First Sensor AG

Sponsored Research

Germany | Technology Hardware & Equipment

Investment Research



Company Flash Note

Buy	

Duy			
Recommendation unchang	ed		
Share price: EUR			18.50
closing price as of 12/11/2018			
Target price: EUR		:	27.50
from Target Price: EUR			27.40
Upside/Downside F	Potentia	al 4	8.6%
Reuters/Bloomberg		SISG.DI	E/SIS GR
Market capitalisation (EUR	:m)		189
Current N° of shares (m)			10
Free float			53%
Daily avg. no. trad. sh. 12 mt	h		24
Daily avg. trad. vol. 12 mth (n	n)		240.42
Price high/low 12 months		14.4	0 / 30.50
Abs Perfs 1/3/12 mths (%)		7.56/-14.	75/-2.68
Key financials (EUR)	12/17	12/18e	12/19e
Sales (m)	148	157	168
EBITDA (m)	20	23	23
EBITDA margin	13.3%	14.4%	13.9%
EBIT (m)	11	12	14
EBIT margin	7.2%	7.9%	8.0%
Net Profit (adj.)(m)	4	7	8
ROCE	6.0%	6.9%	7.4%
Net debt/(cash) (m)	23	22	18
Net Debt Equity	0.3	0.3	0.2
Net Debt/EBITDA	1.2	1.0	0.8
Int. cover(EBITDA/Fin.int)	10.6	10.5	10.8
EV/Sales	1.7	1.4	1.2
EV/EBITDA	12.6	9.4	8.9
EV/EBITDA (adj.)	14.2	10.4	9.9
EV/EBIT	23.4	17.2	15.4
P/E (adj.)	nm	27.5	24.7
P/BV	2.8	2.2	2.1
OpFCF yield	1.2%	1.3%	3.2%
Dividend yield	0.9%	1.0%	1.1%
EPS (adj.)	0.40	0.67	0.75
BVPS	7.91	8.42	8.99
DPS	0.16	0.18	0.20

Shareholders

FS Technology Holding S.à.r.l. 36%; Midlin NV 6%; Gerlin NV 5%;



Analyst(s) Winfried Becker winfried.becker@equinet-ag.de +49.69.58997-416

Reason: Company newsflow

13 November 2018

Guidance confirmation as expected

Having seen now the full set of 9M/Q3 results we confirm our view already given after the publication of some preliminary figures (23 Oct 2018), that First Sensor (FIS) remains on track to reach the full-year 2018e guidance. In contrast, some of FIS' peers failed to meet market expectations. By segment, 2018e the Mobility division will come out somewhat lower than expected earlier, but this will be compensated by a better business in the Industrial and Medical segments in our view. End of October the major shareholder DPE (36.02%) made the consideration of a stake sale public, leading to a strong rebound of the shares. After some fine-tuning in our model our new TP amounts to EUR 27.50 (+0.4%) per share and we maintain our Buy recommendation.

- Order situation: Q3 '18 order intake declined by 5.9% yoy to EUR 39.5m. This resulted in a book-to-bill-ratio of 0.97 and the first time since several quarters it was below "1". On a nine months basis the book-to-bill ratio amounted to 1.07 versus 1.12 a year earlier. The order book could keep the high level and reached EUR 100.6m (30 June: EUR 102.9m), which is a good basis in our view to reach our 2018e sales estimate.
- EBIT-margin improvement: The group made further progress with regard to margin improvement. The EBIT-margin in Q3 '18 amounted 11.3% (Q1: 3.1% negative impact from the introduction of a new ERP-system; Q2: 7.5%). On a 9M basis the EBIT-margin reached 7.5% (6.9%). Reasons for the improvement are in particular a strict cost control, optimized value chains and a successful focus on economies of scale.
- Capacity increase at pressure sensors: End of October FIS announced a capacity increase for pressure sensors ("H-series") at the locations in Berlin and Puchheim near Munich. First contributions were already seen in Q3.
- Confirmed guidance FY 2018e: The group wants to generate sales of EUR 150-160m (equinet: EUR 157m); in order to achieve our estimate, in Q4 the group needs to reach EUR 41.9m. The EBIT-margin should reach a corridor of 7 - 9% (equinet at 7.9%).
- ✓ DPE considers to sell its stake: 31 October First Sensor made public, that the major shareholder Deutsche Private Equity is considering to sell its 36.02% holding in First Sensor. This news came out as a surprise. In case the stake will be sold as a whole, it could lead to a complete takeover bid according to the German takeover law ("Pflichtangebot" nach WpÜG) from a potential buyer. FIS management stated to take an active role within this process and will be supported by Goldman Sachs.
- Key risks comprise among other factors: 1) FS might not keep the speed with regard to new, innovative products and as a result could lose market share over time. 2) FS will not meet timely all defined milestones of their overall strategy plan what can result in a lower than expected profitability. 3) Hiring of new and skilled employees could become more challenging.

Produced by:

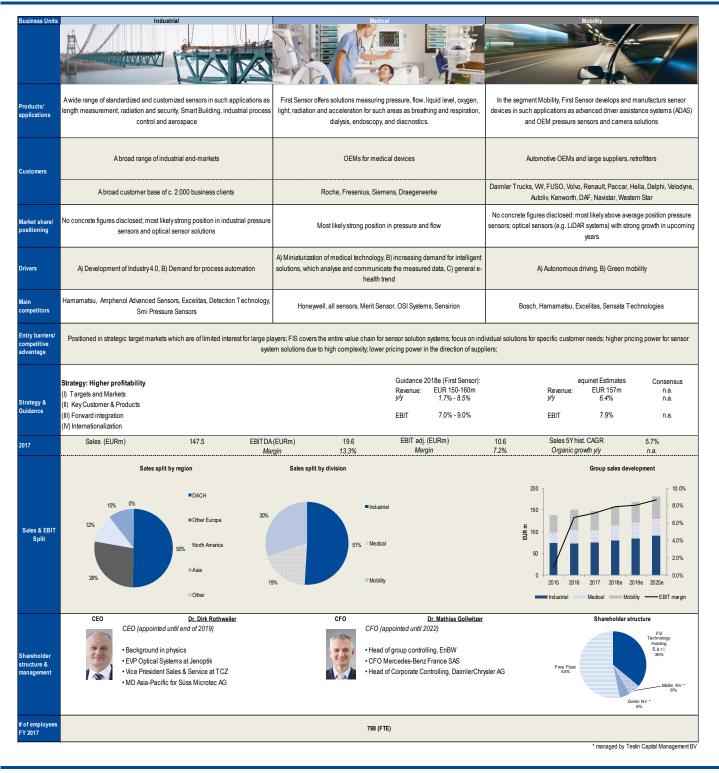


For important disclosure information, please refer to the disclaimer page of this report.

All ESN research is available on Bloomberg, "ESNR", Thomson-Reuters, S&P Capital IQ, FactSet

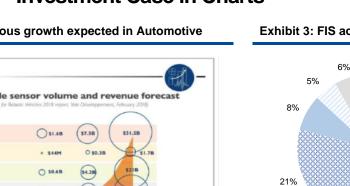


Exhibit 1: First Sensor at a glance



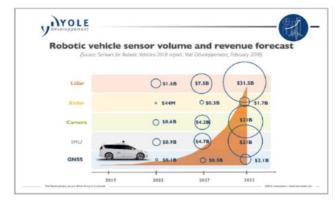
Source: Company data, equinet Research



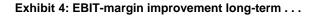


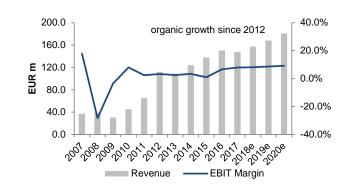
Investment Case in Charts

Exhibit 2: Tremendous growth expected in Automotive

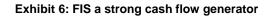


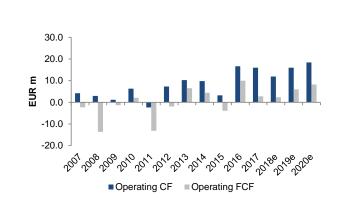
Source: Yole Dévelopment





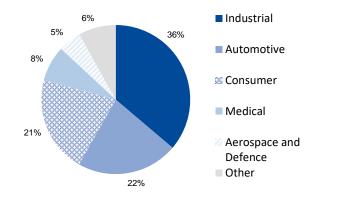
Source: Company data, equinet Research



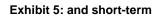


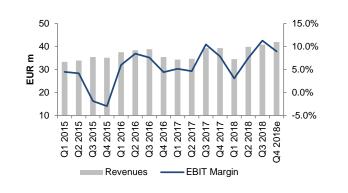
Source: Company data, equinet Research

Exhibit 3: FIS active in 4-5 sensor market segments

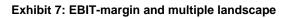


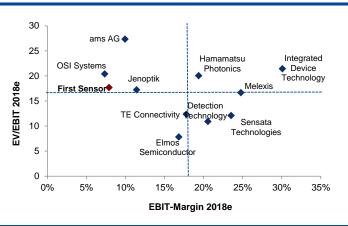
Source: AMR, BCC, R&M, equinet Research





Source: Company data, equinet Research





Source: FactSet, equinet Research

equinet Bank

Investment case

The First Sensor group currently holds leading market positions in its defined strategic endmarkets. These markets have high entry barriers for other medium-sized companies and volumes most likely are too small for the large players in our view.

The company covers the entire value chain for sensor and related systems. Looking forward, First Sensor is well positioned to benefit from some megatrends like for example autonomous driving or Industry 4.0. By benefitting from these trends the current strategy is directed to a higher margin level and in 2016 and 2017 the group could harvest the first fruits of this program. Nevertheless the margin level is still behind to some of its listed peer group companies.

Further triggers for the share price in our view are any signs for a further sustainable margin improvement. These signs can be for example the winning of new high volume OEM customers, new product innovations, internal cost savings measures or entering new markets. The signing of an extension of an existing contract with a Chinese process automation company in July is a good example. The strengthening of the collaboration with a Canadian technology leader for machine vision technology for an additional contract for sensor boards until 2019 is another one.

A possible escalation of the global trade war will not directly affect the business of FIS, according to the company. An extension of duties for European carmakers could have a negative impact on First Sensor's Mobility segment (2017 sales share of 30.1%) in our view.

After a poor share price performance in the course of 2018 the announcement from Deutsche Private Equity end of October to consider a sale of its 36.02% holding immediately lifted the share price to a level of EUR 18-19 per share. That is roughly the average share price of the last three months. Management of First Sensor stated to take an active role and has hired Goldman Sachs to attend this process.

Valuation Update

- Again we confirm our Buy recommendation for FIS
- TP marginally up to EUR 27.50 from EUR 27.40 per share
- Base parameters have not changed: Beta at 1.1; perpetual growth rate at 2.5% and sustainable margin at 9.5%
- Current upside potential for the FIS shares of 49%

			Phase I					Phase I			Phase III
EUR m	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	
Revenues	157.0	168.0	180.8	194.9	210.0	224.4	237.9	250.1	260.7	269.5	
growth rate	6.4%	7.0%	7.6%	7.8%	7.7%	6.9%	6.0%	5.1%	4.2%	3.4%	
EBIT	12.4	13.5	15.6	17.8	19.8	21.2	22.5	23.7	24.7	25.6	
EBIT margin	7.9%	8.0%	8.6%	9.1%	9.4%	9.5%	9.5%	9.5%	9.5%	9.5%	
Tax	-3.7	-4.1	-4.7	-5.3	-5.9	-6.4	-6.8	-7.1	-7.4	-7.7	
Taxrate	30%	30%	30%	30%	30%	30%	30%	30%	30%	30%	
Depr. & Amort.	10.2	9.8	9.9	10.2	10.3	11.2	11.9	12.5	13.1	13.6	
% of sales	6.5%	5.8%	5.5%	5.2%	4.9%	5.0%	5.0%	5.0%	5.0%	5.0%	
Capex	-9.5	-10.0	-10.2	-11.0	-11.1	-11.9	-12.6	-13.2	-13.8	-14.2	
% of sales	6.1%	6.0%	5.6%	5.6%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	
Change in WC & P	-3.5	-1.5	-0.8	-0.7	0.2	0.2	0.2	0.2	0.2	0.1	
% of sales	2.2%	0.9%	0.4%	0.4%	-0.1%	-0.1%	-0.1%	-0.1%	-0.1%	0.0%	
Free Cash Flow	5.9	7.7	9.9	10.9	13.3	14.4	15.3	16.1	16.8	17.4	401.2
growth rate Present Value FCF	nm 5.8	30.9% 7.2	27.7% 8.5	10.9% 8.9	21.7% 10.1	7.9% 10.2	6.5% 10.1	5.3%	4.3% 9.7	3.4% 9.4	2.5% 217.4
	5.0	1.2	0.5	0.9	10.1	10.2	10.1	10.0	5.1	9.4	217
PV Phase I		40.5			Risk fre	e rate	3.5%		Targ. eq	uity ratio	60%
PV Phase II		49.4			Premiur	n Equity	5.0%		Beta		1.1
PV Phase III		217.4			Premiur	n Debt	2.0%		WACC		6.9%
Enterprise value		307.3		Sensitivity		ʻity		Gro	wth in p	hase III	
- Net Debt (Cash)		22.8					1.5%	2.0%	2.5%	3.0%	3.5%
- Pension Provisions		0.3				6.25%	27.5	30.1	33.3	37.6	43.4
- Minorities & Periphera	als	1.2				6.59%	25.3	27.5	30.2	33.6	38.2
+ MV of financial assets					WACC	6.94%	23.5	25.3	27.5	30.4	34.0
- Paid-out dividends for	-	1.6				7.29%	21.8	23.4	25.3	27.6	30.6
+/- Other EV items						7.63%	20.4	21.7	23.3	25.3	27.7
Equity value		281.4									
Number of shares		10.2									
Value per share (€)		27.5									
Current Price (€)		18.5									
Upside		49%									

Exhibit 8: First Sensor: DCF model – base case

Source: FactSet (share price as of 12 Nov 2018), equinet Research

Our selected highlights within 9M/Q3 reporting:

- Group sales in Q3 '18 for the first time surpassed the level of EUR 40m and amounted to EUR 40.8m (+3.8% yoy). In the first nine months sales growth amounted to 6.4% yoy. By segment, Mobility in Q3 '18 declined by 14.6% yoy, but this was overcompensated by Medical (+25% yoy) and Industrial (+6.7% yoy).
- Sales by region becoming more international (9M figures): The sales share of Asia increased to 11.9% (9.9%). North America too, could increase the sales share to 11.9% (10.6%).
- 9M EPS amounted to EUR 0.55 (EUR0.28) per share
- Net financial debt increase to EUR 26.9m from EUR 22.8m end of December 2017
- Working Capital in Q3 '18 increased to EUR 44.5m versus EUR 41.1m last year. The increase is related to the higher sales volume and to some strategic buys of inventories in order to secure production capability. Due to the overall strong demand the supply chain is somewhat stressed in our view.

EUR m	Q3 2018	Q3 2017	% YoY	equinet	Delta
Order intake	39.5	42.0	0.0%	43.8	-9.8%
Revenues	40.8	39.3	3.8%	40.8	0.0%
ile venues	40.0	33.5	5.070	40.0	0.070
of which: Industrial	20.7	19.4	6.7%	21.1	-1.9%
of which: Medical	9.5	7.6	25.0%	8.8	8.0%
of which: Mobility	10.5	12.3	-14.6%	10.9	-3.7%
Book-to-bill ratio group	0.97	1.07		1.07	
EBIT	4.6	4.1	12.0%	4.6	0.0%
EBIT Margin	11.3%	10.4%		11.3%	
Netincome	3.4	0.9	277.8%	3.4	0.0%
eps, eur	0.33	0.09	266.7%	0.33	0.0%

Exhibit 9: First Se

Source: Company data, equinet Research



First Sensor AG : Summary tables

First Sensor AG : Summary tables						
PROFIT & LOSS (EURm)	12/2014	12/2015	12/2016	12/2017	12/2018e	12/2019e
Sales	124	138	150	148	157	168
Cost of Sales & Operating Costs	-113	-129	-131	-130	-137	-147
Non Recurrent Expenses/Income	2.5	3.2	0.2	2.3	2.2	2.2
EBITDA	13.1	11.5	19.4	19.6	22.6	23.3
EBITDA (adj.)*	10.6	8.4	19.3	17.3	20.4	21.1
Depreciation	-6.5	-7.2	-7.1	-6.8	-8.0	-7.6
EBITA	6.6	4.4	12.4	12.8	14.6	15.7
EBITA (adj)*	4.1	1.2	12.2	10.6	12.4	13.5
Amortisations and Write Downs	-2.5	-3.2	-2.4	-2.3	-2.2	-2.2
of which PPA amortisation	-2.5	-3.2	-2.4	-2.3	-2.2	-2.2
EBIT	4.1	1.2	10.0	10.6	12.4	13.5
EBIT (adj.)*	4.1	1.2	12.2	10.6	12.4	13.5
Net Financial Interest	-2.4	-2.4	-1.8	-1.9	-2.1	-2.2
Other Financials	0.0	0.0	0.0	0.0	0.0	0.0
Associates	0.0	0.0	0.5	-1.5	0.0	0.0
Other Non Recurrent Items	0.0	0.0	0.0	0.0	0.0	0.0
Earnings Before Tax (EBT)	1.7	-1.2	8.7	7.2	10.2	11.4
Тах	-1.3	-0.4	-2.6	-2.8	-3.1	-3.4
Tax rate	76.3%	n.m.	30.2%	38.9%	30.0%	30.0%
Discontinued Operations	0.0	0.0	0.0	0.0	0.0	0.0
Minorities	-0.2	-0.2	-0.3	-0.2	-0.3	-0.3
Net Profit (reported)	0.2	-1.7	5.7	4.1	6.9	7.7
Net Profit (adj.)	0.2	-1.7	5.8	4.1	6.9	7.7
CASH FLOW (EURm)	12/2014	12/2015	12/2016	12/2017	12/2018e	12/2019e
Cash Flow from Operations before change in NWC	11.4	9.5	15.8	17.8	15.3	17.5
Change in Net Working Capital	-1.6	-6.3	0.8	-1.8	-3.5	-1.5
Cash Flow from Operations	9.8	3.2	16.6	16.0	11.9	16.0
Capex	-5.4	-7.1	-6.6	-13.2	-9.5	-10.0
Net Financial Investments	1.1	2.0	0.1	0.7	0.0	0.0
Free Cash Flow	5.5	-1.9	10.1	3.5	2.4	6.0
Dividends	0.0	0.0	0.0	0.0	-1.6	-1.8
Other (incl. Capital Increase & share buy backs)	0.0	0.0	0.0	0.0	0.0	0.0
Change in Net Debt	5.5	-1.9	10.1	3.5	0.7	4.1
NOPLAT	2.9	0.8	8.5	7.4	8.7	9.5
BALANCE SHEET & OTHER ITEMS (EURm)	12/2014	12/2015	12/2016	12/2017	12/2018e	12/2019e
Net Tangible Assets	36.4	35.0	33.0	36.4	36.7	36.4
Net Intangible Assets (incl.Goodwill)	52.2	49.6	49.1	48.9	47.9	48.4
Net Financial Assets & Other	0.0	0.0	0.0	0.0	0.0	0.0
Total Fixed Assets	88.7	84.6	82.1	85.3	84.6	84.8
Inventories	29.9	27.1	25.9	24.6	27.1	28.1
Trade receivables	8.6	17.0	18.4			~ ~ ~
Other current assets				20.8	22.0	22.7
	4.8	4.7	3.8	20.8 3.4	22.0 3.7	22.7 3.8
Cash (-)	4.8 -14.5	4.7	3.8	3.4	3.7	3.8
Cash (-) Total Current Assets	-14.5	4.7 -21.5	3.8 -23.8	3.4 -25.5	3.7 -27.2	3.8 -31.6
	-14.5 57.8	4.7 -21.5 70.4	3.8 -23.8 71.9	3.4 -25.5 74.3	3.7 -27.2 80.0	3.8 -31.6 86.3
Total Current Assets Total Assets	-14.5 57.8 146	4.7 -21.5 70.4 155	3.8 -23.8 71.9 154	3.4 -25.5 74.3 160	3.7 -27.2 80.0 165	3.8 -31.6 86.3 171
Total Current Assets Total Assets Shareholders Equity	-14.5 57.8 146 71.6	4.7 -21.5 70.4 155 70.7	3.8 -23.8 71.9 154 76.5	3.4 -25.5 74.3 160 80.8	3.7 -27.2 80.0 165 86.0	3.8 -31.6 86.3 171 91.8
Total Current Assets Total Assets Shareholders Equity Minority	-14.5 57.8 146 71.6 0.4	4.7 -21.5 70.4 155 70.7 0.6	3.8 -23.8 71.9 154 76.5 0.9	3.4 -25.5 74.3 160 80.8 1.2	3.7 -27.2 80.0 165 86.0 1.2	3.8 -31.6 86.3 171 91.8 1.2
Total Current Assets Total Assets Shareholders Equity Minority Total Equity	-14.5 57.8 146 71.6 0.4 72.0	4.7 -21.5 70.4 155 70.7 0.6 71.3	3.8 -23.8 71.9 154 76.5 0.9 77.4	3.4 -25.5 74.3 160 80.8 1.2 82.0	3.7 -27.2 80.0 165 86.0 1.2 87.2	3.8 -31.6 86.3 171 91.8 1.2 93.0
Total Current Assets Total Assets Shareholders Equity Minority Total Equity Long term interest bearing debt	-14.5 57.8 146 71.6 0.4 72.0 35.3	4.7 -21.5 70.4 155 70.7 0.6 71.3 44.5	3.8 -23.8 71.9 154 76.5 0.9 77.4 37.2	3.4 -25.5 74.3 160 80.8 1.2 82.0 36.3	3.7 -27.2 80.0 165 86.0 1.2 87.2 36.3	3.8 -31.6 86.3 171 91.8 1.2 93.0 35.6
Total Current Assets Total Assets Shareholders Equity Minority Total Equity Long term interest bearing debt Provisions	-14.5 57.8 146 71.6 0.4 72.0 35.3 0.5	4.7 -21.5 70.4 155 70.7 0.6 71.3 44.5 0.7	3.8 -23.8 71.9 154 76.5 0.9 77.4 37.2 0.3	3.4 -25.5 74.3 160 80.8 1.2 82.0 36.3 0.3	3.7 -27.2 80.0 165 86.0 1.2 87.2 36.3 0.3	3.8 -31.6 86.3 171 91.8 1.2 93.0 35.6 0.3
Total Current Assets Total Assets Shareholders Equity Minority Total Equity Long term interest bearing debt Provisions Other long term liabilities	-14.5 57.8 146 71.6 0.4 72.0 35.3 0.5 13.0	4.7 -21.5 70.4 155 70.7 0.6 71.3 44.5 0.7 11.8	3.8 -23.8 71.9 154 76.5 0.9 77.4 37.2 0.3 8.1	3.4 -25.5 74.3 160 80.8 1.2 82.0 36.3 0.3 7.4	3.7 -27.2 80.0 165 86.0 1.2 87.2 36.3 0.3 7.0	3.8 -31.6 86.3 171 91.8 1.2 93.0 35.6 0.3 7.1
Total Current Assets Total Assets Shareholders Equity Minority Total Equity Long term interest bearing debt Provisions Other long term liabilities Total Long Term Liabilities	-14.5 57.8 146 71.6 0.4 72.0 35.3 0.5 13.0 48.8	4.7 -21.5 70.4 155 70.7 0.6 71.3 44.5 0.7 11.8 57.0	3.8 -23.8 71.9 154 76.5 0.9 77.4 37.2 0.3 8.1 45.6	3.4 -25.5 74.3 160 80.8 1.2 82.0 36.3 0.3 7.4 44.0	3.7 -27.2 80.0 165 86.0 1.2 87.2 36.3 0.3 7.0 43.6	3.8 -31.6 86.3 171 91.8 1.2 93.0 35.6 0.3 7.1 43.0
Total Current Assets Total Assets Shareholders Equity Minority Total Equity Long term interest bearing debt Provisions Other long term liabilities Total Long Term Liabilities Short term interest bearing debt	-14.5 57.8 146 71.6 0.4 72.0 35.3 0.5 13.0 48.8 9.0	4.7 -21.5 70.4 155 70.7 0.6 71.3 44.5 0.7 11.8 57.0 10.0	3.8 -23.8 71.9 154 76.5 0.9 77.4 37.2 0.3 8.1 45.6 11.0	3.4 -25.5 74.3 160 80.8 1.2 82.0 36.3 0.3 7.4 44.0 12.0	3.7 -27.2 80.0 165 86.0 1.2 87.2 36.3 0.3 7.0 43.6 13.0	3.8 -31.6 86.3 171 91.8 1.2 93.0 35.6 0.3 7.1 43.0 14.0
Total Current Assets Total Assets Shareholders Equity Minority Total Equity Long term interest bearing debt Provisions Other long term liabilities Total Long Term Liabilities Short term interest bearing debt Trade payables	-14.5 57.8 146 71.6 0.4 72.0 35.3 0.5 13.0 48.8 9.0 8.2	4.7 -21.5 70.4 155 70.7 0.6 71.3 44.5 0.7 11.8 57.0 10.0 7.6	3.8 -23.8 71.9 154 76.5 0.9 77.4 37.2 0.3 8.1 45.6 11.0 8.6	3.4 -25.5 74.3 160 80.8 1.2 82.0 36.3 0.3 7.4 44.0 12.0 7.9	3.7 -27.2 80.0 165 86.0 1.2 87.2 36.3 0.3 7.0 43.6 13.0 8.1	3.8 -31.6 86.3 171 91.8 1.2 93.0 35.6 0.3 7.1 43.0 14.0 8.3
Total Current Assets Total Assets Shareholders Equity Minority Total Equity Long term interest bearing debt Provisions Other long term liabilities Total Long Term Liabilities Short term interest bearing debt Trade payables Other current liabilities	-14.5 57.8 146 71.6 0.4 72.0 35.3 0.5 13.0 48.8 9.0 8.2 8.5	4.7 -21.5 70.4 155 70.7 0.6 71.3 44.5 0.7 11.8 57.0 10.0 7.6 9.1	3.8 -23.8 71.9 154 76.5 0.9 77.4 37.2 0.3 8.1 45.6 11.0 8.6 11.4	3.4 -25.5 74.3 160 80.8 1.2 82.0 36.3 0.3 7.4 44.0 12.0 7.9 13.7	3.7 -27.2 80.0 165 86.0 1.2 87.2 36.3 0.3 7.0 43.6 13.0 8.1 12.7	3.8 -31.6 86.3 171 91.8 1.2 93.0 35.6 0.3 7.1 43.0 14.0 8.3 12.7
Total Current Assets Total Assets Shareholders Equity Minority Total Equity Long term interest bearing debt Provisions Other long term liabilities Total Long Term Liabilities Short term interest bearing debt Trade payables Other current liabilities Total Current Liabilities	-14.5 57.8 146 71.6 0.4 72.0 35.3 0.5 13.0 48.8 9.0 8.2 8.5 25.7	4.7 -21.5 70.4 155 70.7 0.6 71.3 44.5 0.7 11.8 57.0 10.0 7.6 9.1 26.7	3.8 -23.8 71.9 154 76.5 0.9 77.4 37.2 0.3 8.1 45.6 11.0 8.6 11.4 31.0	3.4 -25.5 74.3 160 80.8 1.2 82.0 36.3 0.3 7.4 44.0 12.0 7.9 13.7 33.6	3.7 -27.2 80.0 165 86.0 1.2 87.2 36.3 0.3 7.0 43.6 13.0 8.1 12.7 33.8	3.8 -31.6 86.3 171 91.8 1.2 93.0 35.6 0.3 7.1 43.0 14.0 8.3 12.7 35.0
Total Current Assets Total Assets Shareholders Equity Minority Total Equity Long term interest bearing debt Provisions Other long term liabilities Total Long Term Liabilities Short term interest bearing debt Trade payables Other current liabilities Total Current Liabilities Total Luabilities and Shareholders' Equity	-14.5 57.8 146 71.6 0.4 72.0 35.3 0.5 13.0 48.8 9.0 8.2 8.5 25.7 146	4.7 -21.5 70.4 155 70.7 0.6 71.3 44.5 0.7 11.8 57.0 10.0 7.6 9.1 26.7 155	3.8 -23.8 71.9 154 76.5 0.9 77.4 37.2 0.3 8.1 45.6 11.0 8.6 11.4 31.0 154	3.4 -25.5 74.3 160 80.8 1.2 82.0 36.3 0.3 7.4 44.0 12.0 7.9 13.7 33.6 160	3.7 -27.2 80.0 165 86.0 1.2 87.2 36.3 0.3 7.0 43.6 13.0 8.1 12.7 33.8 165	3.8 -31.6 86.3 171 91.8 1.2 93.0 35.6 0.3 7.1 43.0 14.0 8.3 12.7 35.0 171
Total Current Assets Total Assets Shareholders Equity Minority Total Equity Long term interest bearing debt Provisions Other long term liabilities Total Long Term Liabilities Short term interest bearing debt Trade payables Other current liabilities Total Current Liabilities Total Liabilities and Shareholders' Equity Net Capital Employed	-14.5 57.8 146 71.6 0.4 72.0 35.3 0.5 13.0 48.8 9.0 8.2 8.5 25.7 146 115	4.7 -21.5 70.4 155 70.7 0.6 71.3 44.5 0.7 11.8 57.0 10.0 7.6 9.1 26.7 155 117	3.8 -23.8 71.9 154 76.5 0.9 77.4 37.2 0.3 8.1 45.6 11.0 8.6 11.4 31.0 154 110	3.4 -25.5 74.3 160 80.8 1.2 82.0 36.3 0.3 7.4 44.0 12.0 7.9 13.7 33.6 160 113	3.7 -27.2 80.0 165 86.0 1.2 87.2 36.3 0.3 7.0 43.6 13.0 8.1 12.7 33.8 165 117	3.8 -31.6 86.3 171 91.8 1.2 93.0 35.6 0.3 7.1 43.0 14.0 8.3 12.7 35.0 171 118
Total Current Assets Total Assets Shareholders Equity Minority Total Equity Long term interest bearing debt Provisions Other long term liabilities Total Long Term Liabilities Short term interest bearing debt Trade payables Other current liabilities Total Current Liabilities Total Current Liabilities Total Liabilities and Shareholders' Equity Net Capital Employed Net Working Capital	-14.5 57.8 146 71.6 0.4 72.0 35.3 0.5 13.0 48.8 9.0 8.2 8.5 25.7 146 115 30.3	4.7 -21.5 70.4 155 70.7 0.6 71.3 44.5 0.7 11.8 57.0 10.0 7.6 9.1 26.7 155 117 36.5	3.8 -23.8 71.9 154 76.5 0.9 77.4 37.2 0.3 8.1 45.6 11.0 8.6 11.4 31.0 154 110 35.7	3.4 -25.5 74.3 160 80.8 1.2 82.0 36.3 0.3 7.4 44.0 12.0 7.9 13.7 33.6 160 113 37.5	3.7 -27.2 80.0 165 86.0 1.2 87.2 36.3 0.3 7.0 43.6 13.0 8.1 12.7 33.8 165 117 41.0	3.8 -31.6 86.3 171 91.8 1.2 93.0 35.6 0.3 7.1 43.0 14.0 8.3 12.7 35.0 171 118 42.5
Total Current Assets Total Assets Shareholders Equity Minority Total Equity Long term interest bearing debt Provisions Other long term liabilities Total Long Term Liabilities Short term interest bearing debt Trade payables Other current liabilities Total Current Liabilities Total Liabilities and Shareholders' Equity Net Capital Employed Net Working Capital GROWTH & MARGINS	-14.5 57.8 146 71.6 0.4 72.0 35.3 0.5 13.0 48.8 9.0 8.2 8.5 25.7 146 115 30.3 12/2014	4.7 -21.5 70.4 155 70.7 0.6 71.3 44.5 0.7 11.8 57.0 10.0 7.6 9.1 26.7 155 117 36.5	3.8 -23.8 71.9 154 76.5 0.9 77.4 37.2 0.3 8.1 45.6 11.0 8.6 11.4 31.0 154 110 35.7 12/2016	3.4 -25.5 74.3 160 80.8 1.2 82.0 36.3 0.3 7.4 44.0 12.0 7.9 13.7 33.6 160 113 37.5	3.7 -27.2 80.0 165 86.0 1.2 87.2 36.3 0.3 7.0 43.6 13.0 8.1 12.7 33.8 165 117 41.0 12/2018e	3.8 -31.6 86.3 171 91.8 1.2 93.0 35.6 0.3 7.1 43.0 14.0 8.3 12.7 35.0 171 118 42.5 12/2019e
Total Current Assets Total Assets Shareholders Equity Minority Total Equity Long term interest bearing debt Provisions Other long term liabilities Total Long Term Liabilities Short term interest bearing debt Trade payables Other current liabilities Total Current Liabilities Total Liabilities and Shareholders' Equity Net Capital Employed Net Working Capital GROWTH & MARGINS Sales growth	-14.5 57.8 146 71.6 0.4 72.0 35.3 0.5 13.0 48.8 9.0 8.2 8.5 25.7 146 115 30.3 12/2014 14.2%	4.7 -21.5 70.4 155 70.7 0.6 71.3 44.5 0.7 11.8 57.0 10.0 7.6 9.1 26.7 155 117 36.5 12/2015 <i>11.1%</i>	3.8 -23.8 71.9 154 76.5 0.9 77.4 37.2 0.3 8.1 45.6 11.0 8.6 11.4 31.0 154 110 35.7 12/2016 9.0%	3.4 -25.5 74.3 160 80.8 1.2 82.0 36.3 0.3 7.4 44.0 12.0 7.9 13.7 33.6 160 113 37.5 12/2017 -1.7%	3.7 -27.2 80.0 165 86.0 1.2 87.2 36.3 0.3 7.0 43.6 13.0 8.1 12.7 33.8 165 117 41.0 12/2018e 6.4%	3.8 -31.6 86.3 171 91.8 1.2 93.0 35.6 0.3 7.1 43.0 14.0 8.3 12.7 35.0 171 118 42.5 12/2019e 7.0%
Total Current Assets Total Assets Shareholders Equity Minority Total Equity Long term interest bearing debt Provisions Other long term liabilities Total Long Term Liabilities Short term interest bearing debt Trade payables Other current liabilities Total Current Liabilities Total Current Liabilities Total Liabilities and Shareholders' Equity Net Capital Employed Net Working Capital GROWTH & MARGINS Sales growth EBITDA (adj.)* growth	-14.5 57.8 146 71.6 0.4 72.0 35.3 0.5 13.0 48.8 9.0 8.2 8.5 25.7 146 115 30.3 12/2014 14.2% -32.3%	4.7 -21.5 70.4 155 70.7 0.6 71.3 44.5 0.7 11.8 57.0 10.0 7.6 9.1 26.7 155 117 36.5 12/2015 <i>11.1%</i> - 20.9%	3.8 -23.8 71.9 154 76.5 0.9 77.4 37.2 0.3 8.1 45.6 11.0 8.6 11.4 31.0 154 110 35.7 12/2016 9.0% 129.5%	3.4 -25.5 74.3 160 80.8 1.2 82.0 36.3 0.3 7.4 44.0 12.0 7.9 13.7 33.6 160 113 37.5 12/2017 -1.7% -9.9%	3.7 -27.2 80.0 165 86.0 1.2 87.2 36.3 0.3 7.0 43.6 13.0 8.1 12.7 33.8 165 117 41.0 12/2018e 6.4% 17.6%	3.8 -31.6 86.3 171 91.8 1.2 93.0 35.6 0.3 7.1 43.0 14.0 8.3 12.7 35.0 171 118 42.5 12/2019e 7.0% 3.6%
Total Current Assets Total Assets Shareholders Equity Minority Total Equity Long term interest bearing debt Provisions Other long term liabilities Total Long Term Liabilities Short term interest bearing debt Trade payables Other current liabilities Total Current Liabilities Total Liabilities and Shareholders' Equity Net Capital Employed Net Working Capital GROWTH & MARGINS Sales growth	-14.5 57.8 146 71.6 0.4 72.0 35.3 0.5 13.0 48.8 9.0 8.2 8.5 25.7 146 115 30.3 12/2014 14.2%	4.7 -21.5 70.4 155 70.7 0.6 71.3 44.5 0.7 11.8 57.0 10.0 7.6 9.1 26.7 155 117 36.5 12/2015 <i>11.1%</i>	3.8 -23.8 71.9 154 76.5 0.9 77.4 37.2 0.3 8.1 45.6 11.0 8.6 11.4 31.0 154 110 35.7 12/2016 9.0%	3.4 -25.5 74.3 160 80.8 1.2 82.0 36.3 0.3 7.4 44.0 12.0 7.9 13.7 33.6 160 113 37.5 12/2017 -1.7%	3.7 -27.2 80.0 165 86.0 1.2 87.2 36.3 0.3 7.0 43.6 13.0 8.1 12.7 33.8 165 117 41.0 12/2018e 6.4%	3.8 -31.6 86.3 171 91.8 1.2 93.0 35.6 0.3 7.1 43.0 14.0 8.3 12.7 35.0 171 118 42.5 12/2019e 7.0%





First Sensor AG : Summary tables

GROWTH & MARGINS	12/2014	12/2015	12/2016	12/2017	12/2018e	12/2019e
Net Profit growth	-93.5%	n.m.	n.m.	-28.2%	66.3%	11.4%
EPS adj. growth	-93.6%	n.m.	<i>n.m</i> .	-28.3%	66.3%	11.4%
DPS adj. growth				n.m.	12.5%	11.1%
EBITDA (adj)* margin	8.6%	6.1%	12.8%	11.8%	13.0%	12.6%
EBITA (adj)* margin	3.3%	0.9%	8.1%	7.2%	7.9%	8.0%
EBIT (adj)* margin	3.3%	0.9%	8.1%	7.2%	7.9%	8.0%
RATIOS	12/2014	12/2015	12/2016	12/2017	12/2018e	12/2019e
Net Debt/Equity	0.4	0.5	0.3	0.3	0.3	0.2
Net Debt/EBITDA	2.3	2.9	1.3	1.2	1.0	3.0
Interest cover (EBITDA/Fin.interest)	5.4	4.9	10.8	10.6	10.5	10.8
Capex/D&A	60.2%	68.5%	70.1%	145.4%	93.1%	102.0%
Capex/Sales	4.4%	5.1%	4.4%	8.9%	6.1%	6.0%
NWC/Sales	24.4%	26.5%	23.8%	25.4%	26.1%	25.3%
ROE (average)	0.2%	-2.4%	7.8%	5.3%	8.2%	8.6%
ROCE (adj.)	2.4%	0.7%	7.2%	6.0%	6.9%	7.4%
WACC	6.9%	6.9%	6.9%	6.9%	6.9%	6.9%
ROCE (adj.)/WACC	0.3	0.1	1.0	0.9	1.0	1.1
PER SHARE DATA (EUR)***	12/2014	12/2015	12/2016	12/2017	12/2018e	12/20196
Average diluted number of shares	10.0	10.2	10.2	10.2	10.2	10.2
EPS (reported)	0.02	-0.17	0.56	0.40	0.67	0.75
EPS (adj.)	0.02	-0.17	0.56	0.40	0.67	0.75
BVPS	7.12	6.96	7.49	7.91	8.42	8.99
DPS	0.00	0.00	0.00	0.16	0.18	0.20
VALUATION	12/2014	12/2015	12/2016	12/2017	12/2018e	12/2019e
EV/Sales	1.0	1.2	1.2	1.7	1.4	1.2
EV/EBITDA	9.8	13.9	8.9	12.6	9.4	8.9
EV/EBITDA (adj.)*	12.1	19.1	9.0	14.2	10.4	9.9
EV/EBITA	19.5	36.8	14.1	19.2	14.6	13.3
EV/EBITA (adj.)*	31.3	133.5	14.2	23.4	17.2	15.4
EV/EBIT	31.3	n.m.	17.4	23.4	17.2	15.4
EV/EBIT (adj.)*	31.3	n.m.	14.2	23.4	17.2	15.4
P/E (adj.)	n.m.	n.m.	25.7	n.m.	27.5	24.7
P/BV	1.4	1.8	1.9	2.8	2.2	2.1
Total Yield Ratio	0.0%	0.0%	0.0%	0.9%	1.0%	1.1%
EV/CE	1.1	1.3	1.5	2.0	1.7	1.6
OpFCF yield	4.5%	-3.1%	6.8%	1.2%	1.3%	3.2%
OpFCF/EV	3.4%	-2.4%	5.8%	1.1%	1.1%	2.9%
Payout ratio	0.0%	0.0%	0.0%	39.6%	26.8%	26.7%
Dividend yield (gross)	0.0%	0.0%	0.0%	0.9%	1.0%	1.1%
EV AND MKT CAP (EURm)	12/2014	12/2015	12/2016	12/2017	12/2018e	12/2019
Price** (EUR)	9.75	12.44	14.50	21.76	18.50	18.50
Outstanding number of shares for main stock	10.0	10.2	10.2	10.2	10.2	10.2
Total Market Cap	98	126	148	222	189	189
Net Debt	30	33	24	23	22	18
o/w Cash & Marketable Securities (-)	-15	-22	-24	-26	-27	-32
o/w Gross Debt (+)	44	55	48	48	49	50
Other EV components	1	1	1	2	1	1
· · · · · · · · · · · · · · · · · · ·		160				

Notes

* Where EBITDA (adj.) or EBITA (adj)= EBITDA (or EBITA) -/+ Non Recurrent Expenses/Income and where EBIT (adj)= EBIT-/+ Non Recurrent Expenses/Income - PPA amortisation **Price (in local currency): Fiscal year end price for Historical Years and Current Price for current and forecasted years

Sector: Technology Hardware & Equipment/Technology Hardware & Equipment

Company Description: First Sensor engages in the development and manufacture of sensors, components and sensor solutions. The company serves the target markets Industrial, Medical and Mobility. The product portfolio include, among others, pressure, optical, radiation, flow, level and inertial sensors, cameras and power semiconductors. The company was founded in 1991 and is located in Berlin, Germany.





Recommendation and Disclosures

Coverage	Analyst	Target	Rating	Disc.	Coverage	Analyst	Target	Rating	Disc.
&1DRILLISCHAG	Sen	66.00	Buy		Logwin	Mildner	150.00	Accumulate	2/3
GEnergy	Rüzgar	23.50	Accumulate	2/3/5	Manz AG	Rüzgar	37.00	Neutral	2/3
areal Bank	Häßler	41.00	Buy		MAXAut omation SE	Becker	6.70	Buy	2/3
didas	Josefson	228.00	Accumulate		Merck	Berzhanin	112.00	Buy	
dlerModemaerkte	Josefson	4.15	Buy	7	Merkur Bank	Häßler	10.00	Buy	2/7
DLER Real Estate	Mayer	20.00	Buy		MetroAG	Bruns	17.00	Buy	
lixtron	Sen	14.00	Buy	2/3	MLP	Häßler	7.50	Buy	2/3
Allianz	Häßler	220.00	Buy		MTU Aero Engines	Rüzgar	155.00	Reduce	2
Axel Springer	Josefson	67.00	Accumulate		Munich Re	Häßler	210.00	Accumulate	
Bayer	Berzhanin	96.00	Buy		Nemetschek SE	Mildner	47.00	Reduce	ŧ
Baywa	Bruns	32.00	Buy	2/7	Norma Group	Schuldt	51.00	Neutral	
BBBiotech	Berzhanin	73.00	Buy	7	OHB SE	Rüzgar	40.00	Buy	7
Biotest	Berzhanin	24.10	Neutral	2/3	OVB Holding AG	Häßler	20.00	Buy	2/5/7
BMW	Schuldt	100.00	Buy		Patrizia	Mayer	20.00	Accumulate	
Brenntag	Hinkel	53.00	Buy	2	Pfeiffer Vacuum	Sen	162.00	Buy	5
Ceconomy AG	Bruns	5.00	Neutral		Procredit Holding	Häßler	15.00	Buy	2/3/5
comdirect	Häßler	13.50	Buy	7	PSISOFTWAREAG	Mildner	20.60	Buy	2/3
Commerzbank	Häßler	9.20	Neutral		Puma	Josefson	565.00	Buy	2.0
Continental	Schuldt	195.00	Buy		PWO	Schuldt	36.00	Buy	2/3
CORESTATE Capital Holding S.A.	Mayer	66.00	Buy	2/5	Rheinmetall	Rüzgar	80.00	Neutral	2/3
CORESTATE Capital Holding S.A.	Mayer Heilmann	40.00		2/5	RIB Soft ware	Mildner	25.00		2/3
			Buy					Buy	2/3
Daimler AG	Schuldt	63.00	Buy		RTL Group	Josefson	72.00	Accumulate	_
Daldrup & Soehne	Becker	13.20	Buy	2/3/5	S&TAG	Sen	27.00	Buy	2/3
Demire	Mayer	4.80	Accumulate	2/5	SAF-Holland	Schuldt	13.80	Accumulate	
Deut sche Bank	Häßler	14.00	Buy		Schaeffler	Tanzer	13.00	Buy	
Deut sche EuroShop	Mayer	30.00	Neutral		Schaltbau Holding AG	Becker	32.50	Buy	2/7
Deutsche Pfandbriefbank	Häßler	14.50	Accumulate		SCOUT24	Heilmann	44.00	Neutral	2
Deutsche Telekom	Sen	13.30	Neutral		Siegfried Holding AG	Berzhanin	399.00	Neutral	7
Duerr	Augustin	30.00	Neutral		SiemensHealthineersAG	Rüzgar	39.00	Neutral	2
DWS	Häßler	30.00	Buy		SLM Solutions	Sen	15.00	Sell	
ElringKlinger	Schuldt	5.50	Sell		SMTScharf AG	Rüzgar	18.00	Neutral	2/3
elumeo SE	Josefson	10.90	Accumulate		SoftwareAG	Mildner	30.00	Sell	
EpigenomicsAG	Berzhanin	3.80	Buy	2/3	Stabilus	Tanzer	91.00	Buy	
Euromicron AG	Becker	8.90	Buy	2/3/5	Suedzucker	Bruns	11.70	Reduce	
Evonik	Hinkel	37.00	Buy		SuessMicroTec	Sen	13.80	Accumulate	
Eyemaxx Real Estate	Mayer	18.00	Buy	2/5/7	Surteco Group	Mildner	26.50	Buy	2/3
Ferratum	Häßler	23.00	Buy		Symrise AG	Hinkel	67.00	Neutral	
Fielmann	Heilmann	55.00	Neutral		Syzygy AG	Heilmann	10.70	Buy	2/3
First Sensor AG	Becker	27.50	Buy	7	TAKKTAG	Bruns	20.00	Buy	2
Freenet	Sen	36.00	Buy	2	Talanx Group	Häßler	37.00	Buy	-
				2					2/3
FuchsPetrolub	Hinkel	50.00	Buy		Technotrans	Becker	39.60	Buy	2/3
GeaGroup	Augustin	25.00	Neutral		TELECOLUMBUS	Sen	4.80	Buy	
Gerresheimer AG	Rüzgar	69.00	Neutral		Telefonica Deut schland	Sen	3.40	Sell	
Gerry Weber	Josefson	3.80	Reduce		UnitedInternet	Sen	63.00	Buy	
Gesco	Becker	35.60	Buy	2/3	Vapiano	Bruns	20.00	Buy	2/7
GFTTechnologies	Mildner	13.40	Buy	2/3	va-Q-tec	Sen	12.00	Buy	2/3
Gigaset	Sen	0.85	Accumulate	2/3	Viscom	Rüzgar	28.00	Buy	2/3
Grenke	Häßler	90.00	Neutral		Volkswagen	Schuldt	154.00	Neutral	
Hannover Re	Häßler	110.00	Neutral		Wacker Neuson SE	Becker	24.10	Neutral	
HeidelbergPharma	Berzhanin	3.50	Accumulate	2/3	windeln.de	Josefson	3.10	Buy	2
Heidelberger Druck	Augustin	2.90	Buy		XINGSE	Heilmann	305.00	Accumulate	
HELLA GmbH & Co. KGaA	Tanzer	51.00	Accumulate		Zalando	Josefson	44.50	Neutral	
Hornbach Holding	Bruns	89.00	Buy						
Hugo Boss	Josefson	80.00	Buy						
Hypoport AG	Häßler	190.00	Neutral	2/7					
NDUS Holding AG	Becker	55.70	Neutral						
ntershop CommunicationsAG	Mildner	1.85	Buy	2/7					
(+SAG	Hinkel	24.00	Buy						
Koenig & Bauer	Augustin	44.00	Neutral						
KronesAG	Augustin	90.00	Accumulate						
KIONESAG	Hinkel	353.00	Buy						
Lanxess	Hinkel	83.00	Buy						
LEG Immobilien AG	Mayer	105.00	Neutral						
Leoni	Schuldt	34.00	Accumulate						
Linde	Hinkel	176.00	Neutral						

Notice according to § 34 b (German) Securities Trading Act ("Wertpapierhandelsgesetz")

This document is issued by Equinet Bank AG ("Equinet Bank"). It has been prepared by its authors independently of the Company, and none of Equinet Bank, the Company or its shareholders has independently verified any of the information given in this document.

Equinet Bank possesses relations to the covered companies as detailed in the table on the previous page. Additional information and disclosures will be made available upon request and/or can be looked up on our website http://www.Equinet Bank-ag.de

1 - Equinet Bank and/or its affiliate(s) hold(s) more than 5% of the share capital of this company calculated under computational methods required by German law.

2 - Equinet Bank acts as a designated sponsor for this company, including the provision of bid and ask offers. Therefore, we regularly possess shares of the company in our proprietary trading books. Equinet Bank receives a commission from the company for the provision of the designated sponsor services.

3 - The designated sponsor services include a contractually agreed provision of research services.

4 – Within the last twelve months, Equinet Bank was involved as a lead or co-lead manager in the public offering of securities which are/whose issuer is the subject of this report.

5 – Within the last twelve months, Equinet Bank and/or its affiliate(s) provided investment banking- and/or other consultancy services for this company and/or it's shareholders.

6 - Equinet Bank and/or its affiliate(s) has/have other substantial financial interests in relation to this issuer.

7 - Equinet Bank has entered into an agreement with this company about the preparation of research reports and - in return - receives a compensation.

Companies of the Equinet Bank group and/or its directors, officers and employees or clients may take positions in, and may make purchases and/or sales as principal or agent in the securities or related financial instruments discussed in our reports. The Equinet Bank group may provide investment banking and other services to and/or serve as directors of the companies referred to in our reports.

In compliance with Para 5 Sec. 4 of the Ordinance on the Analysis of Financial Instruments (FinAnV) Equinet Bank has realized additional internal and organizational measures, such as specific research guidelines, to prevent or manage conflicts of interest.

Neither the company nor its employees are allowed to receive donations from third parties with a special interest in the content of the analysis.

The salary of the research analysts of Equinet Bank AG does not depend on the investment banking transactions of the company. Nevertheless, this does not rule out the payment of a bonus which depends on the overall financial performance of the bank.

Particular care is taken that the individual performance of each research analyst of Equinet Bank AG is not being assessed by a manager of another business division with similar or same interests.

To assure a highest degree of transparency Equinet Bank AG regularly provides - on a quarterly basis – a summary according to Para 5 Sec. 4 No. 3 of the Ordinance on the Analysis of Financial Instruments (FinAnV). It informs about the overall analysts recommendations and sets them in a relationship to those companies, for which Equinet Bank provided investment banking services within the last twelve months. This summary is published via our website http://www.Equinet Bank-aq.de.

Furthermore, we refer to our conflict of interest policy as well as the German Securities Trading Act (WpHG) and the Ordinance on the Analysis of Financial Instruments (FinAnV) provided in the download area of our website http://www.Equinet Bank-ag.de.

Remarks

Recommendation System

Buy - The stock is expected to generate a total return of over 20% during the next 12 months time horizon. Accumulate - The stock is expected to generate a total return of 10% to 20% during the next 12 months time horizon. Hold - The stock is expected to generate a total return of 0% to 10% during the next 12 months time horizon Reduce - The stock is expected to generate a total return of 0 to -10% during the next 12 months time horizon Sell - The stock is expected to generate a total return below -10% during the next 12 months time horizon

Basis of Valuation

Equinet Bank uses for valuation purposes primarily DCF-Valuations and Sum-Of-The-Parts-Valuations as well as peer group comparisons.

Share prices

Share prices in this analysis are the German closing prices of the last trading day before the publication.

Sources

Equinet Bank has made any effort to carefully research all information contained in the analysis. The information on which the analysis is based has been obtained from sources which we believe to be reliable such as, for example, Reuters, Bloomberg and the relevant press as well as the company which is the subject of the analysis. Only that part of the research note is made available to the issuer, who is the subject of the analysis, which is necessary to properly reconcile with the facts. Should this result in considerable changes a reference is made in the research note.

Actualizations

Opinions expressed in this analysis are our current opinions as of the issuing date indicated on this document. We do not commit ourselves in advance to whether and in which intervals updates are made.





DISCLAIMER

THE PREPARATION OF THIS DOCUMENT IS SUBJECT TO REGULATION BY GERMAN LAW. THIS DOCUMENT IS BEING SUPPLIED TO YOU SOLELY IN YOUR CAPACITY AS A PROFESSIONAL INSTITUTIONAL INVESTOR FOR YOUR INFORMATION AND MAY NOT BE REPRODUCED OR PASSED ON, DIRECTLY OR INDIRECTLY, TO ANY OTHER PERSON OR PUBLISHED, IN WHOLE OR IN PART, FOR ANY PURPOSE. NEITHER THIS DOCUMENT NOR ANY COPY OF IT MAY BE TAKEN OR TRANSMITTED INTO AUSTRALIA, CANADA OR JAPAN OR DISTRIBUTED, DIRECTLY OR INDIRECTLY, IN AUSTRALIA, CANADA OR JAPAN OR TO ANY RESIDENT THEREOF.

THE DELIVERY OF THIS RESEARCH REPORT TO U.S. PERSONS IN THE UNITED STATES OF AMERICA IS MADE BY AND UNDER THE RESPONSIBILITY OF GSN NA, INC. (REGISTERED WITH THE SEC). THIS RESEARCH REPORT IS ONLY INTENDED FOR PERSONS WHO QUALIFY AS MAJOR U.S. INSTITUTIONAL INVESTORS, AS DEFINED IN SECURITIES EXCHANGE ACT RULE 15A-6, AND DEAL WITH GSN NA, INC. HOWEVER, THE DELIVERY OF THIS RESEARCH REPORT OR SUMMARY TO ANY U.S. PERSON SHALL NOT BE DEEMED A RECOMMENDATION OF GSN NA, INC. TO EFFECT ANY TRANSACTIONS IN THE SECURITIES DISCUSSED HEREIN OR AN ENDORSEMENT OF ANYOPINION EXPRESSED HEREIN. GSN NA, INC. MAY FURNISH UPON REQUEST ALL INVESTMENT INFORMATION AVAILABLE TO IT SUPPORTING ANY RECOMMENDATIONS MADE IN THIS RESEARCH REPORT. ALL TRADES WITH U.S. RECIPIENTS OF THIS RESEARCH SHALL BE EXECUTED THROUGH GSN NA, INC.

THIS DOCUMENT IS FOR DISTRIBUTION IN THE U.K. ONLY TO PERSONS WHO HAVE PROFESSSIONAL EXPERIENCE IN MATTERS RELATING TO INVESTMENTS AND FALL WITHIN ARTICLE 19(5) OF THE FINANCIAL SERVICES AND MARKETS ACT 2000 (FINANCIAL PROMOTION) ORDER 2005 (THE "ORDER") OR (ii) ARE PERSONS FALLING WITHIN ARTICLE 49(2)(A) TO (D) OF THE ORDER, NAMELY HIGH NET WORTH COMPANIES, UNINCORPORATED ASSOCIATIONS ETC (ALL SUCH PERSONS TOGETHER BEING REFERRED TO AS "RELEVANT PERSONS"). THIS DOCUMENT MUST NOT BE ACTED ON OR RELIED UPON BY PERSONS WHO ARE NOT RELEVANT PERSONS. ANY INVESTMENT OR INVESTMENT ACTIVITY TO WHICH THIS DOCUMENT RELATES IS AVAILABLE ONLY TO RELEVANT PERSONS AND WILL BE ENGAGED IN ONLY WITH RELEVANT PERSONS.

THE DISTRIBUTION OF THIS DOCUMENT IN OTHER JURISDICTIONS OR TO RESIDENTS OF OTHER JURISDICTIONS MAY ALSO BE RESTRICTED BY LAW, AND PERSONS INTO WHOSE POSSESSION THIS DOCUMENT COMES SHOULD INFORM THEMSELVES ABOUT, AND OBSERVE, ANY SUCH RESTRICTIONS. BY ACCEPTING THIS REPORT YOU AGREE TO BE BOUND BY THE FOREGOING INSTRUCTIONS. YOU SHALL INDEMNIFY EQUINET BANK AGAINST ANY DAMAGES, CLAIMS, LOSSES, AND DETRIMENTS RESULTING FROM OR IN CONNECTION WITH THE UNAUTHORIZED USE OF THIS DOCUMENT.

This report is for informational purposes only and has no regard to the specific investment objectives, financial situation or particular needs of any specific recipient. This publication is intended to provide information to assist institutional investors in making their own investment decisions, not to provide investment advice to any specific investor. Therefore, investments discussed and recommendations made herein may not be suitable for all investors: readers must exercise their own investment objectives, experience, taxation status and financial position.

The information herein is believed by Equinet Bank to be reliable and has been obtained from sources believed to be reliable, but Equinet Bank makes no representation as to the accuracy or completeness of such information. The information given in this report is subject to change without notice; it may be incomplete or condensed and it may not contain all material information concerning the Company. Opinions expressed herein may differ or be contrary to opinions expressed by other business areas of the Equinet Bank group as a result of using different assumptions and criteria. Equinet Bank is under no obligation to update or keep the information current. Equinet Bank provides data concerning the future development of securities in the context of its usual research activity. However, if a financial instrument is denominated in a currency other than an investor's currency, a change in exchange rates may adversely affect the price or value of, or the income derived from, the financial instrument, and such investor effectively assumes currency risk. In addition, income from an investment may fluctuate and the price or value of financial instruments de-scribed in this report, either directly or indirectly, may rise or fall. Furthermore, past performance is not necessarily indicative of future results. Neither the author nor Equinet Bank accepts any liability whatsoever for any loss howsoever arising from any use of this publication or its contents or otherwise arising in connection herewith, except as provided for under applicable regulations.

Equinet Bank shall only be liable for any damages intentionally caused or which result from any gross negligence of Equinet Bank. Further Equinet Bank shall be liable for the breach of a material obligation of Equinet Bank, however, limited to the amount of the typical foreseeable which shall in no event exceed the amount of EUR 10,000. German law shall be applicable and court of jurisdiction for all disputes shall be Frankfurt/Main (Germany).

Competent Supervisory Authority:

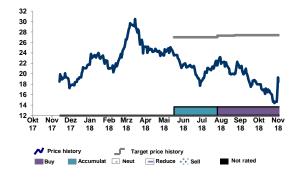
Bundesanstalt für Finanzdienstleistungsaufsicht -BaFin- (Federal Financial Supervisory Authority) Graurheindorfer Straße 108, 53117 Bonn and Marie-Curie-Str. 24-28, 60439 Frankfurt am Main



Recommendation history for FIRST SENSOR AG

Date	Recommendation	Target price	Price at change date
13. Nov 18	Buy	27.50	18.50
23. Aug 18	Buy	27.40	20.10
26. Jul 18	Buy	27.30	21.60
17. Mai 18	Accumulate	27.00	23.50

Source: Factset & ESN, price data adjusted for stock splits. This chart shows equinet Bank continuing coverage of this stock; the current analyst may or may not have covered it over the entire period. Current analyst: Winfried Becker (since 25/04/2018)





ESN Recommendation System

The ESN Recommendation System is **Absolute**. It means that each stock is rated on the basis of a **total return**, measured by the upside potential (including dividends and capital reimbursement) over a **12 month time horizon**.

SELL	REDUCE	NEUTRAL		ACCUMULATE	BUY
	-15%	-5%	5%	15%	

The ESN spectrum of recommendations (or ratings) for each stock comprises 5 categories: Buy (B), Accumulate (A), Neutral (N), Reduce (R) and Sell (S).

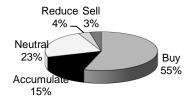
Furthermore, in specific cases and for a limited period of time, the analysts are allowed to rate the stocks as **Rating Suspended (RS)** or **Not Rated (NR)**, as explained below.

Meaning of each recommendation or rating:

- Buy: the stock is expected to generate total return of over 15% during the next 12 months time horizon
- Accumulate: the stock is expected to generate total return of 5% to 15% during the next 12 months time horizon
- Neutral: the stock is expected to generate total return of -5% to +5% during the next 12 months time horizon
- Reduce: the stock is expected to generate total return of -5% to -15% during the next 12 months time horizon
- Sell: the stock is expected to generate total return under -15% during the next 12 months time horizon
- Rating Suspended: the rating is suspended due to a change of analyst covering the stock or a capital operation (take-over bid, SPO, ...) where the issuer of the document (a partner of ESN) or a related party of the issuer is or could be involved
- Not Rated: there is no rating for a company being floated (IPO) by the issuer of the document (a partner of ESN) or a related party of the issuer

Certain flexibility on the limits of total return bands is permitted especially during higher phases of volatility on the markets

Equinet Bank Ratings Breakdown



For full ESN Recommendation and Target price history (in the last 12 months) please see ESN Website Link Date and time of production: 13 November 2018: 18:30 CET First date and time of dissemination: 13 November 2018: 18:35 CET



Disclaimer:

These reports have been prepared and issued by the Members of European Securities Network LLP ('ESN'). ESN, its Members and their affiliates (and any director, officer or employee thereof), are neither liable for the proper and complete transmission of these reports nor for any delay in their receipt. Any complete transmission of these reports nor for any delay in their feedpi. Any unauthorised use, disclosure, copying, distribution, or taking of any action in reliance on these reports is strictly prohibited. The views and expressions in the reports are expressions of opinion and are given in good faith, but are subject to change without notice. These reports may not be reproduced in whole or in part or passed to third parties without permission. The information herein was obtained from various sources. ESN, its Members and their affiliates (and any director officer or employee thereoft do not quarantee their accuracy or director, officer or employee thereof) do not guarantee their accuracy or completeness, and neither ESN, nor its Members, nor its Members' affiliates (nor any director, officer or employee thereof) shall be liable in respect of any errors or omissions or for any losses or consequential losses arising from such errors or omissions. Neither the information contained in these reports nor any opinion expressed constitutes an offer, or an invitation to make an offer, to buy or sell any securities or any options, futures or other derivatives related to such securities ('related investments'). These reports are prepared for the clients of the Members of ESN only. They do not have regard to the specific investment objectives, financial situation and the particular needs of any specific person who may receive any of these reports. Investors should seek financial advice regarding the appropriateness of investing in any securities or investment strategies discussed or recommended in these reports and should understand that statements regarding future prospects may not be realised. Investors should note that income from such securities, if any, may fluctuate and that each security's price or value may rise or fall. Accordingly, investors may receive back less than originally invested. Past performance is not necessarily a guide to future performance. Foreign currency rates of exchange may adversely affect the value, price or income of any security or related investment mentioned in these reports. In addition, investors in securities such as ADRs, whose value are influenced by the currency of the underlying security, effectively assume currency risk. ESN, its Members and their affiliates may submit a pre-publication draft (without mentioning neither the recommendation nor the target price/fair value) of its reports for review to the Investor Relations Department of the issuer forming the subject of the report, solely for the purpose of correcting any inadvertent material inaccuracies. Like all members employees, analysts receive compensation that is impacted by overall firm profitability For further details about the analyst certification, the specific risks of the company and about the valuation methods used to determine the price targets included in this report/note, please refer to the specific disclaimer pages prepared by the ESN Members. In the case of a short note please refer to the latest relevant published research on single stock or contact the analyst named on the front of the report/note for detailed information on the valuation methods, earning estimates and risks. A full description of all the organisational and administrative measures taken by the Members of ESN to manage interest and conflicts of measures taken by the Members of ESN to manage interest and conflicts of interest are available on the website of the Members or in the local disclaimer of the Members or contacting directly the Members. Research is available through the ESN Members sales representative. ESN will provide periodic updates on companies or sectors based on company-specific developments or announcements, market conditions or any other publicly available information. Unless agreed in writing with an ESN Member, this research is intended solely for internal use by the recipient. Neither this document nor any copy of it may be taken or transmitted function. taken or transmitted into Australia, Canada or Japan or distributed, directly or indirectly, in Australia, Canada or Japan or to any resident thereof. This document is for distribution in the U.K. Only to persons who have professional experience in matters relating to investments and fall within article 19(5) of the financial services and markets act 2000 (financial promotion) order 2005 (the "order") or (ii) are persons falling within article 49(2)(a) to (d) of the order, namely high net worth companies, unincorporated associations etc. (all such persons together being referred to as "relevant persons"). This document must not be acted on or relied upon by persons who are not relevant persons. Any investment or investment activity to which this document relates is available only to relevant persons and will be engaged in only with relevant persons. The distribution of this document in other jurisdictions or to residents of other jurisdictions may also be restricted by law, and persons into whose possession this document comes should inform themselves about, and observe, any such restrictions. By accepting this report you agree to be bound by the foregoing instructions. You shall indemnify ESN, its Members and their affiliates (and any director, officer or employee thereof) against any damages, claims, losses, and detiments resulting from or in economic with the unsufted index. detriments resulting from or in connection with the unauthorized use of this document. For disclosure upon "conflicts of interest" on the companies under coverage by all the ESN Members, on the "interests" and "conflicts" of the analysis and on each "company recommendation history", please visit the ESN website (http://www.esnpartnership.eu/research and database access/insite) or refer to the local disclaimer of the Members, or contact directly the Members

www.bancaakros.it regulated by the CONSOB - Commissione Nazionale per le Società e la Borsa www.caixabi.pt regulated by the CMVM - Comissão do Mercado de Valores Mobiliários

www.cmcicms.com regulated by the AMF - Autorité des marchés financiers

www.equinet-aq.de regulated by the BaFin - Bundesanstalt für Finanzdienstleistungsaufsicht

www.ibg.gr regulated by the HCMC - Hellenic Capital Market Commission

www.nibc.com regulated by the AFM - Autoriteit Financiële Markten

www.op.fi regulated by the Financial Supervision Authority

www.valores.gvcgaesco.es regulated by CNMV - Comisión Nacional del Mercado de Valores

Members of ESN (European Securities Network LLP)





Caixa-Banco de Investimento Avenida João XXI, 63 1000-300 Lisboa Portugal Phone: +351 21 313 73 00 Fax: +351 21 389 68 98

CM-CIC Market Solutions 6, avenue de Provence 75441 Paris Cedex 09 France Phone: +33 1 53 48 81 93

equinetBank

equinet Bank AG Gräfstraße 97 60487 Frankfurt am Main Germany Phone:+49 69 – 58997 – 212 Fax:+49 69 – 58997 – 299



C/ Marques de Villamagna 3 28001 Madrid Spain Phone: +34 91 436 7813



Investment Bank of Greece 32 Aigialeias Str & Paradissou, 151 25 Maroussi, Greece Phone: +30 210 81 73 383





OP Corporate Bank plc P.O.Box 308 Teollisuuskatu 1, 00013 Helsinki Finland

Phone: +358 10 252 011 Fax: +358 10 252 2703

