(Scale All Share, Technology, V3S GR)



Dung	Value Indicators:	EUR	Warburg ESG Risk Score:	3.0	Description:	
Buy	DCF:	20.00	ESG Score (MSCI based):	3.0	Leading point-of-sale systems	s with a
00 00	FCF-Value Potential 2022e:	16.00	Balance Sheet Score:	5.0	focus on the gastronomy and	bakery
EUR 20.00			Market Liquidity Score:	1.0	sector	
	Market Snapshot:	EUR m	Shareholders:		Key Figures (WRe):	2020e
Drice FUD 0.70	Market cap:	77.6	Freefloat	48.3 %	Beta:	1.3
Price EUR 9.72	No. of shares (m):	8.0	Thomas Stümmler	22.6 %	Price / Book:	3.5 x
Upside 105.8 %	EV:	66.5	Jens Reckendorf	19.1 %	Equity Ratio:	63 %
	Freefloat MC:	37.5	Primepulse SE	10.0 %		
	Ø Trad. Vol. (30d):	364.12 th	TBF Global Asset Management	5.0 %		

Update provided on recurring sales

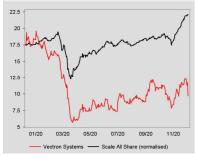
Vectron provided an update on the development of its recurring revenues on Thursday (03.12.2020). The transformation to an SaaS-model is the main driver of future sales and earnings.

Despite the severe COVID impact on the hospitality sector, Vectron was able to gain 8,000 new subscriptions for its entry digital package by early December and raised total subscriptions from 2,000 at the beginning of the year to a current >10,000. This is positive news as it reflects the increasing contributions from digital products (which were, so far, only small). The entry digital package includes the software update required for the new German regulation for manipulation-proof POS data, cloud-based storage for POS data, a reporting app and all regular software updates. It is expected that such a run rate will remain largely stable, so that subscriptions should rise to ~20,000 by year-end 2021. Owing to the high margins of these recurring revenues, this digital package alone can increase the profitability of the POS life-cycle by 50%. Digital packages are expected to contribute EUR 1.5 – 2m to the EBIT in FY 2021.

Vectron currently generates recurring revenues to the tune of EUR 5-6m annually, including its bonVito (customer cards for chain stores such as bakeries with > 5m active cards and 6,000 outlets) and posmatic iPad-based POS solution. Recurring sales could almost double to ~ EUR 10m in 2021, with the further roll-out of the SaaS-platform. Besides the Duratec POS (including payment services etc.), the digital offering will be expanded to the Vectron premium systems as well in early 2021. Although the COVID-related impact of lockdown measures etc. can limit customer gains, especially in early 2021, Vectron is expected to significantly expand its number of hardware contracts too next year (from just above 1,500 currently).

The share price came under pressure on Friday, after an analyst report with a sell recommendation. The report (which contains several errors) completely ignores the potential to lift recurring sales with digital products (e.g. payment, online ordering, reservation, marketing tools, data analysis). We do not share this main thesis as Vectron's leading positioning (~25-30% market share) in the hospitality POS market in Germany (as well as the German-speaking region and other neighbouring countries) is a strong position for the introduction of digital products and the establishment of a SaaS-platform with recurring sales. The share of recurring revenues should exceed 50% by 2023.

The rating and PT remain unchanged.

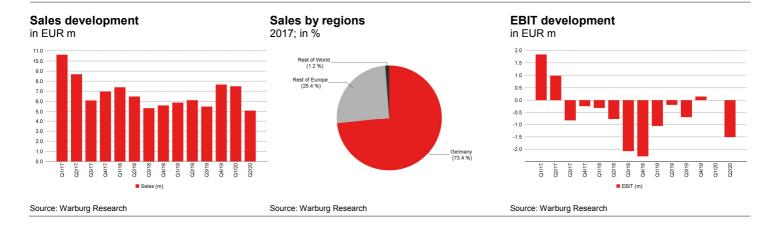


Rel. Performance vs Scale All	
1 month:	-13.5 %
6 months:	-16.6 %
Year to date:	-72.7 %
Trailing 12 months:	-68.8 %

Company events:

EV E . 1 04 40	0400							
FY End: 31.12. in EUR m	CAGR (19-22e)	2016	2017	2018	2019	2020e	2021e	2022e
	· · · · · · · · · · · · · · · · · · ·							
Sales	36.6 %	33.7	32.4	24.8	25.2	27.5	50.6	64.1
Change Sales yoy		33.7 %	-4.0 %	-23.3 %	1.4 %	9.2 %	84.1 %	26.6 %
Gross profit margin		54.4 %	56.7 %	53.7 %	57.8 %	58.4 %	58.5 %	58.5 %
EBITDA	-	3.6	2.3	-3.8	-1.4	-1.6	9.5	14.6
Margin		10.7 %	7.0 %	-15.2 %	-5.5 %	-6.0 %	18.8 %	22.8 %
EBIT	-	3.1	1.8	-5.4	-1.8	-2.3	8.9	14.0
Margin		9.1 %	5.4 %	-22.0 %	-7.1 %	-8.2 %	17.6 %	21.8 %
Net income	-	2.0	1.1	-3.9	-1.4	-1.9	5.8	9.3
EPS	-	1.23	0.16	-0.59	-0.19	-0.24	0.73	1.17
EPS adj.	-	1.23	0.16	-0.59	-0.19	-0.24	0.73	1.17
DPS	-	1.00	0.05	0.05	0.00	0.00	0.10	0.20
Dividend Yield		9.0 %	0.2 %	0.3 %	n.a.	n.a.	1.0 %	2.1 %
FCFPS		0.23	-0.46	-0.40	-0.38	-0.06	0.65	0.87
FCF / Market cap		2.1 %	-1.8 %	-2.1 %	-3.4 %	-0.6 %	6.6 %	8.9 %
EV / Sales		n.a.	5.0 x	5.2 x	3.2 x	2.4 x	1.2 x	0.9 x
EV / EBITDA		n.a.	71.4 x	n.a.	n.a.	n.a.	6.4 x	3.8 x
EV / EBIT		n.a.	92.2 x	n.a.	n.a.	n.a.	6.9 x	4.0 x
P/E		9.1 x	154.5 x	n.a.	n.a.	n.a.	13.3 x	8.3 x
P / E adj.		9.1 x	154.5 x	n.a.	n.a.	n.a.	13.3 x	8.3 x
FCF Potential Yield	ı	n.a.	0.9 %	-1.8 %	-1.4 %	-2.0 %	10.6 %	18.1 %
Net Debt		-7.2	-1.7	1.2	-0.9	-11.2	-16.3	-22.4
ROCE (NOPAT)		29.8 %	11.2 %	n.a.	n.a.	n.a.	53.8 %	74.4 %
Guidance:	2020: Sales E	UR 25 - 29m	; EBITDA -2	- 0.25m				



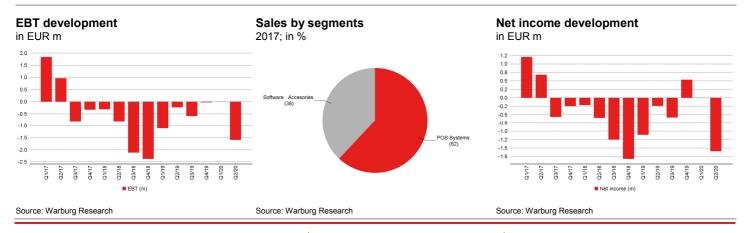


Company Background

- Vectron is a leading provider of POS systems. The products are positioned in the medium to premium segment. With its high degree of functionality, Vectron is one of the technology and innovation leaders.
- Vectron focuses on the market for proprietary POS systems (30% of the overall market). PC-based systems (bulk of the market) usually require higher maintenance and are primarily used by large chain stores.
- Vectron's market share is particularly high in the food service and bakery industries, where the company is market leader for proprietary systems in the German-speaking area with a market share of ca. 25%.
- Vectron has some 180 employees. About one-third are employed in development and product management as the company aims to maintain its position as technology leader.
- Since end of 2013, Vectron addresses non-premium market segments and new markets abroad with a second trademark (Duratec) and simpler systems

Competitive Quality

- Factors such as high reliability, ease of operation and low follow-up costs (maintenance/support) are required in the food service and bakery target sectors which are characterised by an atomistic customer structure.
- This explains the high penetration rate of the proprietary POS systems. Given that the large producers of POS systems mainly offer PC-based systems Vectron mainly has to face smaller competitors.
- Vectron differentiates itself from the mainly smaller competitors by rigorously pursuing the further development of the POS systems and thanks to the high additional use offered by wide functionality.
- By focusing on the premium segment, Vectron avoids the typical problems in the lower segment: solely differentiating on price. This is underpinned by gross margins of ca. 55% and ROCEs of well above 10%.
- Growth opportunities presently arise from the establishment of the cooperation with DeutschlandCard and potentially further partners.





DCF model														
	Detaile	d forecas	t period				٦	ransition	al period					Term. Value
Figures in EUR m	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e	2031e	2032e	
Sales	27.5	50.6	64.1	55.1	63.9	69.7	74.6	79.8	83.8	88.0	92.4	97.0	n.a.	
Sales change	9.2 %	84.1 %	26.6 %	-14.0 %	16.0 %	9.0 %	7.0 %	7.0 %	5.0 %	5.0 %	5.0 %	5.0 %	n.a.	1.8 %
EBIT	-2.3	8.9	14.0	7.7	11.5	13.9	14.9	16.0	16.8	17.6	18.5	19.4	n.a.	
EBIT-margin	-8.2 %	17.6 %	21.8 %	14.0 %	18.0 %	20.0 %	20.0 %	20.0 %	20.0 %	20.0 %	20.0 %	20.0 %	n.a.	
Tax rate (EBT)	24.3 %	31.0 %	31.0 %	30.5 %	30.5 %	30.5 %	30.5 %	30.5 %	30.5 %	30.5 %	30.5 %	30.5 %	n.a.	
NOPAT	-1.7	6.1	9.6	5.4	8.0	9.7	10.4	11.1	11.6	12.2	12.8	13.5	n.a.	
Depreciation	0.6	0.6	0.6	0.9	1.0	1.1	1.2	1.3	1.3	1.4	1.5	1.6	n.a.	
in % of Sales	2.3 %	1.2 %	1.0 %	1.6 %	1.6 %	1.6 %	1.6 %	1.6 %	1.6 %	1.6 %	1.6 %	1.6 %	n.a.	
Changes in provisions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.a.	
Change in Liquidity from														
- Working Capital	-1.3	2.4	2.4	-2.2	1.0	1.0	0.9	0.9	0.7	0.8	0.8	8.0	n.a.	
- Capex	0.6	0.6	0.6	0.9	1.0	1.1	1.2	1.3	1.3	1.4	1.5	1.6	n.a.	
Capex in % of Sales	2.1 %	1.1 %	0.9 %	1.6 %	1.6 %	1.6 %	1.6 %	1.6 %	1.6 %	1.6 %	1.6 %	1.6 %	n.a.	
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	n.a.	
Free Cash Flow (WACC Model)	-0.3	3.8	7.3	7.6	7.0	8.7	9.5	10.2	10.9	11.5	12.0	12.6	n.a.	14
PV of FCF	-0.3	3.5	6.2	6.0	5.1	5.8	5.9	5.8	5.8	5.6	5.4	5.3	n.a.	80
share of PVs		6.45 %						38.4	I %					55.14 %

Model parameter				Valuation (m)			
Derivation of WACC:		Derivation of Beta:		Present values 2032e	65		
				Terminal Value	80		
Debt ratio	6.00 %	Financial Strength	1.20	Financial liabilities	10		
Cost of debt (after tax)	2.8 %	Liquidity (share)	1.50	Pension liabilities	0		
Market return	7.00 %	Cyclicality	1.10	Hybrid capital	0		
Risk free rate	1.50 %	Transparency	1.40	Minority interest	0		
		Others	1.30	Market val. of investments	2		
				Liquidity	23	No. of shares (m)	8.0
WACC	8.30 %	Beta	1.30	Equity Value	159	Value per share (EUR)	19.90

Sens	itivity Va	lue per Sh	are (EUR)													
Terminal Growth Delta EBIT-margin																	
Beta	WACC	1.00 %	1.25 %	1.50 %	1.75 %	2.00 %	2.25 %	2.50 %	Beta	WACC	-1.5 pp	-1.0 pp	-0.5 pp	+0.0 pp	+0.5 pp	+1.0 pp	+1.5 pp
1.49	9.3 %	16.49	16.71	16.94	17.19	17.46	17.74	18.05	1.49	9.3 %	15.89	16.32	16.76	17.19	17.62	18.05	18.49
1.40	8.8 %	17.60	17.86	18.14	18.45	18.77	19.12	19.49	1.40	8.8 %	17.05	17.52	17.98	18.45	18.91	19.38	19.84
1.35	8.5 %	18.21	18.50	18.81	19.15	19.50	19.89	20.31	1.35	8.5 %	17.70	18.18	18.66	19.15	19.63	20.11	20.59
1.30	8.3 %	18.87	19.19	19.53	19.90	20.30	20.73	21.20	1.30	8.3 %	18.39	18.90	19.40	19.90	20.40	20.91	21.41
1.25	8.0 %	19.58	19.93	20.31	20.72	21.16	21.64	22.16	1.25	8.0 %	19.15	19.67	20.19	20.72	21.24	21.76	22.29
1.20	7.8 %	20.34	20.73	21.15	21.60	22.10	22.64	23.22	1.20	7.8 %	19.96	20.51	21.06	21.60	22.15	22.69	23.24
1.11	7.3 %	22.04	22.52	23.05	23.62	24.24	24.93	25.68	1.11	7.3 %	21.82	22.42	23.02	23.62	24.22	24.81	25.41

- Model reflects fiscal regulation
- Increasing digitalization drives mid term sales and profitability increase
- Model is not yet reflecting the company target of > EUR 100m in sales by 2022



Free Cash Flow Value Potential

Warburg Research's valuation tool "FCF Value Potential" reflects the ability of the company to generate sustainable free cash flows. It is based on the "FCF potential" - a FCF "ex growth" figure - which assumes unchanged working capital and pure maintenance capex. A value indication is derived via the perpetuity of a given year's "FCF potential" with consideration of the weighted costs of capital. The fluctuating value indications over time add a timing element to the DCF model (our preferred valuation tool).

in EUR m	2016	2017	2018	2019	2020e	2021e	2022e
Net Income before minorities	n.a.	1.1	-3.9	-1.4	-1.9	6.0	9.5
+ Depreciation + Amortisation	n.a.	0.5	1.7	0.4	0.6	0.6	0.6
- Net Interest Income	n.a.	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2
- Maintenance Capex	n.a.	0.3	0.3	0.3	0.3	0.3	0.3
+ Other	n.a.	0.0	0.0	0.0	0.0	0.0	0.0
Free Cash Flow Potential	n.a.	1.4	-2.3	-1.1	-1.3	6.5	10.0
FCF Potential Yield (on market EV)	n/a	0.9 %	-1.8 %	-1.4 %	-2.0 %	10.6 %	18.1 %
WACC	8.30 %	8.30 %	8.30 %	8.30 %	8.30 %	8.30 %	8.30 %
= Enterprise Value (EV)	n.a.	161.4	128.5	79.9	66.5	61.3	55.2
= Fair Enterprise Value	n.a.	16.6	n.a.	n.a.	n.a.	78.5	120.7
- Net Debt (Cash)	n.a.	-11.2	-11.2	-11.2	-11.2	-16.3	-22.4
- Pension Liabilities	n.a.	0.0	0.0	0.0	0.0	0.0	0.0
- Other	n.a.	0.0	0.0	0.0	0.0	0.0	0.0
 Market value of minorities 	n.a.	0.0	0.0	0.0	0.0	0.0	0.0
+ Market value of investments	n.a.	0.0	0.0	0.0	0.0	0.0	0.0
= Fair Market Capitalisation	n.a.	27.7	n.a.	n.a.	n.a.	94.8	143.2
Number of shares, average	1.6	6.6	6.6	7.2	7.9	7.9	7.9
= Fair value per share (EUR)	n.a.	4.20	n.a.	n.a.	n.a.	11.96	18.06
premium (-) / discount (+) in %						23.1 %	85.8 %
Sensitivity Fair value per Share (EU	R)						
11.	30 % n.a.	2.92	n.a.	n.a.	n.a.	9.26	13.91
10.	30 % n.a.	3.07	n.a.	n.a.	n.a.	9.96	14.99
9.	30 % n.a.	3.25	n.a.	n.a.	n.a.	10.82	16.30
WACC 8.	30 % n.a.	3.47	n.a.	n.a.	n.a.	11.87	17.92
7.3	30 % n.a.	3.76	n.a.	n.a.	n.a.	13.22	19.99
	30 % n.a.	4.13	n.a.	n.a.	n.a.	14.99	22.72
5.3	30 % n.a.	4.64	n.a.	n.a.	n.a.	17.44	26.48

[•] Rising value indication with higher business volume...

^{...}this is due to a high operating leverage given gross margins of >50%



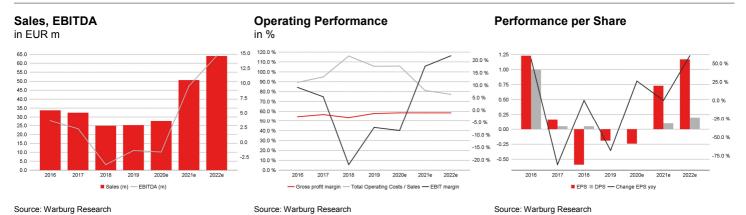
Valuation							
	2016	2017	2018	2019	2020e	2021e	2022e
Price / Book	1.2 x	11.4 x	12.6 x	5.8 x	3.5 x	2.8 x	2.1 x
Book value per share ex intangibles	8.75	1.94	1.51	1.88	2.77	3.50	4.56
EV / Sales	n.a.	5.0 x	5.2 x	3.2 x	2.4 x	1.2 x	0.9 x
EV / EBITDA	n.a.	71.4 x	n.a.	n.a.	n.a.	6.4 x	3.8 x
EV / EBIT	n.a.	92.2 x	n.a.	n.a.	n.a.	6.9 x	4.0 x
EV / EBIT adj.*	n.a.	92.2 x	n.a.	n.a.	n.a.	6.9 x	4.0 x
P/FCF	48.7 x	n.a.	n.a.	n.a.	n.a.	15.1 x	11.2 x
P/E	9.1 x	154.5 x	n.a.	n.a.	n.a.	13.3 x	8.3 x
P / E adj.*	9.1 x	154.5 x	n.a.	n.a.	n.a.	13.3 x	8.3 x
Dividend Yield	9.0 %	0.2 %	0.3 %	n.a.	n.a.	1.0 %	2.1 %
FCF Potential Yield (on market EV)	n.a.	0.9 %	-1.8 %	-1.4 %	-2.0 %	10.6 %	18.1 %
*Adjustments made for: -							



Consolidated profit & loss							
In EUR m	2016	2017	2018	2019	2020e	2021e	20226
Sales	33.7	32.4	24.8	25.2	27.5	50.6	64.1
Change Sales yoy	33.7 %	-4.0 %	-23.3 %	1.4 %	9.2 %	84.1 %	26.6 %
Increase / decrease in inventory	0.0	0.6	0.2	0.0	0.0	0.0	0.0
Own work capitalised	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Sales	33.7	33.0	25.0	25.2	27.5	50.6	64.1
Material expenses	15.4	14.6	11.7	10.7	11.4	21.0	26.6
Gross profit	18.4	18.4	13.3	14.5	16.1	29.6	37.5
Gross profit margin	54.4 %	56.7 %	53.7 %	57.8 %	58.4 %	58.5 %	58.5 %
Personnel expenses	8.6	9.7	10.2	9.3	9.7	11.2	12.5
Other operating income	0.4	0.6	0.5	0.3	0.6	0.6	0.6
Other operating expenses	6.6	7.0	7.4	7.0	8.6	9.5	11.0
Unfrequent items	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBITDA	3.6	2.3	-3.8	-1.4	-1.6	9.5	14.6
Margin	10.7 %	7.0 %	-15.2 %	-5.5 %	-6.0 %	18.8 %	22.8 %
Depreciation of fixed assets	0.3	0.3	0.4	0.2	0.4	0.4	0.4
EBITA	3.3	1.9	-4.2	-1.6	-2.1	9.1	14.2
Amortisation of intangible assets	0.2	0.2	1.3	0.2	0.2	0.2	0.2
Goodwill amortisation	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBIT	3.1	1.8	-5.4	-1.8	-2.3	8.9	14.0
Margin	9.1 %	5.4 %	-22.0 %	-7.1 %	-8.2 %	17.6 %	21.8 %
EBIT adj.	3.1	1.8	-5.4	-1.8	-2.3	8.9	14.0
Interest income	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Interest expenses	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Other financial income (loss)	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
EBT	3.0	1.7	-5.6	-2.0	-2.5	8.7	13.8
Margin	8.8 %	5.1 %	-22.6 %	-7.8 %	-9.0 %	17.2 %	21.5 %
Total taxes	1.0	0.6	-1.7	-0.6	-0.6	2.7	4.3
Net income from continuing operations	2.0	1.1	-3.9	-1.4	-1.9	6.0	9.5
Income from discontinued operations (net of tax)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net income before minorities	2.0	1.1	-3.9	-1.4	-1.9	6.0	9.5
Minority interest	0.0	0.0	0.0	0.0	0.0	0.2	0.2
Net income	2.0	1.1	-3.9	-1.4	-1.9	5.8	9.3
Margin	5.8 %	3.3 %	-15.6 %	-5.5 %	-6.8 %	11.4 %	14.5 %
Number of shares, average	1.6	6.6	6.6	7.2	7.9	7.9	7.9
EPS	1.23	0.16	-0.59	-0.19	-0.24	0.73	1.17
EPS adj.	1.23	0.16	-0.59	-0.19	-0.24	0.73	1.17
*Adjustments made for:							

Guidance: 2020: Sales EUR 25 - 29m; EBITDA -2 - 0.25m

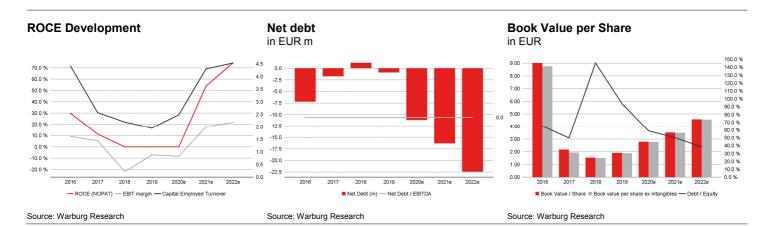
Financial Ratios							
	2016	2017	2018	2019	2020e	2021e	2022e
Total Operating Costs / Sales	89.4 %	95.0 %	116.1 %	105.6 %	106.0 %	81.2 %	77.2 %
Operating Leverage	1.5 x	10.9 x	n.a.	-48.6 x	3.0 x	n.a.	2.1 x
EBITDA / Interest expenses	37.2 x	14.9 x	n.m.	n.m.	n.m.	47.6 x	72.9 x
Tax rate (EBT)	33.8 %	35.3 %	31.0 %	28.7 %	24.3 %	31.0 %	31.0 %
Dividend Payout Ratio	81.5 %	30.7 %	n.m.	0.0 %	0.0 %	13.2 %	16.7 %
Sales per Employee	235,783	203,667	190,962	193,610	166,600	389,354	492,960





Consolidated balance sheet							
In EUR m	2016	2017	2018	2019	2020e	2021e	20226
Assets							
Goodwill and other intangible assets	0.4	1.5	0.2	0.1	0.1	0.1	0.1
thereof other intangible assets	0.4	1.5	0.2	0.1	0.1	0.1	0.1
thereof Goodwill	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Property, plant and equipment	0.7	0.6	0.6	0.5	0.4	0.4	0.3
Financial assets	0.9	1.8	1.8	2.1	2.1	2.1	2.1
Other long-term assets	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fixed assets	2.1	4.0	2.6	2.6	2.6	2.6	2.5
Inventories	4.8	7.6	5.8	5.0	5.0	5.3	5.8
Accounts receivable	4.9	3.3	2.3	5.0	3.8	6.9	8.8
Liquid assets	11.7	5.5	11.6	11.3	21.6	26.7	32.9
Other short-term assets	1.2	1.1	2.7	2.8	2.3	0.7	0.7
Current assets	22.5	17.5	22.3	24.1	32.7	39.7	48.2
Total Assets	24.6	21.5	24.9	26.7	35.3	42.2	50.7
Liabilities and shareholders' equity							
Subscribed capital	1.6	6.6	6.6	7.3	8.0	8.0	8.0
Capital reserve	10.3	5.4	5.4	9.7	19.8	19.8	19.8
Retained earnings	0.0	0.0	0.0	0.0	-1.8	3.9	12.4
Other equity components	2.9	2.3	-1.9	-3.3	-3.8	-3.7	-3.7
Shareholders' equity	14.9	14.3	10.1	13.8	22.2	28.1	36.6
Minority interest	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total equity	14.9	14.3	10.1	13.8	22.2	28.1	36.6
Provisions	3.2	1.7	1.0	1.2	1.2	1.2	1.2
thereof provisions for pensions and similar obligations	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial liabilities (total)	4.4	3.8	12.8	10.4	10.4	10.4	10.4
thereof short-term financial liabilities	0.8	1.1	0.8	10.4	10.4	10.4	10.4
Accounts payable	1.5	1.4	0.6	0.9	1.1	2.1	2.1
Other liabilities	0.6	0.2	0.4	0.4	0.4	0.4	0.4
Liabilities	9.7	7.2	14.7	12.9	13.1	14.1	14.1
Total liabilities and shareholders' equity	24.6	21.5	24.9	26.7	35.3	42.2	50.7

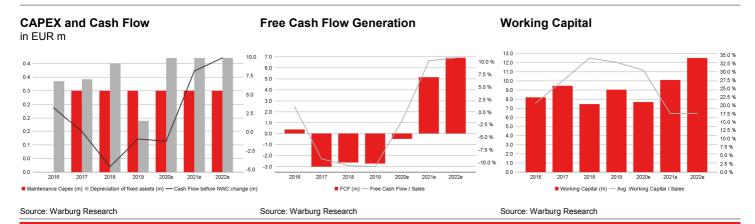
Financial Ratios							
	2016	2017	2018	2019	2020e	2021e	2022e
Efficiency of Capital Employment							
Operating Assets Turnover	3.8 x	3.2 x	3.1 x	2.6 x	3.4 x	4.8 x	5.0 x
Capital Employed Turnover	4.4 x	2.6 x	2.2 x	1.9 x	2.5 x	4.3 x	4.5 x
ROA	95.4 %	27.2 %	-151.1 %	-52.7 %	-71.8 %	225.4 %	368.1 %
Return on Capital							
ROCE (NOPAT)	29.8 %	11.2 %	n.a.	n.a.	n.a.	53.8 %	74.4 %
ROE	17.4 %	7.4 %	-31.7 %	-11.6 %	-10.4 %	22.9 %	28.7 %
Adj. ROE	17.4 %	7.4 %	-31.7 %	-11.6 %	-10.4 %	22.9 %	28.7 %
Balance sheet quality							
Net Debt	-7.2	-1.7	1.2	-0.9	-11.2	-16.3	-22.4
Net Financial Debt	-7.2	-1.7	1.2	-0.9	-11.2	-16.3	-22.4
Net Gearing	-48.5 %	-12.1 %	11.9 %	-6.5 %	-50.3 %	-58.1 %	-61.4 %
Net Fin. Debt / EBITDA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Book Value / Share	9.0	2.2	1.5	1.9	2.8	3.5	4.6
Book value per share ex intangibles	8.8	1.9	1.5	1.9	2.8	3.5	4.6





Consolidated cash flow statement							
In EUR m	2016	2017	2018	2019	2020e	2021e	2022e
Net income	2.0	1.1	-3.9	-1.4	-1.9	5.8	9.3
Depreciation of fixed assets	0.3	0.3	0.4	0.2	0.4	0.4	0.4
Amortisation of goodwill	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Amortisation of intangible assets	0.2	0.2	1.3	0.2	0.2	0.2	0.2
Increase/decrease in long-term provisions	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other non-cash income and expenses	0.8	-1.6	-2.4	0.1	0.0	1.7	0.0
Cash Flow before NWC change	3.3	0.0	-4.6	-0.9	-1.2	8.1	9.9
Increase / decrease in inventory	-1.0	-2.9	1.8	8.0	0.0	-0.3	-0.5
Increase / decrease in accounts receivable	-1.5	1.6	1.0	-2.7	1.2	-3.1	-1.9
Increase / decrease in accounts payable	0.0	0.0	-0.8	0.3	0.2	1.0	0.0
Increase / decrease in other working capital positions	0.0	-0.3	0.3	0.0	0.0	0.0	0.0
Increase / decrease in working capital (total)	-2.5	-1.5	2.3	-1.6	1.3	-2.4	-2.4
Net cash provided by operating activities [1]	0.8	-1.5	-2.3	-2.5	0.1	5.7	7.5
Investments in intangible assets	-0.2	-1.3	-0.2	-0.2	-0.2	-0.2	-0.2
Investments in property, plant and equipment	-0.3	-0.2	-0.4	-0.4	-0.4	-0.4	-0.4
Payments for acquisitions	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial investments	0.0	-0.9	0.0	0.0	0.0	0.0	0.0
Income from asset disposals	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Net cash provided by investing activities [2]	-0.4	-2.4	-0.3	-0.1	-0.6	-0.6	-0.6
Change in financial liabilities	-3.3	-0.6	8.9	-2.3	0.0	0.0	0.0
Dividends paid	-0.7	-1.6	-0.3	0.0	0.0	0.0	-0.8
Purchase of own shares	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capital measures	5.9	0.0	0.0	5.1	10.8	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net cash provided by financing activities [3]	1.9	-2.2	8.6	2.7	10.8	0.0	-0.8
Change in liquid funds [1]+[2]+[3]	2.2	-6.1	6.0	0.1	10.3	5.1	6.1
Effects of exchange-rate changes on cash	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cash and cash equivalent at end of period	11.7	5.5	11.6	11.7	21.6	26.7	32.9

Financial Ratios							
	2016	2017	2018	2019	2020e	2021e	2022e
Cash Flow							
FCF	0.4	-3.0	-2.6	-2.7	-0.5	5.1	6.9
Free Cash Flow / Sales	1.1 %	-9.3 %	-10.6 %	-10.8 %	-1.8 %	10.2 %	10.8 %
Free Cash Flow Potential	n.a.	1.4	-2.3	-1.1	-1.3	6.5	10.0
Free Cash Flow / Net Profit	18.6 %	-279.6 %	67.8 %	196.0 %	26.0 %	89.3 %	74.5 %
Interest Received / Avg. Cash	0.7 %	0.7 %	0.5 %	0.2 %	0.0 %	0.0 %	0.0 %
Interest Paid / Avg. Debt	1.6 %	3.7 %	2.5 %	1.7 %	1.9 %	1.9 %	1.9 %
Management of Funds							
Investment ratio	1.2 %	4.7 %	2.3 %	2.3 %	2.1 %	1.1 %	0.9 %
Maint. Capex / Sales	n.a.	0.9 %	1.2 %	1.2 %	1.1 %	0.6 %	0.5 %
Capex / Dep	78.6 %	300.2 %	34.5 %	148.7 %	93.5 %	93.5 %	93.5 %
Avg. Working Capital / Sales	20.7 %	27.3 %	34.1 %	32.8 %	30.5 %	17.6 %	17.6 %
Trade Debtors / Trade Creditors	336.9 %	228.8 %	375.5 %	541.0 %	345.5 %	328.6 %	419.0 %
Inventory Turnover	3.2 x	1.9 x	2.0 x	2.1 x	2.3 x	4.0 x	4.6 x
Receivables collection period (days)	53	37	33	73	50	50	50
Payables payment period (days)	34	36	19	32	35	36	29
Cash conversion cycle (Days)	131	191	196	211	175	105	101





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 redisseminated 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.
- 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.
- 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.
- 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.
- 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.
- 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)
Vectron Systems AG	3, 5	http://www.mmwarburg.com/disclaimer/disclaimer_en/DE000A0KEXC7.htm

Rating suspended

Total



3

100

INVESTMENT RECOMMENDATION

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

-B-	Buy:	The price of the analysed financial instrument is expected to rise over the next 12 months.
-H-	Hold:	The price of the analysed financial instrument is expected to remain mostly flat over the next 12 months.
-S-	Sell:	The price of the analysed financial instrument is expected to fall over the next 12 months.
<u>"_"</u>	Rating suspended:	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	131	65			
Hold	58	29			
Sell	8	4			

6

203

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	37	84
Hold	5	11
Sell	0	0
Rating suspended	2	5
Total	44	100

PRICE AND RATING HISTORY VECTRON SYSTEMS AG AS OF 07.12.2020



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.



RESEARCH Michael helider Head of Equilities RESEARCH Michael helider Head of Research mhedine@warburg-research.com Henner Rüschmeier Head of Research hrusedmiere@warburg-research.com Henner Rüschmeier Head of Research hrusedmiere@warburg-research.com Stefan Augustin Head of Research hrusedmiere@warburg-research.com Stefan Augustin Head of Research hrusedmiere@warburg-research.com Stefan Augustin Head of Research Henner Rüschmeier Head of Research Henner Head of Research Henner Rüschmeier Head of Rüschmeier Head of Research Henner Rüschmeier Head of Rüschmeier Henner Rüschmeier Head of Rüschmeier Head of Rüschmeier Henner Rüschmeier Head of Rüsch				
RESEARCH Michael Heider Head of Risearch Michael Heider Head of Risearch Michael Heider Henner Rüschmeiler	EQUITIES			
Head of Research Henoner Riseschmeir Henoner Riseschmein Henoner Henon	RESEARCH			
Henner Rüschmeler 4-94 40 309637-270 httebauer (mesearch in hueschmeeringwabrug-research in 13 august (mesearch in 14 a				+49 40 309537-260
Head of Research Inceschmeie@warburg-research.com Refail. Consumer Goods Ideibaue@warburg-research.com Act 49.40 300837-76 bg Eggert Kulls 4.94 40 3008537-26 bg Engineering eku48 40 309537-27 bg Earth Andreas Pläsier 4.94 40 309537-27 bg Earth Andreas Pläsier 4.94 40 309537-27 bg Earth Andreas Pläsier 4.94 40 309537-27 bg Earth Schamman 4.94 40 309537-27 bg Andreas Pläsier Andreas Pläsier 4.94 40 309537-27 bg Andreas Pläsier Andreas Pläsier 4.94 40 309537-27 bg Andreas Pläsier 4.94 40 309537-27 bg Chemicals, Agriculture Sochwarz with 49 40 309537-27 bg Andreas Pläsier 4.94 40 309537-27 bg Chemicals, Agriculture Sochwarz with 49 40 309537-27 bg Chemicals, Agriculture Sochwarz with 49 40 309537-27 bg Case Istate Case Sobbia plane pl				pkaiser@warburg-research.com
Stefan Augustin				
Jan Bauer 14.94 0, 309637-155 Markes Financial Services aplaesier@watury-research.com Jonas Blum 14.94 0, 309637-240 Malto Schaumann 14.94 0, 309637-240 Malto Schaumann 14.94 0, 309637-745 Malto Schaumann 14.94 0, 309637-175 Malto Schaumann 14.94 0, 309637-1	Stefan Augustin		·	+49 40 309537-256
Penewables Dataur@warburg-research.com Hay 49 do 39357-240 Marie Schaumann Hay 49 do 39357-240 Telco. Media, Construction Dilum@warburg-research.com Hay 49 do 39357-167 Industrials & Transportation Cochris@warburg-research.com Hay 49 do 39357-167 Biot Peth, Life Science Cethranne@warburg-research.com Hay 49 do 39357-167 Biot Peth, Life Science Cethranne@warburg-research.com Hay 49 do 39357-167 Software Hay 49 do 39357-167 Presearch Hay			• •	ekuls@warburg-research.com
Technology mischawaman@warburg-research.com Christian Chors	Renewables	jbauer@warburg-research.com	Banks, Financial Services	aplaesier@warburg-research.com
Industrials & Transportation Cochris@warburg-research.com 4-94 0,39637-167 Simon Stippig 3+49.40 396537-275 Real Estate sstippig@warburg-research.com Felix Elimann 4-94 0,309537-225 Real Estate Stippig@warburg-research.com Felix Elimann 4-94 0,309537-225 Real Estate Stippig@warburg-research.com 4-94 0,309537-225 Real Estate Stippig@warburg-research.com 4-94 0,309537-225 Real Estate Stippig@warburg-research.com 4-94 0,309537-25 Real Estate Cansu Tatar 4-94 0,309537-25 Cap. Goods, Engineening Catata@warburg-research.com Automobies, Car Suppliers Minor@warburg-research.com Automobies, Car Suppliers Minor@warburg-research.com Automobies, Car Suppliers Minor@warburg-research.com Mustafa Hidir 4-94 0,309537-230 Automobies, Car Suppliers Minor@warburg-research.com Mustafa Hidir 4-94 0,309537-255 Marchael Minor 4-94 0,309537-255 Minor 4-94 0,309537-255 Marchael Minor 4-94 0,309537-255 Minor 4-94				+49 40 309537-170 mschaumann@warburg-research.com
Dr. Christian Ehmann Felix Elimann Felix Eli				+49 40 309537-250
Bio Tech, Life Science cehmann@warburg-research.com	·		. •	
Software, IT fellmann@warburg-research.com / 49 40 309537-258 fetail. Consumer Goods / Jfrey@warburg-research.com / 49 40 309537-37-85 mitunberg / 49 40 309537-37-85 mitunberg / 49 40 309537-230 mitunberg / 49 40 309537-255 mitunberg / 49 40 3282-2660 mitunberg / 4				sstippig@warburg-research.com
Retail, Consumer Goods firey@warburg-research.com Martius Furthberg				+49 40 309537-248 ctatar@warburg-research.com
Marius Fuhrberg 4-9 40 309537-185 Robert-Jan van der Horst 14-9 40 309537-25 Technology rvanderhorst@warburg-research.com Mustafa Hildir 4-9 40 309537-25 Automobiles, Car Suppliers midurberg@warburg-research.com Software, IT awoft@warburg-research.com INSTITUTIONAL EQUITY SALES Marc Niemann 4-9 40 3282-2660 Maximilian Martin 4-9 69 5050-74 Austria, Poland midurberg@warburg-research.com Austria, Poland midurb@warburg.com Austria, Poland Switzerland Cseedorf@mmwarburg.com Austria, Poland Cseedorf@mmwarburg.com Austria, Poland Austria, Poland Cseedorf@mmwarburg.com Austria, Poland Cseedorf@m		+49 40 309537-258		+49 40 309537-259
Financial Services mfuhrberg@warburg-research.com Mustafa Hidlir			, 11	mtonn@warburg-research.com
Mustafa Hidir				
United Kingdom, Ireland 149 40 308537-255 University Sales 149 40 308537-255 University Sales 149 40 3085-2666 Maximilian Martin 149 69 5050-74	Mustafa Hidir		• •	+49 40 309537-140
Health Care, Pharma uhuwald@warburg-research.com INSTITUTIONAL EQUITY SALES Marc Niemann			Software, IT	awolf@warburg-research.com
Marc Niemann				
Marc Niemann Head of Equity Sales, Gemany Minemann@mmwarburg.com Masc Schilling Head of Equity Sales, Gemany Kschilling Head of Equity Sales, Gemany Kschilling@mmwarburg.com Lead of Equity Sales, Gemany Head of Equity Sales, Gemany Kschilling@mmwarburg.com Head of Equity Sales, Gemany Head of Equity Sales, Gemany Kschilling@mmwarburg.com Head of Equity Sales, Gemany Head of Sales Trading Head of S				
Head of Equity Sales, Germany Klaus Schilling Head of Equity Sales, Germany Klaus Schilling Head of Equity Sales, Germany Klaus Schilling Head of Equity Sales, Germany Kommarkburg.com Head of Sales Trading			Maximilian Martin	+40.60.5050.7412
Klaus Schilling				mmartin@mmwarburg.com
Tim Beckmann United Kingdom United Kingdom Lea Bogdanova United Kingdom, Ireland Jepace Alexander Eschweiler H49 40 3282-2669 Sophie Hauer Roadshow/Marketing Roadshow/Marketing Shauer@mmwarburg.com Matthias Fritsch H49 40 3282-2696 United Kingdom Miffisch@mmwarburg.com Matthias Fritsch United Kingdom Miffisch@mmwarburg.com Matthias Fritsch United Kingdom Marketing Marcel Magiera Marcel Magiera H49 40 3282-2694 Marcel Magiera H49 40 3282-2695 Sales Trading Marcel Magiera Marcel Magiera Marcel Magiera Marcel Magiera H49 40 3282-2695 Sales Trading Maccel Magiera Marcel Magiera Magiera Marcel Magiera Magiera Marcel Magiera Marcel Magiera	Klaus Schilling		•	+49 69 5050-7414
United Kingdom tbeckmann@mmwarburg.com Lea Bogdanova			Switzerland	cseedorf@mmwarburg.com
Lea Bogdanova				
Sandinavia, Austria jbuchmueller@mmwarburg.com Alexander Eschweiler 4.9 40 3282-2669 Sophie Hauer 4.9 40 5050-74	•			
Scandinavia, Austria jbuchmueller@mmwarburg.com Alexander Eschweiler	=	5 - 5		
Alexander Eschweiler				
Matthias Fritsch+49 40 3282-2696 mfritsch@mmwarburg.comJuliane Niemann Roadshow/Marketing+49 40 3282-26 jniemann@mmwarburg.comSALES TRADINGOliver Merckel+49 40 3282-2634 Head of Sales TradingMarcel Magiera Sales Trading+49 40 3282-26 mmagiera@mmwarburg.comElyaz Dust+49 40 3282-2702 Sales TradingBastian Quast edust@mmwarburg.com+49 40 3282-27 Sales TradingBastian Quast bquast@mmwarburg.com+49 40 3282-27 Sales TradingMichael Ilgenstein Sales Trading+49 40 3282-2700 milgenstein@mmwarburg.comJörg Treptow Sales Trading+49 40 3282-26 jtreptow@mmwarburg.comMACRO RESEARCHCarsten Klude Macro Research+49 40 3282-2572 cklude@mmwarburg.comDr. Christian Jasperneite Investment Strategy+49 40 3282-24 cjasperneite@mmwarburg.comOur research can be found under:Varburg ResearchThomson Reuterswww.thomsonreuters.com/en/index.html	•	,	Sophie Hauer	+49 69 5050-7417
United Kingdom mfritsch@mmwarburg.com Roadshow/Marketing jniemann@mmwarburg.com SALES TRADING Oliver Merckel +49 40 3282-2634 Marcel Magiera +49 40 3282-266 Head of Sales Trading omerckel@mmwarburg.com Sales Trading mmagiera@mmwarburg.com Sales Trading mmagiera@mmwarburg.com Sales Trading bquast@mmwarburg.com Sales Trading jtreptow +49 40 3282-270 Jörg Treptow +49 40 3282-260 Sales Trading milgenstein@mmwarburg.com Sales Trading jtreptow@mmwarburg.com MACRO RESEARCH Carsten Klude +49 40 3282-2572 Dr. Christian Jasperneite +49 40 3282-240 Macro Research can be found under: Warburg Research research.mmwarburg.com/en/index.html Thomson Reuters www.thomsonreuters.com	Germany, Luxembourg	aeschweiler@mmwarburg.com		shauer@mmwarburg.com
SALES TRADING Oliver Merckel				+49 40 3282-2694
Oliver Merckel +49 40 3282-2634 Marcel Magiera +49 40 3282-2664 Head of Sales Trading omerckel@mmwarburg.com Sales Trading mmagiera@mmwarburg.com Sales Trading mmagiera@mmwarburg.com Sales Trading bquast@mmwarburg.com Sales Trading jtreptow@mmwarburg.com Sales Trading jtreptow@		mfritsch@mmwarburg.com	Roadshow/ivial keting	jniemann@mmwarburg.com
Head of Sales Trading omerckel@mmwarburg.com Sales Trading mmagiera@mmwarburg.com Elyaz Dust	SALES TRADING			
Elyaz Dust			•	+49 40 3282-2662
Sales Trading bquast@mmwarburg.com Michael Ilgenstein	•		<u> </u>	+49 40 3282-2701
Sales Trading milgenstein@mmwarburg.com Sales Trading jtreptow@mmwarburg.com MACRO RESEARCH Carsten Klude +49 40 3282-2572 Dr. Christian Jasperneite +49 40 3282-24 Macro Research cklude@mmwarburg.com Investment Strategy cjasperneite@mmwarburg.com Our research can be found under: Warburg Research research.mmwarburg.com/en/index.html Thomson Reuters www.thomsonreuters.com	-			bquast@mmwarburg.com
Carsten Klude +49 40 3282-2572 Dr. Christian Jasperneite +49 40 3282-24 Investment Strategy cjasperneite@mmwarburg.com Our research can be found under: Warburg Research research.mmwarburg.com/en/index.html Thomson Reuters www.thomsonreuters.com	ŭ		• .	+49 40 3282-2658 jtreptow@mmwarburg.com
Macro Research Our research can be found under: Warburg Research research.mmwarburg.com/en/index.html Thomson Reuters www.thomsonreuters.com/en/index.dem/en/index.html	MACRO RESEARCH			
Macro Research Our research can be found under: Warburg Research research.mmwarburg.com/en/index.html Thomson Reuters www.thomsonreuters.com/en/index.dem/en/index.html	Carsten Klude	+49 40 3282-2572	Dr. Christian Jasperneite	+49 40 3282-2439
Warburg Research research.mmwarburg.com/en/index.html Thomson Reuters www.thomsonreuters.com/en/index.html			Investment Strategy	cjasperneite@mmwarburg.com
	Our research can be f	ound under:		
Bloomberg MMWA GO Capital IO www.capitalig.co	Warburg Research	research.mmwarburg.com/en/index.html	Thomson Reuters	www.thomsonreuters.com
	Bloomberg	MMWA GO	Capital IQ	www.capitaliq.com
FactSet www.factset.com	FactSet	www.factset.com		
For access please contact:	For access please conta	ct:		
	•		——————————————————————————————————————	+49 40 3282-2703
Sales Assistance aschaper@mmwarburg.com Sales Assistance kmuthig@mmwarburg.co	Sales Assistance	aschaper@mmwarburg.com	Sales Assistance	kmuthig@mmwarburg.com