (including lost profits) even if notified of the possibility.

---

### Additional information for clients in the United States

1. This research report (the "Report") is a product of Warburg Research GmbH, Germany, a fully owned subsidiary of M.M.Warburg & CO (AG & Co.) KGaA, Germany (in the following collectively "Warburg"). Warburg is the employer of the research analyst(s), who have prepared the Report. The research analyst(s) reside outside the United States and are not associated persons of any U.S. regulated broker-dealer and therefore are not subject to the supervision of any U.S. regulated broker-dealer.
2. The Report is provided in the United States for distribution solely to "major U.S. institutional investors" under Rule 15a-6 of the U.S. Securities Exchange Act of 1934 by CIC.
3. CIC (Crédit Industriel et Commercial) and M.M. Warburg & CO have concluded a Research Distribution Agreement that gives CIC Market Solutions exclusive distribution in France, the US and Canada of the Warburg Research GmbH research product.
4. The research reports are distributed in the United States of America by CIC ("CIC") pursuant to a SEC Rule 15a-6 agreement with CIC Market Solutions Inc ("CICI"), a U.S. registered broker-dealer and a related company of CIC, and are distributed solely to persons who qualify as "Major U.S. Institutional Investors" as defined in SEC Rule 15a-6 under the Securities Exchange Act of 1934.
5. Any person who is not a Major U.S. Institutional Investor must not rely on this communication. The delivery of this research report to any person in the United States of America is not a recommendation to effect any transactions in the securities discussed herein, or an endorsement of any opinion expressed herein.

### Reference in accordance with section 85 of the German Securities Trading Act (WpHG) and Art. 20 MAR regarding possible conflicts of interest with companies analysed:

- 1- Warburg Research, or an affiliated company, or an employee of one of these companies responsible for the compilation of the research, hold a **share of more than 5%** of the equity capital of the analysed company.
- 2- Warburg Research, or an affiliated company, within the last twelve months participated in the **management of a consortium** for an issue in the course of a public offering of such financial instruments, which are, or the issuer of which is, the subject of the investment recommendation.
- 3- Companies affiliated with Warburg Research **manage financial instruments**, which are, or the issuers of which are, subject of the investment recommendation, in a market based on the provision of buy or sell contracts.
- 4- MMWB, Warburg Research, or an affiliated company, reached an agreement with the issuer to provide **investment banking and/or investment services** and the relevant agreement was in force in the last 12 months or there arose for this period, based on the relevant agreement, the obligation to provide or to receive a service or compensation - provided that this disclosure does not result in the disclosure of confidential business information.
- 5- The company compiling the analysis or an affiliated company had reached an **agreement on the compilation of the investment recommendation** with the analysed company.
- 6a- Warburg Research, or an affiliated company, holds a **net long position of more than 0.5%** of the total issued share capital of the analysed company.
- 6b- Warburg Research, or an affiliated company, holds a **net short position of more than 0.5%** of the total issued share capital of the analysed company.
- 6c- The issuer holds shares of more than 5% of the total issued capital of Warburg Research or an affiliated company.
- 7- The company preparing the analysis as well as its affiliated companies and employees have **other important interests** in relation to the analysed company, such as, for example, the exercising of mandates at analysed companies.

This report has been made accessible to the company analysed.

Company	Disclosure	Link to the historical price targets and rating changes (last 12 months)
GK Software	5	<a href="http://www.mmwarburg.com/disclaimer/disclaimer_en/DE0007571424.htm">http://www.mmwarburg.com/disclaimer/disclaimer_en/DE0007571424.htm</a>

**INVESTMENT RECOMMENDATION**

Investment recommendation: expected direction of the share price development of the financial instrument up to the given price target in the opinion of the analyst who covers this financial instrument.

-B-	<b>Buy:</b>	The price of the analysed financial instrument is expected to rise over the next 12 months.
-H-	<b>Hold:</b>	The price of the analysed financial instrument is expected to remain mostly flat over the next 12 months.
-S-	<b>Sell:</b>	The price of the analysed financial instrument is expected to fall over the next 12 months.
“-“	<b>Rating suspended:</b>	The available information currently does not permit an evaluation of the company.

**WARBURG RESEARCH GMBH – ANALYSED RESEARCH UNIVERSE BY RATING**

Rating	Number of stocks	% of Universe
Buy	151	70
Hold	55	26
Sell	5	2
Rating suspended	4	2
<b>Total</b>	<b>215</b>	<b>100</b>

**WARBURG RESEARCH GMBH – ANALYSED RESEARCH UNIVERSE BY RATING ...**

... taking into account only those companies which were provided with major investment services in the last twelve months.

Rating	Number of stocks	% of Universe
Buy	43	88
Hold	3	6
Sell	0	0
Rating suspended	3	6
<b>Total</b>	<b>49</b>	<b>100</b>

**PRICE AND RATING HISTORY GK SOFTWARE AS OF 28.05.2021**


Markings in the chart show rating changes by Warburg Research GmbH in the last 12 months. Every marking details the date and closing price on the day of the rating change.

## EQUITIES

**Matthias Rode** +49 40 3282-2678  
Head of Equities mrode@mmwarburg.com

## RESEARCH

**Michael Heider** +49 40 309537-280  
Head of Research mheider@warburg-research.com

**Henner Rüschemeyer** +49 40 309537-270  
Head of Research hrueschmeier@warburg-research.com

**Stefan Augustin** +49 40 309537-168  
Cap. Goods, Engineering saugustin@warburg-research.com

**Jan Bauer** +49 40 309537-155  
Renewables jbauer@warburg-research.com

**Jonas Blum** +49 40 309537-240  
Telco, Media, Construction jblum@warburg-research.com

**Christian Cohrs** +49 40 309537-175  
Industrials & Transportation ccohrs@warburg-research.com

**Dr. Christian Ehmann** +49 40 309537-167  
BioTech, Life Science cehmann@warburg-research.com

**Felix Ellmann** +49 40 309537-120  
Software, IT fellmann@warburg-research.com

**Jörg Philipp Frey** +49 40 309537-258  
Retail, Consumer Goods jfrey@warburg-research.com

**Marius Fuhrberg** +49 40 309537-185  
Financial Services mfuhrberg@warburg-research.com

**Mustafa Hidir** +49 40 309537-230  
Automobiles, Car Suppliers mhidir@warburg-research.com

**Ulrich Huwald** +49 40 309537-255  
Health Care, Pharma uhuwald@warburg-research.com

**Philipp Kaiser** +49 40 309537-260  
Real Estate pkaiser@warburg-research.com

**Thilo Kleibauer** +49 40 309537-257  
Retail, Consumer Goods tkleibauer@warburg-research.com

**Eggert Kuls** +49 40 309537-256  
Engineering ekuls@warburg-research.com

**Andreas Pläsier** +49 40 309537-246  
Banks, Financial Services aplaesier@warburg-research.com

**Malte Schaumann** +49 40 309537-170  
Technology mschaumann@warburg-research.com

**Oliver Schwarz** +49 40 309537-250  
Chemicals, Agriculture oschwarz@warburg-research.com

**Simon Stippig** +49 40 309537-265  
Real Estate sstippig@warburg-research.com

**Cansu Tatar** +49 40 309537-248  
Cap. Goods, Engineering ctatar@warburg-research.com

**Marc-René Tonn** +49 40 309537-259  
Automobiles, Car Suppliers mtonn@warburg-research.com

**Robert-Jan van der Horst** +49 40 309537-290  
Technology rvanderhorst@warburg-research.com

**Andreas Wolf** +49 40 309537-140  
Software, IT awolf@warburg-research.com

## INSTITUTIONAL EQUITY SALES

**Marc Niemann** +49 40 3282-2660  
Head of Equity Sales, Germany mniemann@mmwarburg.com

**Klaus Schilling** +49 40 3282-2664  
Head of Equity Sales, Germany kschilling@mmwarburg.com

**Tim Beckmann** +49 40 3282-2665  
United Kingdom tbeckmann@mmwarburg.com

**Lea Bogdanova** +49 69 5050-7411  
United Kingdom, Ireland lbogdanova@mmwarburg.com

**Jens Buchmüller** +49 69 5050-7415  
Scandinavia, Austria jbuchmueller@mmwarburg.com

**Alexander Eschweiler** +49 40 3282-2669  
Germany, Luxembourg aeschweiler@mmwarburg.com

**Matthias Fritsch** +49 40 3282-2696  
United Kingdom mfritsch@mmwarburg.com

**Maximilian Martin** +49 69 5050-7413  
Austria, Poland mmartin@mmwarburg.com

**Christopher Seedorf** +49 69 5050-7414  
Switzerland cseedorf@mmwarburg.com

**Sophie Hauer** +49 69 5050-7417  
Roadshow/Marketing shauer@mmwarburg.com

**Juliane Niemann** +49 40 3282-2694  
Roadshow/Marketing jniemann@mmwarburg.com

## SALES TRADING

**Oliver Merckel** +49 40 3282-2634  
Head of Sales Trading omerckel@mmwarburg.com

**Elyaz Dust** +49 40 3282-2702  
Sales Trading edust@mmwarburg.com

**Michael Ilgenstein** +49 40 3282-2700  
Sales Trading milgenstein@mmwarburg.com

**Marcel Magiera** +49 40 3282-2662  
Sales Trading mmagiera@mmwarburg.com

**Bastian Quast** +49 40 3282-2701  
Sales Trading bquast@mmwarburg.com

**Jörg Treptow** +49 40 3282-2658  
Sales Trading jtreptow@mmwarburg.com

## MACRO RESEARCH

**Carsten Klude** +49 40 3282-2572  
Macro Research cklude@mmwarburg.com

**Dr. Christian Jasperneite** +49 40 3282-2439  
Investment Strategy cjasperneite@mmwarburg.com

### Our research can be found under:

Warburg Research [research.mmwarburg.com/en/index.html](https://research.mmwarburg.com/en/index.html)  
Bloomberg RESP MMWA GO  
FactSet [www.factset.com](https://www.factset.com)

Thomson Reuters [www.thomsonreuters.com](https://www.thomsonreuters.com)  
Capital IQ [www.capitaliq.com](https://www.capitaliq.com)

### For access please contact:

**Andrea Schaper** +49 40 3282-2632  
Sales Assistance aschaper@mmwarburg.com

**Kerstin Muthig** +49 40 3282-2703  
Sales Assistance kmuthig@mmwarburg.com