



# LINC

---

LUND UNIVERSITY FINANCE SOCIETY EST 1991

---

EQUITY RESEARCH REPORT

---

# IAR SYSTEMS GROUP AB (IAR B)

“Software company with solid financial track-record offering a  
unique opportunity to capitalize on IoT”

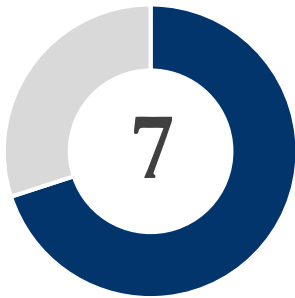
## TABLE OF CONTENTS

Case Summary	3
Investment Thesis	4
Valuation	5
Management	6
SWOT-Analysis	7
Appendix	8
Disclaimer	9

## COMPANY DESCRIPTION

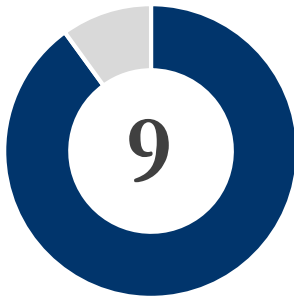
IAR Systems is a Swedish based software company founded in 1983, listed on midcap Nasdaq Stockholm. Their software is put to use in programming microprocessors which go in to consumer products such as automobiles and electronics. With a cutting edge quality and security in programming-delivery, IAR is well positioned for continued delivery of customer and shareholder value. Combined with financial stability and a solid track-record, IAR offers great prospects to capitalize on future growth in “IoT”.

### VALUE DRIVERS



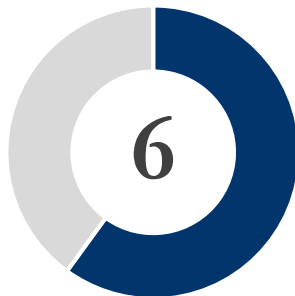
The primary value driver in IAR is scalability in their business model. All else equal indicates continuously improved operating margin. Strong estimated growth prospects in embedded systems should secure focus on product development and in-house efficiency rather than fighting for market shares.

### FINANCIAL HISTORY



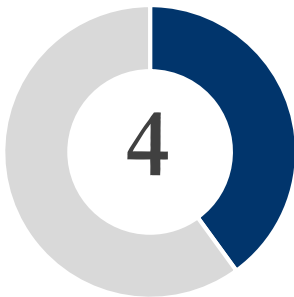
Solid financial track-record from topline down to net income. Topline CAGR of 8.5% and EBIT margin have improved from 21% to 30% in the last five years. Performing this numbers with negative NWC and low CAPEX corresponds to a operating cash flow CAGR of 17.4%.

### MANAGEMENT



Majority of senior staff have been with IAR from the start. They have deep knowledge of the company and the industry itself. High insider ownership with CEO Stefan Skarin at the helm, holding a total amount of 420,000 shares, which totals 3.1% of all outstanding shares.

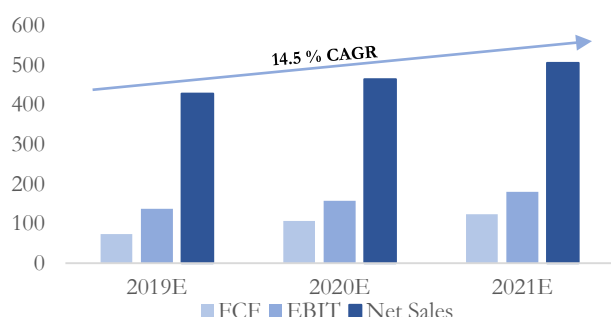
### RISK PROFILE



The main operational risks are FX sensitivity, an unpredictable Asian market and hiring competent programmers to reasonable wages. The reasoning of ranking the profile 4 is low financial risk with a net cash position of 103 MSEK.

**IAR Systems** is the world leading software developer for embedded systems. Their well working and easy-to-use workbench has made them the market leader in this specific field. Market research expects IoT to grow 7% annually until 2023 which translates into continued topline expansion and margin improvements for IAR. High underlying market growth combined with a scalable business model comes down to forecasted CAGR of EBIT at 10.6 % until 2027. IAR is ranked a solid company both operational and financially, but according to our DCF the stock is fair valued at current trading price, 250 SEK.

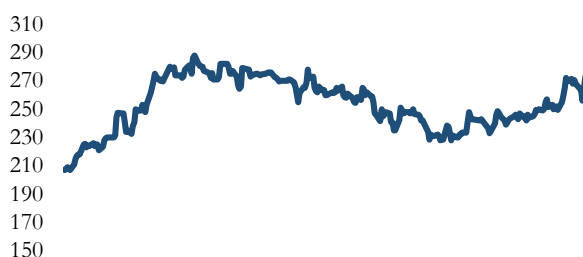
- **IAR Systems is riding the wave of IoT.** The phenomena known as Internet of Things is one of the key drivers in the case of IAR. Traditional appliances requires digital upgrades and need embedded system to function. IAR with over 50% of the market share are aligned to meet this expected growth in costumer demand.
- **Scalable business model set to drive margin improvements.** With large fixed costs which mostly consist of compensation for engineers, ~46% of sales. According to the company 70-80% of old codes can be re-used, developing new software products. Therefore, EBIT margin is expected to grow from 30% in Q4 2018 to 35,5% in 2021E. Cash conversion have been strong historically and expects to continue due to IAR's asset light business model.
- **Low financial risk with a net cash position and positive cash flow.** IAR's recurring customer rate of 95% have lead to stable revenue streams and predictable cash flow. IAR is operating in a very profitable industry and accumulated a strong financial position financed almost entirely with equity.
- **DCF valuation indicates 5% downside.** Discounting expected FCF with a WACC of 8.76% implies target price of 247 SEK per share, which is 5% below current trading price. Taking into account current multiples for 2019E of a P/E 33 and an EV/ EBIT of 25 expectations is relatively high and room for failures is small.



## I.A.R Systems Group (IAR B)

Current Price (SEK)	274.5
52 v Low/High	216.5 / 290.0
Market Cap (MSEK)	3735
Net Debt (MSEK)	-103,2
Enterprise Value (MSEK)	3632
Sector	Software
Exchange	NASDAQ STO
Next Report	2019-04-24

### 1 Year Chart



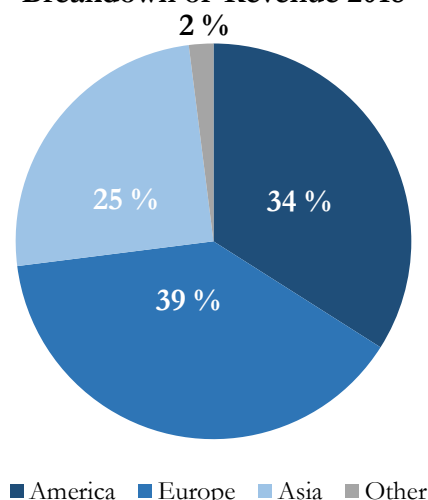
\*Since 2018-03-19

MSEK	2019E	2020E	2021E
Net Sales	428	466	508
Growth (%)	11	7	9
Gross Marg (%)	98	98	98
EBIT	133	135	152
EBIT Marg (%)	31	29	30
Earnings	88	102	105
Earnings Marg (%)	23.9	22.6	23.4
EV/S	7.8	7.2	6.6
EV/EBIT	25.2	24.7	21.9
P/E	32.83	31.81	28.18
P/S	8.8	7.2	6.6
FCF	71	103	117
FCF Yield (%)	2.1	3.1	3.5

### Ownership

SEB S.A.	10 %
Andra AP-fonden	9 %
Första AP-fonden	9 %
Handelsbanken Fonder	8 %

**Breakdown of Revenue 2018**



**Software for embedded systems is a complicated market but the gains are large.** IAR Systems is the world leading Software Company that specialises in producing development tools for embedded systems. Today, everyday items are becoming digitalized. These digitalized items need an embedded system with a processor to function. All processors need to be programed by a computer engineer, however a programing tool is also required. This tool is provided by IAR Systems in their Workbench product. As IAR systems themselves states, just as a builder needs a toolbox, a programmer needs a programming tool. Their easy-to-use Workbench has made them the world's largest software developer for embedded systems. This Workbench has made IAR Systems accumulate more than 50% of the market share for programming tools specially designed to cope with embedded system. This well-working product has attracted over 46,000 customers, 150,000 users and supports over 12,700 different devices.

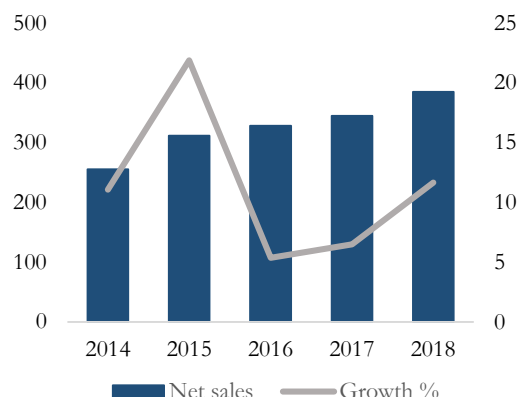
**As the "Internet of Things" industry is expected to grow, new opportunities and potential customers are on the horizon.** Traditional appliances are becoming digitalized that historically have been simplistic. Therefore, the market is expected to grow as more manufactures need software to program the increasing demand for embedded systems. Due to IAR being the market leader in this field, it gives them the potential to supply software for an ever growing market. As IoT is expected to grow at a CAGR of 7% until 2023, IAR are aligned to capitalize on the growing industry. As the tech industry is rapidly advancing and becoming more complicated by the day, embedded software will be of high demand. One of these potential opportunities for example is the emerging Asian market, especially China. Chinese manufacturers are vigilant about implementing American software, helping IAR Systems by looking for new partnerships primarily in Europe.

**IAR Systems large fixed costs and reusable codes have created their key driver: scalability.** As the market for embedded systems is expected to grow at a rampant pace, so should the sales of compatible software. With large fixed costs which mostly consist of compensation for engineers, ~46% of sales, the scalability in their business model is obvious. According to the company, 70-80% of old codes can be re-used developing new products. Therefore, EBIT margin is expected to grow from 30% in Q4 2018 to 35.5% in 2021E.

**Long customer relationship and recurring revenue.** IAR's recurring customers have lead to a steady stream of income, over 95% of their customers extends their license. Because IAR systems sells their products via licensing contracts, they have accumulated a steady stream of income. These licensing agreements in conjunction with great products have lead to IAR's high amount of recurring customers. Furthermore, IAR System is financially stable with a Net Cash position of 103 MSEK and current ratio of 1.5. Taking the long term perspective, IAR finances its operations almost entirely with equity, which therefore ranks their financial risk as low.

**Chinese regulations, low value of the Swedish crown and expensive workforce are the main risks.** The high valuation of the company implies high expectations on growth and margins. Factors that can disrupt these expectations are for example the Chinese market, low value of the Swedish crown and finding a competent workforce. IAR heavily relies on having qualified personal to maintain their superior product, in 2018 personnel cost made up 46% of sales and 62% of costs. Sweden currently suffers from a shortage of programmers and the average programmer wage is expected to increase. Therefore, future wage inflation could put significant pressure on future margins. Another factor is the Chinese market; IAR Systems fastest growing market. China is infamous for preferring in-house production and excluding foreign suppliers from their market. Due to IAR being a foreign supplier there lie a significant risk in Chinese customers turning to local players. IAR sales have historically been boosted by the weak SEK, however anticipated appreciation could work against IAR in the near future.

**MSEK**

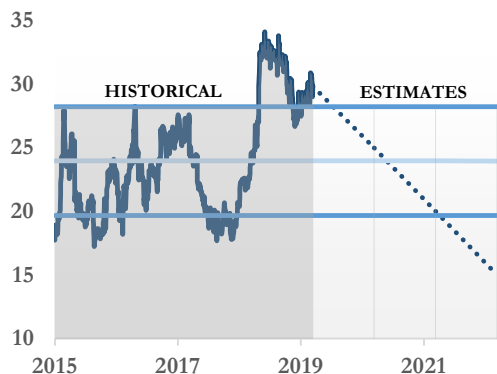


"China remains red hot when it comes to standing on its own two feet in the field of cutting-edge technology. Major resources are being invested in creating local suppliers for a global market"

- Stefan Skarin, CEO

MSEK	2018	2019E	2020E	2021E
Net Sales	385	428	458	490
Sales Growth (%)	12	11	7	9
EBIT	116	133	135	152
EBIT Marg (%)	30	31	29	30
Net Income	88	99	112	129



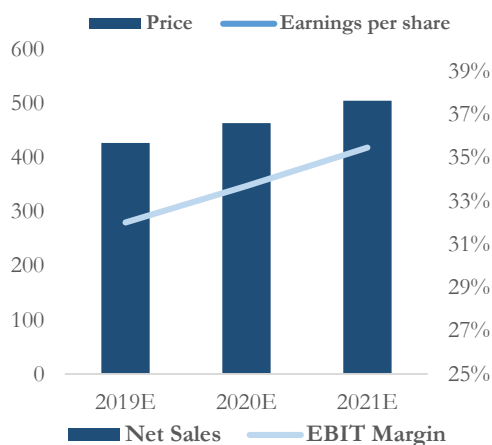
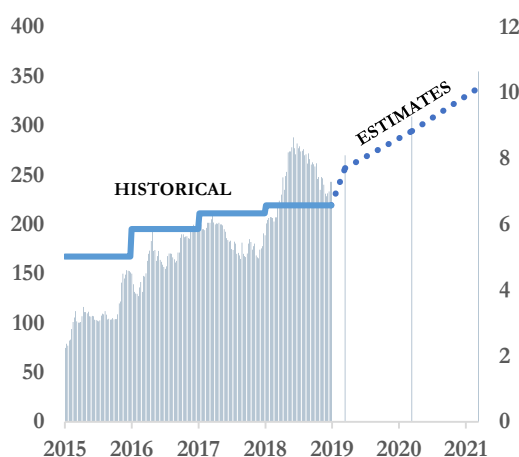


**Strengthened customer offer and continued heightened electronics content of end market products clears the way for future growth prospects.** IAR have a financial target that states a topline growth of 10-15% in the foreseeable future. We believe that is quite bullish considering positive FX trends in the last decade and expected underlying market growth ahead of 7%. With background of arguments above, our estimates fall in the lower range of communicated growth target. In Q4 2018 IAR grew topline with 14% year-on-year, rather being modest then overly positive, estimated growth for 2019/2021 amounts to 11%, 8.5 % and 9%. Expected Key driver for this growth is expected continuation of heightened electronics content of end market products. CAGR for topline during explicit period (2019-2027) is expected to be 6.5%.

**Scalability is the key for EBIT to improve from already high levels.** IAR communicate a financial target of an EBIT margin > 25%. Last five years growing their scalable business model have generated a rise in EBIT margin from 21% to 30% in 2018. Due to many of the codes in programming, 80% can be re-used in developing new software. In addition, the marginal cost of selling one additional license is negligible. After acquiring Secure Thingz in 2018, including their security technology in IAR client offering should clear the way for a more premium pricing strategy. With a continued improvement on EBIT margins due to the above mentioned arguments, EBIT CAGR is expected to be somewhat higher then topline, 10.6% for the explicit period. The expansion in EBIT is a consequence of engineer salary and capitalized software impairment is growing at a slower pace then net sales which is inline with historical trends. Forecasting EBIT to continue improving, we see the company raising their financial target to an EBIT > 30% as likely and should be considered a possible short-term trigger.

**Capital efficiency is crucial in IAR creation of shareholder value.** Based on IAR's revenue model of customers paying for licenses fees upfront, they are able to run their operations with negative NWC. IC which also includes CAPEX, put into relation against sales is low consisting mostly of capitalized software, hovering around 5% of sales historically and are expected to continue at that level in the future. Topline combined with estimated EBIT expansion, future profitability becomes exponential. This comes down to a forecasted CAGR in FCF for the explicit period of 14.5%. Asset light business model with negative Net Debt makes IAR able to keep a sustainable high payout ratio into the future. A dividend policy which could be challenged considering ROIC is considerably higher then WACC, re-investing profits internally instead should at least theoretically be a more value creation strategy.

**Bullish market trends and operational performance, but currently priced into the stock with a target price of 250 SEK per share.** Assumptions based on historical performance, sector outlook and internal financial trends is the fundamental basis of the valuation. Estimates of Free Cash Flow (FCF), Net working capital (NWC) and Invested Capital (IC) were made. Regarding possible future acquisitions the assumption were made that they will be value neutral and therefore can be excluded from the estimates. For the terminal period 3 % growth is assumed, corresponding to a EV/ EBITA multiple of 11.5. Somewhat high numbers for a company in a mature stage but could also be considered low, taking into account long term growth and profitability prospects for the sector which the company operates in. Discounting expected FCF with a WACC of 8.76% implies a target price of 247 SEK per share, which is 5% below current trading price. Taking into account current multiples for 2019E of a P/E 33 and an EV/ EBIT of 25 expectations is obviously relatively high and room for failures is small. With that said, a CAGR in FCF of over 15% with exposure to the IoT trend in a relative un-cyclical business is attractive if you have a long term investment horizon. Financial stability and stable growth in dividend working as a pillow in downside risk. IAR is not a short term safe bet for risk avert investors but should rather be considered offering an attractive exposure considering future earnings power.



Equity Beta	1,1
Levered Beta	0,9
Size adj. premium	0,1
Market risk premium	6.4%
Riskfree rate	2,9%

WACC	8.7%
------	------



**Stefan Skarin (100,000 A-Shares & 321,000 B-Shares)**  
Client Executive Officer

Stefan has been the CEO of IAR Systems since April, 2009 and board of IAR Systems group since 2002. Stefan has over 20 years experience of the IT and software industry. He has an education from IHM Business School and studied economics at Stockholm University.

**Stefan Ström (Amount of shares unknown)**  
Chief Financial Officer

Stefan has been the CFO of IAR Systems since April 2009, however he has been apart of the company since 1997. Stefan holds an M.B.A from Lund University.



**Mats Ullström (2,000 B-shares)**  
Vice President Products

Mats has worked for IAR Systems since 2001. Prior to this he worked as a software consultant at Programator Consulting AB. He holds a Master of Computer Science from Uppsala University.

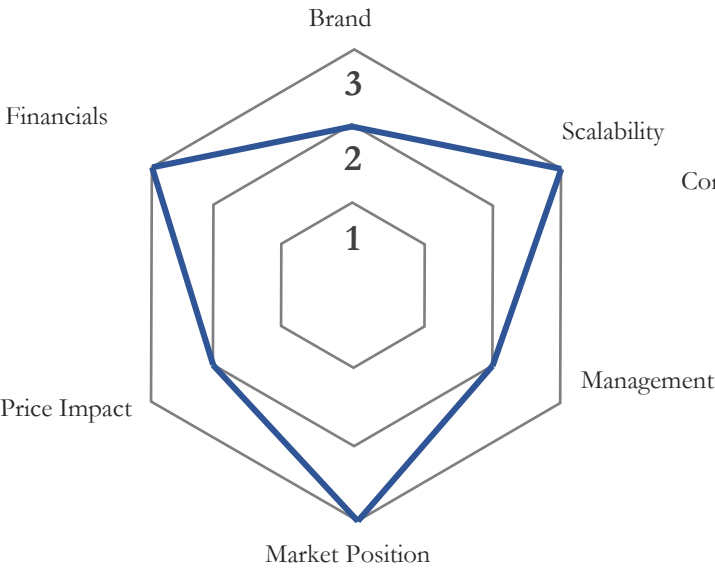


**Susanne Dahlén (No Shares)**  
Director of Engineering

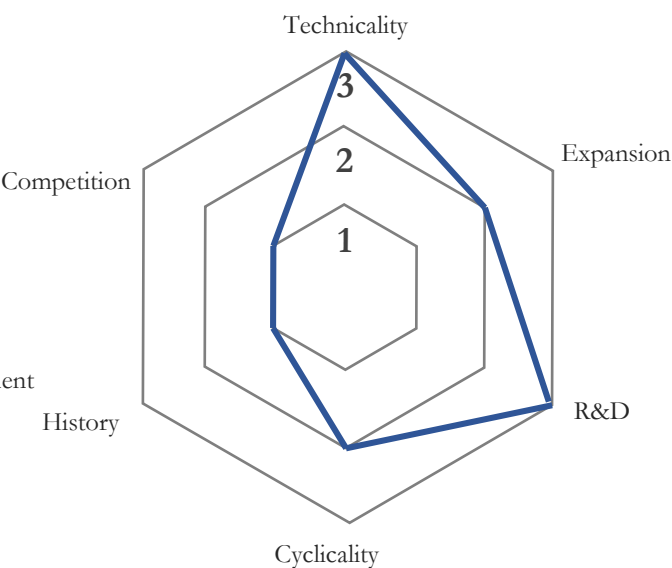
Susanne has been an employee at IAR Systems since 1995 in different positions. She studied Computer Science and Language at Uppsala University.



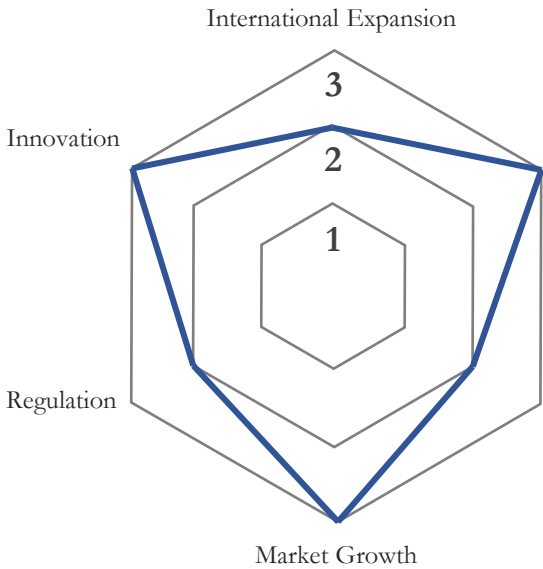
STRENGTHS



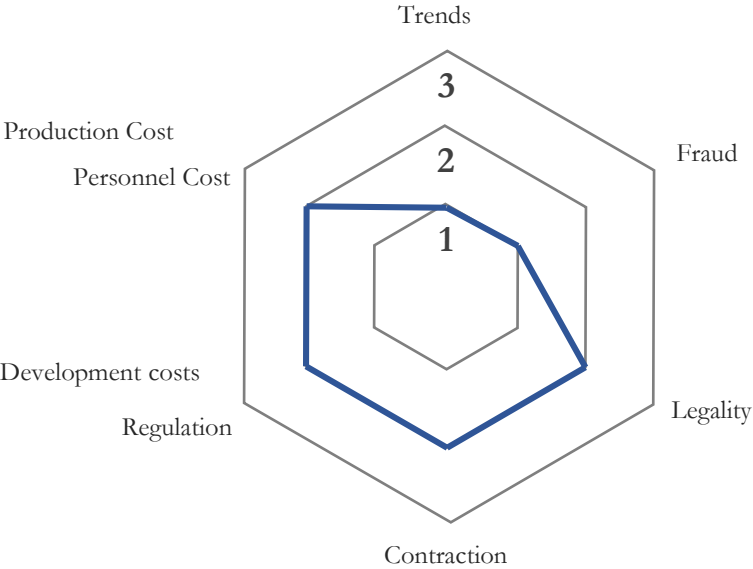
WEAKNESSES



OPPORTUNITIES



THREATS



# APPENDIX I

In Millions of (SEK)	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E
Net sales	427	463	505	546	584	625	669	715	766
<b>Growth</b>	<b>11.0%</b>	<b>8.5%</b>	<b>9.0%</b>	<b>8.0%</b>	<b>7.0%</b>	<b>7.0%</b>	<b>7.0%</b>	<b>7.0%</b>	<b>7.0%</b>
COGS	-14.4	-15.6	-17.1	-18.4	-19.7	-21.1	-22.6	-24.1	-25.8
Other external expenses	-68	-73	-80	-86	-93	-99	-106	-113	-121
Personnel cost	-182	-190	-200	-208	-213	-219	-224	-229	-234
EBITDA	163	183	208	232	257	285	315	348	384
Depreciation of PP&E	-4.3	-4.6	-5.1	-5.5	-5.8	-6.3	-6.7	-7.2	-7.7
EBITA	158	179	202	227	252	279	308	340	376
Amortization of intangibles assets	-21.3	-21.9	-22.6	-23.3	-24.0	-24.7	-25.4	-26.2	-27.0
EBIT	137	157	180	204	228	254	283	314	349
<b>Operating Margin</b>	<b>32.0%</b>	<b>33.7%</b>	<b>35.5%</b>	<b>37.2%</b>	<b>38.8%</b>	<b>40.5%</b>	<b>42.2%</b>	<b>43.8%</b>	<b>45.5%</b>
Net interest income	-4.3	-4.6	-5.1	-8.2	-8.8	-9.4	-13.4	-14.3	-15.3
Profit before tax	133	152	175	196	219	245	270	300	334
Income tax	-30.8	-35.3	-40.6	-45.3	-50	-56	-62	-66	-73
Net income	102	117	135	150	168	188	207	234	260
<b>In Millions of (SEK)</b>	<b>2019E</b>	<b>2020E</b>	<b>2021E</b>	<b>2022E</b>	<b>2023E</b>	<b>2024E</b>	<b>2025E</b>	<b>2026E</b>	<b>2027E</b>
Operating Cash	8.6	9.2	10.0	10.8	11.5	12.3	13.2	14.1	15.1
Accounts Receivable	65	70	76	82	88	94	101	108	115
Prepaid expenses	25	26	29	31	33	36	38	41	44
Inventories	6.8	7.3	8.0	8.6	9.2	9.9	10.6	11.3	12.1
<b>Operating current assets</b>	<b>106</b>	<b>113</b>	<b>123</b>	<b>133</b>	<b>143</b>	<b>153</b>	<b>163</b>	<b>175</b>	<b>187</b>
Accounts Payable	7.5	8.0	8.7	9.4	10.1	10.8	11.5	12.3	13.2
Other current + accrued exp.	94	101	110	118	127	136	145	155	166
<b>Operating current liabilities</b>	<b>101</b>	<b>109</b>	<b>118</b>	<b>128</b>	<b>137</b>	<b>146</b>	<b>157</b>	<b>168</b>	<b>180</b>
<b>Net working capital</b>	<b>4.28</b>	<b>4.58</b>	<b>4.99</b>	<b>5.39</b>	<b>5.77</b>	<b>6.17</b>	<b>6.60</b>	<b>7.07</b>	<b>7.56</b>
PP&E	9.6	10.3	11.2	12.1	12.9	13.8	14.8	15.8	16.9
Capitalized software	149	153	158	163	167	172	178	183	188
INVESTED CAPITAL	163	168	174	180	186	192	199	206	213
ROIC	71%	71%	79%	87%	94%	101%	109%	119%	127%

## Sensitivity Analysis

		Sales Growth				
		2%	4%	6%	8%	10%
Exit Multiple	9x	147	163	181	201	223
	10x	156	173	193	214	238
	11x	164	183	204	228	253
	12x	173	193	216	241	269
	13x	182	204	228	255	284
	14x	191	214	240	268	300



## Ansvarsbegränsning

Analys, dokument och all annan information (Vidare "analys(en)") som härrör från LINC Research & Analysis ("LINC R&A" (LINC är en ideell organisation (organisationsnummer 845002-2259))) är framställt i informationssyfte och är inte avsett att vara rådgivande. Informationen i analysen ska inte anses vara en köp/säljrekommendation eller på annat sätt utgöra eller uppmana till en investeringsstrategi.

Informationen i analysen är baserad på källor, uppgifter och personer som LINC R&A bedömer som tillförlitliga, men LINC R&A kan aldrig garantera riktigheten i informationen. Den framåtblickande informationen i analysen baseras på subjektiva bedömningar om framtiden, vilka alltid är osäkra och därför bör användas försiktigt. LINC R&A kan aldrig garantera att prognoser och framåtblickande estimat kommer att bli uppfyllda. Om ett investeringsbeslut baseras på information från LINC R&A eller person med koppling till LINC R&A, ska det anses som dessa fattas självständigt av investeraren. LINC R&A fransäger sig därmed allt ansvar för eventuell förlust eller skada av vad slag det än må vara som grundar sig på användandet av analys, dokument och all annan information som härrör från LINC R&A.

## Intressekonflikter och opartiskhet

För att säkerställa LINC R&A:s oberoende har LINC R&A inrättat interna regler. Utöver detta så är alla personer som skriver för LINC R&A skyldiga att redovisa alla eventuella intressekonflikter. Dessa har utformats för att säkerställa att *KOMMISSIONENS DELEGERADE FÖRORDNING (EU) 2016/958 av den 9 mars 2016 om komplettering av Europaparlamentets och rådets förordning (EU) nr 596/2014 vad gäller tekniska standarder för tillsyn för de tekniska villkoren för en objektiv presentation av investeringsrekommendationer eller annan information som rekommenderar eller föreslår en investeringsstrategi och för uppgivande av särskilda intressen och intressekonflikter* efterlevs.

Om skribent har ett innehav där en intressekonflikt kan anses föreligga, redovisas detta i informationsmaterialet.

## Övrigt

LINC R&A har ej mottagit betalning eller annan ersättning för att göra analysen.

Analysen avses inte att uppdateras.

## Upphovsrätt

Denna analys är upphovsrättsskyddad enligt lag och är LINC R&A:s egendom (© LINC R&A 2017).

