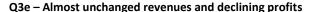


We expect a muted development in Q3e after the management flagged the lower end of its FY 2019e guidance range and the market environment has not turned into a positive direction since then. Global economic uncertainties should continue to weigh on business sentiment, mainly in the automotive business. We adjust our estimates (included merger related one-off costs). The current share price development decoupled clearly from First Sensor's operating development, as some investors are looking for higher compensation from TE. We do not rule out, that TE intends to increase its stake in First Sensors (c.72% of the shares were tendered), which would allow some further upside for shareholders. Long-term perspectives with TE should be much brighter for First Sensor. Due to increased long-term estimates, our TP moves from EUR 28.80 to EUR 32.50. However, given the downside potential of c.8%, we downgrade the shares from Buy to Hold.



We expect a similar development in Q3e as in the last quarter. The revenue development in Q3e should be muted due to global economic uncertainties. In addition, burdening facts from Q2 like destocking and project delays at customer side are not expected to have fully disappeared, in our view. Bear in mind, that order intake in Q2 was down by 20% yoy and 7% yoy in H1. Consequently, we forecast lower earnings and margins. For the adj. EBIT (w/o TE related costs), we estimate EUR 3.6m and an adj. EBIT margin of 8.9% (-240 bps yoy). The ongoing merger with TE should lead to further one-off costs (H1: EUR 4m), which is why First Sensor is expected to distinguish between reported and adj. earnings. At Q2 reporting, the management specified its guidance and flagged the lower end of its guidances ranges for revenue and margin.

EURm	2017	2018	2019e	2020e	2021 e
Revenues	148	155	161	176	195
EBITDA	20	21	17	26	29
EBIT	11	12	6	16	18
EPS	0.40	0.72	0.27	0.96	1.12
EPS adj	0.25	0.70	0.82	0.96	1.12
DPS	0.16	0.20	0.20	0.20	0.20
EV/EBITDA	12.5	11.2	22.5	14.3	12.3
EV/EBIT	23.3	19.5	65.5	23.5	20.0
P/E adj	86.1	30.4	43.0	36.7	31.3
P/B	2.75	2.49	4.07	3.74	3.41
ROE (%)	5.3	8.8	3.1	10.6	11.4
Div yield (%)	0.7	0.9	0.6	0.6	0.6
Net debt	23	19	17	10	2

Source: Pareto



Target price (EUR)	33
Share price (EUR)	35

Forecast changes			
%	2019e	2020e	2021e
Revenues	(4)	(2)	2
EBITDA	(32)	1	7
EBIT adj	(8)	(1)	4
EPS reported	(69)	2	9
EPS adj	(6)	2	9

Source: Pareto

Ticker	SISG.DE, SIS GR
Sector	Hardware & Equipment
Shares fully diluted (m)	10.2
Market cap (EURm)	359
Net debt (EURm)	17
Minority interests (EURm)	1
Enterprise value 19e (EURm)	377
Free float (%)	60

Performance



Source: Factset

Pareto Securities AS has been paid by the issuer to produce this research report. This material is considered by Pareto Securities to qualify as an acceptable minor non-monetary benefit according to the EU MIFID 2 directive.

Analysts

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Preview Q3'19e

The results for Q3e are due on November 14th 2019.

Exhibit 1: Preview Q3/9m 2019e

EUR m	Q3 2019e	Q3 2018	% yoy	9M 2019e	9M 2018	% уоу
Revenues	40.9	40.8	0%	122.2	115.1	6%
Industrial	22.0	20.7	7%	65.6	57.8	14%
Medical	9.1	9.5	-5%	27.7	25.8	7%
Mobility	9.8	10.5	-7%	28.9	31.5	-8%
EBITDA	4.8	6.9	-31%	14.3	15.4	-7%
EBITDA margin	11.7%	17.0%	-533 BP	11.7%	13.4%	-165 BP
Adjusted EBIT margin	3.6	4.6	-21%	10.4	8.6	20%
Adjusted EBIT margin	8.9%	11.3%	-238 BP	8.5%	7.5%	137 BP
EBT	1.7	4.2	-60%	4.9	7.4	-34%
EBT margin	4.1%	10.4%	-628 BP	4.0%	6.4%	-234 BP
Net income	1.2	3.4	-66%	3.8	5.7	-34%

Source: First Sensor, Pareto Securities Research

Exhibit 2: FY 2019e guidance vs. PASe

	FY 2018	Guidance FY 2019e	Pareto	Delta*
Revenues	155	160-170	161	0.6%
% уоу			3.7%	
Adjusted EBIT	12.2	13.6	13.8	1.2%
Adjusted EBIT margin	7.9%	8.5%-9.5%	8.6%	5 BP

Source: First Sensor, Pareto Securities Research

Estimates changes

Given the deterioration of the overall economic situation and the respective effects on customer's order behaviour, First Sensor specified its guidance for FY 2019e. The management now expects to end up at the lower end of the respective guidance ranges. First Sensors guides revenues in the range of EUR 160m to EUR 170m and adj. EBIT margin in the range of 8.5% to 9.5%.

Exhibit 3: Changes to our estimates

		2019e			2020e			2021e		
	Old	New	Chg.	Old	New	Chg.	Old	New	Chg.	
Revenues	167.0	160.9	-3.7%	179.0	176.2	-1.6%	192.0	194.9	1.5%	
Adjusted EBIT	14.9	13.8	-7.7%	15.9	15.7	-0.8%	17.3	18.1	4.3%	
Adjusted EBIT margin	8.9%	8.6%	-37 BP	8.9%	8.9%	7 BP	9.0%	9.3%	24 BP	
ЕВТ	13.0	3.9	-70.2%	14.0	13.8	-0.9%	15.5	16.2	4.8%	
Net result	8.9	2.7	-69.3%	9.6	9.8	1.9%	10.6	11.5	8.5%	

Source: Pareto Securities Research

First Sensor argues that customers with higher sales contribution in previous years are now destocking, while other customers are shifting projects for an unpredictable period of time.

To reflect the specified guidance, we downgrade our estimates for revenue and adj. EBIT in FY 2019e by 4% and 8%, respectively. However, on reported base, our estimates cut is more severe due to the one-off costs in conjunction with the TE takeover. We forecast for FY 2019e the one-off costs to amount to EUR 8m, after EUR 4.4m already occurred in H1 2019.

We also slightly lowered our estimates for FY 2020e as we assume that the order behaviour of customers to change rather slowly and to take some time to show positive effects.

Valuation

We continue to derive our TP based on our DCF model. Our TP moves from EUR 28.80 to EUR 32.50, as higher long-term expectations outweigh the negative impact from the lowered short-term estimates.

Exhibit 4: DCF model

			Phase I					Phase II			Phase III
EUR m	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e	
Revenues	161	176	195	218	242	267	292	317	342	366	
growth rate	3.7%	9.5%	10.6%	12.0%	11.0%	10.2%	9.4%	8.6%	7.8%	7.0%	
EBIT	6	16	18	22	25	28	30	32	35	37	
EBIT margin	3.6%	8.9%	9.3%	9.9%	10.4%	10.3%	10.3%	10.2%	10.1%	10.0%	
Тах	-1.6	-4.4	-5.1	-6.0	-7.1	-7.7	-8.4	-9.0	-9.7	-10.1	
Tax rate	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	
Depr. & Amort.	11.0	10.2	11.3	12.7	14.1	12.9	12.7	13.1	13.7	14.2	
% of sales	6.8%	5.8%	5.8%	5.8%	5.8%	4.8%	4.4%	4.1%	4.0%	3.9%	
Capex	-8.0	-8.8	-9.2	-9.8	-10.4	-11.0	-11.8	-12.7	-13.6	-14.5	
% of sales	5.0%	5.0%	4.7%	4.5%	4.3%	4.1%	4.0%	4.0%	4.0%	4.0%	
Change in WC & P	-1.2	-2.7	-3.3	-2.5	-1.4	-1.5	-1.6	-1.7	-1.9	-2.0	
% of sales	0.7%	1.5%	1.7%	1.1%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	
Free Cash Flow	5.9	10.0	11.8	15.9	20.4	20.2	20.9	21.9	23.1	24.4	466.0
growth rate	nm	69.8%	17.9%	34.4%	28.2%	-0.8%	3.3%	4.8%	5.5%	5.4%	2.5%
Present Value FCF	5.8	9.2	10.1	12.6	14.9	13.7	13.2	12.8	12.5	12.3	234.
PV Phase I		53			Risk free	rate	3.50%		Targ. eq	uity ratio	80%
PV Phase II		64			Premium	Equity	5.00%		Beta		1.
PV Phase III		235			Premium	Debt	2.00%		WACC		7.80%
Enterprise value		352			Sensitivi	tv		Gro	wth in pl	nase III	
- Net Debt (Cash)		19				<i>'</i>	1.5%	2.0%	2.5%	3.0%	3.5%
- Pension Provisions		0				7.02%	33.2	35.6	38.6	42.3	47.0
- Minorities & Peripherals		1				7.41%	30.7	32.8	35.2	38.2	42.0
+ MV of financial assets					WACC	7.80%	28.6	30.3	32.4	34.9	37.9
- Paid-out dividends for last F	Υ	0				8.19%	26.7	28.2	29.9	32.0	34.5
+/- Other EV items						8.58%	25.0	26.3	27.8	29.5	31.6
Equity value		331									
Number of shares		10.2									
Value per share (€)		32.4									
Current Price (€)		35.1									
Upside		-8%									
e: Pareto Securities Research											

The shares continue to outperform the market, despite deteriorating operative development and dampened outlook by the management. We consider the recent strong performance to be mainly related to investors' expectations to receive a higher compensation from TE in a further offer. We do not expect that in any time soon but would not rule out higher compensations in the future.

However, after having reached c. 72% of total shares, TE and First Sensor should now be concentrated on the closing of the merger, which is expected at mid-2020 at the latest. Final approvals from Germany and the US are yet not received. However, we do not have major anti-trust concerns.

First Sensor AG Sponsored Research Update

Exhibit 5: SIS shares vs. TecDAX (12 months)

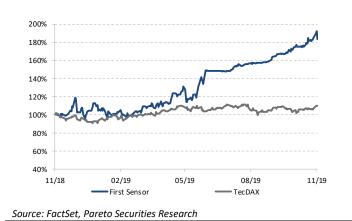


Exhibit 6: SIS shares vs. TecDAX (5 years)



Source: FactSet, Pareto Securities Research

Bettook 14	PROFIT & LOSS (fiscal year) (EURm)	2014	2015	2016	2017	2018	2019e	2020e	2021e
Deprocation & amortisation (9)	Revenues	124	138	150	148	155	161	176	195
ENT 4 1 10 111 12 6 16 Other financial items 2 2 (1) 33 2 2 1 7 10 4 1 7 10 4 1 7 10 4 1 7 10 4 1 4 1 4 1 4 4 1 4 4 1 4 4 1 4 4 1 4 4 1 4 4 1 4 4 1 4 4 1 4 4 1 4 4 1 4 4 4 1 4 4 4 4 4 4 7 3 10 9 1 2 2 0	EBITDA	14	11	19	20	21	17	26	29
Net interest 12 12 13 13 12 12 13 14 14 14 14 14 14 14	Depreciation & amortisation	(9)	(10)	(9)	(9)	(9)	(11)	(10)	(11)
Differ financial items	EBIT	4	1	10	11	12	6	16	18
Profile For Laxes	Net interest	(2)	(2)	(1)	(3)	(2)	(2)	(2)	(2)
Taxes (1) (0) (3) (3) (3) (1) (4) Minority interest (0)	Other financial items	-	-	-	-	-	-	-	-
Minorty interest 0	Profit before taxes	2	(1)	9	7	10	4	14	16
Net profife 0	Taxes	(1)	(0)	(3)	(3)	(3)	(1)	(4)	(5)
EPS reported 0.02 (0.17) 0.57 0.40 0.72 0.27 0.96 1.	Minority interest	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
EPS adjusted 0.02 (0.19) 0.62 0.25 0.70 0.82 0.96 1.0 DPS - - - - 0.16 0.20 0.20 0.20 0.20 BALANCE SHEET (EURm) 2014 2015 2016 2017 2018 2019e 2020e 202 Tangible non current assets 36 35 33 36 39 40 42 Other non-current assets 42 47 48 49 54 55 59 Cash & equivalents 15 22 24 66 29 11 38 Total equity 72 71 77 82 89 90 97 1 Interest-bearing non-current debt 41 47 44 32 44 48 48 Interest-bearing current debt 13 8 5 16 4 - - Charle politic (EURm) 20 28 28 29 <td< td=""><td>Net profit</td><td>0</td><td>(2)</td><td>6</td><td>4</td><td>7</td><td>3</td><td>10</td><td>11</td></td<>	Net profit	0	(2)	6	4	7	3	10	11
DPS 2014 2015 2016 2017 2018 2019 2020 2020 BALANCE SHEET (EURm) 2014 2015 2016 2017 2018 2019 2020 2020 Tanglibe non current assets 36 35 33 36 39 40 42 Other current assets 42 47 48 49 54 55 59 Cash & equivalents 15 22 24 26 29 31 38 Total assets 145 153 154 160 168 169 199 1 Total assets 145 153 154 160 48 169 199 1 Total assets 145 153 154 160 48 169 199 1 Total assets 145 153 154 160 48 48 48 Interest-bearing current debt 13 8 152 160 160	EPS reported	0.02	(0.17)	0.57	0.40	0.72	0.27	0.96	1.12
BALANCE SHEET (EURm) 2014 2015 2016 2017 2018 2019e 2020e 2020e Tangible non current assets 36 35 33 36 39 40 42 Other non-current assets 52 50 49 49 47 43 40 Cash & equivalents 15 22 24 26 29 31 38 Total sessets 145 153 154 160 168 169 179 1 Total equity 72 71 77 82 89 90 97 1 Interest-bearing nor-current debt 41 47 44 32 44 48 48 Interest-bearing current debt 3 8 5 16 4 Other Debt 29 28 28 29 32 32 33 Total liabilites & equity 145 153 154 160 16 16 <	EPS adjusted	0.02	(0.19)	0.62	0.25	0.70	0.82	0.96	1.12
Tangible non current assets 36 35 33 36 39 40 42	DPS	-	-	-	0.16	0.20	0.20	0.20	0.20
Other non-current assets 52 50 49 49 47 43 40 Other current assets 42 47 48 49 54 55 59 Cash & equivalents 15 22 24 26 29 31 38 Total assets 145 153 154 160 168 169 179 1 Total equity 72 71 77 82 89 90 97 1 Interest-bearing current debt 41 47 44 32 44 48 48 Interest-bearing current debt 29 28 28 29 32 32 33 Total liabilites & equity 145 153 154 160 168 169 179 1 CASH FLOW (EURm) 2014 2015 2016 2017 2018 2019e 2020e 202 Cash earnings 8 (2) 155 (13) (10)	BALANCE SHEET (EURm)	2014	2015	2016	2017	2018	2019e	2020e	2021e
Other current assets 42 47 48 49 54 55 59 Cash & equivalents 15 22 24 26 29 31 38 Total assets 145 153 154 160 168 169 179 1 Total acquity 72 71 77 82 89 90 97 1 Interest-bearing non-current debt 41 47 44 32 44 48 48 Interest-bearing current debt 29 28 28 29 32 32 33 7 Other Debt 29 28 28 29 32 32 33 7 Charle flabilities & equity 145 153 154 160 168 169 179 1 CASH Flow (Furm) 2014 2015 2016 2017 2018 2019e 2020e 2020e Cash earnings 8 (2) 15 14	Tangible non current assets	36	35	33	36	39	40	42	43
Cash & equivalents 15 22 24 26 29 31 38 Total assets 145 153 154 160 168 169 179 1 Total assets 145 153 154 160 168 169 179 1 Total equity 72 71 77 82 89 90 97 1 Interest-bearing non-current debt 41 47 44 32 44 48 48 Interest-bearing current debt 29 28 28 29 32 32 33 Total liabilities & equity 115 153 154 160 168 169 179 11 CASH FLOW (EURm) 2014 2015 2016 2017 2018 2019e 2020e 2020e Cash earnings 8 (2) 155 114 16 11 15 Cash How from investments (2) 55 (1) 13	Other non-current assets	52	50	49	49	47	43	40	36
Total assets	Other current assets	42	47	48	49	54	55	59	64
Total assets	Cash & equivalents	15	22	24	26	29	31	38	46
Interest-bearing non-current debt 41		145	153	154	160	168	169	179	190
Interest-bearing current debt 3	Total equity	72	71	77	82	89	90	97	107
Other Debt 29 28 28 29 32 32 33 Total liabilites & equity 145 153 154 160 168 169 179 1 CASH FLOW (EURm) 2014 2015 2016 2017 2018 2019e 2020e 202 Cash earnings 8 (2) 15 14 16 11 15 Change in working capital 2 6 (1) 2 0 1 3 Cash flow from investments (2) (5) (5) (13) (10) (8) (9) Cash flow from investments (2) (5) (5) (13) (10) (8) (9) Cash flow from investments (2) (5) (5) (13) (10) (8) (9) Cash flow from investments (2) (5) (5) (13) (10) (8) (9) (20) (20) (20) (20) (20) (20) (20) (20) <td>Interest-bearing non-current debt</td> <td>41</td> <td>47</td> <td>44</td> <td>32</td> <td>44</td> <td>48</td> <td>48</td> <td>48</td>	Interest-bearing non-current debt	41	47	44	32	44	48	48	48
Total liabilites & equity 145 153 154 160 168 169 179 120	Interest-bearing current debt	3	8	5	16	4	-	-	-
CASH FLOW (EURm) 2014 2015 2016 2017 2018 2019e 2020e 2020e 2020e Cash earnings 8 20 15 14 16 11 15 Change in working capital 2 6 (1) 2 0 13 (10) (8) (9) Cash flow from investments (2) (5) (5) (5) (13) (10) (8) (9) Cash flow from financing (3) 10 (6) 0 (3) (2) (2) (2) Net cash flow 3 7 2 2 2 3 3 7 CAPITALIZATION & VALUATION (EURm) 2014 2015 2016 2017 2018 2019e 2020e 202 Share price (EUR end) 9.8 12.4 14.5 21.8 21.3 35.1 3	Other Debt	29	28	28	29	32	32	33	35
Cash earnings 8 (2) 15 14 16 11 15 Change in working capital 2 6 (1) 2 0 1 3 Cash flow from investments (2) (5) (5) (13) (10) (8) (9) Cash flow from investments (2) (5) (5) (13) (10) (8) (9) Cash flow from investments (2) (5) (5) (13) (10) (8) (9) Cash flow from investments (2) (5) (5) (13) (10) (8) (9) Cash flow from investments (2) (5) (5) (13) (10) <td< td=""><td>Total liabilites & equity</td><td>145</td><td>153</td><td>154</td><td>160</td><td>168</td><td>169</td><td>179</td><td>190</td></td<>	Total liabilites & equity	145	153	154	160	168	169	179	190
Change in working capital 2 6 (1) 2 0 1 3 Cash flow from investments (2) (5) (5) (13) (10) (8) (9) Cash flow from financing (3) 10 (6) 0 (3) (2) (2) Net cash flow 3 7 2 2 2 3 3 7 CAPITALIZATION & VALUATION (EURm) 2014 2015 2016 2017 2018 2019e 2020e 2020e Share price (EUR end) 9.8 12.4 14.5 21.8 21.3 35.1 35.1 35.1 Number of shares end period 10	CASH FLOW (EURm)	2014	2015	2016	2017	2018	2019e	2020e	2021 e
Cash flow from investments (2) (5) (5) (13) (10) (8) (9) Cash flow from financing (3) 10 (6) 0 (3) (2) (2) Net cash flow 3 7 2 2 2 3 3 7 CAPITALIZATION & VALUATION (EURm) 2014 2015 2016 2017 2018 2019e 2020e 2020e Share price (EUR end) 9.8 12.4 14.5 21.8 21.3 35.1 35.1 35.1 Number of shares end period 10 <	Cash earnings	8	(2)	15	14	16	11	15	16
Cash flow from financing (3) 10 (6) 0 (3) (2) (2) Net cash flow 3 7 2 2 3 3 7 CAPITALIZATION & VALUATION (EURm) 2014 2015 2016 2017 2018 2019e 2020e 202 Share price (EUR end) 9.8 12.4 14.5 21.8 21.3 35.1 35.2 36.2 36.2 36.2 36.2 35.2 36.2 36.2 36.2 <td>Change in working capital</td> <td>2</td> <td>6</td> <td>(1)</td> <td>2</td> <td>0</td> <td>1</td> <td>3</td> <td>3</td>	Change in working capital	2	6	(1)	2	0	1	3	3
Net cash flow 3 7 2 2 2 3 3 7 CAPITALIZATION & VALUATION (EURm) 2014 2015 2016 2017 2018 2019e 2020e 202 Share price (EUR end) 9.8 12.4 14.5 21.8 21.3 35.1 35.2 35.2 35.2 35.2 35.2 35.2 35.2 35.2 35.2	Cash flow from investments	(2)	(5)	(5)	(13)	(10)	(8)	(9)	(9)
CAPITALIZATION & VALUATION (EURm) 2014 2015 2016 2017 2018 2019e 2020e 202 Share price (EUR end) 9.8 12.4 14.5 21.8 21.3 35.1 35.2 42.2 20.2 20.2 20.2 20.2 20.2 20.2 20.2 20.2 20.2 20.2 20.2 20.2 20.2 20.2 20.2 20.2	Cash flow from financing	(3)	10	(6)	0	(3)	(2)	(2)	(2)
Share price (EUR end) 9.8 12.4 14.5 21.8 21.3 35.1 35.2 45.2 45.2 45.2 45.2 45.2 45.2 45.2 45.2 45.2 45.2 45.2 45.2 45.2 45.2 45.2 45.2 45.2 45.2<	Net cash flow	3	7	2	2	3	3	7	8
Number of shares end period 10 10 10 10 10 10 10 10 10 10 10 10 10	CAPITALIZATION & VALUATION (EURm)	2014	2015	2016	2017	2018	2019e	2020e	2021 e
Net interest bearing debt 30 33 24 23 19 17 10 Enterprise value 128 160 173 246 238 377 371 3 EV/sales 1.0 1.2 1.2 1.7 1.5 2.3 2.1 3 EV/EBITDA 9.5 14.1 8.9 12.5 11.2 22.5 14.3 12 EV/EBIT 31.5 - 17.3 23.3 19.5 65.5 23.5 20 P/E reported - - - 25.6 53.8 29.4 - 36.7 35 P/B adjusted - - - 23.5 86.1 30.4 43.0 36.7 35 FINANCIAL ANALYSIS & CREDIT METRICS 2014 2015 2016 2017 2018 2019e 2020e 202 ROE adjusted (%) 0.2 - 8.4 3.2 8.4 9.3 10.4 11.7 15 <th< td=""><td>Share price (EUR end)</td><td>9.8</td><td>12.4</td><td>14.5</td><td>21.8</td><td>21.3</td><td>35.1</td><td>35.1</td><td>35.1</td></th<>	Share price (EUR end)	9.8	12.4	14.5	21.8	21.3	35.1	35.1	35.1
Enterprise value 128 160 173 246 238 377 371 3 EV/Sales 1.0 1.2 1.2 1.7 1.5 2.3 2.1 1 EV/EBITDA 9.5 14.1 8.9 12.5 11.2 22.5 14.3 1 EV/EBIT 31.5 - 17.3 23.3 19.5 65.5 23.5 20 P/E reported - - 25.6 53.8 29.4 - 36.7 33 P/B adjusted - - 23.5 86.1 30.4 43.0 36.7 33 P/B 1.4 1.8 1.9 2.8 2.5 4.1 3.7 36 FINANCIAL ANALYSIS & CREDIT METRICS 2014 2015 2016 2017 2018 2019e 2020e 202 ROE adjusted (%) 0.2 - 8.4 3.2 8.4 9.3 10.4 13 Dividend yield (%) -	Number of shares end period	10	10	10	10	10	10	10	10
EV/Sales 1.0 1.2 1.2 1.7 1.5 2.3 2.1 3 EV/EBITDA 9.5 14.1 8.9 12.5 11.2 22.5 14.3 12 EV/EBIT 31.5 - 17.3 23.3 19.5 65.5 23.5 20 P/E reported - - 25.6 53.8 29.4 - 36.7 33 P/B adjusted - - 23.5 86.1 30.4 43.0 36.7 33 P/B 1.4 1.8 1.9 2.8 2.5 4.1 3.7 35 FINANCIAL ANALYSIS & CREDIT METRICS 2014 2015 2016 2017 2018 2019e 2020e 202 ROE adjusted (%) 0.2 - 8.4 3.2 8.4 9.3 10.4 11.7 Dividend yield (%) - - - - 0.7 0.9 0.6 0.6 0.6 EBITDA margin (%)	Net interest bearing debt	30	33	24	23	19	17	10	2
EV/EBITDA 9.5 14.1 8.9 12.5 11.2 22.5 14.3 12.5 EV/EBIT 31.5 - 17.3 23.3 19.5 65.5 23.5 20.0 P/E reported - - 25.6 53.8 29.4 - 36.7 33.7 P/E adjusted - - 23.5 86.1 30.4 43.0 36.7 33.7 P/B 1.4 1.8 1.9 2.8 2.5 4.1 3.7 33.7 FINANCIAL ANALYSIS & CREDIT METRICS 2014 2015 2016 2017 2018 2019e 2020e 202 ROE adjusted (%) 0.2 - 8.4 3.2 8.4 9.3 10.4 13.7 Dividend yield (%) - - - 0.7 0.9 0.6 0.6 0.6 EBITDA margin (%) 10.9 8.3 12.9 13.3 13.7 10.4 14.7 19.9 EBIT margin (%)	Enterprise value	128	160	173	246	238	377	371	362
EV/EBIT 31.5 - 17.3 23.3 19.5 65.5 23.5 20 P/E reported - - - 25.6 53.8 29.4 - 36.7 35 P/E adjusted - - - 23.5 86.1 30.4 43.0 36.7 35 P/B 1.4 1.8 1.9 2.8 2.5 4.1 3.7 35 FINANCIAL ANALYSIS & CREDIT METRICS 2014 2015 2016 2017 2018 2019e 2020e 202 ROE adjusted (%) 0.2 - 8.4 3.2 8.4 9.3 10.4 12 Dividend yield (%) - - - 0.7 0.9 0.6 0.6 0.6 EBITDA margin (%) 10.9 8.3 12.9 13.3 13.7 10.4 14.7 19 EBIT margin (%) 3.3 0.9 6.7 7.2 7.9 3.6 8.9 9	EV/Sales	1.0	1.2	1.2	1.7	1.5	2.3	2.1	1.9
P/E reported - - 25.6 53.8 29.4 - 36.7 33.7 P/E adjusted - - - 23.5 86.1 30.4 43.0 36.7 33.7 35.7 P/B 1.4 1.8 1.9 2.8 2.5 4.1 3.7 35.7 FINANCIAL ANALYSIS & CREDIT METRICS 2014 2015 2016 2017 2018 2019e 2020e 202 ROE adjusted (%) 0.2 - 8.4 3.2 8.4 9.3 10.4 11.2 Dividend yield (%) - - - - 0.7 0.9 0.6 0.6 0.6 EBITDA margin (%) 10.9 8.3 12.9 13.3 13.7 10.4 14.7 11.9 EBIT margin (%) 3.3 0.9 6.7 7.2 7.9 3.6 8.9 9.9	EV/EBITDA	9.5	14.1	8.9	12.5	11.2	22.5	14.3	12.3
P/E adjusted - - 23.5 86.1 30.4 43.0 36.7 33.7 P/B 1.4 1.8 1.9 2.8 2.5 4.1 3.7 3.7 FINANCIAL ANALYSIS & CREDIT METRICS 2014 2015 2016 2017 2018 2019e 2020e 202 ROE adjusted (%) 0.2 - 8.4 3.2 8.4 9.3 10.4 12 Dividend yield (%) - - - 0.7 0.9 0.6 0.6 0.6 EBITDA margin (%) 10.9 8.3 12.9 13.3 13.7 10.4 14.7 12 EBIT margin (%) 3.3 0.9 6.7 7.2 7.9 3.6 8.9 9	EV/EBIT	31.5	-	17.3	23.3	19.5	65.5	23.5	20.0
FINANCIAL ANALYSIS & CREDIT METRICS 2014 2015 2016 2017 2018 2019e 2020e 202 ROE adjusted (%) 0.2 - 8.4 3.2 8.4 9.3 10.4 12 Dividend yield (%) - - - 0.7 0.9 0.6 0.6 0.6 EBITDA margin (%) 10.9 8.3 12.9 13.3 13.7 10.4 14.7 15 EBIT margin (%) 3.3 0.9 6.7 7.2 7.9 3.6 8.9 9	P/E reported	-	-	25.6	53.8	29.4	-	36.7	31.3
FINANCIAL ANALYSIS & CREDIT METRICS 2014 2015 2016 2017 2018 2019e 2020e 202 ROE adjusted (%) 0.2 - 8.4 3.2 8.4 9.3 10.4 12 Dividend yield (%) - - - 0.7 0.9 0.6 0.6 0.6 EBITDA margin (%) 10.9 8.3 12.9 13.3 13.7 10.4 14.7 15 EBIT margin (%) 3.3 0.9 6.7 7.2 7.9 3.6 8.9 9	P/E adjusted	-	-	23.5	86.1	30.4	43.0	36.7	31.3
ROE adjusted (%) 0.2 - 8.4 3.2 8.4 9.3 10.4 12 Dividend yield (%) - - - 0.7 0.9 0.6 0.6 0.6 EBITDA margin (%) 10.9 8.3 12.9 13.3 13.7 10.4 14.7 15 EBIT margin (%) 3.3 0.9 6.7 7.2 7.9 3.6 8.9 9	P/B	1.4	1.8	1.9	2.8	2.5	4.1	3.7	3.4
Dividend yield (%) - - - - 0.7 0.9 0.6 0.6 0 EBITDA margin (%) 10.9 8.3 12.9 13.3 13.7 10.4 14.7 15 EBIT margin (%) 3.3 0.9 6.7 7.2 7.9 3.6 8.9 9	FINANCIAL ANALYSIS & CREDIT METRICS	2014	2015	2016	2017	2018	2019e	2020e	2021 e
EBITDA margin (%) 10.9 8.3 12.9 13.3 13.7 10.4 14.7 15 EBIT margin (%) 3.3 0.9 6.7 7.2 7.9 3.6 8.9 5	ROE adjusted (%)	0.2	-	8.4	3.2	8.4	9.3	10.4	11.2
EBIT margin (%) 3.3 0.9 6.7 7.2 7.9 3.6 8.9	Dividend yield (%)	-	-	-	0.7	0.9	0.6	0.6	0.6
	EBITDA margin (%)	10.9	8.3	12.9	13.3	13.7	10.4	14.7	15.1
NIBD/EBITDA 2.19 2.90 1.26 1.16 0.92 1.01 0.40 0.	EBIT margin (%)	3.3	0.9	6.7	7.2	7.9	3.6	8.9	9.3
	NIBD/EBITDA	2.19	2.90	1.26	1.16	0.92	1.01	0.40	0.06
EBITDA/Net interest 5.66 4.76 15.31 5.77 11.54 8.92 13.68 15.	EBITDA/Net interest	5.66	4.76	15.31	5.77	11.54	8.92	13.68	15.95

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Companies	No. of shares Holdi	ings in %	Companies	No. of shares	Holdings in %
Helgeland Sparebank	2,010,630	9.63%	SpareBank 1Østfold Akersl	1,140,010	9.20%
Pareto Bank ASA	13,672,650	19.57%	Sparebanken Vest	4,507,960	7.64%

Pareto Securities AS or its affiliates own as determined in accordance with Section 13(d) of the US Exchange Act, 1% or moreof the equity securities of:

Companies	No. of shares Hold	lings in %	Companies	No. of shares Ho	ldings in %
Helgeland Sparebank	2,010,630	9.63%	SpareBank 1Østfold Akersl	1,140,010	9.20%
Pareto Bank ASA	13,672,650	19.57%	Sparebanken Møre	305,239	3.09%
Selvaag Bolig ASA	2,172,147	2.32%	Sparebanken Sør	433,149	2.77%
SpareBank 1BV	1,650,920	2.62%	Sparebanken Vest	4,507,960	7.64%
SpareBank 1Nord-Norge	3,113,087	3.10%	Totens Sparebank	79,246	1.29%
SpareBank 1SMN	1,878,192	1.45%			

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Company	A nalyst holdings*	Total holdings	Company	Analyst holdings*	Total holdings	Company	A nalyst holdings*	Total holdings
	-		• •	_		SalMar	_	280
AF Gruppen	0	18,475	Helgeland Sparebank	0	4,127		0	
Aker	0	1,021	Höegh LNG	0	3,890	Sandnes Sparebank	0	23,832
AkerBP	0	8,560	Jæren Sparebank	0	500	Scatec Solar	0	35,635
AKVA Group	0	2,100	Komplett Bank	0	108,913	Schibsted ASA B Aksjer	0	453
Archer	0	38,730	Kongsberg Gruppen	0	34,051	Seadrill	0	11,722
Atlantic Sapphire	0	3,805	KWS	75	75	Selvaag Bolig	0	3,000
Avance Gas	0	4,580	Lerøy Seafood	0	4,880	SpareBank 1BV	0	17,700
Axactor	0	8,709	Magseis Fairfield	0	12,379	SpareBank 1Nord-Norge	0	26,500
BASF	270	270	Mowi	0	2,679	SpareBank 1Ringerike Hade	0	500
Bonheur	0	48,485	NEXT Biometrics	0	10,976	SpareBank 1SM N	0	15,490
BRABank	0	1,371,000	NORBIT	0	18,864	SpareBank 1SR-Bank	0	29,482
BWLPG	0	2,069	Nordic Semiconductor	0	6,000	Sparebank 1Østfold Akersh	0	450
DNB	0	31,295	Norsk Hydro	0	96,051	SpareBank 1Østlandet	0	2,891
DNO	0	391,278	Northern Drilling	0	5,060	Sparebanken Sør	0	15,840
DNO Bull ETN	0	7,000	Norwegian Air Shuttle	0	66,467	Sparebanken Vest	0	1,900
Entra	0	31,627	Norwegian Energy Company	0	300	Sparebanken Øst	0	1,500
Equinor	0	6,431	Ocean Yield	0	34,967	Stolt-Nielsen	0	40,400
Europris	0	14,750	Odfjell Drilling	0	2,244	Storebrand	0	5,565
Fjord1	0	51,250	Okeanis Eco Tankers	0	1,738	Subsea 7	0	1,162
Fjordkraft Holding	0	5,000	Orkla	0	19,864	Telenor	0	1,911
FlexLNG	0	1,032	Panoro Energy	0	5,670	TGS-NOPEC	0	2,000
Frontline	0	11,730	Pareto Bank	0	1,183,040	XXL	0	8,879
Gjensidige Forsikring	0	6,690	Pioneer Property	0	2,050	Yara International	0	12,475
Golden Ocean Group	0	1,744	Protector Forsikring	0	14,385	Zenterio	0	78,865
Grieg Seafood	0	970	REC Silicon	0	32,776			

This overview is updated monthly (last updated 15.10.2019).

 $^{{}^*\!}Analyst\ holdings refers to position sheld by the Pareto Securities AS\ analyst\ covering the\ company.$

First Sensor AG Sponsored Research Update

Appendix B

Disclosure requirements pursuant to the Norwegian Securities Trading Regulation § 3-11, letters e-f, ref the Securities Trading Act Section 3-10

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2020Bulkers Genel Energy Norwegian Air Shuttle
Advanzia Bank Gfinity Plc Nouveau Monde Graphite

 African Petroleum
 GG. St. Kongensgade 100 og 106
 Ocean Yield

 Agder Energi
 Haf slund E-CO
 OKEA

 American Tanker
 Hertha BSC GmbH
 Okeanis Eco Tankers

 Andfjord Salmon
 HKN Energy Ltd
 Otiga Group

 APC Forsikringsmæglere A/S
 Hunter Group ASA
 Panoro Energy

 Belships ASA
 Hörmann Industries
 Pareto Bank

Bluewater Holding Ice Group Petroleum Geo-Services

BRAbank Jact el AS PetroTal Central Nic Group Klaveness Ship Holding Point Resources AS DNO LifeFit Quest erre Energy Dof Subsea Lundin Petroleum Rødovre Port Holding A/S Eco Atlantic Oil and Gas Magseis Shamaran Petroleum Euromicron AG Monobank ASA Sparebank 1Østlandet Exmar NV Stolt Nilsen

FFS Bidco Navigator Holdings TEMPTON Dienstleistungen Filo Mining Corp NGEx Resources Union Martime Limited Flex LNG Norbit ASA Vantage Drilling

Floatel

This overview is updated monthly (this overview is for the period 30.09.2018 – 30.09.2019).

Appendix C

Disclosure requirements pursuant to the Norwegian Securities Trading Regulation § 3-11(4)

Distribution of recommendations

Recommendation	% distribution
Buy	65%
Hold	31%
Sell	4%

$Distribution\ of\ recommendations\ (transactions^{\star})$

Recommendation % distribution
Buy 95%

 Buy
 95%

 Hold
 5%

 Sell
 0%

This overview is updated monthly (last updated 15.10.2019).

^{*} Companies under coverage with which Pareto Securities Group has on-going or completed public investment banking services in the previous 12 months

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Disclosure of assignments and mandates

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Bionvent IRRAS AB Pledpharma AB ShaMaran Petroleum

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Members of the Pareto Group have entered into agreements concerning the inclusion of the company in question in Pareto Securities AB's research coverage universe with the following companies: None This overview is updated monthly (last updated 05.11.2019).

Appendix E

Disclosure requirements pursuant to the Norwegian Securities Trading Regulation § 3-11, letter d, ref the Securities Trading Act Section 3-10

Designated Sponsor

Pareto Securities acts as a designated sponsor for the following companies, including the provision of bid and ask offers. Therefore, we regularly possess shares of the company in our proprietary trading books. Pareto Securities receives a commission from the company for the provision of the designated sponsor services.

2G Energy * MAX Automation SE SCOUT24 Siemens Healthineers AG Aixtron M erkur Bank M LP * GFT Technologies SM T Scharf AG Baywa Biotest Gigaset * M OBOTIX AG Surteco Group Brenntag Heidelberg Pharma* OVB Holding AG Syzygy AG * CORESTATE Capital Holding S.A. Hypoport AG Procredit Holdina * TAKKT AG Daldrup & Söhne init PSI SOFTWARE AG * Vapiano PWO* Intershop Communications AG va-Q-tec 3 Demire RIB Software * Epigenomics AG' Leifheit Viscom* Euromicron AG * Logwin * S&T AG * windeln.de Eyemaxx Real Estate Manz AG* Schaltbau Holding AG

Appendix F

Disclosure requirements pursuant to the Norwegian Securities Trading Regulation § 3-11, letter g, ref the Securities Trading Act Section 3-10

Sponsored Research

Pareto Securities has entered into an agreement with these companies about the preparation of research reports and—in return - receives compensation.

 Adler Modemaerkte
 Eyemaxx Real Estate
 Intershop Communications AG
 OHB SE

 Baywa
 First Sensor
 Leifheit
 OVB Holding AG

 BB Biotech
 Godewind Immobilien AG
 MAX Automation SE
 Schaltbau Holding AG

 comdirect
 Hypoport AG
 Merkur Bank
 Siegfried Holding AG

Daldrup & Söhne init MOBOTIX AG Vapiano

This overview is updated monthly (last updated 15.10.2019).

^{*} The designated sponsor services include a contractually agreed provision of research services.