Acconeer

Sector: Semiconductors

Flying under the radar

More initiatives to speed up customers' time-to-market

Acconeer is progressing as we expect it to. In conjunction with the Q4 report we visited the company, met with management and saw demonstrations of the product portfolio, including the brand new actions with dielectric lenses and the new IoT dedicated module on ARM M-4. The dielectric lenses will increase the reach of the signal from two to up to ten meters. These initiatives together with the detectors and reference application software are important in helping the customers coming faster to market because very few customers are good at signal processing or advanced radar technology. We like that there is a clear market and customer focus.

Infineon postpones launch again but Soli is alive and could spill over on Acconeer

The competition is about the same. Infineon has still not launched its radar. As for Project Soli, FCC recently granted Google a waiver to turn up the power. This is no big deal according to Acconeer but the news of the waiver made the Acconeer stock soar and created a fierce stream of articles from journalists who thought Soli was dead. We assume Project Soli, with this waiver, finally should start gaining some traction. When this happens we believe there will be positive spillover effects on Acconeer.

It's gonna take a whole lot of precious time

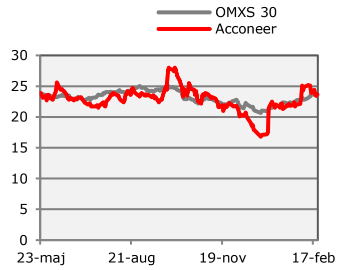
Acconeer continues to fly under the radar. By that we mean the decision to not announce design wins, meaning a black box for our projections. The stock is not really under the radar though with a current market cap of SEK 450m. We keep our fair value range since we believe the company is progressing according to our expectations and is doing the right things to speed up customers' launches. However, we want to emphasize that it will take time for the shares to reach our target. Lead times for the customers are long, 12-24 months – after they have finally opted for Acconeer. Therefore we expect no big deal flow before the summer. Nevertheless, big orders are required to drive the share price. Our sales estimates are virtually unchanged but if there are still no larger deals for e.g. lawn mowers etc. in the fall of 2019 we might need to bring out the brushcutter.

KEY FINANCIALS (SEKm)	2017	2018	2019E	2020E	2021E	2022E
Net sales	0	1	3	26	83	164
EBITDA	-21	-33	-49	-43	-11	22
EBIT	-23	-35	-60	-56	-25	7
EPS (adj.)	-1.2	-1.8	-3.1	-2.9	-1.3	0.4
EV/Sales	11220.3	320.1	127.0	17.8	6.1	3.2
EV/EBITDA	-17.6	-9.8	-7.9	-10.8	-46.3	24.0
EV/EBIT	-16.0	-9.2	-6.4	-8.2	-20.5	73.3
P/E	-24.2	-13.1	-7.6	-8.2	-18.7	64.0

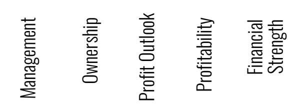
FAIR VALUE RANGE

BEAR	BASE	BULL
18.0	**29.0**	60.0

ACCON.ST VERSUS OMXS30



REDEYE RATING (NOT AVAILABLE)



KEY STATS

Ticker	ACCON.ST
Market	First North
Share Price (SEK)	23.7
Market Cap (MSEK)	456
Net Debt 19E (MSEK)	-72
Free Float	64 %
Avg. daily volume ('000)	0

ANALYSTS

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Flying under the radar

In conjunction with the Q4 report we visited Acconeer, met with management and saw demonstrations of the product portfolio, including the brand new initiatives with dielectric lenses and the new module (see further below). The technology works as it's supposed to and the next challenge will be to prove that scaling to mass production is feasible at a minor cost. In order to do that, Acconeer needs to get the yield up and the testing time down, which are key areas for the company in 2019. Acconeer is understandable very happy with the sensor design and the balancing of the trade-off between size and capability. A larger number of antennas could have given a bit more information but then the sensor would have been a lot larger, similar to Infineon/Project Soli. Instead, Acconeer now has a unique radar sensor with minimal footprint (5x5x1 mm) and 10x better power consumption than competition, which fits everywhere, even in smartphones.

Speaking of smartphones, LG has hinted that it is coming with a gesture based smartphone to MWC Barcelona. We would be very surprised if this was related to Acconeer since it has not yet been a focus area for Acconeer but we also want to add that the smartphone market is secretive. There are other possible technologies besides radar that could be in this LG phone, including e.g. (expensive) camera based gesture control. Nevertheless, this is a very interesting future focus area for Acconeer. LG could create a hype and interest from other phone manufacturers.

Robotics has been moving slower than Acconeer expected since the company underestimated the lead times in designing new vacuum cleaners and lawn mowers. Acconeer's fastest moving customers instead seem to be the smaller IoT start-ups. In general though, customers are always too optimistic. Even for the nimble start-ups it is tricky to get started with Acconeer's advanced tech since these firms usually do not have any radar expertise in-house. Acconeer is therefore doing a lot of good activities to help the customers come faster to market, which we will now have a look at, starting with the modules.

New IoT module on ARM M-4

We commented on the rationale of introducing modules in our initiating coverage report of October and we include these thoughts in the quote below:

"*One problem is that radar technology is difficult while many of the customers are not tech savvy. On top of adding new channels, Acconeer has therefore made important strategic decisions in order to speed up the time to market for customers. It will offer modules, i.e. sensors with processors integrated. Acconeer will also, on its website, free of charge, release so called sensing detectors with specific reference application software that interprets the signals. The detector translates the raw signal into a result, e.g. a distance, meaning the customer does not need to be an expert on radar. The reference applications will be for specific use cases. Today there are ~~two of them on the website~~ e.g. waste level measurement and liquid level measurement. The logics behind this approach is to simplify the customers' development of application software. One possible, positive effect from the detectors is that since they are linked to the Acconeer hardware and do not work with the hardware from other companies they could create a more sticky hardware business*."

The newly launched, second module, the XM122, is built on a Nordic Semiconductor microprocessor and an ARM Cortex M-4. This is Acconeer's IoT module and therefore, in order to communicate, it has Bluetooth support and can be connected to a LoRa network. LoRa, short for "long range", is a long-range wireless communication protocol. Basically, LoRa allows inexpensive, long-range connectivity for IoT devices in rural, remote and offshore areas. LoRa connects 50 million devices in 95 countries for 600 different use cases and is therefore becoming the go-to-technology for IoT networks.

Acconeer now has modules running on ARM M-4 and M-7. We believe there will be one more module before year-end and subsequently expect more module additions from Acconeer.

Most notably we await a module for ARM's smallest processor, the M-0.

Adding new modules forces Acconeer to build the associated software and it can therefore make sure that the software works, which helps the customer dialogue. As we have mentioned before, Acconeer shares detectors and reference application software with the customers. The software is Acconeer hardware specific. It should be noted that the customers are neither allowed nor able to use the software for other applications. A large part of Acconeer's investments are related to algorithms and software. There is a large value in the software but as we read Management the company has no desire to sell software as it believes that this business is too tough. Thus, software will be a mean to boost hardware sales.

Dielectric lenses increase the reach from 2 to up to 10 meters

Besides the modules Acconeer will, in q2'19, introduce dielectric lenses that will increase the signal reach from two to up to ten meters in e.g. a tank. The lenses will also make it possible to detect a human on five meter distance instead of two. In short, the dielectric lenses consists of inexpensive plastic patterns that focus the sensor signal. This will not be big business for Acconeer but it could be very useful for the customers, depending on the use case. In our initiating coverage report we highlighted the reach as a disadvantage but we do not expect any drastic increase in the TAM from the dielectric lenses. As mentioned, Acconeer can detect a human on a five meter distance. Five or two meters makes no difference for slow moving robots like vacuum cleaners of lawn mowers (those are a large part of our investment case) but one possible application area is intelligent lightning. One key advantage over today's IR based lightning solutions is that it cannot detect people that are making just small movements when e.g. sitting down while Acconeer's radar can detect a human that is sitting still by only minor movements - breathing and pulse is enough.

Interesting automotive potential in mandatory Child Presence Detection

We view automotive as one of the most interesting areas long-term for Acconeer with several different opportunities, one of them being presence detection. There are different needs. Some car OEMs want to know which seat the person is sitting in. The largest opportunity though is Child Presence Detection, i.e. making sure children (and pets) are not forgotten in the back seat. This problem is larger than we first thought. Only in US, over 40 children in cars die every year from heat strokes, which can be compared to airbag deaths peaking at 32 in 1998 before mandatory advanced airbags brought the death toll down to 0. According to our sources, Euro NCAP will include Child Presence Detection in is safety rating for new car models from 2024. All car manufactures pursue the highest score in the ratings so the Euro NCAP effect is powerful (for a better understanding on the implications of Euro NCAP read our last research update on Smart Eye).

2024 might seem far out in the future but the work needs to begin several years before and some car manufacturers like to move faster. Acconeer has already demonstrated presence detection with its big, unknown tier-1 partner. Acconeer continues to stick solely to this partner but says it has received interest from many others.

There is lots of hard work related to breaking into automotive. Acconeer needs to become AEC-Q100 certified, which will be an important milestone. However, as mentioned in our initiation report, the automotive partner was the first one who received an evaluation kit from Acconeer so some of the work has already been done.

Other notable news in the automotive space is Acconeer's reference application for trunk lid opening.

Competition: Soli finally received its FCC waiver

A quick look at the competition shows that Infineon's radar is still not launched and has been postponed again. Acconeer has no insight in why that is. There were signs of life from Google's Project Soli though. When the Federal Communications Commission (FCC) allowed Google to turn up the power (see the waiver below) there were a lot of articles and renewed buzz around Soli, as if many had thought that it would have been dead. Shares of Acconeer also popped when the market learned the news. For the CEO of Acconeer, Lars Lindell, the Soli wavier was no major news. Our view is that when Soli starts receiving orders, it will have spillover effects on Acconeer. The waiver is a prerequisite for Soli's future sales. Since Acconeer is ahead of Soli, but Soli has huge resources, the faster the market moves the better.

FCC's Waiver to Google Project Soli

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of Google LLC Request for Waiver of Section 15.255(c)(3) of the Commission's Rules Applicable to Radars used for Short-Range Interactive Motion Sensing in the 57-64 GHz Frequency Band	)))))	ET Docket No. 18-70

ORDER

Adopted: December 31, 2018 **Released: December 31, 2018**

By the Chief, Office of Engineering and Technology:

I. INTRODUCTION

1. By this Order, we grant a request by Google, LLC (Google)[1] for waiver of section 15.255(c)(3)[2] of the rules governing short-range interactive motion sensing devices, consistent with the parameters set forth in the *Google-Facebook Joint ex parte Filing*, to permit the certification and marketing of its Project Soli field disturbance sensor (Soli sensor) to operate at higher power levels than currently allowed. In addition, we waive compliance with the provision of section 15.255(b)(2) of the rules to allow users to operate Google Soli devices while aboard aircraft.[3] We find that the Soli sensors, when operating under the waiver conditions specified herein, pose minimal potential of causing harmful interference to other spectrum users and uses of the 57-64 GHz frequency band, including for the earth exploration satellite service (EESS) and the radio astronomy service (RAS). We further find that grant of the waiver will serve the public interest by providing for innovative device control features using touchless hand gesture technology.

Source: Federal Communications Commission (FCC)

While radar competitors are still not ready, we are more concerned with competition outside radar, the main competition being ST's ToF IR sensors that can compare to Acconeer in terms of size/cost and has a large market share of the smartphone market. From dialogues with various customers Acconeer has gained a good understanding in ST's strengths and weaknesses and concludes that its radar has a better performance than ST.

Ultrasound will also challenge Acconeer's radar. We are especially thinking about Chirp Microsystems. Acconeer has still not encountered Chirp on the market but it looks like TDK has kept the Chirp brand instead of fully devouring it so it is probably just a matter of time. Chirp recently announced a partnership with Qualcomm on a partnership for VR and AR. This makes sense in our opinion as Qualcomm is an ultrasonic expert, following large investments and acquisitions in the area over a long period.

We concur with Acconeer that there is no omnipotent technology for all situations. The preferred technology will depend on the specific use case, meaning there will be a mix of radar, inductive/magnetometer, ultrasonic and optical technology. In addition, for several use cases we find it likely that the technologies will co-exist and complement each other, such as e.g. radar and magnetometers for parking. The appropriate technology depends on many factors. Here are just a few examples: Material, size, power requirements, narrow or wide beam width, what is most important of false positives and false negatives and last, the environment (e.g. outdoor/indoor, day/night, harsh weather conditions, bumps etc.).

Q4: Higher cost only on the surface - related to no capitalized R&D

The operating loss of SEK -15.1m was higher than our estimate of SEK -11.1m and on the surface it looks like the OPEX has jumped up but it is related to Acconeer no longer capitalizing R&D, i.e. the cash flow burn is the same. Looking at EBITDA of SEK -12.2m we only missed the outcome by SEK 1.6m.

Expected vs. Outcome

SEKm	Q4'17	Q4'18E	Outcome	Diff
Net sales	**0.0**	**0.5**	**0.4**	**-0.1**
EBITDA	-13.5	-10.6	-12.2	-1.6
EBIT	**-14.1**	**-11.1**	**-15.1**	**-4.0**
PTP	-14.2	-11.1	-15.1	-4.0
EPS, SEK	-1.00	-0.58	-0.79	-0.21
Salesgrowth	n/a	31150.0%	27525.0%	
EBITDA margin	n/a	n/a	n/a	
EBIT margin	n/a	n/a	n/a	
EPS growth	n/a	n/a	n/a	

Source: Acconeer, Redeye Research

Acconeer has gone from sales of around one EVK per day to currently about two. In our view, Digi-Key is a sales leads generator. Being on Digi-Key is, according to Acconeer, the best marketing effort and other potential marketing investments would not give the same bang for the buck. The company also says that there is no need to push EVK sales from 2 to 3 per day, suggesting that it got enough focus areas to explore. Acconeer will however add more distributors over the coming quarters. Particularly Japan is a unique market with a need for several local distributors.

We have summarized all known orders with an individual value of SEK 100 000+ in the table below on the next page. The table indicates that the only ones ordering are Digi-Key and BEYD but this is not accurate. Acconeer has received orders from the other markets as well (Scanti in Russia and Micro Summit in Japan) but these orders have not been press released as they have been smaller than SEK 100 000.

Known orders from distriubution partners (SEK 100 000+ each)			
Date	**Distributor**	**Products**	**Order value (USD ')**
jan-18	Digi-Key	Sensors & EVKs	36.3
maj-18	Digi-Key	EVKs	13.0
maj-18	Digi-Key	Sensors	48.1
jun-18	Digi-Key	EVKs	68.4
jul-18	BEYD	Sensors & EVKs	12.3
nov-18	Digi-Key	Modules & breakout boards	44.0
dec-18	BEYD	Modules, breakout boards & EVKs	13.2
jan-19	BEYD	Sensors & EVKs	22.5
Total			**257.8**

Source: Acconeer

The combined value from known orders of USD 258 000 is substantially larger than Acconeer's 2018 sales. The reason is that Acconeer only include the sell-through in its P&L and not the sell-in to the distributor.

Several of the customers have bought more than one EVK, indicating that more than one engineer is working on the end products.

A lot of customers are eager to buy directly from Acconeer but the company says that this requires orders of more than 10 000 units. We therefore expect customers like OnlineMarina and Bintel, to buy from Digi-Key. OnlineMarina has launched its boat surveillance product and Bintel will launch its waste management solution in Q2'19.

The municipalities are the end customers but they outsource to waste management companies. Since the waste management companies by nature are not skilled in electronics, and especially not radar, Acconeer's customers will be system integrators similar to Bintel. Bintel will be a reference customer for international players.

Financial estimates

The higher losses in our adjusted estimates (see the table below) are related to Acconeer stopping the capitalization of R&D and starting with depreciation instead. Thus, there is basically no difference in the cash burn or the OPEX level. It is just an accounting effect.

Forecast adjustments

(SEKm)		2019E	2020E	2021E
Sales	Old	3	30	85
	New	3	26	83
% change		-5%	-13%	-2%
EBIT	Old	-43	-30	0
	New	-60	-56	-25
% change		40%	89%	10546%
Profit before tax	Old	-43	-30	0
	New	-60	-56	-25
% change		41%	89%	10592%
Earnings per share	Old	-2.22	-1.20	-0.01
	New	-3.13	-2.89	-1.26
% change		41%	141%	13497%

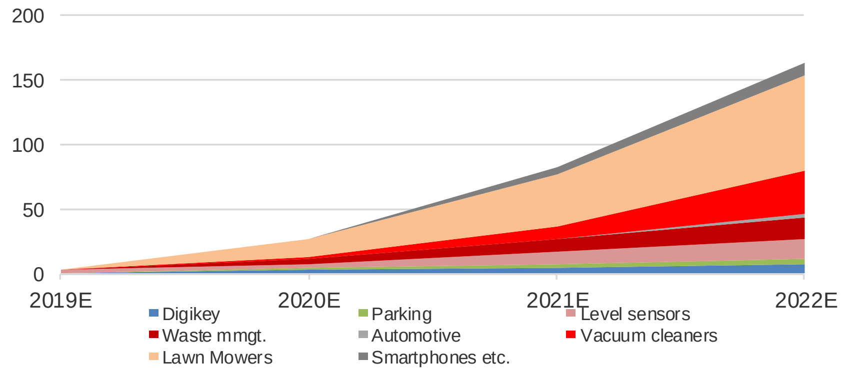
Source: Redeye Research, Acconeer

We have lowered the 2020 volumes slightly as lead times for the customers' products to hit the market could be anywhere up to 12-24 months. This is partly offset by higher ASP assumptions related to the new XM122 modules.

We assume Acconeer can maintain a neat marketing budget due to the focus on Digi-Key and uploading video tutorials and reference application software on the homepage. The load on the support team grows in line with Digi- Key. We are a bit more skeptic when it comes to the short-term gross margins given the challenge in increasing the yield and decreasing the testing time.

Our sales estimates are summarized in the graph below. We maintain our high confidence in lawn mowers even though we are aware of robotics having moved a bit slower. The reason for the high lawn mowers is basically that Husqvarna has over 50 % of the robotic lawn mower market and we believe Acconeer eventually will close a deal with Husqvarna.

Sales per segment (SEKm)



Source: Redeye Research

In the graph above we especially believe that there is a lot of room for surprises on the upside in automotive. We have assumed 2-3 sensors per car but it could be more than five times that. However, at this early stage, with lots of work left to do, we want to maintain a conservative approach.

The module mix is the determining factor for the ASP but it is still uncertain what the module penetration will look like in the different areas but we still see a good case for a high portion of module sales in parking and waste management.

Earnings estimates

Our earnings estimates are summarized in the table below:

Earnings estimates				
(SEK million)	**2019E**	**2020E**	**2021E**	**2022E**
Total net sales	**3**	**26**	**83**	**164**
Net sales growth (%)	*218%*	*757%*	*220%*	*97%*
Employee costs	-21	-30	-36	-45
Avr. n.o employees	30	35	42	50
Other OPEX	-28	-30	-35	-40
Total depreciation	-12	-12	-13	-13
Capitalized work for own account	0	0	0	0
Gross margin	***17%***	***58%***	***71%***	***64%***
EBIT	**-60**	**-56**	**-25**	**7**
EBIT (%)	*-1985%*	*-217%*	*-30%*	*4%*
PTP	-60	-56	-25	7
EPS (SEK)	-3.13	-2.89	-1.26	0.37

Source: Redeye Research

Looking at our loss estimates above the cash should be enough for two years of financing. We are not expecting Acconeer to be profitable before 2022 but there is a large uncertainty and we try to keep most of this uncertainty on the upside by having lower expectations.

Quarterly figures & estimates

Since it takes time to launch products for the customers, our quarterly 2019 sales are solely based on EVKs and minor sensor orders via e.g. Digi-Key and BEYD.

Quarterly estimates (million SEK)											
SEKm	**2017**	**Q1'18**	**Q2'18**	**Q3'18**	**Q418**	**2018**	**Q1'19**	**Q2'19**	**Q3'19**	**Q419**	**2019**
Net sales	**0.0**	**0.1**	**0.2**	**0.2**	**0.4**	**1.0**	**0.5**	**0.6**	**0.8**	**1.0**	**3.0**
Sales growth (%)		*n/a*	*1165%*	*1379%*	*27525%*	*0%*	*559%*	*186%*	*285%*	*136%*	*0%*
EBIT	**-23.1**	**-7.4**	**-9.3**	**-7.2**	**-15.1**	**-39.0**	**-14.7**	**-15.3**	**-14.2**	**-15.9**	**-60.1**
EBITDA	-21.0	-6.9	-8.8	-6.7	-12.2	-34.5	-11.8	-12.4	-11.3	-13.0	-48.5
PTP	-23.2	-7.4	-9.2	-7.2	-15.1	-39.1	-14.7	-15.3	-14.3	-15.9	-60.2
EPS (SEK)	-1.87	-0.39	-0.48	-0.38	-0.79	-2.05	-0.77	-0.80	-0.75	-0.83	-3.15
EBIT margin (%)	-177%	-217%	-265%	-205%	-3101%	-357%	-2585%	-2414%	-1697%	-1491%	-1936%
EBITDA margin (%)	-161%	-202%	-250%	-190%	-2500%	-316%	-2074%	-1958%	-1352%	-1219%	-1562%
EPS growth (%)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Source: Redeye Research, Acconeer

As mentioned above, there is an accounting effect from stopped capitalizing of R&D that gives the reader a false impression that the loss doubled between Q3'18 and Q4'18. The costs from Q1'19 and onward should be in line with Q4 and the cash burn essentially the same as in 2018.

Investment Case

- Strong unique product offering & scalability from unmatched cost
- Large established market with solid structural growth
- Large design wins with big players to drive the share price

Strong unique product offering & scalability from unmatched cost

Acconeer's radar of 5x5x1 mm is the tiniest radar on the market, which means unmatched cost. Other radars are more than three times larger, suggesting that they have at least three times higher cost. The real claim to fame though, and the truly disruptive element in Acconeer's offering, is the power consumption, which is more than 10 times lower than competing radars. Combining these characteristics and its fabless business model with the largest manufacturing partners in the World (Amkor & Global Foundries), Acconeer is poised to scale rapidly with high gross margins (about 70 %) as soon as sales kick in. Adding the expanding distribution network and the partnership with Uniquest, South Korea's largest electronics supplier, Acconeer is ready to ride the structural growth in large market segments within especially IoT (increased sensor penetration) and robotics respectively. The application areas with the best value proposition and largest volume potential in the company's focus markets are, according to us, large volume markets such as robotic lawn mowers/vacuum cleaners and IoT applications like measuring levels in tanks and garbage bins.

Large established market with solid structural growth

According to our estimates, the contactless level sensor market already exceeds 90 million units. Costly radar is the go-to-technology and has thus controlled an increasing majority of the tank gauging segment during the past 15 years. In lawn mowers and vacuum cleaners we expect the robotic penetration to go from 2 to 12 % until 2026, meaning volumes growing from 9 to 41 million. Even better is that all of the markets mentioned are concentrated (non-fragmented). The five largest level measurement companies together hold the majority of the market. This creates solid conditions for new contenders to attack large, non-innovative incumbents with Acconeer's disruptive technology. Still, we expect a few incumbents to join forces with Acconeer. Husqvarna e.g. has over 50 % of the robotic lawn mower market, making it Husqvarna's most important top line growth driver. We do not know if Acconeer is working with Husqvarna but in the same way vacuum cleaners should require Acconeer's technology to detect water, lawn mowers need to distinguish grass from humans and pets etc. Thus, the technology is a great fit for Husqvarna and we expect it to be a (future) customer. There could also be a potential in extending the offering for huge OEMs and grow with them. LG and Samsung (accessible through Uniquest) may only have 5 % of the robotic vacuum cleaner market but they are dominant in many other areas of consumer electronics, smartphones being only one good example. Since our base case is based on the focus areas it only includes a couple of million units from smartphones and wearables. While this implies a negligible market share, it is worth noting that currently these customers are not in the bag and at the moment there seem to be no smartphone use case with decent ASP.

Large design wins with big players to drive the share price

We value Acconeer to SEK 29 per share in our base case while our bear and bull case amount to SEK 18 and 60 respectively. The key differences in our scenarios are related to lawn mowers, automotive and smartphones. Today's valuation discounts a bunch of deals for Acconeer but since the product was launched in April 2018 and lead times are at least 12 months we assume deals will not show earlier than Q2'19. While news of orders gradually will de-risk the case we assume certain deals are key catalysts. They are more worth than others and have the potential to substantially move the shares; especially larger deals with Husqvarna (50+% of the robotic lawn mower market), a large level measurement company or a big smartphone OEM like LG.

Valuation

Bear Case 18.0 SEK

The differences in our bear case assumptions for years 2019-2026 compared to our base scenario are the following: Sales growing by a CAGR of 114 % to about SEK 660 million based on volumes of 15 million. Average EBIT margin of 15 % and a 10 % long-term EBIT margin The difference from our base case is that we expect that Acconeer fails to penetrate automotive and also that it gains no traction in smartphones/wearables as customers go for competing alternatives. Thus, lawn mowers, level measurement (incl. waste management) and vacuum cleaners account for 49, 24 and 19 % respectively, i.e. in total 92 % of total sales. Other than that the other segments perform the same as in our base case.

Base Case 29.0 SEK

Our base case assumptions for years 2019-2026 are summarized below. In all our valuation scenarios we are using a required rate of return of 14.3 % based on our Redeye Rating and a terminal sales CAGR of 2 %. Sales growing by a CAGR of 119 % reaching close to SEK 780m in 2026 while the 2026 volumes amount to 21 million. Sensor prices dropping from USD 5 by on average 15 % per year (although faster in the first years), somewhat offset by modules and increased sensor penetration in robotics and automotive. Cumulative sales to 42 % related to robotic lawn mowers (whereof about 50 % from Husqvarna), 16 % robotic vacuum cleaners, 21 % level measurement sensors (incl. waste management) and 8 % smartphones/wearables Average gross margin of about 50 %; higher during the first years and substantially lower during the second half as gross margin drops to 40 % in 2026. OPEX growing at a CAGR of 13 %. Average EBIT margin of 22 % and a 15 % long-term EBIT margin

Bull Case 60.0 SEK

The differences in our bull case assumptions for years 2019-2026 compared to our base scenario are the following: Sales growing by a CAGR of 135 % to about SEK 1.3 billion based on volumes of 49 million. Same gross margins as in our base scenario but costs grow slightly faster (20 % CAGR) although not as fast as the stronger top line growth, meaning higher margins. Average EBIT of 29 % and a long-term EBIT margin of 20 %. The big difference from our base case is that we estimate Acconeer to be able to enter LG's smartphones and therefore also subsequently get several Chinese players on board. We assume 30 million smartphones and wearables in 2026 – equal to about two percent of today's volumes of 1.5 billion. This means a six times faster smartphone growth reaching 30 million units in 2026 (5 million in base case). We also forecast stronger growth in lawn mowers and automotive. We assume that Acconeer can win 40 % of the Husqvarna volumes instead of 24 % as in our base case, which implies a market share just above 30 % instead of 20 %. We expect 43 % larger volumes in automotive over the whole period (in total 5 million cars) and an average of four sensors per car instead of two.

Catalysts

Larger deals to drive the share price

Today's valuation has discounted a bunch of deals for Acconeer but since the product was launched in April 2018 and lead times are at least 12 months we assume the deals will not show earlier than Q2'19. While news of orders gradually will de-risk the case we assume certain deals are key catalysts. They are more worth than others and have the potential to substantially move the shares, such as especially larger deals with Husqvarna (50+% of the robotic lawn mower market), one larger level measurement company or a big smartphone OEM like LG.

Summary Redeye Rating

Management: 6.0

Acconeer, founded as late as 2011, is in an early stage with sales of its radar technology just getting started, making it hard to rate the management. We see no big screw-ups thus far but there are not much signs of deals yet, suggesting that things are taking a bit longer. Acconeer also has a short history of being a listed company (IPO in Dec. 2017) in terms of communication to shareholders etc. Given the short history we therefore especially evaluate the experience in the Board and Management, which overall is solid with people from previous executive positions at companies like Ericsson and Sony Mobile. The CEO was e.g. the President of Japan at ST Ericsson during 2009-2014.

Ownership: 6.0

Acconeer has active main owners represented on the Board and in general the Board own lots of shares. We would prefer a bit higher commitment from insiders in Management though. However, we note that the two co-founders own 3 percent each and we like the fact that they are still working in the company as CTO and COO respectively. Aside of insider buying another potential upside to the ownership score is institutional investors eventually discovering Acconeer and buying into the company.

Profit Outlook: 6.0

The power efficient sensor has minimal cost and footprint, which together with Acconeer's fabless business model will make Acconeer scale rapidly with high margins when sales kick in. Adding the major, global partners in manufacturing and distribution Acconeer seems ready to meet the demand and ride the strong, structural trends in IoT and robotics, although these trends will of course entice severe competition down the road. The interest for Acconeer's solution is strong with a large group of customers testing the technology. However, the jury is still out in the sense that it is still early stage and there are not much news of won deals yet, which is a risk factor.

Profitability: 0.0

Since Acconeer is not yet profitable our fully retrospective profitability rating can be no more than zero at the moment. The scalability and the low cost base imply a good outlook for profitability in the future. At that point the rating would start to gradually increase.

Financial Strength: 3.0

The rather early stage with a limited product portfolio and no stable earnings or revenue weighs on the financial stability score. In addition, it is too soon to understand what the customer base will look like in terms of differentiation etc., which adds uncertainty. However, following the IPO, the company has a large war chest that will help it invest to reach its strategic objectives. The current burn rate is under control. We assume cash is enough for the next three years.

INCOME STATEMENT	2017	2018	2019E	2020E	2021E
Net sales	0	1	3	26	83
Total operating costs	-21	-34	-52	-69	-94
EBITDA	-21	-33	-49	-43	-11
Depreciation	-2	-2	-2	-3	-2
Amortization	0	0	-9	-10	-12
Impairment charges	0	0	0	0	0
EBIT	-23	-35	-60	-56	-25
Share in profits	0	0	0	0	0
Net financial items	0	0	0	0	0
Exchange rate dif.	0	0	0	0	0
Pre-tax profit	-23	-35	-60	-56	-25
Tax	0	0	0	0	0
Net earnings	-23	-35	-60	-56	-25

BALANCE SHEET	2017	2018	2019E	2020E	2021E
Assets					
Current assets					
Cash in banks	196	136	72	0	0
Receivables	0	1	2	13	20
Inventories	1	4	7	12	25
Other current assets	2	2	5	11	20
Current assets	199	142	85	36	65
Fixed assets					
Tangible assets	7	6	6	5	5
Associated comp.	0	0	0	0	0
Investments	0	0	0	0	0
Goodwill	0	0	0	0	0
Cap. exp. for dev.	0	0	0	0	0
O intangible rights	37	45	51	58	65
O non-current assets	0	1	1	1	1
Total fixed assets	44	52	57	63	71
Deferred tax assets	0	0	0	0	0
Total (assets)	243	195	143	99	136
Liabilities					
Current liabilities					
Short-term debt	3	0	0	4	48
Accounts payable	4	2	6	8	21
O current liabilities	11	7	11	17	22
Current liabilities	18	9	17	30	91
Long-term debt	2	0	0	0	0
O long-term liabilities	0	1	1	1	1
Convertibles	0	0	0	0	0
Total Liabilities	20	9	18	30	92
Deferred tax liab	0	0	0	0	0
Provisions	0	0	0	0	0
Shareholders' equity	223	185	125	69	44
Minority interest (BS)	0	0	0	0	0
Minority & equity	223	185	125	69	44
Total liab & SE	243	195	143	99	136

FREE CASH FLOW	2017	2018	2019E	2020E	2021E
Net sales	0	1	3	26	83
Total operating costs	-21	-34	-52	-69	-94
Depreciations total	-2	-2	-12	-14	-14
EBIT	-23	-35	-60	-56	-25
Taxes on EBIT	0	0	0	0	0
NOPLAT	-23	-35	-60	-56	-25
Depreciation	2	2	12	14	14
Gross cash flow	-21	-33	-49	-43	-11
Change in WC	11	-10	1	-14	-11
Gross CAPEX	-14	-10	-17	-20	-21
Free cash flow	-24	-52	-65	-76	-44

CAPITAL STRUCTURE	2017	2018	2019E	2020E	2021E
Equity ratio	92%	95%	88%	70%	33%
Debt/equity ratio	2%	0%	0%	7%	109%
Net debt	-191	-136	-72	4	48
Capital employed	32	49	53	73	93
Capital turnover rate	0.0	0.0	0.0	0.3	0.6

GROWTH	2017	2018	2019E	2020E	2021E
Sales growth	725%	2,964%	199%	757%	220%
EPS growth (adj)	0%	51%	70%	-8%	-56%

DCF VALUATION	
WACC (%)	14.3 %

Assumptions 2017-2023 (%)	
Average sales growth	149.0 %
EBIT margin	-306.4 %

PROFITABILITY	2017	2018	2019E	2020E	2021E
ROE	-16%	-17%	-39%	-58%	-43%
ROCE	-15%	-17%	-39%	-57%	-30%
ROIC	-83%	-109%	-123%	-105%	-34%
EBITDA margin	-63786%	-3263%	-1603%	-164%	-13%
EBIT margin	-69919%	-3471%	-1987%	-217%	-30%
Net margin	-70396%	-3473%	-1987%	-217%	-30%

DATA PER SHARE	2017	2018	2019E	2020E	2021E
EPS	-1.22	-1.84	-3.12	-2.89	-1.26
EPS adj	-1.22	-1.84	-3.12	-2.89	-1.26
Dividend	0.00	0.00	0.00	0.00	0.00
Net debt	-10.04	-7.14	-3.72	0.23	2.48
Total shares	19.03	19.08	19.24	19.45	19.45

VALUATION	2017	2018	2019E	2020E	2021E
EV	370.3	323.6	384.3	460.4	504.2
P/E	-24.2	-13.1	-7.6	-8.2	-18.7
P/E diluted	-24.2	-13.1	-7.6	-8.2	-18.7
P/Sales	17,011.2	454.8	150.7	17.8	5.6
EV/Sales	11,220.3	320.1	127.0	17.8	6.1
EV/EBITDA	-17.6	-9.8	-7.9	-10.8	-46.3
EV/EBIT	-16.0	-9.2	-6.4	-8.2	-20.5
P/BV	2.5	2.5	3.6	6.6	10.3

SHARE PERFORMANCE		GROWTH/YEAR	16/18E
1 month	8.7 %	Net sales	857.6 %
3 month	9.7 %	Operating profit adj	61.4 %
12 month	-	EPS, just	60.0 %
Since start of the year	38.6 %	Equity	-25.1 %

SHAREHOLDER STRUCTURE %	CAPITAL	VOTES
Bengt Adolfsson	14.3 %	14.3 %
Winplantan AB	11.7 %	11.7 %
Avanza Pension	7.1 %	7.1 %
Dreamtech Co Ltd	3.2 %	3.2 %
Uniquest Corporation	3.2 %	3.2 %
Mikael Egard	3.0 %	3.0 %
Mats Ingvar Ärlelid	3.0 %	3.0 %
Lars-Erik Wernersson AB	2.9 %	2.9 %
Nordnet Pensionsförsäkring	2.9 %	2.9 %

SHARE INFORMATION	
Reuters code	ACCON.ST
List	First North
Share price	23.7
Total shares, million	19.2
Market Cap, MSEK	456.0

MANAGEMENT & BOARD	
CEO	Lars Lindell
CFO	Henrik Ljung
IR	Lars Lindell
Chairman	Bo Ekelund

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Redeye Rating and Background Definitions

The aim of a Redeye Rating is to help investors identify high-quality companies with attractive valuation.

Company Qualities

The aim of Company Qualities is to provide a well-structured and clear profile of a company's qualities (or operating risk) – its chances of surviving and its potential for achieving long-term stable profit growth.

We categorize a company's qualities on a ten-point scale based on five valuation keys; 1 – Management, 2 – Ownership, 3 – Profit Outlook, 4 – Profitability and 5 – Financial Strength.

Each valuation key is assessed based a number of quantitative and qualitative key factors that are weighted differently according to how important they are deemed to be. Each key factor is allocated a number of points based on its rating. The assessment of each valuation key is based on the total number of points for these individual factors. The rating scale ranges from 0 to +10 points.

The overall rating for each valuation key is indicated by the size of the bar shown in the chart. The relative size of the bars therefore reflects the rating distribution between the different valuation keys.

Management

Our Management rating represents an assessment of the ability of the board of directors and management to manage the company in the best interests of the shareholders. A good board and management can make a mediocre business concept profitable, while a poor board and management can even lead a strong company into crisis. The factors used to assess a company's management are: 1 – Execution, 2 – Capital allocation, 3 – Communication, 4 – Experience, 5 – Leadership and 6 – Integrity.

Ownership

Our Ownership rating represents an assessment of the ownership exercised for longer-term value creation. Owner commitment and expertise are key to a company's stability and the board's ability to take action. Companies with a dispersed ownership structure without a clear controlling shareholder have historically performed worse than the market index over time. The factors used to assess Ownership are: 1 – Ownership structure, 2 – Owner commitment, 3 – Institutional ownership, 4 – Abuse of power, 5 – Reputation, and 6 – Financial sustainability.

Profit Outlook

Our Profit Outlook rating represents an assessment of a company's potential to achieve long-term stable profit growth. Over the long-term, the share price roughly mirrors the company's earnings trend. A company that does not grow may be a good short-term investment, but is usually unwise in the long term. The factors used to assess Profit Outlook are: 1 – Business model, 2 – Sale potential, 3 – Market growth, 4 – Market position, and 5 – Competitiveness.

Profitability

Our Profitability rating represents an assessment of how effective a company has historically utilised its capital to generate profit. Companies cannot survive if they are not profitable. The assessment of how profitable a company has been is based on a number of key ratios and criteria over a period of up to the past five years: 1 – Return on total assets (ROA), 2 – Return on equity (ROE), 3 – Net profit margin, 4 – Free cash flow, and 5 – Operating profit margin or EBIT.

Financial Strength

Our Financial Strength rating represents an assessment of a company's ability to pay in the short and long term. The core of a company's financial strength is its balance sheet and cash flow. Even the greatest potential is of no benefit unless the balance sheet can cope with funding growth. The assessment of a company's financial strength is based on a number of key ratios and criteria: 1 – Times-interest-coverage ratio, 2 – Debt-to-equity ratio, 3 – Quick ratio, 4 – Current ratio, 5 – Sales turnover, 6 – Capital needs, 7 – Cyclicality, and 8 – Forthcoming binary events.

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Redeye Rating (2019-02-24)

Rating	Management	Ownership	Profit outlook	Profitability	Financial Strength
7,5p - 10,0p	48	46	19	11	20
3,5p - 7,0p	87	84	117	41	55
0,0p - 3,0p	13	18	12	96	73
Company N	148	148	148	148	148

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Viktor Westman owns shares in the company : No

Dennis Berggren owns shares in the company : No

Redeye performs/have performed services for the Company and receives/have received compensation from the Company in connection with this.