

ESG insight



IAR SYSTEMS

Security for mainstream MCUs

IAR's decision to adapt its security offering to support mainstream microcontrollers should widen the long-term market potential. However, we sense it is likely to affect the inflection point for our sales forecasts, and hence we have cut our 2019–2021e EPS by 10–15% and lowered our fair value to SEK260–310 (270–340).

Q3 preview. Ahead of the Q3 results (due at 13:00 CET on 7 November), we forecast sales of SEK102m (5% growth of which -1% organic, 5% due to FX) and EBIT of SEK26m, corresponding to a 25% EBIT margin (owing to a rapid hiring of software developers since its acquisition of Secure Thingz). This also reflects tough comparisons (Q3 2018 sales were up 16% YOY) in its licence business, and minimal sales contribution from its security product, while we believe RISC-V could surprise on the upside as we note strong customer interest especially in China where there are efforts to side-step the US trade sanctions on Arm ISA.

A week ago IAR extended its security offering to include training, technical support and consulting services. It has simplified IP protection to enable mainstream device support, rather than being reliant on secure chips in the market, and has teamed up with leading processor vendors ST, NXP, and Microchip for this launch (whose devices compose c30–40% of IAR's installed base, we estimate). This should provide a faster ramp-up for OEMs, where IAR will relinquish the highest level of security, to maximise the sales potential. Long-term this is a clear positive for its addressable market opportunity, in our view, but for our 2019–2020 forecasts, we sense that adjusting its offering one quarter ahead of when we expect sales to materialise could bring into question current customer traction, and thus push out the inflection point for sales.

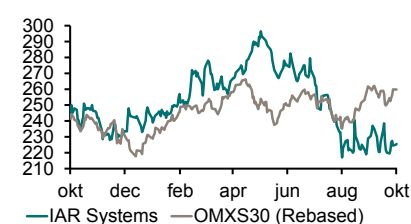
We have cut our 2019–2021e EPS by 10–15% to reflect lower sales assumptions and timing effects for IAR's security offering based on weaker than anticipated visibility.

At SEK226, little is priced in for its security offering and RISC-V. The timing of new product launches is not linear but we believe that the long-term story is still strong. Owing to our estimate cuts, we have lowered our fair value to SEK260–310 (270–340) but believe that if IAR Systems can leverage its central position towards the embedded industry's key themes, there is value-creation potential beyond SEK400/share.

Year-end Dec	2015	2016	2017	2018	2019e	2020e	2021e
Revenue (SEKm)	312	328	345	385	424	518	623
EBITDA adj (SEKm)	98	113	127	140	152	207	272
EBIT adj (SEKm)	83	101	107	119	115	154	199
PTP (SEKm)	83	100	106	117	112	151	195
EPS rep (SEK)	5.02	6.18	6.33	6.67	6.29	8.30	10.73
EPS adj (SEK)	5.02	6.18	6.33	6.67	6.21	8.30	10.73
DPS (SEK)	5.00	7.00	5.00	4.99	5.00	5.50	5.50
Revenue growth (%)	21.9	5.4	5.1	11.7	10.0	22.1	20.4
EBITDA growth adj (%)	54.6	15.2	12.4	10.1	8.4	36.4	31.1
EPS growth adj (%)	50.2	23.0	2.6	5.3	-6.8	33.6	29.4
EBITDA margin adj (%)	31.5	34.5	36.9	36.4	35.9	40.0	43.6
EV/Sales adj (x)	5.80	7.63	6.58	8.32	7.13	5.84	4.79
EV/EBITDA adj (x)	18.4	22.1	17.8	22.9	19.9	14.6	11.0
EV/EBIT adj (x)	21.7	24.9	21.1	27.0	26.3	19.6	15.0
P/E adj (x)	29.9	33.4	29.8	36.4	36.3	27.2	21.0
P/Book (x)	6.51	9.31	8.22	6.02	5.24	4.92	4.42
ROE (%)	21.9	27.3	28.1	21.6	15.1	18.7	22.2
ROCE (%)	28.5	34.9	33.6	26.1	18.3	21.2	25.5
Dividend yield (%)	3.3	3.4	2.6	2.1	2.2	2.4	2.4

Source: Company (historical figures), DNB Markets (estimates)

IARB versus OMXS30 (12m)



Source: Factset

SUMMARY

Share price (SEK)	226
Tickers	IARB SS, IARB.ST

CAPITAL STRUCTURE

No. of shares (m)	13.6
No. of shares fully dil. (m)	14.0
Market cap. (SEKm)	3,071
NIBD adj end-2019e (SEKm)	-50
Enterprise value adj (SEKm)	3,021
Net debt/EBITDA adj (x)	-0.33
Free float (%)	100

Source: Company, DNB Markets (estimates)

Note: Unless otherwise stated, the share prices in this note are the last closing price.

NEXT EVENT

Q3 2019	07/11/2019
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ESTIMATE CHANGES (SEK)

Year-end Dec	2019e	2020e	2021e
Sales (old)	439.6	554.9	644.6
Sales (new)	423.8	517.6	622.9
Change (%)	-3.6	-6.7	-3.4
EPS (old)	6.94	9.87	12.14
EPS (new)	6.21	8.30	10.73
Change (%)	-10.5	-16.0	-11.6

Source: DNB Markets,

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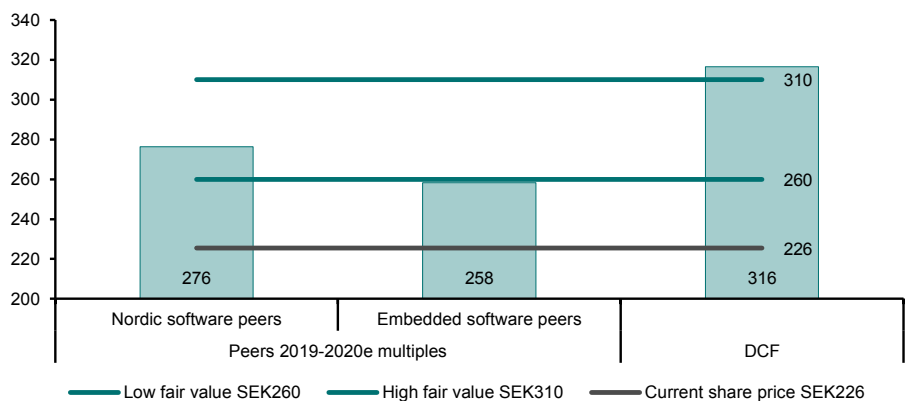
ANALYSTS

Joachim Gunell

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Overview

Valuation (SEK)



Source: DNB Markets

Downside risks to our fair value

- Failure to resurrect the growth story. If investors lose trust in IAR Systems' ability to resume growth, it could trigger share devaluation, as in 2017.
- Disappointing disclosures regarding key strategic partnerships in terms of when they will materialise and the fee structure. For instance, the Renesas Synergy agreement has yet to show itself in IAR Systems' sales. Thus, it would be negative if the Secure Thingz collaboration falls short of management expectations.
- IAR Systems is highly sensitive to a strengthening of the SEK (particularly against the USD, EUR, and JPY).

Source: DNB Markets

DNB Markets estimates

- We believe IAR 3.0 will mark the shift when the market starts to view it as the go-to tools partner for global names as they position their embedded systems ahead of the IoT. We would highlight the market opportunity within secure embedded systems.
- A broad consensus has yet to emerge on IAR Systems' investment case; however, we particularly like the group's market opportunity, operating profile, financial outlook, and valuation.
- We estimate that IAR Systems should generate a 2018–2021 EBIT CAGR of 19%, with the true potential expected beyond our forecast period.

Source: DNB Markets

Valuation methodology

- Blending our total peer group of Nordic software and embedded software peers with DCF suggests a fair value of SEK260–310 (270–340) in our 12-month perspective (methodology unchanged).
- Our estimates correspond to a 2020e P/E of 27x, an EV/EBIT of 20x, and an EV/sales of 6x.

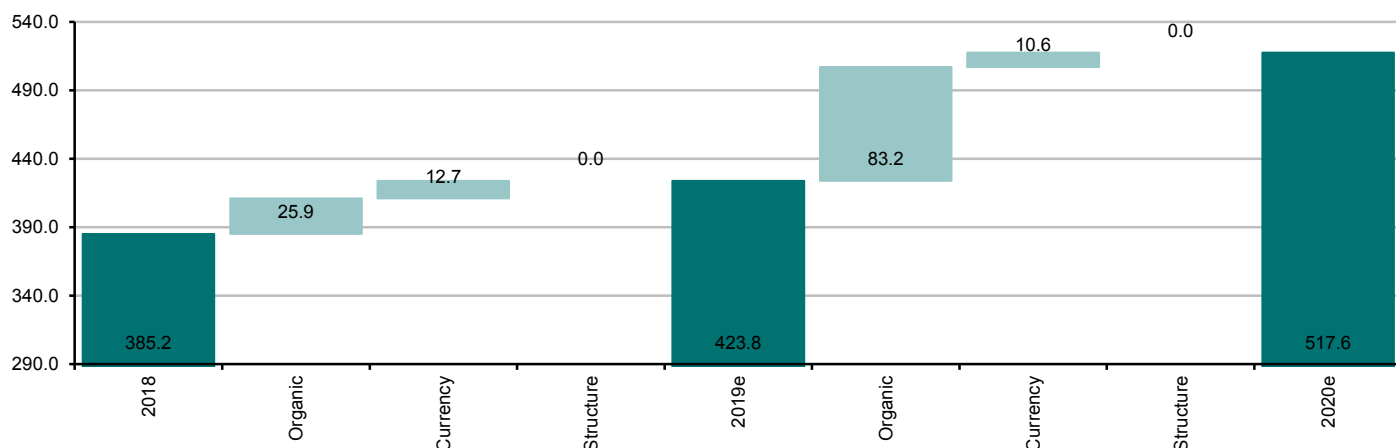
Source: DNB Markets

Upside risks to our fair value

- The company over-delivering on its financial targets (particularly for 10–15% in organic growth).
- If IAR Systems' new security offering gains faster penetration than we assume by leveraging on its head-start, we believe there is a potential for shareholder value creation beyond our fair value.
- Value-enhancing acquisitions to be integrated in its product offering or new strategic partnerships.
- Better cost control (as it has a reputation for tight cost control), implying higher margins.

Source: DNB Markets

Sales bridge 2018–2020e (SEKm)



Source: DNB Markets (forecasts), company (historical data)

ESG overview

Sustainability assessment

	Positive	Negative
Conclusions	<ul style="list-style-type: none"> ■ IAR Systems' software development tools are market leading in terms of code quality, analysis, functional safety and security. Its software ensures that the code is in line with industry standards, thereby guaranteeing its reliability when applied. ■ Increased IoT security legislation drives demand for its products as its OEM customers must comply with new security design requirements. 	<ul style="list-style-type: none"> ■ Data loss or security bugs in the software code could trigger regulatory scrutiny as well as legal costs and reputational damage, hampering its growth prospects. ■ IAR Systems' competitiveness relies greatly on its ability to continuously innovate. For this, its highly skilled workforce is a key resource. Failure to attract and retain such professionals could lead to delays in innovation and a loss of market share.
Actions being taken by company	<ul style="list-style-type: none"> ■ Embedded programmers clearly need to protect their code from IP theft and illegal copying as IoT security issues are becoming increasingly prevalent. Following the acquisition of Secure Thingz, IAR Systems' tools are increasingly linked to sustainability as they help developers take control of security from inception in the IP throughout the lifecycle of a digital product. 	<ul style="list-style-type: none"> ■ IAR Systems' development tools are the most used in the embedded industry owing to its leading optimisation technology, comprehensive debugger quality and renowned technical support. This is confirmed by its loyal customer base. It has 46,000 OEM customers and 150,000 technology users of which 95% are recurring customers, we believe.

Key ESG drivers

Short-term

- Today, less than 4% of new IoT devices have embedded security. ABI research forecasts that penetration will increase to 20% by 2022.
- IAR Systems' security offering (C-Trust and Embedded Trust) ensures that its customers' intellectual property is protected against IP theft, overproduction, piracy, and that software updates can be managed in a secure fashion. In other words, it creates a secure infrastructure and protects its customers' digital products from sabotage programmes and data intrusion. Examples of customer use cases have included:
 - A leading vending machine provider whose IP was stolen (stolen credit card and transaction details), a global white goods company whose stolen IP led to twice as many products manufactured, a leading door sensor provider whose IP was stolen internally, which led to direct revenue loss etc.
- To stay ahead of the competition, IAR Systems' relies heavily on its employees in the development and innovation of new technologies.
- Following the integration of Secure Thingz, IAR Systems' addressable market has expanded from application development into manufacturing and update management (the entire lifecycle of embedded systems). To keep pace with competition in a larger market, it needs to retain highly skilled software engineers, which could come at a higher cost than its traditional business.
- As an increasingly larger part of IAR Systems should revolve around Cambridge-based Secure Thingz, this could create some corporate cultural challenges versus the Uppsala-based legacy business.

Long-term

- Regulators will also play an active role in the long-term uptake of secure development tools. This is having an increasing impact on programmers' designs as applications need to remain secure across the entire lifecycle to comply with new legislation. We note legislation initiatives in Europe (UK government, ETSI, ENISA), the US (California IoT Security law, NIST evolving cyber security act), and government initiatives across Singapore, Japan, South Korea, and China etc.
- Considering its offering of software development tools to over 46,000 clients, as well as the sensitive nature of the data it handles, IAR Systems' is exposed to possible hacking attempts and misappropriation of technological data.

Q3 2019 preview

We forecast sales of SEK102m (5% growth of which -1% organic, 5% FX) and EBIT of SEK26m, corresponding to a 25% EBIT margin (down 7%-points YOY owing to a rapid hiring of software developers since the acquisition of Secure Thingz). Our weak organic sales forecast reflects tough comparisons (Q3 2018 sales grew 16% YOY) in its licence business, and minimal sales contribution from its security product, while we believe RISC-V could surprise on the upside as we note strong customer interest especially in China where efforts are being made to side-step the US trade sanctions on Arm ISA.

Figure 1: Q3 2019 results expectations

Key highlights (SEKm, except per share data)	Q3 2019		Deviation (%)		Q3 2018	DNB
	Actual	DNB	DNB	DNB	Actual	2019e
Sales		102.5			97.9	423.8
EBIT adjusted		26.0			31.3	115.2
Margin		25.4%			32.0%	27.2%
One-offs		0.0			0.0	0.0
EBIT		26.0			31.3	115.2
Margin		25.4%			32.0%	27.2%
EPS		1.41			1.97	6.21
Growth YOY						
Sales growth		4.7%			16.3%	10.0%
-of w hich organic		-0.6%			6.7%	6.7%
-of w hich FX		5.3%			9.6%	3.3%
Divisions (SEKm)		Q3 2019			Q3 2018	2019e
		Actual			Actual	DNB
Sales						
Legacy IAR Systems		99.1			95.5	406.2
Royalty-based revenue		1.5			1.4	6.5
Secure Thingz		1.8			1.0	11.1
Group		102.5			97.9	423.8
EBIT adjusted						
Legacy IAR Systems + Secure Thingz		24.5			29.9	108.8
Royalty-based revenue		1.5			1.4	6.3
Group		26.0			31.3	115.2
FX impact						
Sales		5.3%			9.6%	3.3%
EBIT		13.6%			19.9%	18.2%

Source: Company (historical figures), DNB Markets (estimates)

Estimate revisions

We have lowered our 2019–2021e EPS by 10-15% to reflect lower sales assumptions and timing effects for IAR's security offering based on weaker than anticipated visibility. We now forecast a 2018–2021 EPS CAGR of 17%.

Figure 2: Estimate changes

(SEKm, except per share data)	Old			New			Change		
	2019e	2020e	2021e	2019e	2020e	2021e	2019e	2020e	2021e
Sales									
Legacy IAR Systems	408.0	442.9	471.4	406.2	441.5	468.6	0%	0%	-1%
Royalty-based revenue	6.5	11.8	26.2	6.5	9.8	20.1	0%	-17%	-23%
Secure Thingz	25.1	100.3	147.1	11.1	66.3	134.2	-56%	-34%	-9%
Group Total	439.6	554.9	644.6	423.8	517.6	622.9	-4%	-7%	-3%
EBIT adjusted									
Legacy IAR Systems + Secure Thingz	122.1	171.6	199.7	108.8	144.7	179.9	-11%	-16%	-10%
Royalty-based revenue	6.4	11.4	25.4	6.4	9.4	19.4	0%	-18%	-24%
Group Total	128.4	183.0	225.0	115.2	154.0	199.2	-10%	-16%	-11%
EBIT adjusted margin									
Legacy IAR Systems + Secure Thingz	28.2%	31.6%	32.3%	26.1%	28.5%	29.8%	-211bp	-311bp	-245bp
Royalty-based revenue	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0bp	0bp	0bp
Group Total	29.2%	33.0%	34.9%	27.2%	29.8%	32.0%	-204bp	-321bp	-293bp
Organic growth									
Legacy IAR Systems	5.7%	6.6%	5.3%	5.0%	6.5%	5.7%	-73bp	-6bp	45bp
Royalty-based revenue	0.2%	1.1%	2.5%	0.2%	0.7%	1.9%	0bp	-40bp	-53bp
Secure Thingz	5.0%	15.9%	8.1%	1.5%	12.4%	12.7%	-354bp	-352bp	466bp
Group Total	11.0%	23.6%	15.8%	6.7%	19.6%	20.4%	-428bp	-398bp	457bp
Group									
Sales	439.6	554.9	644.6	423.8	517.6	622.9	-4%	-7%	-3%
Sales growth	17.6%	25.5%	15.8%	10.0%	22.1%	20.4%	-759bp	-337bp	457bp
Organic	11.0%	23.6%	15.8%	6.7%	19.6%	20.4%	-428bp	-398bp	457bp
Structure	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0bp	0bp	0bp
Currency	6.6%	1.9%	0.0%	3.3%	2.5%	0.0%	-331bp	60bp	0bp
Gross profit	429.8	542.6	630.3	414.4	506.1	609.0	-4%	-7%	-3%
Margin	97.8%	97.8%	97.8%	97.8%	97.8%	97.8%	0bp	0bp	0bp
EBIT adjusted	128.4	183.0	225.0	115.2	154.0	199.2	-10%	-16%	-11%
Margin	29.2%	33.0%	34.9%	27.2%	29.8%	32.0%	-204bp	-321bp	-293bp
Adjustments	0.0	0.0	0.0	0.0	0.0	0.0			
EBIT	128.4	183.0	225.0	115.2	154.0	199.2	-10%	-16%	-11%
Margin	29.2%	33.0%	34.9%	27.2%	29.8%	32.0%	-204bp	-321bp	-293bp
Net financial items	-2.8	-3.5	-4.4	-2.8	-3.3	-4.2			
Pretax profit	125.6	179.4	220.7	112.4	150.8	195.0	-11%	-16%	-12%
Tax	-30.0	-44.9	-55.2	-26.7	-37.7	-48.8	-11%	-16%	-12%
Tax rate	23.9%	25.0%	25.0%	23.8%	25.0%	25.0%	-13bp	0bp	0bp
Net profit	95.5	134.6	165.5	85.6	113.1	146.3	-10%	-16%	-12%
EPS adjusted	6.94	9.87	12.14	6.21	8.30	10.73	-10%	-16%	-12%
EPS	7.01	9.87	12.14	6.29	8.30	10.73	-10%	-16%	-12%
DPS	5.00	5.50	5.50	5.00	5.50	5.50	0%	0%	0%

Source: DNB Markets

Figure 3: Quarterly estimates by division

(SEKm, except per share data)	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19	Q2'19	Q3'19e	Q4'19e	Q1'20e	Q2'20e	Q3'20e	Q4'20e
Sales												
Legacy IAR Systems	87.6	93.8	95.5	97.8	98.0	96.8	99.1	112.0	109.8	106.3	106.7	118.5
Royalty-based revenue	1.3	1.3	1.4	1.5	1.4	1.5	1.5	2.1	2.0	2.1	2.1	3.7
Secure Thingz	0.0	0.5	1.0	3.5	0.4	0.7	1.8	8.4	10.7	13.7	18.3	23.7
Group Total	88.9	95.6	97.9	102.8	99.8	99.0	102.5	122.5	122.5	122.0	127.1	145.9
EBIT												
Legacy IAR Systems + Secure Thingz	28.2	22.4	29.9	29.6	28.0	22.3	24.5	33.8	35.8	31.3	35.8	41.4
Royalty-based revenue	1.3	1.3	1.4	1.5	1.4	1.5	1.5	2.1	2.0	2.1	2.1	3.7
Group Total	29.5	23.7	31.3	31.1	29.4	23.8	26.0	35.9	37.8	33.3	37.8	45.1
EBIT adjusted margin												
Legacy IAR Systems + Secure Thingz	32.2%	23.9%	31.3%	30.3%	28.6%	23.0%	24.7%	30.2%	32.6%	29.4%	33.5%	35.0%
Royalty-based revenue	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Group Total	33.2%	24.8%	32.0%	30.3%	29.5%	24.0%	25.4%	29.3%	30.8%	27.3%	29.8%	30.9%
Organic growth												
Legacy IAR Systems	4.9%	7.9%	6.5%	9.6%	3.4%	-2.3%	-1.5%	7.1%	6.9%	6.8%	6.4%	6.0%
Royalty-based revenue	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	0.5%	0.5%	0.5%	0.5%	1.2%
Secure Thingz	0.0%	0.0%	0.1%	0.3%	0.0%	0.0%	0.8%	4.3%	9.9%	12.7%	15.2%	11.9%
Group Total	5.0%	8.1%	6.7%	10.0%	3.5%	-2.3%	-0.6%	11.9%	17.2%	20.1%	22.1%	19.2%
Group												
Sales												
Group Total	88.9	95.6	97.9	102.8	99.8	99.0	102.5	122.5	122.5	122.0	127.1	145.9
Sales growth	2.9%	10.1%	16.3%	17.4%	12.3%	3.6%	4.7%	19.2%	22.8%	23.2%	24.1%	19.1%
Organic	5.0%	8.1%	6.7%	10.0%	3.5%	-2.3%	-0.6%	11.9%	17.2%	20.1%	22.1%	19.2%
Structure	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Currency	-2.1%	2.1%	9.6%	7.3%	8.8%	5.9%	5.3%	7.3%	5.5%	3.2%	2.0%	-0.1%
Gross profit	86.1	93.7	95.8	100.6	97.7	96.5	100.3	119.9	120.0	118.9	124.4	142.8
Margin	96.9%	98.0%	97.9%	97.9%	97.9%	97.5%	97.9%	97.9%	97.9%	97.5%	97.9%	97.9%
EBIT adjusted	29.5	26.9	31.3	31.1	29.4	23.8	26.0	35.9	37.8	33.3	37.8	45.1
Margin	33.2%	28.1%	32.0%	30.3%	29.5%	24.0%	25.4%	29.3%	30.8%	27.3%	29.8%	30.9%
Adjustments	0.0	-3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBIT	29.5	23.7	31.3	31.1	29.4	23.8	26.0	35.9	37.8	33.3	37.8	45.1
Margin	33.2%	24.8%	32.0%	30.3%	29.5%	24.0%	25.4%	29.3%	30.8%	27.3%	29.8%	30.9%
Net financial items	-0.4	-1.7	-0.3	0.6	-0.2	-2.0	-0.4	-0.2	-0.8	-1.7	-0.6	-0.2
Pretax profit	29.1	22.0	31.0	31.7	29.2	21.8	25.7	35.7	37.0	31.6	37.2	45.0
Tax	-6.3	-5.8	-4.2	-9.9	-6.3	-5.1	-6.4	-8.9	-9.3	-7.9	-9.3	-11.2
Tax rate	21.6%	26.4%	13.5%	31.2%	21.6%	23.4%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Net profit	22.8	16.2	26.8	21.8	22.9	16.7	19.2	26.8	27.8	23.7	27.9	33.7
EPS adjusted	1.81	1.43	1.97	1.60	1.64	1.20	1.41	1.96	2.04	1.74	2.05	2.47
EPS	1.81	1.20	1.97	1.60	1.68	1.23	1.41	1.96	2.04	1.74	2.05	2.47
DPS	0.00	5.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	5.50	0.00	0.00

Source: DNB Markets (forecasts), company (historical data)

15 October 2019

Figure 4: HMS Networks' valuation versus listed peers

	Mkt. cap.	P/E (x)			EV/EBIT (x)			EV/Sales (x)			Div. yield (%)		ROE (%)		EBIT margin		CAGR 2019-2021e (%)		
	(SEKbn)	2019e	2020e	2021e	2019e	2020e	2021e	2019e	2020e	2021e	2019e	2020e	2019e	2020e	2019e	2020e	Sales	EBIT	EPS
IAR Systems (DNBe)	3.1	35.9	27.2	21.0	26.2	19.5	14.9	7.1	5.8	4.8	2.2	2.4	15	18	27.2	29.8	17	19	17
<i>Premium/discount</i>		-14%	-22%	-28%	-21%	-29%	-35%	-28%	-30%	-34%									
IAR Systems (Cons.)	3.1	34.5	25.2	21.7	24.7	18.5	15.7	7.1	5.9	5.3	2.3	2.5	17	22	28.3	31.4	16	24	26
<i>Premium/discount</i>		-18%	-28%	-25%	-26%	-33%	-32%	-28%	-29%	-27%									
Nordic software peers																			
Admicom	2.8	49.4	38.7	28.9				15.8	12.1	9.6	1.4	1.8	41	43	41.4	40.8	28	31	31
Fortnox	10.1	76.7	60.0	45.3	58.5	44.6	33.0	18.3	14.8	11.8	0.3	0.4	59	49	30.9	32.3	24	31	30
HMS Networks	6.1	33.2	25.8	21.5	24.3	19.1		4.2	3.9	3.4	1.5	1.6			16.9	19.2	11	22	24
INVISIO Communications	3.6	43.6	31.3	24.0	32.7	23.3	17.5	7.8	6.1	5.1	1.0	1.4	26	29	23.1	25.1	23	34	35
Lime Technologies	1.7	36.6	28.4	21.9	34.0	25.8	19.5	6.0	5.1	4.4	1.3	1.6	63	57	17.6	19.2	17	29	29
SimCorp	35.8	34.1	31.1	26.7	26.4	24.1	20.9	7.4	6.8	6.2	1.3	1.5	47	42	27.7	27.6	9	11	13
Vitec Software	4.6	39.5	33.9	31.6	30.1	26.2	24.2	4.2	4.0	3.9	0.8	1.0	17	17	13.7	14.9	4	10	12
Embedded software peers																			
Cadence Design Systems	184.9	31.4	29.3	27.4	24.9	22.6	20.0	8.0	7.5	7.1			42	30	31.8	31.7	7	7	7
ANSYS	188.2	36.8	33.8	31.0	28.1	25.1	21.9	12.6	11.5	10.5	0.0	0.0	17	15	44.2	43.8	9	10	9
Xilinx	239.3	25.7	24.5	22.1	25.1	24.9	20.4	7.5	6.7	6.0	1.5	1.5	34	33	31.8	28.5	12	9	8
Altium	28.7	54.8	48.3	39.4	49.3	38.1	29.8	16.4	13.5	11.0	1.3	1.5	32	32	33.5	35.4	22	27	18
Average	64.2	42.0	35.0	29.1	33.3	27.4	23.0	9.8	8.4	7.2	1.0	1.2	38	35	28.4	29.0	15	20	20
Median	10.1	36.8	31.3	27.4	29.1	25.0	20.9	7.8	6.8	6.2	1.3	1.5	38	32	30.9	28.5	12	22	18

Source: Bloomberg (underlying data), DNB Markets (further calculations)

Summary of positives

World-leading provider of software development tools and services

Sweden-based IAR Systems is a world-leading provider of software tools and services for embedded systems (a chip containing embedded software) that enable the development of digital products for 46,000+ customers with 150,000+ users in end-markets, underpinned by growing demand for digital technology. We believe IAR Systems has a resilient business model selling flexible right-to-use licences to access its wholly owned software tool-chain (the IAR Embedded Workbench), which enables close customer relationships, high customer retention, and consistent revenue streams complemented by a royalty-based agreement with world-leading processor vendor Renesas Electronics. The March 2018 acquisition of Secure Thingz (the leading provider of advanced security solutions that help customers to take control of digital products from inception) has made IAR Systems the frontrunner ahead of the paradigm shift associated with security solutions for embedded systems in the Internet of Things (IoT).

Its software tools and services enable the development of digital products...

...in end-markets underpinned by growing demand for digital technology

Embedded resilience in a sticky business

We consider IAR Systems' key competitive advantage to be its proprietary technology platform, the IAR Embedded Workbench, which holds a ~50% global market share, as: 1) it is a unique line-up of a complete tool-chain for product developers; 2) being independent, IAR Systems supports a wide range of design architecture, meaning customers can choose the programming environment and tools according to their own needs, regardless of processor or project, which avoids locking customers in to one technical platform; 3) superior quality as its commercial customers cannot compromise on tools' code performance, reliability, user-friendliness, or time-to-market using inferior technologies such as open-source alternatives; 4) it is now a leading participant in embedded systems security, and should be able to leverage its head-start and unique technology to maximise the market potential; and 5) a scaled-up management team with the ability to execute the growth potential in the business, in our view.

IAR Systems owns the market for software development tools with c50% global market share

Key competitive strengths:

- 1) unique and complete tool-chain
- 2) independence
- 3) high-quality products
- 4) frontrunner in security solutions
- 5) management's ability to achieve its long-term potential

IAR 3.0

IAR Systems has gone through various phases since 2010, having: 1) streamlined the business towards proprietary software, creating a more specialised company; and 2) shifted its project-based business model to scalable licence sales, which has substantially improved margins. In our view, it is now heading into its third phase: the growth story. We believe that IAR 3.0 (our interpretation of IAR Systems' next phase) marks the shift from being a supplier of a compiler to becoming the go-to software tool partner for global names such as Amazon and Renesas Electronics as they position their embedded systems ahead of the Internet of Things (IoT).

Setting the scene for the growth story

Growing addressable market with the spread of digital technology

The spread of digital technology is driving the market for embedded systems. Thus, the market has numerous underlying drivers that all indicate a continuation of the solid industry growth of the past decade. Global Market Insights estimates a 7% market CAGR until 2023e, and we believe the factors that should affect growth for IAR Systems are likely to be: 1) continued increase in the number (and complexity) of embedded systems driven by IoT; 2) demand for reliable and advanced software tools that offer faster time-to-market and a complete development platform; 3) the automotive opportunity as cars become mobile computing platforms; 4) RISC-V adoption; 5) market consolidation and participants becoming too dominant; and 6) untapped potential in security solutions for embedded systems.

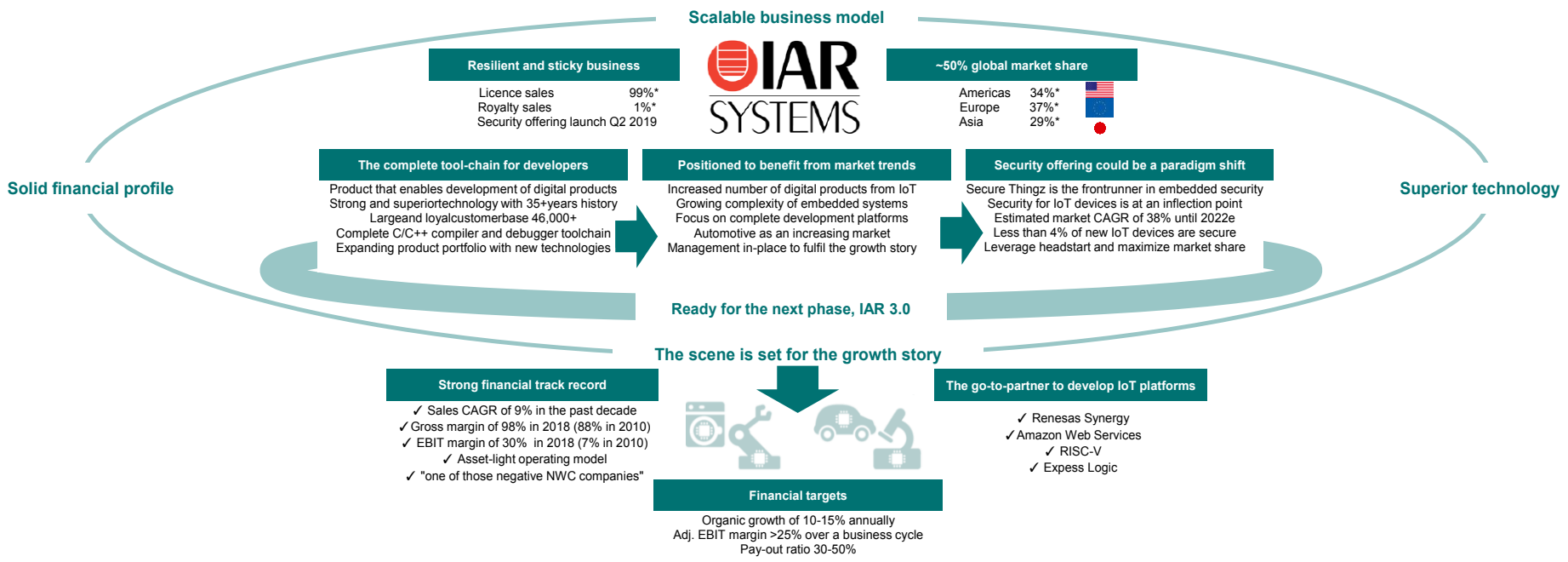
Numerous market drivers indicate a continuation of the solid industry growth

Security for embedded systems could mark a paradigm shift for IAR Systems

Having acquired Secure Thingz in Q2 2018, we believe IAR Systems is now the frontrunner in offering secure embedded systems. Theft of IP (code), cloning, counterfeiting etc. has made security issues the number one barrier for IoT adoption. The security market for embedded systems is in its inception phase but we expect it to grow rapidly through 2022 driven by 1) securing IP is a business imperative and 2) increasingly stringent security legislation. Thus, the share of secure new embedded products is set to grow from 4% today to almost 20% by 2022e, according to ABI Research. In Q2 2019, IAR Systems launched its security offering (C-Trust and Embedded Trust), which ensures that its customers' intellectual property is protected against IP theft, overproduction, piracy, and that software updates can be managed in a secure fashion.

Untapped potential in security offering with an addressable market opportunity of USD3bn, highlights that if IAR Systems is able to grab just a small market share, it could have a swing factor on its valuation

Figure 5: IAR Systems' at a glance



Source: Company (underlying data), DNB Markets (compilation)

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We forecast 2018–2021 sales and EBIT CAGR of 17% and 19%, respectively

We forecast a 2018–2021 sales CAGR of 17% and EBIT CAGR of 19% based on a strong market outlook underpinned by: 1) an increase in the number (and complexity) of embedded systems; 2) growing demand for reliable and advanced software tools that offer faster time-to-market and complete development platforms; 3) the automotive opportunity, as cars become mobile computing platforms; 4) rapid RISC-V adoption; and 5) minor uptake in royalties from Renesas Electronics. Moreover, we see additional prospects and untapped potential in security solutions for embedded systems.

This should be driven by a 6% organic sales CAGR for its legacy licensing business (98% of 2018 sales) as the aforementioned market drivers should translate into more processors and lines of code, driving demand for software development tools and possibly programmers (user keys) for IAR Systems, as well as a full user-friendly total solution enabling customers to re-use large amounts of code. The large growth opportunities for its legacy business are:

- 1 Growing RISC-V adoption as its tools launched in May 2019 and have been well received amongst customers (especially in China, which today accounts for 1% of group sales), setting the stage for accelerating organic growth.
- 2 Strategic customer sales now represent c10–15% of sales, highlighting that larger OEMs (in some cases 100+ developers) are increasingly standardising on IAR’s tools.
- 3 In addition, increased penetration from existing and new technologies in the IAR Embedded Workbench should drive add-on sales.

We estimate that revenues stemming from the royalty-based agreement with Renesas Electronics (1%) should contribute 1% organic sales CAGR for IAR Systems until 2021. We take a conservative approach when estimating the revenue impact.

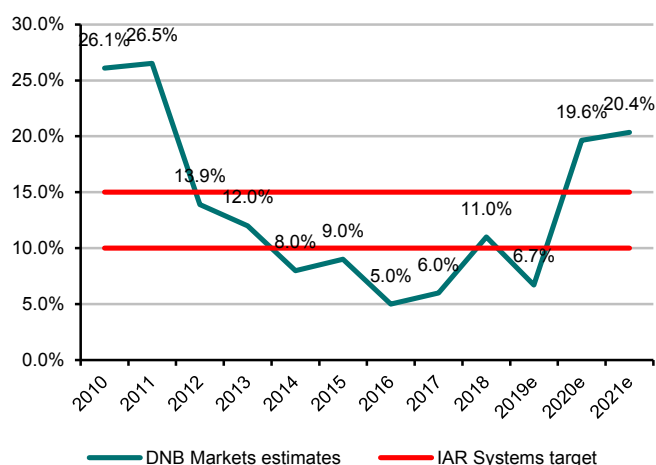
IAR Systems’ security offering lends the greatest growth potential, in our view, as IAR has a solid track record of offering new products to its existing customers. In a simplified scenario, we believe its existing customer base could represent a >SEK11bn revenue pool for its security offering. This should provide a long runway for future growth, but in the short-term we expect 1) security legislation to play an active role in the update of secure development tools; and 2) the company to focus on larger customer accounts. Furthermore discussions with its customers and partners at Embedded World 2019 cemented our view of IAR Systems’ value proposition.

We forecast a 2018–2021 EBIT CAGR of 19%, implying a margin gain from 30% in 2018 to 32% in 2021e, driven by: 1) solid organic volume growth; and 2) ample operational leverage (hurt in 2018 by the integration of Secure Thingz) in 2019–2021e as we believe IAR Systems should continue to benefit from economies of scale due to its large fixed cost base.

Market drivers should create more processors and lines of code, driving demand for software development tools, and a user-friendly total solution enabling customers to re-use code

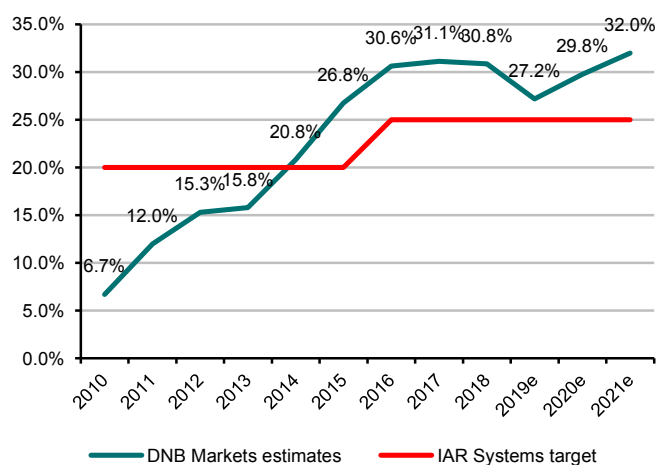
We expect Secure Thingz to contribute to group sales with 10% organic growth CAGR in 2018–2021

Figure 6: Organic sales growth (2010–2021e)



Source: DNB Markets (forecasts), company (historical data)

Figure 7: Adj. EBIT margin



Source: DNB Markets (forecasts), company (historical data)

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Financial targets

IAR Systems has three financial targets: 1) average organic growth of 10–15% annually; 2) an adj. EBIT margin in excess of 25% over a business cycle; and 3) a dividend payout of 30–50% of annual net income. Our estimates are above IAR Systems’ throughout our forecast period.

Figure 8: IAR Systems’ financial targets – reported and DNB Markets’ estimates

	Reported fiscal years					IAR target	DNB Markets’ estimates		
	2014	2015	2016	2017	2018		2019e	2020e	2021e
Organic growth	8.0%	9.0%	5.0%	6.0%	11.0%	10-15%	6.7%	19.6%	20.4%
EBIT margin	20.8%	26.8%	30.6%	31.1%	30.8%	>25%	27.2%	29.8%	32.0%
Pay-out ratio	149.3%	99.7%	113.3%	79.0%	74.9%	30-50%	80%	66%	51%

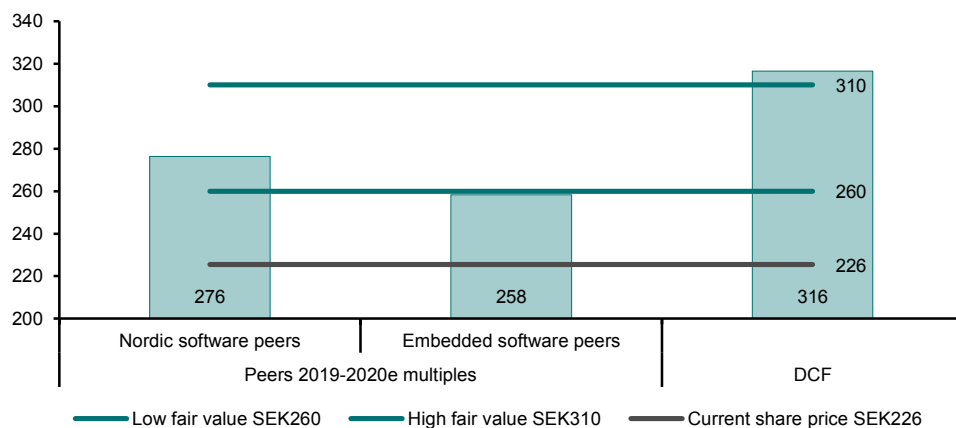
Source: DNB Markets (forecasts), company (historical data and targets)

We calculate a fair value of SEK260–310/share

Based on our group of Nordic software peers, embedded software peers, and our DCF model, we calculate a fair value of SEK260–310/share. We believe the market has been valuing IAR Systems relative to Nordic software peers, whereas in our view embedded software peers better reflect its operating environment, business model, and growth prospects. On the current share price, our estimates suggest a 27x 2020e P/E, 20x EV/EBIT, and 6x EV/sales, while our fair value suggests share price potential upside of 15–40%.

Fair value of SEK260–310/share suggests potential upside of 15–40%

Figure 9: Valuation summary (SEK/share)



Source: DNB Markets

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Summary of negatives

The key risks that could affect our fair value are: 1) IAR Systems' inability to resurrect the growth story, e.g. if it failed to capture the underlying market growth, or if there was prolonged market consolidation (causing market uncertainty) or delays in key strategic initiatives; 2) market entry from large and well-resourced participants that, until now, have overlooked the potential in software tools for embedded systems; and 3) FX headwinds, as the company is fairly sensitive to fluctuations in the SEK as it does not hedge its currency flows (with >98% of sales from markets outside Sweden but 57% of its cost base in SEK).

- **Failure to resurrect the growth story.** Having reported average local currency growth of 20% in 2010–2013, 9% in 2014–2015, and 7% in 2016–2018, we believe the key risk to the valuation is a failure to resurrect the organic growth story. While we have identified numerous market drivers that should fuel organic growth in our forecast period, an inability to capture these trends, delays in when the factors materialise, or disappointing disclosures regarding the new strategic alliances in royalty fees, licensing structures, etc. could raise questions about the operations and thus the valuation.
- **FX headwinds.** Although >98% of sales are from markets outside Sweden, the vast majority of the fixed cost base is denominated in SEK (we estimate ~58%); hence the company is fairly sensitive to fluctuations in this currency. If the SEK were to strengthen by 10% against its most important currencies (USD, EUR, JPY) as well as the GBP and KRW in 2018, we estimate a ~10% FX headwind on sales and a ~30% headwind on 2019 EBIT.
- **Intensified competitive landscape.** While the company holds leading positions across most processor types, it still faces a highly competitive environment, particularly from the independent supplier Green Hills Software and Arm's development tool, Kiel. If the competitiveness were to intensify or market growth rates were to abate, there could be pressure on the pricing of software licences (from those not giving it away free) in efforts to recapture growth or gain market share. While we believe the commercial viability of open source names is a limited risk for IAR Systems' offering today, any success for these alternatives could result in reduced licensing revenues for IAR Systems.
- **Continued market consolidation.** The ongoing consolidation trend among processor vendors could last longer than IAR Systems expects. If this continues to create market uncertainty and disrupt IAR Systems' partner network, it could hamper its growth prospects. Moreover, if the acquisitions of embedded software companies continue, it could cap IAR Systems' ability to integrate new technologies to its product offering. If it fails to acquire new technologies or create strategic alliances to integrate into IAR Systems' offering, this could impede its ability to address new market trends that should contribute to growth.
- **Large company entering the market.** While we believe the barriers to entry are considerable, we also believe the attractiveness of this market has been somewhat overlooked by industry giants as they have often acquired development tools companies and given away the products 'free' to reduce costs. As many competitors in the semiconductor industry (particularly processor vendors) but especially global giants such as Google and Amazon are well resourced, it could pose a threat if they were to consider increasing their presence in software development tools.
- **Limited supply of qualified personnel.** In an industry characterised by rapid technological development, it is vital for IAR Systems to continually improve its product offering through innovation. A need for its technology and products to be market-leading means it has to retain well qualified employees, particularly in the technological aspects of product development. Failure to respond quickly to technological developments through qualified personnel could hurt its operations.
- **Worsening economic conditions.** A deteriorating global economy would probably cause a downturn in the cyclical semiconductor industry and customers' end-markets, which could affect the number of new microprocessors, and consequently demand for software development tools that programme the chips.

Until now large well-resourced competitors have overlooked the potential in software tools for embedded systems

IAR Systems is sensitive to fluctuations in the SEK

Growth prospects could be hampered by further consolidation

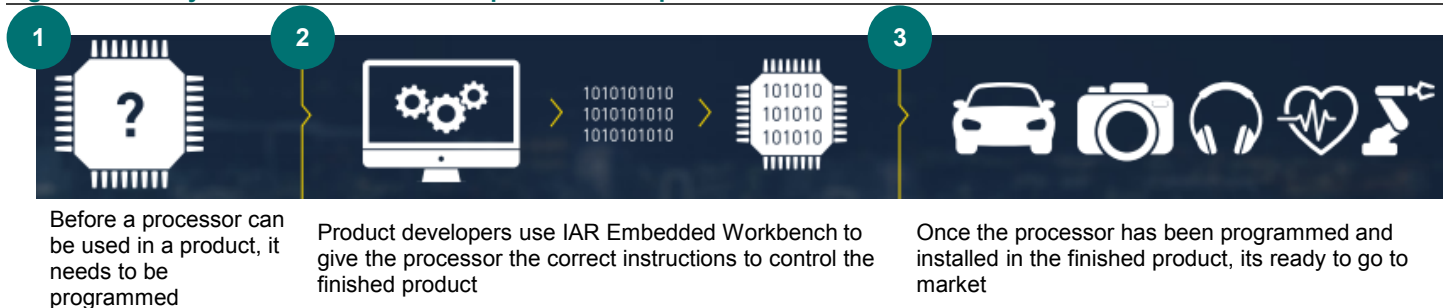
Retaining talented employees is key

Business overview

Dating back to 1983, IAR Systems is an independent provider of software for the programming of microprocessors in embedded systems (the control function in digital products). Its leading software – the IAR Embedded Workbench – facilitates, quality-assures, and improves the time-to-market of programming instructions in processors. The customer base of 46,000+ OEM customers and 150,000+ technology users is found mainly in end-markets underpinned by growing demand for digital technology and embedded systems, such as industrial automation, medical technology, telecommunications, consumer electronics, and the automotive industry.

World-leading provider of software for programming processors in embedded systems, which enable the development of digital products

Figure 10: IAR Systems' role in customers' product development



Source: Company

Headquartered in Uppsala (Sweden), the company holds a leading global market share of ~50% with 95%+ of sales stemming from markets outside the Nordics and a headcount of 215. IAR Systems' business model is primarily licence-based, where customers pay for a flexible right-to-use licence to access the IAR Embedded Workbench®, giving it attractive and steady revenue streams (~30% recurring revenues). In addition to this, IAR Systems has undergone two of the most comprehensive product launches in its history in 2019. With the launch of its security offering (C-Trust and Embedded Trust) as well as for RISC-V tools introducing a subscription-based model, we believe the building blocks are in place take the case to the next level:

50% global market share with 98% licence-based revenues, which are flexible for customers and leverage the number of programmers using its licence...

- **IAR Embedded Workbench (98% of 2018 sales)** based on the number of licence users (perpetual software keys) of the IAR Embedded Workbench sold when a developer programmes a product. The traditional licence costs cSEK30,000 (upfront) while the customer can add support and updates for an annual cost of 20% of the licence price.

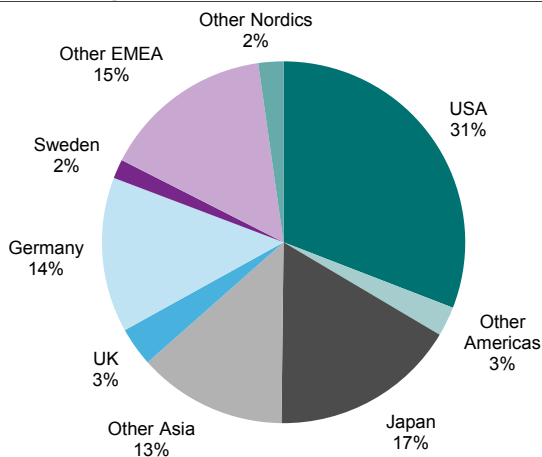
...In 2019, IAR Systems via its RISC-V tools and Embedded Trust also introduced a subscription model...

- **Secure Thingz (1%)**. C-Trust at ~SEK30,000/seat as a perpetual licence targeting IAR's 150,000 users, Embedded Trust at ~SEK150,000/seat as an annual subscription licence targeting the security experts at IAR Systems' 46,000 OEM customers.

... complemented by royalty-based revenue that leverages the number of chips used in customers' production, which falls straight through to EBIT

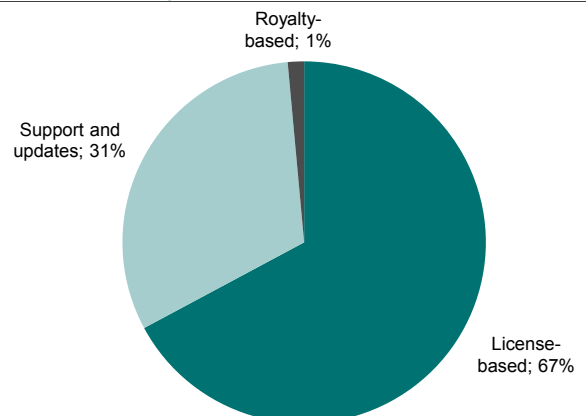
- **Royalty-based sales (1%)** based on the number of chips produced in Renesas Synergy.

Figure 11: Geographical sales split (2018)



Source: Company

Figure 12: Sales by business model (2018)



Source: Company

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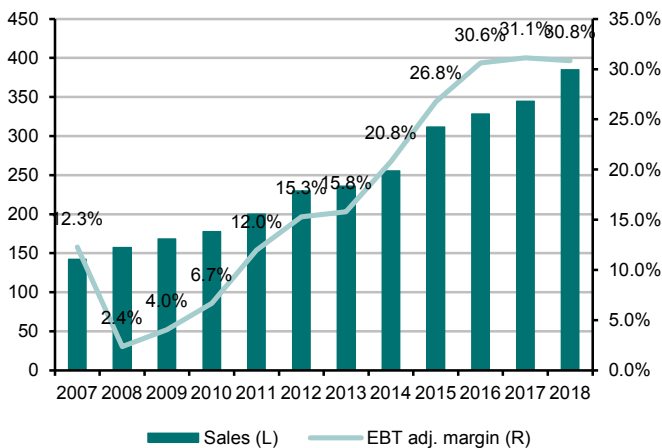
IAR Systems was acquired by IT conglomerate Nocom in 2005. However, by 2010 Nocom (known as Intoi by then) wanted to focus on proprietary software and create a more specialised company, so it kept only IAR Systems and took on that name.

With 2018 net sales of SEK385m, IAR Systems is 3x larger than the company acquired in 2005. While generating a sales CAGR of 9% over the past 10 years, it was able to significantly boost its underlying profitability from an adj. EBIT margin of 12.3% in 2007 to 30.8% in 2018, which we attribute to: 1) the scalability of its high gross-margin standardised software; 2) more focus on proprietary products; and 3) increased cost efficiency (given the large fixed cost base where personnel costs represent 44% of sales).

From an IT conglomerate to a streamlined proprietary software provider...

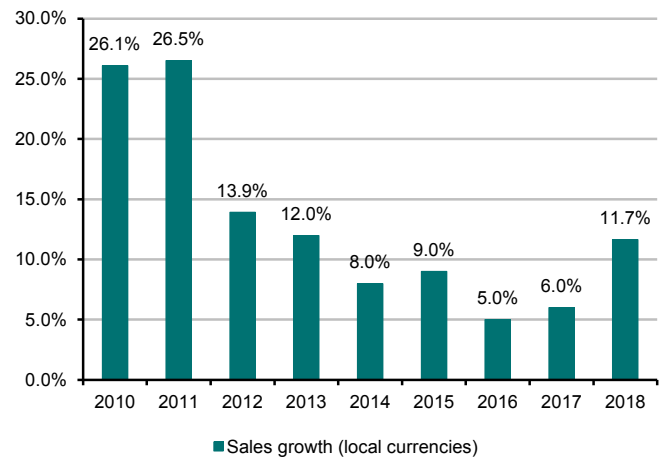
...with profitable growth, sales CAGR of 9% and adj. EBIT CAGR of 40% in the past 10 years

Figure 13: IAR Systems – sales (SEKm) and adj. EBIT margin



Source: Company

Figure 14: IAR Systems – sales growth local currencies



Source: Company

IAR Systems' key competitive advantage in our view is its flagship product, the IAR Embedded Workbench, which is a complete tool-chain for customers. Being independent, the software supports 14,000+ processors for embedded systems from the major process vendors with 8-, 16-, and 32-bit architecture, meaning customers can choose the programming environment and tools according to their own needs regardless of processor or project, which avoids locking customers in to one technical platform. Moreover, it can re-use 70–80% of previously developed code instead of rewriting it (saving time and resources).

Key competitive advantage: cutting-edge wholly owned technology that maximises customer benefits offering a complete solution...

Over the past few years, IAR Systems has expanded its product portfolio and now offers several adjacent products integrated in the IAR Embedded Workbench to optimise the code programming, for instance C-STAT and C-RUN (static and dynamic analysis that quality-assures and strengthens the reliability of the programming), Embedded Trust (security development environment for IoT solutions) and C-Trust (delivering secure, encrypted code) through its acquisition of Secure Thingz, as well as support for RISC-V, positioning IAR Systems to two of the embedded industry's hottest themes. In addition to driving add-on sales, this has – combined with a comprehensive support organisation – translated into impressive customer retention (95% recurring customers) and strengthened IAR Systems' competitiveness.

...which, combined with complementary integrated products and comprehensive support means a loyal customer base (95% recurring customers)

Figure 15: IAR Embedded Workbench® sold to >46,000 customer organisations

IDE Tools	Build Tools	C-SPY Debugger	C-Trust	Embedded Trust
<ul style="list-style-type: none"> - Editor - Project manager - Library Tools 	<ul style="list-style-type: none"> - IAR C/C++ Compiler - Assembler - Linker - RISC-V support 	<ul style="list-style-type: none"> - Simulator driver - Hardware debugging - Power debugging - RTOS plugins 	<ul style="list-style-type: none"> - Adds security to IAR Embedded Workbench - Delivery of secure and encrypted code - Inhibits unauthorized manufacturing 	<ul style="list-style-type: none"> - Security development environment - Identity and certificate management - Secure Boot Manager - Secure deployment and manufacturing mastering



Source: Company (information), DNB Markets (graph structuring)

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Forecast changes – P&L

(SEKm)	New			Old			Change		
	2019e	2020e	2021e	2019e	2020e	2021e	2019e	2020e	2021e
Revenues	424	518	623	440	555	645	-16	-37	-22
Cost of sales	-9	-12	-14	-10	-12	-14	0	1	0
Gross profit	414	506	609	430	543	630	-15	-37	-21
Operating expenses	-262	-299	-337	-265	-308	-338	3	9	1
EBITDA	152	207	272	165	235	292	-13	-27	-20
EBITDA adj	152	207	272	165	235	292	-13	-27	-20
EBITDA margin (%)	35.9	40.0	43.6	37.4	42.3	45.3	-1.6	-2.3	-1.7
Depreciation	-3	-5	-7	-4	-5	-7	0	0	0
Amortisation	-33	-48	-66	-33	-46	-60	-1	-2	-6
EBIT	115	154	199	128	183	225	-13	-29	-26
EBIT adj	115	154	199	128	183	225	-13	-29	-26
Net financial items	-3	-3	-4	-3	-4	-4	0	0	0
PBT	112	151	195	126	179	221	-13	-29	-26
Taxes	-27	-38	-49	-30	-45	-55	3	7	6
Minorities	0	0	0	0	0	0	0	0	0
Net profit	86	113	146	96	135	165	-10	-21	-19
Adjustments to net profit	0	0	0	0	0	0	0	0	0
Net profit adj	86	113	146	96	135	165	-10	-21	-19
<i>Per share data (SEK)</i>									
EPS	6.29	8.30	10.73	7.01	9.87	12.14	-0.73	-1.58	-1.41
EPS adj	6.21	8.30	10.73	6.94	9.87	12.14	-0.73	-1.58	-1.41
DPS ordinary	5.00	5.50	5.50	5.00	5.50	5.50	0.00	0.00	0.00
DPS	5.00	5.50	5.50	5.00	5.50	5.50	0.00	0.00	0.00
<i>Other key metrics (%)</i>									
Revenue growth	10.0	22.1	20.4	14.1	26.2	16.2	-4.1	-4.1	4.2
EBIT adj growth	-3.1	33.8	29.4	8.1	42.5	23.0	-11.2	-8.7	6.4
EPS adj growth	-6.8	33.6	29.4	4.1	42.3	23.0	-10.9	-8.7	6.4
Avg. number of shares (m)	14	14	14	14	14	14	0	0	0
Capex	-78	-82	-87	-79	-92	-97	2	10	10
OpFCF	74	125	184	85	143	195	-11	-18	-11
Working capital	42	52	108	50	70	130	-8	-18	-22
NIBD adj	-50	-49	-91	-46	-56	-100	-4	7	9

Source: DNB Markets

Forecast changes – By segment and assumptions

(SEKm)	New			Old			Change		
	2019e	2020e	2021e	2019e	2020e	2021e	2019e	2020e	2021e
Assumptions									
Revenue org. % YOY	6.72	19.63	20.35	11.00	23.61	15.78	-4.28	-3.98	4.57
Structure impact % YOY	0.00	0.00	0.00			0.00			0.00
Currency impact % YOY	6.78	2.50	0.00	6.61	1.90	0.00	0.17	0.60	0.00

Source: DNB Markets

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Quarterly numbers

(SEKm)	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019e	Q2 2019e	Q3 2019e	Q4 2019e	Q1 2020e
Revenues	84	88	89	96	98	103	100	99	102	123	123
Cost of sales	-2	-3	-3	-2	-2	-2	-2	-3	-2	-3	-3
Gross profit	82	85	86	94	96	101	98	97	100	120	120
Operating expenses	-49	-53	-51	-64	-58	-63	-59	-64	-66	-74	-68
EBITDA	34	32	35	30	38	38	38	33	35	46	52
Depreciation	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Amortisation	-5	-5	-5	-6	-6	-6	-9	-8	-8	-9	-13
EBIT	29	27	30	24	31	31	29	24	26	36	38
Net financial items	0	0	0	-2	0	1	0	-2	0	0	-1
PBT	28	26	29	22	31	32	29	22	26	36	37
Taxes	-8	-7	-6	-6	-4	-10	-6	-5	-6	-9	-9
Minorities	0	0	0	0	0	0	0	0	0	0	0
Net profit	20	20	23	16	27	22	23	17	19	27	28
Adjustments to net profit	0	0	0	-2	0	0	0	0	0	0	0
Net profit adj	20	20	23	14	27	22	23	17	19	27	28
Dividend paid	0	0	0	-68	0	0	0	-68	0	0	0
Avg. number of shares (m)	13	13	13	14	14	14	14	14	14	14	14
<i>Per share data (SEK)</i>											
EPS	1.61	1.56	1.81	1.20	1.97	1.60	1.68	1.23	1.41	1.96	2.04
EPS adj	1.61	1.56	1.81	1.43	1.97	1.60	1.64	1.20	1.41	1.96	2.04
DPS ordinary	0.00	0.00	0.00	5.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00
DPS	0.00	0.00	0.00	5.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00
<i>Growth and margins (%)</i>											
Revenues, QOQ growth	-3.0	4.0	1.5	7.5	2.4	5.0	-2.9	-0.8	3.5	19.6	0.0
Revenues, YOY growth	3.8	3.1	2.9	10.1	16.3	17.4	12.3	3.6	4.7	19.2	22.8
EPS adj, YOY growth	-6.9	-2.0	21.3	-15.1	22.5	2.6	-9.2	-16.1	-28.3	22.8	24.2
Gross margin	97.7	97.0	96.9	98.0	97.9	97.9	97.9	97.5	97.9	97.9	97.9
EBITDA adj margin	40.1	36.4	39.0	31.4	38.6	36.6	38.5	33.2	33.7	37.6	42.3
Depreciation/revenues	-0.7	-0.7	-0.6	-0.6	-0.7	-0.8	-0.5	-1.0	-0.8	-0.9	-0.8
EBIT adj margin	34.0	30.6	33.2	28.1	32.0	30.3	29.5	24.0	25.4	29.3	30.8
Net profit margin	24.1	22.5	25.6	16.9	27.4	21.2	22.9	16.9	18.8	21.9	22.7

Source: Company (historical figures), DNB Markets (estimates)

Adjustments to quarterly numbers

(SEKm)	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019e	Q2 2019e	Q3 2019e	Q4 2019e	Q1 2020e
EBITDA	34	32	35	30	38	38	38	33	35	46	52
EBITDA adj	34	32	35	30	38	38	38	33	35	46	52
EBIT	29	27	30	24	31	31	29	24	26	36	38
Other EBIT adjustments	0	0	0	-3	0	0	0	0	0	0	0
EBIT adj	29	27	30	27	31	31	29	24	26	36	38
Net profit	20	20	23	16	27	22	23	17	19	27	28
Other EBIT adjustments	0	0	0	-3	0	0	0	0	0	0	0
Tax adjustments	0	0	0	0	0	0	0	0	0	0	0
Other adjustments	0	0	0	0	0	0	0	0	0	0	0
Net profit adj	20	20	23	14	27	22	23	17	19	27	28

Source: Company (historical figures), DNB Markets (estimates)

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Quarterly numbers by segment and assumptions

(SEKm)	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019e	Q2 2019e	Q3 2019e	Q4 2019e	Q1 2020e
Assumptions											
Revenue org. % YOY	8.38	8.47	4.98	8.06	6.65	10.05	3.49	-2.30	-0.65	11.88	17.23
Structure impact % YOY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Currency impact % YOY	-4.56	-5.41	-2.08	2.07	9.62	7.31	8.77	5.86	5.31	7.29	5.55

Source: Company (historical figures), DNB Markets (estimates)

Annual P&L

(SEKm)	2012	2013	2014	2015	2016	2017	2018	2019e	2020e	2021e
Revenues	230	236	256	312	328	345	385	424	518	623
Cost of sales	-23	-15	-13	-10	-12	-9	-9	-9	-12	-14
Gross profit	207	222	243	301	316	337	376	414	506	609
Operating expenses	-165	-171	-179	-203	-203	-209	-236	-262	-299	-337
EBITDA	42	51	64	98	113	127	140	152	207	272
Depreciation	-2	-2	-2	-3	-3	-2	-3	-3	-5	-7
Amortisation	-4	-7	-8	-12	-14	-17	-22	-33	-48	-66
EBIT	35	41	53	83	97	107	116	115	154	199
Net financial items	0	0	0	0	0	-2	-2	-3	-3	-4
PBT	35	37	54	83	100	106	117	112	151	195
Taxes	-22	-12	-11	-20	-22	-26	-26	-27	-38	-49
Effective tax rate (%)	63	31	21	24	22	24	22	24	25	25
Minorities	0	0	0	0	0	0	0	0	0	0
Net profit	13	26	42	63	78	80	91	86	113	146
Adjustments to net profit	0	3	0	0	-3	0	-2	0	0	0
Net profit adj	13	29	42	63	75	80	88	86	113	146
Dividend paid	-11	-23	0	-63	-88	-63	-68	-68	-75	-75
Avg. number of shares	11	12	13	13	13	13	14	14	14	14
<i>Per share data (SEK)</i>										
EPS	1.14	2.10	3.34	5.02	6.18	6.33	6.67	6.29	8.30	10.73
EPS adj	1.14	2.10	3.34	5.02	6.18	6.33	6.67	6.21	8.30	10.73
DPS ordinary	0.98	1.85	0.00	5.00	7.00	5.00	4.99	5.00	5.50	5.50
DPS	0.98	1.85	0.00	5.00	7.00	5.00	4.99	5.00	5.50	5.50
<i>Growth and margins (%)</i>										
Revenue growth	14.8	2.7	8.3	21.9	5.4	5.1	11.7	10.0	22.1	20.4
EPS adj growth	-53.2	83.4	59.2	50.2	23.0	2.6	5.3	-6.8	33.6	29.4
Gross margin	89.9	93.9	95.0	96.7	96.3	97.5	97.7	97.8	97.8	97.8
EBITDA margin	18.2	21.4	24.9	31.5	34.5	36.9	36.4	35.9	40.0	43.6
EBITDA adj margin	18.2	21.4	24.9	31.5	34.5	36.9	36.4	35.9	40.0	43.6
Depreciation/revenues	-1.0	-0.9	-0.9	-0.8	-0.8	-0.7	-0.7	-0.8	-1.0	-1.1
EBIT margin	15.3	17.5	20.8	26.8	29.4	31.1	30.0	27.2	29.8	32.0
EBIT adj margin	15.3	15.8	20.8	26.8	30.6	31.1	30.8	27.2	29.8	32.0
PBT margin	15.3	15.8	21.0	26.7	30.5	30.6	30.4	26.5	29.1	31.3
Net profit margin	5.6	11.0	16.5	20.3	23.8	23.2	23.6	20.2	21.8	23.5

Source: Company (historical figures), DNB Markets (estimates)

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Adjustments to annual P&L

(SEKm)	2012	2013	2014	2015	2016	2017	2018	2019e	2020e	2021e
EBITDA	42	51	64	98	113	127	140	152	207	272
EBITDA adj	42	51	64	98	113	127	140	152	207	272
EBIT	35	41	53	83	97	107	116	115	154	199
Other EBIT adjustments	0	4	0	0	-4	0	-3	0	0	0
EBIT adj	35	37	53	83	101	107	119	115	154	199
Net profit	13	26	42	63	78	80	91	86	113	146
Other EBIT adjustments	0	4	0	0	-4	0	-3	0	0	0
Tax adjustments	0	0	0	0	0	0	0	0	0	0
Other adjustments	0	0	0	0	0	0	0	0	0	0
Net profit adj	13	29	42	63	75	80	88	86	113	146
<i>Per share data (SEK)</i>										
EPS	1.14	2.10	3.34	5.02	6.18	6.33	6.67	6.29	8.30	10.73
Recommended adjustment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.08	0.00	0.00
EPS adj	1.14	2.10	3.34	5.02	6.18	6.33	6.67	6.21	8.30	10.73

Source: Company (historical figures), DNB Markets (estimates)

Cash flow

(SEKm)	2012	2013	2014	2015	2016	2017	2018	2019e	2020e	2021e
Net profit	13	26	42	63	78	80	91	86	113	146
Depreciation and amortisation	7	9	10	15	17	20	25	37	53	72
Cash flow from operations (CFO)	38	41	70	99	114	124	93	116	156	204
Capital expenditure	-22	-21	-32	-19	-19	-19	-47	-78	-82	-87
Acquisitions/Investments	0	0	0	0	0	0	-171	0	0	0
Divestments	0	0	0	1	0	0	0	0	0	0
Cash flow from investing (CFI)	-18	-19	-32	-18	-19	-38	-218	-96	-82	-87
Free cash flow (FCF)	20	22	39	80	95	86	-125	19	74	117
Net change in debt	0	0	0	0	0	0	0	30	0	0
Dividends paid	-11	-23	0	-63	-88	-63	-68	-68	-75	-75
Share issue (repurchase)	0	22	-53	0	0	0	172	0	0	0
Other	12	12	0	0	0	0	4	-5	0	0
Cash flow from financing (CFF)	1	12	-53	-64	-88	-63	108	-43	-75	-75
Total cash flow (CFO+CFI+CFF)	21	33	-15	17	7	23	-17	-24	0	42
<i>FCFF calculation</i>										
Free cash flow	20	22	39	80	95	86	-125	19	74	117
Less: tax shields/other	0	0	0	0	0	0	0	0	0	0
Less: acquisitions	0	0	0	0	0	0	171	0	0	0
Less: divestments	0	0	0	-1	0	0	0	0	0	0
Growth (%)										
CFO	10.1	6.3	72.7	40.4	15.7	8.5	-25.3	24.8	35.4	30.5
CFI	30.1	-5.5	-66.0	42.3	-3.3	-98.9	-478.5	55.7	15.0	-6.6
FCF	127.0	6.9	78.7	108.3	18.5	-9.4	-244.7	115.3	289.1	56.8
CFF	-92.2	1866.7	-550.8	-19.5	-39.0	28.5	270.4	-139.8	-74.7	0.0
FCFF	nm	nm	nm	nm	nm	nm	nm	nm	nm	nm

Source: Company (historical figures), DNB Markets (estimates)

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Balance sheet

(SEKm)	2012	2013	2014	2015	2016	2017	2018	2019e	2020e	2021e
Assets	324	370	375	399	396	410	722	817	857	930
Inventories	4	3	4	5	6	5	7	8	9	11
Trade receivables	29	34	39	44	48	51	63	68	79	93
Other receivables	14	15	11	20	19	12	38	52	52	52
Current financial assets	3	1	0	0	0	0	0	0	0	0
Cash and cash equivalents	49	82	71	89	99	120	106	85	84	126
Current assets	98	135	124	158	172	187	214	212	224	281
Property, plant and equipment	6	6	8	7	6	6	9	6	4	0
Other intangible assets	152	164	186	192	197	194	484	578	609	628
Deferred tax assets	62	59	51	37	16	3	13	18	18	18
Non-current financial assets	5	5	6	5	5	20	2	2	2	2
Non-current assets	226	235	251	241	224	223	508	605	633	648
Total assets	324	370	375	399	396	410	722	817	857	930
Equity and liabilities	324	370	375	399	396	410	722	817	857	930
Total equity	254	295	289	291	280	290	550	586	624	696
Trade payables	6	6	5	5	5	6	7	7	9	11
Other payables and accruals	53	54	65	84	92	31	131	66	66	66
Short-term debt	1	1	1	1	1	1	2	9	9	9
Total current liabilities	61	61	71	90	99	102	140	170	172	173
Long-term debt	1	1	2	1	2	2	1	25	25	25
Deferred tax liabilities	9	13	15	17	15	14	30	34	34	34
Other non-current liabilities	0	0	0	1	1	2	2	2	2	2
Total non-current liabilities	10	14	16	18	18	17	32	61	61	61
Total liabilities	70	75	87	108	116	120	172	230	233	234
Total equity and liabilities	324	370	375	399	396	410	722	817	857	930
<i>Key metrics</i>										
Net interest bearing debt	-47	-79	-68	-88	-97	-117	-103	-50	-49	-91

Source: Company (historical figures), DNB Markets (estimates)

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Valuation ratios

(SEKm)	2012	2013	2014	2015	2016	2017	2018	2019e	2020e	2021e
<i>Enterprise value</i>										
Share price (SEK)		39.77	74.75	150.00	206.00	189.00	243.00	225.50	225.50	225.50
Number of shares (m)	11.36	12.34	12.63	12.63	12.63	12.63	13.62	13.63	13.63	13.63
Market capitalisation		491	944	1,895	2,602	2,387	3,310	3,074	3,074	3,074
Net interest bearing debt	-47	-79	-68	-88	-97	-117	-103	-50	-49	-91
Adjustments to NIBD	0	0	0	0	0	0	0	0	0	0
Net interest bearing debt adj	-47	-79	-68	-88	-97	-117	-103	-50	-49	-91
EV		411	876	1,807	2,505	2,270	3,206	3,024	3,024	2,982
EV adj		411	876	1,807	2,505	2,270	3,206	3,024	3,024	2,982
<i>Valuation</i>										
EPS	1.14	2.10	3.34	5.02	6.18	6.33	6.67	6.29	8.30	10.73
EPS adj	1.14	2.10	3.34	5.02	6.18	6.33	6.67	6.21	8.30	10.73
DPS ordinary	0.98	1.85	0.00	5.00	7.00	5.00	4.99	5.00	5.50	5.50
DPS	0.98	1.85	0.00	5.00	7.00	5.00	4.99	5.00	5.50	5.50
P/E		18.9	22.4	29.9	33.4	29.8	36.4	35.9	27.2	21.0
P/E adj		18.9	22.4	29.9	33.4	29.8	36.4	36.3	27.2	21.0
P/B		1.66	3.27	6.51	9.31	8.22	6.02	5.24	4.92	4.42
Average ROE	5.3%	9.4%	14.5%	21.9%	27.3%	28.1%	21.6%	15.1%	18.7%	22.2%
Earnings yield adj		5.3%	4.5%	3.3%	3.0%	3.4%	2.7%	2.8%	3.7%	4.8%
Dividend yield		4.6%	0.0%	3.3%	3.4%	2.6%	2.1%	2.2%	2.4%	2.4%
Free cash flow yield		4.4%	4.1%	4.2%	3.7%	3.6%	-3.8%	0.6%	2.4%	3.8%
EV/SALES		1.74	3.42	5.80	7.63	6.58	8.32	7.13	5.84	4.79
EV/SALES adj		1.74	3.42	5.80	7.63	6.58	8.32	7.13	5.84	4.79
EV/EBITDA		8.1	13.8	18.4	22.1	17.8	22.9	19.9	14.6	11.0
EV/EBITDA adj		8.1	13.8	18.4	22.1	17.8	22.9	19.9	14.6	11.0
EV/EBIT		10.0	16.5	21.7	26.0	21.1	27.7	26.3	19.6	15.0
EV/EBIT adj		11.0	16.5	21.7	24.9	21.1	27.0	26.3	19.6	15.0
EV/capital employed		1.4	3.0	6.2	8.9	6.4	5.8	4.3	4.1	3.6
EV/NOPLAT		13.5	22.2	29.3	35.1	28.6	37.5	35.5	26.5	20.2
EV/OpFCF (taxed)		20.8	50.1	31.6	36.6	28.3	51.4	68.4	35.5	22.5

Source: Company (historical figures), DNB Markets (estimates)

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Key accounting ratios

	2012	2013	2014	2015	2016	2017	2018	2019e	2020e	2021e
<i>Profitability (%)</i>										
ROA	4.1	7.5	11.3	16.4	19.6	19.9	16.0	11.1	13.5	16.4
ROCE	14.0	13.4	18.1	28.5	34.9	33.6	26.1	18.3	21.2	25.5
ROCE after tax	10.4	9.9	13.4	21.1	25.8	24.8	19.3	13.5	15.7	18.9
<i>Return on invested capital (%)</i>										
Net PPE/revenues	2.7	2.6	3.1	2.1	1.9	1.8	2.3	1.4	0.7	-0.1
Working capital/revenues	16.4	31.2	20.9	22.0	22.4	24.6	19.3	10.0	10.0	17.4
<i>Cash flow ratios (%)</i>										
FCF/revenues	8.8	9.1	15.1	25.8	29.0	25.0	-32.4	4.5	14.4	18.8
FCF/market capitalisation		4.4	4.1	4.2	3.7	3.6	-3.8	0.6	2.4	3.8
CFO/revenues	16.6	17.2	27.5	31.7	34.8	35.9	24.0	27.3	30.2	32.8
CFO/market capitalisation		8.3	7.4	5.2	4.4	5.2	2.8	3.8	5.1	6.6
CFO/capex	171.0	192.9	217.6	508.8	614.0	652.1	197.9	148.5	191.0	233.9
CFO/current liabilities	63.3	66.8	99.4	110.2	115.8	121.1	66.2	68.1	91.0	117.9
Cash conversion ratio	155.4	83.4	91.5	126.8	122.2	107.9	-137.6	22.4	65.9	79.9
Capex/revenues	9.7	8.9	12.6	6.2	5.7	5.5	12.1	18.4	15.8	14.0
Capex/depreciation	973.9	959.1	1404.3	776.0	744.0	791.7	1800.0	2275.1	1614.2	1290.2
OpFCF margin	8.4	12.5	12.2	25.3	28.8	31.4	24.2	17.5	24.2	29.6
Total payout ratio	85.4	88.0	0.0	99.7	113.3	79.0	74.9	79.5	66.3	51.3
<i>Leverage and solvency (x)</i>										
Net debt/EBITDA	-1.12	-1.57	-1.08	-0.89	-0.85	-0.92	-0.74	-0.33	-0.24	-0.34
Total debt/total capital (BV)	0.01	0.01	0.01	0.00	0.01	0.01	0.00	0.04	0.04	0.04
LTD / (LTD + equity (MV))		0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
<i>Cash conversion cycle</i>										
Inventory turnover days	61.1	83.1	104.7	180.7	167.5	223.3	267.7	299.8	288.0	290.0
Receivables turnover days	67.7	75.3	70.9	74.5	74.7	66.2	96.1	102.9	91.9	84.5
Credit period	95.6	143.5	147.1	170.1	158.6	244.8	296.1	279.9	300.7	284.4
Cash conversion cycle	33.3	14.8	28.5	85.1	83.7	44.8	67.7	122.8	79.1	90.1

Source: Company (historical figures), DNB Markets (estimates)

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Important Information

Company: IAR Systems
 Coverage by Analyst: Joachim Gunell
 Date: 15/10/2019

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Share positions in the company:	Analyst*	Employees**	DNB***	Update
Number of shares	0	660	0	15/10/2019

*The analyst or any close associates. **Share positions include people involved in the production of credit and equity research, including people that could reasonably be expected to have access to it before distribution.

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Recommendation distribution and corporate clients for the last 12 months

	Buy	Hold	Sell	No rec	Total
Number	143	67	31	10	251
% of total	57%	27%	12%	4%	
DNB Markets client	28%	10%	2%	2%	104

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