

Expect further robust results

We expect Scanfil to remain one of the contract electronics manufacturers with better positioning amid a perennially competitive market for outsourced industrial electronics production. We view Scanfil's strength premised on quality control, competitive pricing and good relationships with its key customers. In our view Scanfil's valuation is at an attractive level as the current multiples represent a discount of some 20% compared to its own historical averages. We rate the shares BUY, TP at EUR 4.75 per share.

Scanfil remains well-positioned strategy-wise

While Scanfil's short-term success is dependent on its most important customers' products (the ten largest accounts generate ca. 60% of revenues), and these large industrial OEMs often face cyclical demand, Scanfil's plant network can serve accounts both in the early stages of a product cycle and industrial electronics that are already being manufactured at high volumes, meaning Scanfil is able to nurture initially small customers and in the longer perspective graduate them to more significant revenues. However, such development demands patience as it will take a few years to reach a couple of million in annual sales (and this is only a fraction of the tens of millions required to be recognized as a major Scanfil customer).

Scanfil set to grow both organically and inorganically

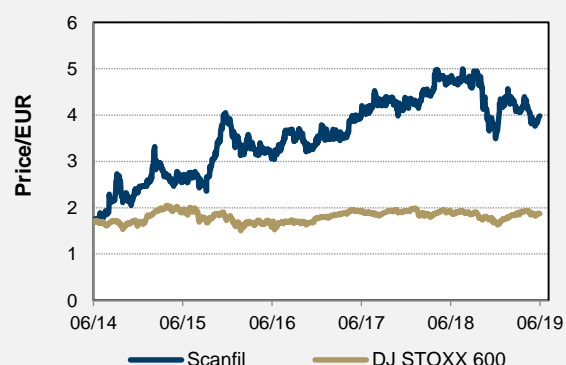
Scanfil targets organic growth of ca. 3% in 2019-20 and a slight improvement in operating margin (7% in 2020). In our view these remain realistic targets, although success could be hampered by the softening of demand for a major customer product. Scanfil is still committed to screening the German market for acquisition targets (after announcing a deal in May).

Both Scanfil and its peers valued at undemanding multiples

Scanfil has historically traded at EV/EBITDA and EV/EBIT multiples above 7x and 9x, while the company is currently valued at 5.7x and 7.4x (based on our 2019 estimates). This 20% discount is in line with the recent peer group development. We rate Scanfil BUY, our target price being EUR 4.75 per share.

Rating

BUY



Share price, EUR (Last trading day's closing price) 3.98

Target price, EUR 4.75

Latest change in recommendation 29-Oct-18

Latest report on company 26-Apr-19

Research paid by issuer: YES

No. of shares outstanding, '000's 63,895

No. of shares fully diluted, '000's 63,895

Market cap, EURm 254

Free float, % -

Exchange rate -

Reuters code SCANFLHE

Bloomberg code SCANFL FH

Average daily volume, EURm 0.1

Next interim report 09-Aug-19

Web site www.scanfil.com

Analyst Joonas Ilvonen

E-mail joonas.ilvonen@evli.com

Telephone +358 44 430 9071

BUY HOLD SELL

KEY FIGURES

	Sales EURm	EBIT EURm	EBIT %	Ptx profit EURm	EPS EUR	P/E (x)	EV/Sales (x)	P/CF (x)	EV/EBIT (x)	DPS EUR
2017	530	31	5.9%	33	0.40	10.5	0.6	12.8	10.0	0.11
2018	563	38	6.7%	36	0.44	10.1	0.5	8.4	8.1	0.13
2019E	589	37	6.2%	35	0.43	9.3	0.5	7.3	7.4	0.14
2020E	607	39	6.5%	39	0.46	8.7	0.4	6.8	6.5	0.15
2021E	622	40	6.5%	40	0.47	8.4	0.4	6.6	5.9	0.16
Market cap, EURm	254		BV per share 2019E, EUR		2.6		CAGR EPS 2018-21, %		3.0	
Net debt 2019E, EURm	20		Price/book 2019E		1.5		CAGR sales 2018-21, %		3.4	
Enterprise value, EURm	274		Dividend yield 2019E, %		3.5		ROE 2019E, %		17.3	
Total assets 2019E, EURm	327		Tax rate 2019E, %		22.6		ROCE 2019E, %		17.7	
Goodwill 2019E, EURm	10		Equity ratio 2019E, %		51.2		PEG, P/E 19/CAGR		2.0	

All the important disclosures can be found on the last pages of this report.

Investment summary

A strong mid-sized contract electronics manufacturer with a European production focus but global reach

Scanfil is a contract electronics manufacturer based in Sievi, Finland. The company focuses on manufacturing industrial electronics for its customers, many of which are large industrial OEMs operating globally. Scanfil has a competitive global plant network currently comprising 11 sites located on three continents, although Europe remains a crucially important market as the continent generates some 70% of revenues. More specifically, Scanfil is committed to producing industrial electronics for the Nordic and DACH regions.

Scanfil operates in a large fragmented growth market where competition remains stiff

The European CEM market is mostly focused on industrial electronics production. These applications are characterized by their low volume and high complexity features, and the production happens with a low level of standardization. The value proposition offered by companies such as Scanfil is to provide industrial OEMs with added flexibility into their operations so that they can focus instead on their core competencies, such as product design. The market can be expected to continue to grow at a healthy rate (close to 5% p.a.) as many industrial OEMs still have further room to outsource their manufacturing. The relevant European market itself is close to EUR 30bn in size, very fragmented and competitive.

Success depends on key customer product demand, whereas the relationships themselves are rather sticky

Although Scanfil's core market poses favorable long-term fundamentals, in practice the achievement of financial targets depends on Scanfil's relatively concentrated key account portfolio and the competitiveness of the specific customer products Scanfil happens to manufacture at any given point of time. Limited visibility on volumes is an essential feature of Scanfil's business model. Moreover, there is very little scope for differentiation in terms of technology or processes, and consequently not much upside in terms of pricing. However, customer relationships tend to be sticky as quality assurance costs are often high. The risk of Scanfil losing a key customer to competition is very small. This means Scanfil's success, at least in the short-term perspective, is mostly a function of its key customer product volumes.

Scanfil has proved itself a robust performer, and current guidance is credible

Scanfil has demonstrated its competitive and flexible cost structure over time by never posting an annual operating loss since the year of foundation (1976). According to our assessment, Scanfil belongs to the class of more profitable contract manufacturers. We find a typical Scanfil peer to have posted an annual average EBITDA margin of 6% in 2012-18, while Scanfil managed 8%. A relatively small difference in operating margin can have a big impact on metrics such as ROCE, as contract manufacturing has quite low capital investment needs. We find such difference can, at least in Scanfil's case, lead to a doubling of ROCE.

In the short-term perspective growth is driven by key accounts, faster expansion most likely achieved through M&A

Scanfil's strategy is based on two kinds of production plants. The company's Western European sites are located close to its customers' R&D units so that prototyping runs can be easily achieved. When a given product is ready to achieve high volumes, production can be shifted to Scanfil's more cost-efficient plants in Eastern Europe, China and the US. However, in practice it takes many years to achieve account revenue in the tens of millions, which is the threshold level for a major Scanfil customer. Consequently, Scanfil is only likely to achieve quicker expansion through M&A activities, of which the company has a strong track record.

Current valuation multiples are rather low most likely due to macro scares

In recent years Scanfil has mostly traded at EBITDA and EBIT multiples of some 7-8x and 9-10x. Based on our estimates, Scanfil currently trades at 5.7x EV/EBITDA '19e and 7.4x EV/EBIT '19e. In our view Scanfil's operations are running as smoothly as they have before, and the low valuation likely reflects wider macro concerns. Scanfil's peer multiples are similarly low.

We expect continued strong performance from Scanfil, with the occasional M&A further boosting expansion

We view Scanfil's EUR 600m guidance (targeted organically) in 2020 revenue as realistic since the figure implies an organic revenue CAGR of ca. 3%. Moreover, Scanfil's balance sheet is strong enough to facilitate further smaller acquisitions such as the recent purchase of HASEC (which should add close to EUR 40m in revenue). The DACH region remains a promising avenue for M&A as the local EMS market amounts to a few times the Nordic one. Scanfil also expects further improvement in profitability and targets 7% operating margin in 2020.

We rate Scanfil BUY, TP EUR 4.75 per share

We expect Scanfil to extend its strong contract manufacturing track record. In our view the company is well placed to grow both organically and through M&A. Further operating margin improvement is a realistic prospect. Current valuation is attractive in a historical context (in our view the low multiples reflect macro risks which might impact key customer volumes).

Company overview

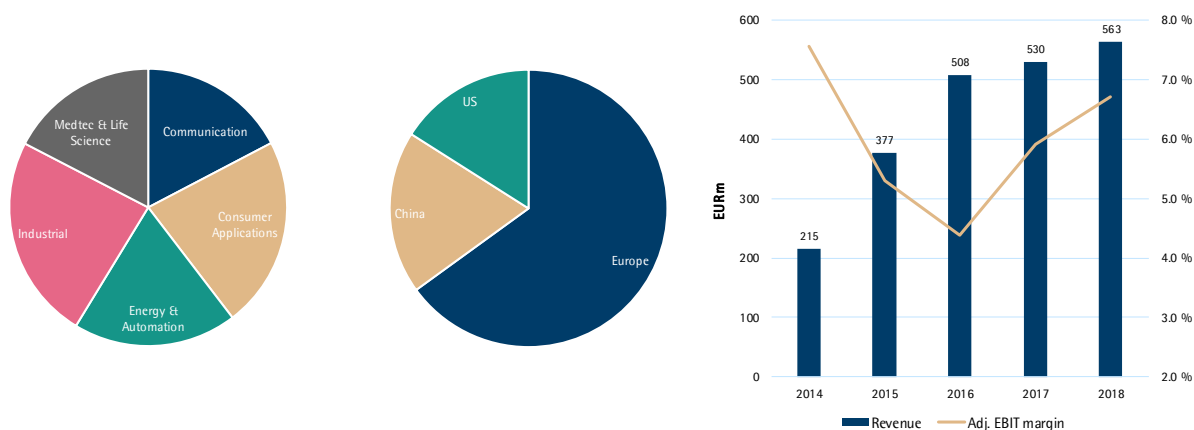
Scanfil background

Scanfil's history traces back to 1976, when Mr Jorma J. Takanen founded the company in Sievi, Finland as a manufacturer of sheet metal mechanics for the electronics industry, deriving the name from Scandinavian Filters (the company's first products were industrial filters). A garage found a role in serving as the inaugural production facility. The company expanded into contract electronics manufacturing during the 1980s and rapidly gained traction in terms of technology and market share. Scanfil had its first plant beyond Sievi completed by 1990. The Oulu plant supported the heady 1990s growth as revenue grew from EUR 5m to above EUR 220m (driven by applications such as base station mechanics). By the turn of the millennium, the company had developed a capacity to act as a system supplier to major telecommunications and industrial electronics companies. Nokia was a crucial customer account and contributed more than three-quarters of revenue at its peak. Scanfil was alert to the shifting of industrial manufacturing to low-cost countries and responded by establishing operations in countries such as Hungary, Estonia and China during the early 2000s. By 2005 Scanfil's domestic personnel were outnumbered by people employed within international operations. Scanfil also started to shift its own focus away from telecommunications applications towards industrial electronics.

Scanfil has been a publicly traded company since 2002. The current company structure was established in 2012 through a partial demerger with Sievi Capital. 2015 was another milestone year as the company acquired PartnerTech, a Swedish contract manufacturer, in a deal that doubled Scanfil's size. Scanfil has throughout its history retained an ambition to grow both organically and with the help of acquisitions. Moreover, the company has never posted an annual operating loss since the first year of operation, a fact that testifies to its agile and lean culture as well as impressive cost control.

Today Scanfil's offering includes products such as automation system modules, frequency converters, lift control systems, analyzers, various slot and vending machines, medical technology and meteorology equipment as well as mobile and communications network devices. The current factory network comprises of 11 production plants located in seven countries across three continents. The company employed 3,348 personnel at the end of 2018, while it remains headquartered in Sievi and is still majority-owned by the extended Takanen family. Takanen representatives no longer serve in an executive capacity but continue to exert influence through board directorships. Mr Petteri Jokitalo has acted as CEO since Apr 2013 and has been with Scanfil for more than 11 years.

Figure 1: Scanfil's 2018 segmental & geographic revenue splits and revenue & profitability development



Source: Scanfil

Business model

Scanfil serves industrial customers by providing electronics manufacturing services (EMS)

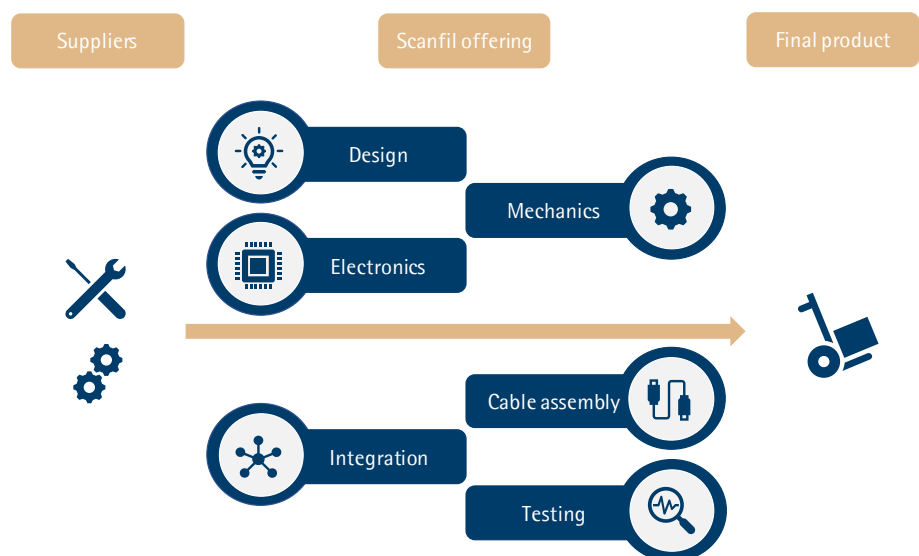
Scanfil focuses on providing its original equipment manufacturer (OEM) customers with global manufacturing and supply chain solutions. The offering's core is in production and printed circuit board (PCB) assembly for industrial customers, yet Scanfil thinks in terms of a vertically integrated model, meaning the company aims to provide service to cover the entire supply chain during the whole lifecycle of a given customer product. Scanfil aims to achieve a fast, flexible and reliable operating model by keeping tabs on both the entire supply chain and vertically integrated manufacturing process.

Scanfil's in-house service offering includes product development, prototype and pre-serial production and testing, supply chain management and logistics, cable assembly and volume manufacturing of products, final assembly and after-sales services such as maintenance and spare parts.

Outsourcing can create value beyond cost-cutting by allowing an OEM to both focus on core business as well as access engineering capabilities

The types of industrial customers Scanfil usually targets most often engage in outsourcing in pursuit of cost reductions, efficiency and reliability gains as well as improved flexibility and time-to-volume. At any given time, Scanfil's factory network is handling the manufacturing of a diversified portfolio of products, leading to a consistently high capacity utilization rate and consequently cost-competitive unit economics in comparison to customers' in-house production. Furthermore, a contract electronics manufacturer might have more purchasing power (Scanfil says it can usually achieve some savings in terms of component procurement costs, especially when growing significantly in size, as happened with the PartnerTech acquisition). The outsourcing of manufacturing processes allows Scanfil's customers to focus on their core competencies. These activities are typically corporate functions such as product innovation and development as well as sales and marketing. Scanfil's customers can tap the company's design and engineering capabilities, which might help to improve a product's performance, the ease of manufacturing and its cost, in addition to time-to-market. Besides the company's supply chain management expertise, customers also gain access to Scanfil's global network of production plants. This facilitates a flexible and potentially rapid scaling up of production in tune with changing market conditions.

Figure 2: Scanfil's role in the outsourced manufacturing process



Source: Scanfil

OEMs look for reliable manufacturing partners

Contract manufacturing operations are often run along standardized production lines, meaning an individual operator has very little scope to gain any technological edge or

stand out from the competition through superior processes. The kinds of customers Scanfil targets are rather looking to partner with reliable and flexible outsourced manufacturing operations as the cost of switching suppliers can be quite high (industrial OEMs pay a great deal of attention to quality issues and are concerned about possible production delays). The nature of the product segments Scanfil is active in (low volumes and level of standardization, high complexity) also demands close coordination with the customer and often leads to familiarity with the OEM's R&D processes. In other words, while the lack of technological differentiation means competition remains tough, in practice the supplier relationships tend to be long-lived and therefore Scanfil seldom loses customers (in fact, Scanfil has practically never lost a key customer account). The flip side is that large customer accounts are hard to gain organically.

A typical large industrial customer account proceeds to generate some EUR 5m in annual revenue within a period of 2-3 years (Scanfil's key customers generate annual revenues in the tens of millions and the largest accounts amount to more than EUR 50m). During its first year, a new account might generate maybe a few hundred thousand euros of revenue. The annual sales usually increase to EUR 2-3m within the first 12-24 months. The revenue development profile for smaller technology firms is subject to much higher uncertainty.

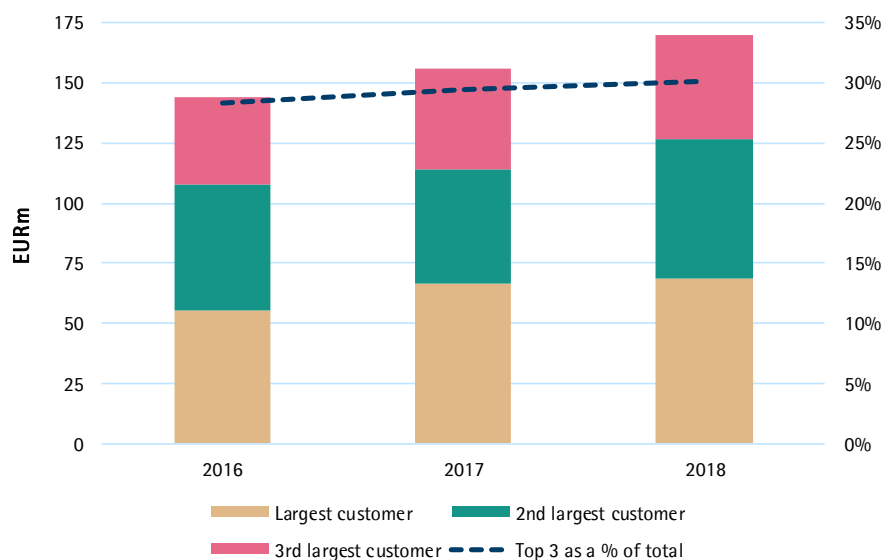
Scanfil expects positive gross margin from new customer accounts during the first year. The gross margin tends to decline, however, if an account's order volumes increase substantially. Scanfil's group level gross margin has remained steady at slightly over 30%.

Long-lived high-quality customer relationships are the key to Scanfil's operational success as the vertically integrated model's full potential typically materializes incrementally. While the account churn rate tends to be low, Scanfil's business can only develop positively so long as there is healthy demand for the given set of customer products. Customers' success often breeds new production opportunities for Scanfil (the upside is expected to materialize through higher volumes as pricing needs to stay competitive).

Scanfil's performance depends on the key customer products' market success

Scanfil is quite reliant on a certain number of key customer accounts. These relationships tend to have a long history, and as we consider Scanfil's solid long-term operational track record we view the risk of losing the customers' business rather low. However, as a single key account can contribute somewhere in the 5-10% range (i.e. roughly EUR 25-50m) of Scanfil's annual revenues, any wider negative economic surprises for one or more of these customers' products means Scanfil's performance is likely to fail its financial targets, both in terms of absolute revenue and operating margin (the relationships tend to be somewhat more profitable than smaller accounts). In any given year, the ten largest customers tend to contribute around 50-60% of Scanfil's revenues. The 2015 PartnerTech acquisition somewhat diversified the customer concentration risk (at least in terms of customer industries), and as Scanfil is likely to continue to act as an industry consolidator the situation might improve further in the long-term.

Figure 3: Scanfil's three largest accounts' annual revenue contribution



Source: Scanfil

Scanfil is in the business to carry its customers' product volume risk

Limited revenue outlook is an essential feature of contract manufacturing as industrial customers rely on the service to cushion the market vagaries' impact on their own businesses. Scanfil works with its key customers to anticipate the demand and volumes for the next few quarters. However, Scanfil does not generally secure long-term purchase commitments (and indeed is required to procure the necessary components before receiving a firm order, although the inventory risk is neutralized by the fact that a customer is obliged to fully compensate Scanfil for the purchases should the actual order fail to materialize). The order forecasts usually translate to binding commitments some 4-6 weeks prior to delivery. In other words, the company has some visibility on the next one or two quarters, but any budgeting beyond that timeframe relies on Scanfil's own assumptions. Scanfil is left to carry the risks related to plant capacity and adequate staffing (the company says around 10-20% of its employees are outsourced). Flexible cost control is therefore of paramount importance.

Contract manufacturing does not require large capital investment projects

Another defining characteristic of contract manufacturing is the business' low capital intensity. The production plants scale both up and down incrementally. While a greenfield facility takes about a year to construct, new production lines can be added within the walls of an existing plant in some three months' time. Conversely, both equipment and staff can be redeployed rather smoothly should there be a negative shock affecting certain line of production. The dynamic is in marked contrast to e.g. the pulp and paper industry, where new capacity can only be added in large, expensive chunks with long lead times (and repurposing too is similarly challenging). As a result, barriers to entry are low and contract manufacturing capacity tends to match demand quite well over time, meaning the industry is not prone to violent cycles the likes of which tend to be inherent to the natural resources sectors. The related downside of all this is that contract manufacturing is rather labor-intensive and does not offer significant scale benefits in terms of potential operating margin upside.

The lack of pronounced investment cycles also means there are no windfalls in contract manufacturing business. If a customer product line would happen to experience unexpectedly brisk demand, Scanfil would need additional equipment and labor force to participate in the upside. Consequently, any positive surprises in terms of operating margin tend to be rather muted. If customers' end-markets develop favorably, Scanfil's

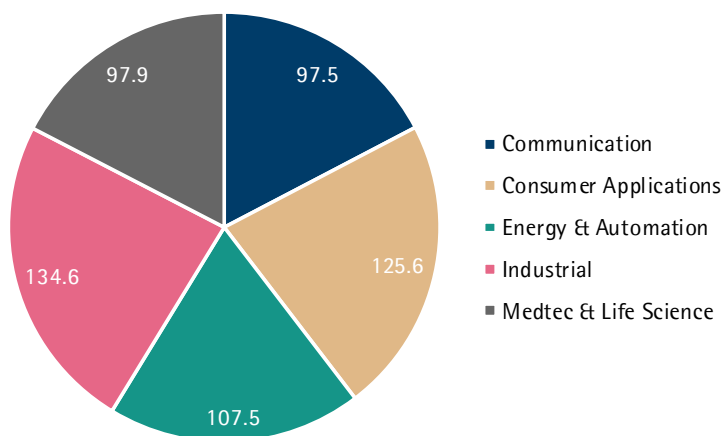
operating margin development can be expected to be stable, perhaps incrementally positive.

Customer segments

Scanfil's revenues largely depend on individual OEM products and are reported under five segments

Scanfil reports revenues for five customer segments. All the segments tend to rely on large global industrial customers for a major part of their business. In any given year, the single largest customer account usually represents around 10-15% of Scanfil's revenues, whereas the ten largest relationships often contribute close to 60% of total revenues. Each customer segment's demand and subsequent performance is very much dependent on the specific products.

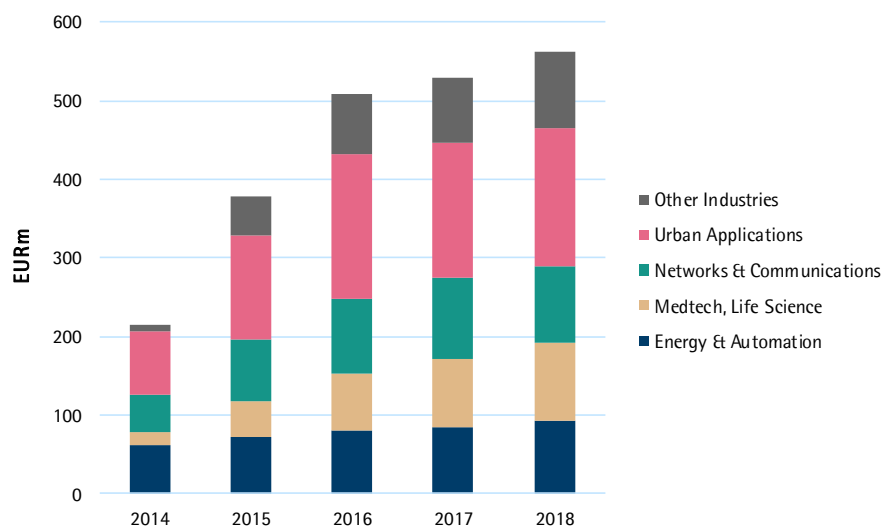
Figure 4: Scanfil customer segment revenue split (EURm, 2018 figures)



Source: Scanfil

The current segment structure was established in the beginning of 2019 as Scanfil saw a need to make certain adjustments to better reflect the contemporary customer base and the segmentation used more widely in the contract manufacturing business. The changes made weren't particularly substantial, and the current Communication, Energy & Automation and Medtec & Life Science segments largely retained their previous form except for a few customer reassignments. A more significant move was the retirement of Urban Applications and Other Industries segments, whose accounts were mostly transferred under the new Consumer Applications and Industrial segments.

Figure 5: Scanfil old segment structure revenue development



Source: Scanfil

Scanfil's key customers are, for the most part, likely to be operating in already mature markets, so it is unlikely Scanfil will be able to significantly benefit from outsourcing rate increases in these relationships.

Although the customer segments' and their respective sectors' business cycles are not particularly correlated and Scanfil has, in our view, achieved a reasonable industry diversification, the segments' demand is mostly based on capital investments and thus Scanfil's business continues to be cyclically exposed.

The synergies between different customer segments are high as electronics manufacturing is mostly a universal process. However, there are some country-specific certificates that complicate the manufacturing process (especially in applications such as medical technology). Yet these certificates also serve as barriers to entry and can thus protect margins.

Communication

The Communication segment (previously known as Networks & Communications) accounted for 17% of 2018 revenues. The segment customers include telecommunications companies, for which Scanfil offers broadband, communications, and mobile network equipment and systems. More specifically, the offering includes products such as base stations, exchanges and amplifiers. The telecommunications market has been challenging in recent years, and the segment's revenue declined by 20% y/y in Q1'19. The network equipment business is highly cyclical by nature and equipment prices have been on a secular decline path for close to two decades.

Table 1: Communication segment's trends, products and customer examples

Market trends	Offering and product examples	Potential customers
<ul style="list-style-type: none"> • Digitalization • Increasing significance of information • 5G • Wireless solutions • The Industrial Internet 	<ul style="list-style-type: none"> • Broadband, communications and mobile network equipment and systems • Base stations, exchanges and amplifiers • Defense applications 	<ul style="list-style-type: none"> • Nokia • Ericsson • Airbus • Teleste • Axis • Invisio Communications

Source: Scanfil

Consumer Applications

The Consumer Applications segment (whose customers were previously served by the Urban Applications and Other Industries segments) contributed 22% of 2018 revenues. Typical products include solutions aimed directly at consumers, such as slot and vending machines as well as photo booths. This means the segment's revenues are not particularly cyclical as such, but, as with other Scanfil's segments, quarterly and annual sales can vary widely due to certain customer account idiosyncrasies.

Table 2: Consumer Applications segment's trends, products and customer examples

Market trends	Offering and product examples	Potential customers
<ul style="list-style-type: none"> • Urbanization • Growing middle class • Ageing population • IoT 	<ul style="list-style-type: none"> • Urban solutions close to consumers • Vending machines • Game machines • Laundromats • Photo booths • Other self-service equipment 	<ul style="list-style-type: none"> • Veikkaus • Tomra • Gunnebo • Photo-Me (KIS) • Plejd • Strong Point

Source: Scanfil

Energy & Automation

The Energy & Automation segment (Scanfil added some accounts under the segment when it updated the segment structure) generated 19% of 2018 revenues. Solutions include e.g. electricity production and distribution systems. The segment's growth is supported by strong megatrends, yet revenues can be volatile as demand depends on capital investments. It should be noted that Scanfil does not produce solar panels and is not planning to move into their production.

Table 3: Energy & Automation segment's trends, products and customer examples

Market trends	Offering and product examples	Potential customers
<ul style="list-style-type: none"> • Energy efficiency • Renewable energy production • Urbanization • Industrial automation 	<ul style="list-style-type: none"> • Power production and electricity transmission systems • Process control systems • Energy efficiency systems • Frequency converters, inverters, switches and automation systems 	<ul style="list-style-type: none"> • ABB • Danfoss • Metso • Valmet • Bobst • Nibe

Source: Scanfil

Industrial

The Industrial segment (contains customers previously served under the Urban Applications and Other Industries segments) accounted for 24% of 2018 revenues. The current portfolio includes a wide range of applications for industrial customers.

Table 4: Industrial segment's trends, products and customer examples

Market trends	Offering and product examples	Potential customers
<ul style="list-style-type: none"> Urbanization Growth of e-commerce Natural resources conservation Industrial automation Internet of Things 	<ul style="list-style-type: none"> Forklift control systems Lift and escalator control systems Smart lighting systems Entrance access systems Water cleaning systems 	<ul style="list-style-type: none"> Alfa Laval Assa Abloy Kone Toyota Material Handling Diebold Nixdorf

Source: Scanfil

Medtec & Life Science

The Medtec & Life Science segment (unchanged following the segment update) contributed 17% of 2018 revenues. The segment gained many new customers through the PartnerTech acquisition. The segment's growth prospects are healthy and demand relatively stable as solutions include e.g. medical technology equipment. Some of the segment's products may even achieve higher-than-average profitability. Furthermore, Scanfil says there is potential to achieve significantly higher volumes with current segment customers such as Thermo Fisher Scientific.

Table 5: Medtec & Life Science segment's trends, products and customer examples

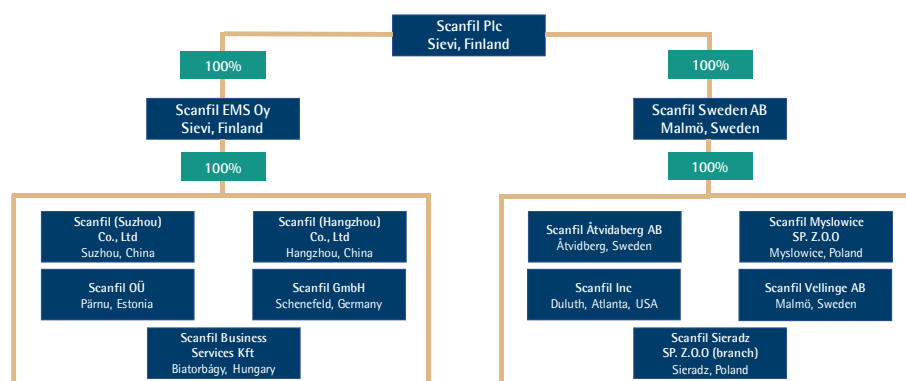
Market trends	Offering and product examples	Potential customers
<ul style="list-style-type: none"> Ageing population Emerging markets healthcare needs Food, water and air quality monitoring Weather phenomena forecasting 	<ul style="list-style-type: none"> Medical technology, research, climate and environmental monitoring equipment Dental chairs Analysers Mass spectrometers Cloud height indicators 	<ul style="list-style-type: none"> Thermo Fisher Scientific Planmeca Vaisala Getinge Biotage Jolife

Source: Scanfil

Group structure and operations**Group companies**

Scanfil is made up of the parent company, Scanfil Plc, and its subgroups Scanfil EMS Oy and Scanfil Sweden AB (former PartnerTech AB). The Scanfil EMS Oy subgroup includes, in addition to the parent company, five wholly-owned subsidiaries operating in four countries. Similarly, the Scanfil Sweden AB subgroup counts five wholly-owned subsidiaries besides the parent company, operating in three countries. Scanfil Sweden AB also owns a few other subsidiaries that didn't have operational activities at the end of 2018.

Figure 6: Scanfil group structure (Dec 2018)



Source: Scanfil

PartnerTech acquisition

Scanfil Plc announced the acquisition of all the shares of Swedish contract manufacturing group PartnerTech AB through a public tender offer in Q2'15 (the acquisition relied on debt financing and valued the target at ca. EUR 76m, or roughly 0.3x in terms of EV/S '14). PartnerTech AB has been effectively consolidated to Scanfil Plc since July 2015.

The PartnerTech acquisition doubled Scanfil's sales, number of employees, customer accounts as well as production plants. The transaction expanded Scanfil's service portfolio and improved competitiveness e.g. through higher procurement volumes. The widened customer base meant new growth opportunities through cross-selling (there were no overlapping customer relationships) and decreased customer risk.

PartnerTech posted an operating loss in 2014 due to the deeply unprofitable Metal Precision business. Scanfil decided to restructure the operations and closed the Metal Precision activity in late 2016. PartnerTech's operating margin excluding Metal Precision and group level adjustments would have amounted to 3% in H1'15.

At the time of the acquisition Scanfil announced it was targeting annual cost synergies to the tune of EUR 5m by 2017. Scanfil projected cost synergies stemming from e.g. administration and sourcing as well as by trimming plant-level overlaps. Consequently, numerous sites in Norway, UK, China and Sweden were either closed or sold off during 2016. Scanfil completed the restructuring in Q2'17 as operations belonging to Scanfil Vantaa Oy (Finland) and Scanfil Kft (Hungary) were shut down. The equipment that previously belonged to the now-closed sites has been transferred to other operational plants. In our view Scanfil has successfully integrated PartnerTech into its own operations and has achieved the targeted cost synergies. We estimate Scanfil to have managed to improve PartnerTech's operating margin by several percentage points (although we assume the business' profitability remains somewhat below that of old Scanfil operations).

Plant network

Scanfil's production plant network includes 11 facilities (following an acquisition in Germany announced in May 2019) located in seven countries on three continents. The Western European sites are found in Sweden, Germany and Finland. The additional sites are situated in Eastern Europe (Estonia and Poland), China and the US.

In our view the PartnerTech acquisition was well executed

Figure 7: Scanfil's current manufacturing plant network (May 2019)



Source: Scanfil

Scanfil has split its plant network to serve two different kinds of customers

Scanfil's Western European plants focus on working closely with customers. These sites are located near Scanfil's customers' R&D activities and have a flexible service offering, including product design activities. By contrast, the plants in Eastern Europe, China and the US put more emphasis on production efficiency. These facilities are meant to produce high volumes and are conveniently located close to the large global customers' main markets. Most Scanfil plants fall somewhere in the 10,000-25,000 square meter range in terms of floor area and tend to employ a few hundred personnel each. The Hamburg and Atlanta facilities count as exceptions in this regard as they each employ less than 100 personnel and amount to only a few thousand square meters in floor area (the Atlanta plant mainly focuses on manufactured parts assembly).

Scanfil gained its current sites in Sweden, Poland and the US through the PartnerTech acquisition. Other plants added through acquisitions include the facility in Hamburg, Germany, which was gained through the 2014 Schaltex Systems deal (valued at ca. EUR 7m, or 0.3x EV/S). Scanfil initially gained the Estonian and Chinese plants through acquisitions in the early 2000s, however the company has made major investments into the facilities since then. Scanfil has closed its own plant in Hungary and either shut or sold several sites in connection with the PartnerTech acquisition.

Scanfil could expand its current capacity by adding production lines to its existing plants. Scanfil says there is room to expand production at every single current plant, a rough estimate would be some 10-20% across the network, depending on various assumptions such as the product mix. Overall, we do believe every single current plant is achieving sufficiently large volumes.

Strategy and financial targets

Scanfil considers proximity to customers essential to its strategy, remaining ready to expand geographic reach in response to customer needs. Historically M&A has been the company's preferred route to expansion, and we do not expect too much to change in this regard.

Scanfil is likely to prefer M&A over greenfield plants as a growth strategy

We view the M&A route as a very actionable way to expansion. The M&A option is preferable to greenfield plant investments as an acquisition target has its manufacturing sites already up and running (and is likely to generate positive cash flow). Moreover, an acquisition can expand Scanfil's customer base, product offering and geographic reach

all at the same time. The contract manufacturing industry is also very fragmented and there are probably quite a few smaller companies on sale at any given point of time. Valuation levels can be expected to remain rather modest and Scanfil aims to acquire targets at EBITDA multiples below those of its own.

A greenfield investment would cost somewhere in the EUR 10-20m range and take about a year to complete. New customer acquisition would likely be slow and cash flow negative for an extended period. (To take one contrasting example, Scanfil announced in May 2019 the purchase of German contract manufacturer HASEC-Elektronik GmbH for a total consideration of some EUR 10m, or 0.3x EV/S, gaining Scanfil one production plant in Germany and about 200 staff). However, Scanfil is willing to consider a greenfield plant project should a certain sector be growing particularly fast.

Table 6: Scanfil's recent acquisition history

Year	Target/Seller	Location(s)	Production focus	Deal value (EURm)	EV/S
2014	Schaltext Systems GmbH	Hamburg, Germany	Life sciences and analytical instrumentation	7	0.3x
2015	PartnerTech AB	Sweden, Poland, the US	Industrial electronics, MedTech	76	0.3x
2019	HASEC-Elektronik GmbH	Wutha-Farnroda, Germany	Industrial electronics	10	0.3x

Source: Scanfil, FactSet

We expect relatively small German acquisitions to remain high on the agenda

German speaking part of Europe (the DACH region) remains one of the more interesting geographies where Scanfil might execute acquisitions. In our view Scanfil is unlikely to go after targets sized beyond some EUR 50-100m in terms of revenue; this sales range would probably translate to transaction values no more than EUR 10-30m per deal. However, Scanfil says it would still be comfortable with financial leverage amounting to some 3x NIBD/EBITDA, a figure that would suggest more than EUR 100m in capacity for additional interest-bearing debt. In other words, another acquisition similar in size to PartnerTech is not entirely off the table (and any larger deal could also rely on additional equity-financing).

Scanfil has communicated an interest to add new customers especially in the Nordic countries and Central Europe. The company views the small but fast-growing Central European technology space as particularly interesting, as the start-ups would gain access to Scanfil's new product introduction experience. These kinds of companies can be initially served by Scanfil's Western European plants and have the potential to graduate to higher volumes over time and thus utilize Scanfil's more efficient facilities in Eastern Europe, China and the US.

Scanfil utilizes both development-focused and more volume-oriented plants to serve its customers throughout the lifecycle

This two-pronged approach to thinking about the production plant network forms the backbone of Scanfil's strategy. Smaller Western European plants are located close to customers' R&D functions, whereas large volume plants are located close to end-markets. The logic is to produce limited-size prototype batches near the customers' R&D activities and only move on closer to the end-use locations once the products are ready to scale up to more significant volumes. Such a set-up affords Scanfil its footprint in higher cost Western European countries.

The strategic approach means Scanfil doesn't necessarily need to have an industry-leading cost structure and offer the lowest prices, but rather can differentiate itself, to some degree, on the strength of its vertically integrated service offering. Especially smaller technology companies might find Scanfil's wide service offering valuable, whereas larger industrial customers often tend to have more significant in-house resources and thus are less ready to compensate Scanfil for certain additional services.

These kinds of services (such as logistics, product development and spare parts) are unlikely to be significantly more profitable than Scanfil's standard assembly offering, but they might make Scanfil a more attractive partner in the eyes of smaller growth-oriented companies.

Scanfil's current production portfolio is quite reliant on large industrial OEMs; we don't expect the situation to change significantly anytime soon. However, Scanfil is working to grow certain smaller accounts towards higher volumes and thus further decrease the company's reliance on current large industrial customers. In any case, Scanfil's strategy is based on long-term customer relationships irrespective of the targeted account types.

Large industrial OEMs are vital for Scanfil, yet smaller technology firms are also important due to their organic growth potential

Inorganic growth through acquisitions is the most relevant way to gaining large new accounts as the contract manufacturing industry's customer relationships tend to be rather long-lived and sticky. New contracts with large industrial OEMs are not signed up that often due to considerable quality assurance costs, while the graduation to high volumes often takes many years. Hence organic growth with existing large customers is an important part of Scanfil's strategy. However, Scanfil's share of wallet within these key accounts is often already quite high and industrial OEMs are likely to retain a certain amount of operational flexibility by not relying too much on any individual contract manufacturer. We therefore wouldn't expect Scanfil to gain additional major volumes through an increased outsourcing rate. In addition, large industrial OEMs often operate in relatively mature sectors, meaning volume upside is somewhat limited in this regard as well. Against this background Scanfil's continuing efforts to nurture long-term relationships with smaller technology companies seem to be directed in a strategically sound direction.

Scanfil's financial targets include reaching EUR 600m in annual revenue (achieved on an organic basis) and a 7% operating margin in 2020. In our view these targets are realistic, but they do depend on key customer product demand to such an extent that there is not much room for major negative volume surprises. Scanfil targets EUR 560-610m in 2019 revenue while expecting operating profit to amount to EUR 36-41m.

Market and competition

Contract electronics manufacturing

Original equipment manufacturers (OEMs) can either manufacture their own products completely or decide to outsource manufacturing activities (wholly or partially) to contract electronics manufacturers (CEMs). These outsourced manufacturing providers can be further divided into two broad camps. Original design manufacturers (ODMs) often own the intellectual property rights for a given product's design, whereas electronics manufacturing service (EMS) providers typically don't. This means ODMs may compete with their customers by producing original product copies. In other words, a customer will find it riskier to engage in an ODM contract (and conversely an EMS provider will bear a higher risk than an ODM as the customer is able to switch EMS providers more easily).

Besides manufacturing products for OEMs, CEMs also typically offer a wide range of value-added services such as design, supply chain management and repair and spare parts solutions. EMS providers such as Scanfil often offer design services without gaining any intellectual property rights.

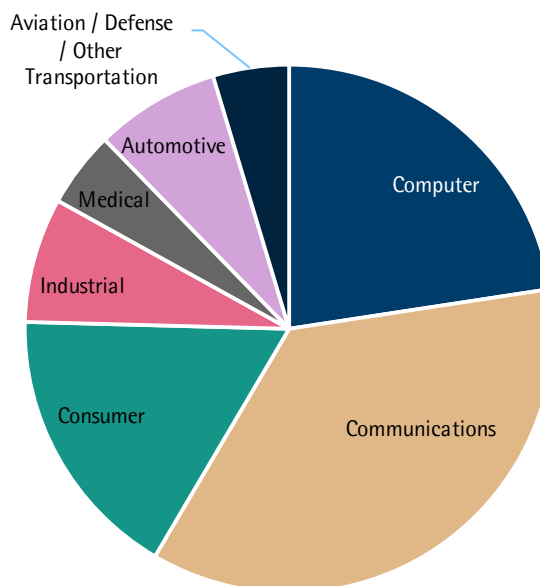
Electronics market trends

New Venture Research estimates the worldwide electronics assembly market amounted to approximately USD 1.5tn in 2017 in terms of cost of goods sold. The definition here is rather wide and includes the assembly of mass market products such as iPhones. Meanwhile the contract electronics manufacturing market amounted to roughly a third of the wider electronics assembly market. Whichever way one looks at it, the industry is very large and fragmented.

Electronics are mostly manufactured in a very standardized fashion within short product cycles

The global electronics assembly market is dominated by three large sectors: computer, communications and consumer, also known as the 3C sector, together accounting for some three-quarters of the total electronics assembly market revenue. The 3C sector consists mainly of high volume and low complexity (HVLC) products, particularly within the computer and communications sectors. A large share of these products' manufacturing is outsourced due to their highly standardized nature. Product cycles tend to be only a few years in duration.

Figure 8: Global electronics assembly market by sector, 2017



Source: New Venture Research

Industrial electronics manufacturing is relatively complex in nature and product cycles long

By contrast, the non-3C sector (or the contract manufacturing market) is characterized by low volume and high complexity (LVHC) products; the level of standardization is rather low. Moreover, product cycles can amount to a couple of decades. The non-3C sector comprises the Industrial, Medical, Automotive and Defense sectors. ODM manufacturing for these sectors is challenging as OEMs tend to have an information advantage when it comes to how the technologies are evolving. Consequently, EMS providers hold a large share of the contract manufacturing market.

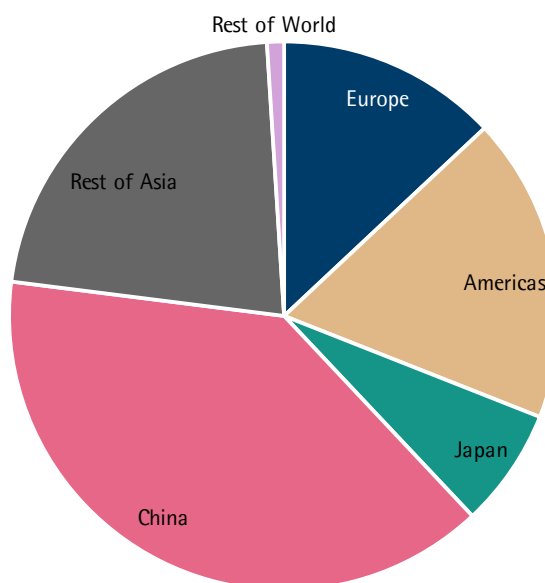
The CEM market grew strongly in the 1990s, cooled somewhat in the wake of the IT boom deflation and stabilized by 2003. The market has been growing at a healthy and rather stable pace ever since then (excluding the 2008 financial crisis). For example, New Venture Research estimates the CEM market grew at a 3% CAGR in 2010-15 (and expects the market will grow further at a 6.2% CAGR by 2020).

China captures most of 3C electronics production

In geographical terms, China is the production center for high volume electronic products (more than 40% of all electronics equipment was produced in the country in

2017), a result of manufacturing migrating to low-cost locations over the past few decades. Adding up the other developing countries' production, the total manufacturing share of low-cost geographies amounts to over 70%. Western Europe and the US focus on producing lower volume and higher mix products. More particularly, Reed Electronics Research reports how Western European production efforts are increasingly focusing on the Aerospace, Defense, Automotive, Medical, Control & Instrumentation, Industrial and Telecom (ADAMCIT) sectors.

Figure 9: Global electronics output by region, 2016



Source: Reed Electronics Research

European contract manufacturing focuses on industrial electronics

Scanfil earns its revenues mostly from the non-3C sector, where proximity to customers' R&D units plays a crucial role. Consequently, Scanfil's Central European and Nordic manufacturing sites are particularly important for the company. Reed Electronics Research estimates European EMS revenues totaled around EUR 28bn in 2017, while the share of Western European revenues amounted to EUR 11bn. The whole European market is expected to reach EUR 30bn in 2020, implying a CAGR of slightly over 2%. The Nordic EMS market was slightly less than EUR 2bn while the German market was roughly EUR 4bn in size. (The German market is the largest in Europe and is dominated by industrial electronics). The Western European EMS market is very fragmented and expected to grow at a 1.6% CAGR in 2015-20 (and reach EUR 11.7bn in 2020). Furthermore, Reed Electronics Research sees particularly strong growth potential for the DACH region in 2015-20.

The popularity of nearshoring has grown in recent years as proximity to end markets has become more important. Production locations like Mexico as well as Central and Eastern Europe have gained volumes as a result. The nearshoring trend has accelerated due to the increase in Chinese manufacturing wages. As Chinese consumers' purchasing power has improved simultaneously, electronics manufacturing has started to shift from China to the nearby low-cost countries such as Vietnam, Thailand and Indonesia.

Whereas consumer electronics companies such as Apple have already outsourced practically all their manufacturing activities, most industrial OEMs still have further room to outsource their production footprint to EMS providers.

Competitive landscape

According to Manufacturing Market Insider, in 2018 Scanfil was the 29th largest EMS provider globally and the fourth largest domiciled in Europe. Moreover, Scanfil is the largest EMS provider in terms of Nordic revenues.

Scanfil is a mid-sized entity operating in a large global market that is both very fragmented and competitive

In the global context Scanfil can be described as a mid-sized player. There are plenty of both larger and smaller companies with which Scanfil effectively competes. Competition is stiff across all regions and sectors. Smaller companies might have a regional, product, service or industry-specific focus, whereas larger manufacturers tend to concentrate on the 3C sector. Larger companies can achieve higher economies of scale than Scanfil but usually lack the flexibility to manufacture smaller volumes competitively. Consequently, the competitive dynamic is likely most intense within the mid-sized company group to which Scanfil itself belongs. We note that Scanfil and its peers also compete with their customers' in-house manufacturing capabilities (large industrial OEMs are constantly evaluating whether to outsource or manufacture in-house).

In our view Scanfil mainly competes with companies focusing on the non-3C sector and operating production facilities in Germany and the Nordic countries. We also mark the world's fifth and sixth largest contract manufacturers on the list of Scanfil competition, namely Sanmina and Celestica. Despite their large size, the US-based Sanmina and Canadian Celestica earn major portions of their revenues from the non-3C sector (55% and 40%, respectively). These revenue shares have grown significantly in recent years, and Celestica has set a target to further expand its scope in the non-3C sector. Sanmina, meanwhile, ranks as one of the largest EMS providers in terms of Nordic revenues. We further highlight the Wisconsin-based Plexus as a large global competitor as the company derives around 80% of its revenues from the non-3C sector.

Profitability is not simply a function of company size

There is no clear correlation between company size and profitability in the contract electronics manufacturing sector. Rather, higher operating margins are usually achieved through proper customer and product portfolio positioning. There are examples of both larger (e.g. Plexus, Venture and Zollner) and smaller (e.g. TQ-Systems and Valuetronics) companies having achieved profitability levels higher than the sector average.

Table 7: Scanfil competition summary

Company	Revenue ¹⁾	Avg. adjusted EBIT margin ²⁾	Ownership status
Benchmark Electronics	2 175	4 %	Public
BMK Group	234	6 %	Private
Celestica	5 623	3 %	Public
exceet Group	42	2 %	Public
Fabrinet	1 151	7 %	Public
Flex	22 646	2 %	Public
Hanza	176	1 %	Public
Jabil	18 548	3 %	Public
Kitron	273	5 %	Public
Lacroix	468	3 %	Public
Neways	507	3 %	Public
Note	134	5 %	Public
Orbit One	97	2 %	Private
Pegatron	37 667	2 %	Public
Plexus	2 416	5 %	Public
Sanmina	5 978	3 %	Public
Siix	1 863	4 %	Public
Sparton	314	4 %	Public ³⁾
TQ-Systems	224	8 %	Private
Universal Scientific Industrial	4 293	4 %	Public
Valuetronics	312	7 %	Public
Venture	2 189	9 %	Public
Zollner	1 478	6 %	Private
<i>Average</i>	<i>4 731</i>	<i>4 %</i>	
<i>Median</i>	<i>1 151</i>	<i>4 %</i>	
Scanfil	563	6 %	Public

1) In millions of Euros (2018 figures for public companies, 2017 for private companies)

2) 2014-18 figures for public companies, 2014-17 for private companies

3) Acquired by Cerberus Capital Management in Mar 2019 in a public to private transaction

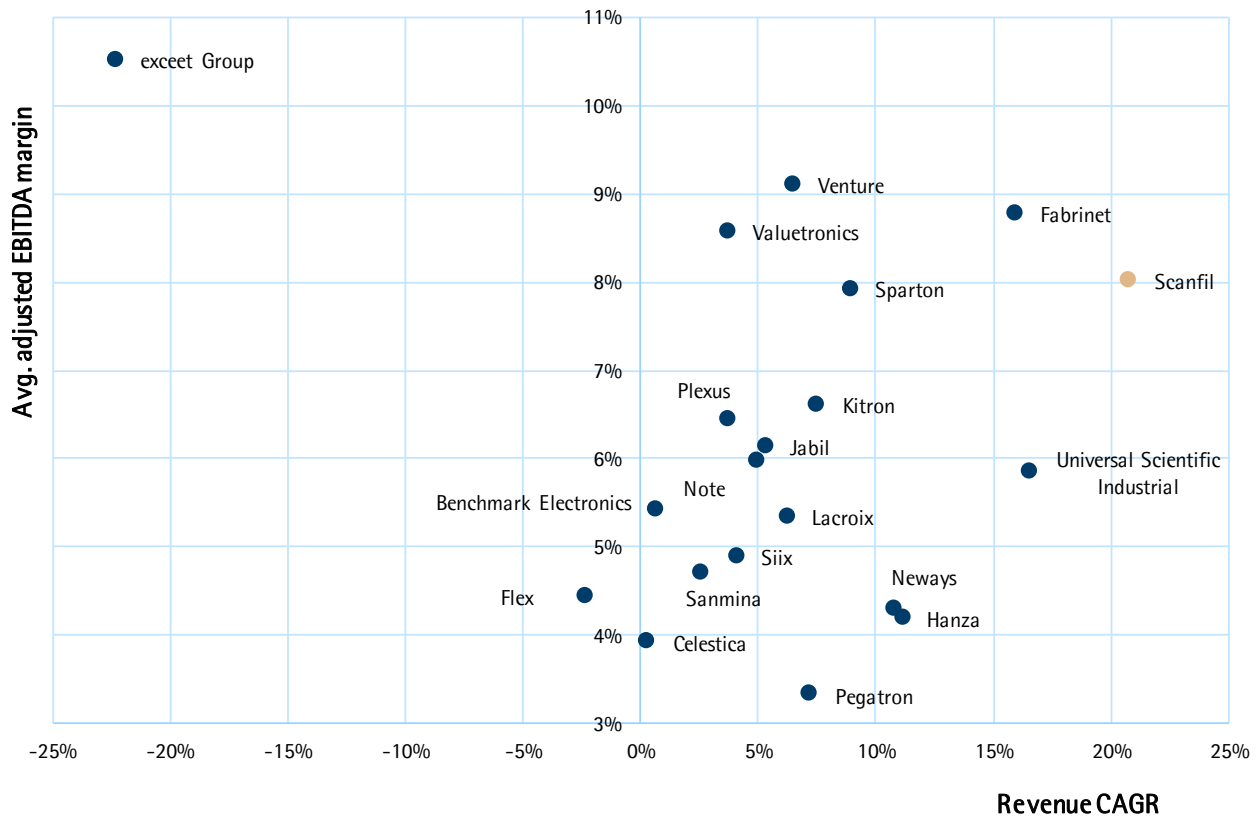
Source: FactSet

Scanfil's Nordic competition includes names such as the public companies Kitron (a Norwegian EMS company operating on three continents), Note (a Swedish EMS provider with facilities in Europe and China) and Hanza (a Swedish company present in Europe and China) as well as the privately held competitors Enics (a Swiss company with sites in Europe and China) and Orbit One (a Swedish company with production also in Poland and Russia).

Scanfil's main competitors in the German and Central European markets include the listed companies Lacroix (a French company with sites across Europe as well as in Tunisia), Neways (a Dutch company with operations also in China and the US) and exceet Group in addition to privately owned names such as Zollner (a company based in Germany with a global presence), Leesys, TQ-Systems (a German company with presence

also in China and the US), BMK Group and Asteelflash (a French company operating on three continents).

Figure 10: Scanfil's publicly traded competition's growth and profitability, 2012-18



Source: Bloomberg

Scanfil's global competition, besides Sanmina and Celestica, counts companies such as Plexus (the company focuses on complex industrial as well as healthcare electronics but has a relatively small European presence), Jabil, Sparton, Siix (a Japanese company focused on Asia), Pegatron and Valuetronics.

In our view the contract electronics manufacturing sector will continue to consolidate as the competitive landscape remains very fragmented. Larger global manufacturers are natural consolidators and we would expect them to acquire smaller, less profitable entities. However, strong mid-sized players such as Scanfil are also likely to continue their inorganic expansion efforts to incrementally improve their offerings' competitiveness.

We recognize Scanfil as a best-in-class performer within the EMS sector

Scanfil has clearly been one of the more profitable contract electronics manufacturers in recent years. Scanfil averaged an 8% adjusted EBITDA margin in 2012-18, whereas the 19 publicly traded peers we have identified managed about 6% on average. Scanfil's 21% revenue CAGR during the period is not directly comparable to the typical 6% growth figure achieved by a peer company as Scanfil doubled in size due to the PartnerTech acquisition. Nevertheless, in our view it is safe to conclude that Scanfil has been one of the best sector performers both in terms of revenue growth and profitability. Based on the peer group assessment, we would say Scanfil still has room for slight improvement in profitability.

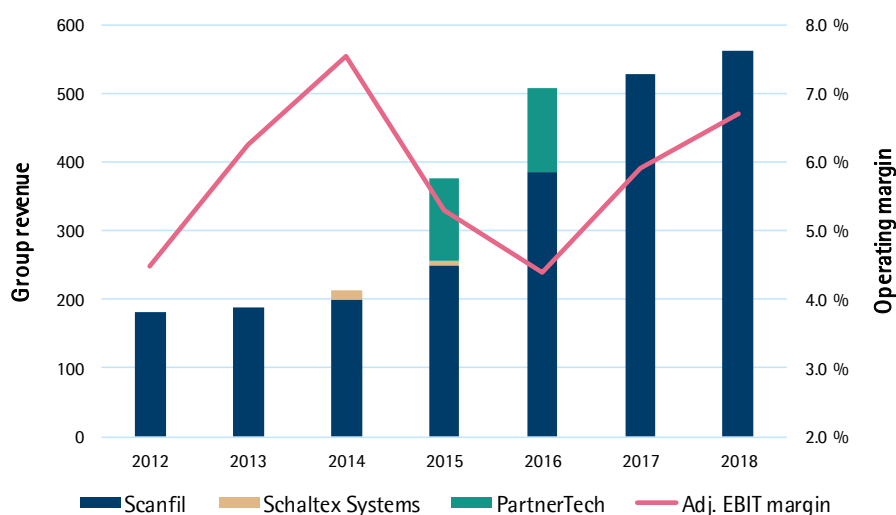
Financials and estimates

Income statement

Scanfil's revenue is driven by its customer product manufacturing volumes, which itself is a function of product-specific demand and the extent to which the production is outsourced to EMS providers like Scanfil.

Scanfil's group top line grew at a 20.8% CAGR in 2013-18. In other words, revenue more than tripled to EUR 563m from EUR 181m. Meanwhile adjusted operating margin averaged about 6%.

Figure 11: Scanfil group revenue and profitability development

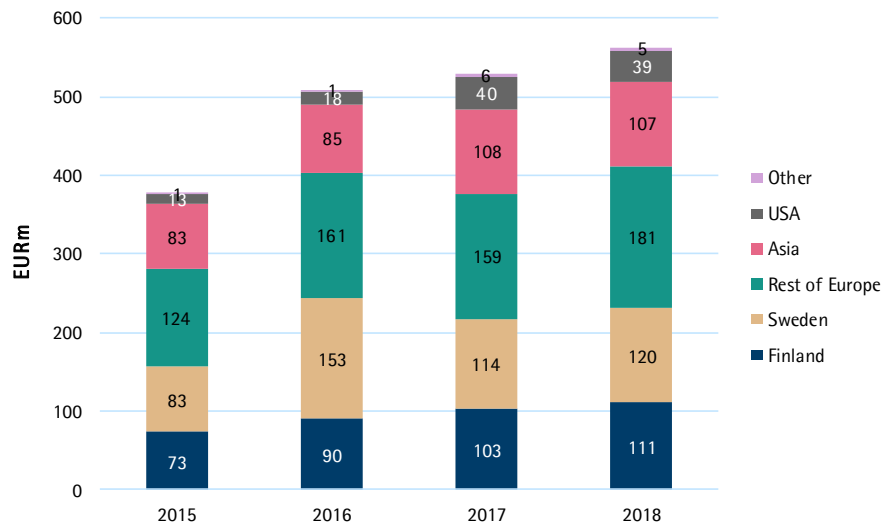


Source: Scanfil, FactSet

Scanfil has grown organically both also with the help of acquisitions

Scanfil's has historically grown both organically and through acquisitions. In recent years the company has made two acquisitions (excluding the purchase of HASEC-Elektronik announced in May 2019). Scanfil acquired Schaltex Systems, a company based in Germany, in 2014. Schaltex Systems reported EUR 20.8m in 2013 revenue and the company has been consolidated into Scanfil's figures effectively since Q2'14. Scanfil announced a transformative acquisition in May 2015 by agreeing to purchase PartnerTech (a Swedish company with international presence). PartnerTech reported some EUR 243m in 2014 revenue. PartnerTech has been effectively consolidated into Scanfil's figures since Q3'15. Excluding the EUR 264m in revenue added through the two acquisitions would bring Scanfil's organic revenue base down to EUR 299m in 2018. The figure would imply a CAGR of 8.7% for 2013-18. We acknowledge this is a rather generous assessment of Scanfil's organic sales track record as the acquired companies have most likely continued to grow organically following their acquisitions. Nevertheless, the figures do point to Scanfil having achieved a healthy growth rate in recent years.

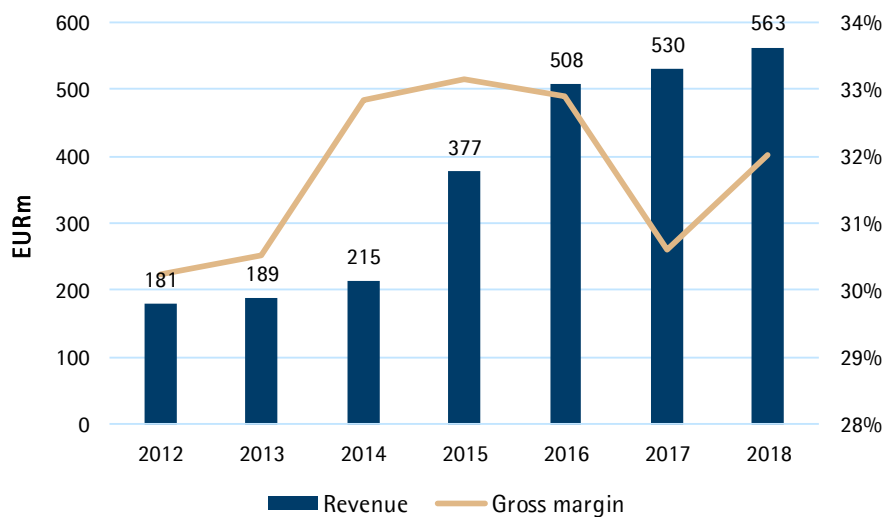
Figure 12: Scanfil revenue development based on customer location



Source: Scanfil

In geographical terms, Scanfil's European plants generated some 65% of 2018 group revenues. Chinese plants accounted for another 20%, with the remainder attributable to the US site. Most of business operations are conducted in local currencies, meaning transaction risk is eliminated. Customers based in Europe accounted for 73% of 2018 revenues. Finland and Sweden together generate over EUR 200m in annual revenue, which can be put into the Nordic EMS market context of around EUR 2bn (as estimated by Reed Electronics Research).

Figure 13: Scanfil revenue and gross margin development



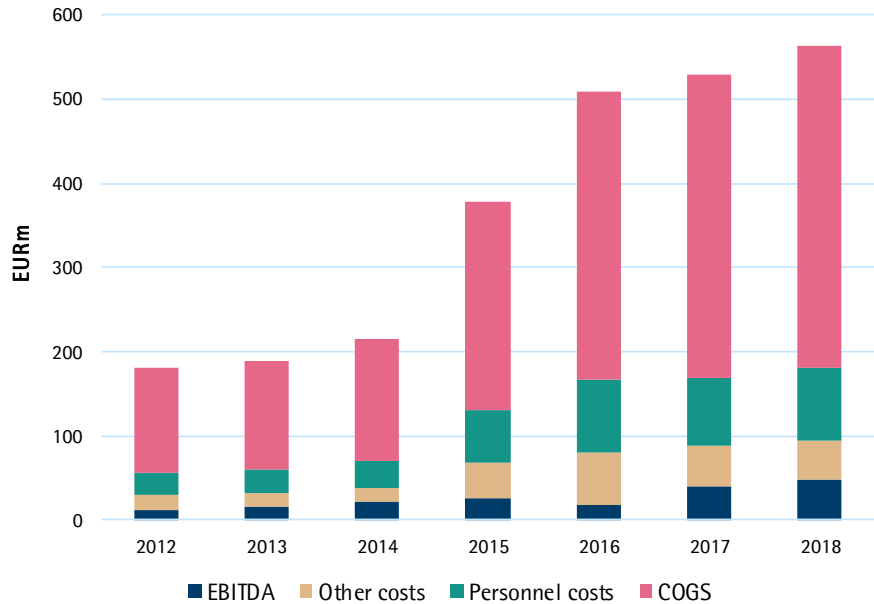
Source: Scanfil

Scanfil's gross margin has proved stable

Scanfil's Cost of Goods Sold has developed in a steady fashion, amounting to some 68% of revenues in recent years. Conversely, Scanfil has managed a rather steady gross margin at around 32%. Major deals such as the PartnerTech acquisition may improve the combined company's component purchasing power, however so far there has not been any marked improvement on gross margin level (although gross margin is also affected by the product mix). We expect the gross margin to remain close to its current levels as

the contract electronics manufacturing sector is by nature very competitive and there is not much potential for higher pricing even in the long-term customer relationship context.

Figure 14: Scanfil revenue and cost structure development

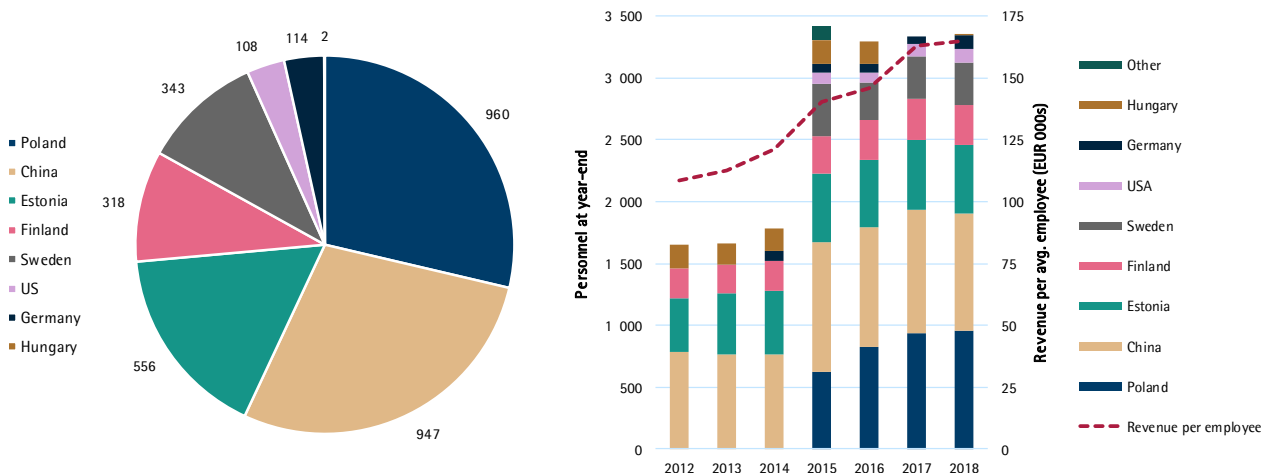


Source: Scanfil

Employee productivity has been improving

Scanfil's cost structure excluding material costs is largely attributable to personnel expenses (not including outsourced labor), which have averaged some 15% of revenues. Both revenue and profit per employee have increased markedly in the last five years or so, meaning productivity has improved. At the end of 2018, almost three-quarters of Scanfil's 3,348 personnel were employed in relatively low-cost countries, namely Poland, China and Estonia. In addition, other expenses (such as outsourced staff, utility bills, equipment repair etc.) have amounted to some 9% of revenues (the PartnerTech acquisition temporarily elevated other expenses).

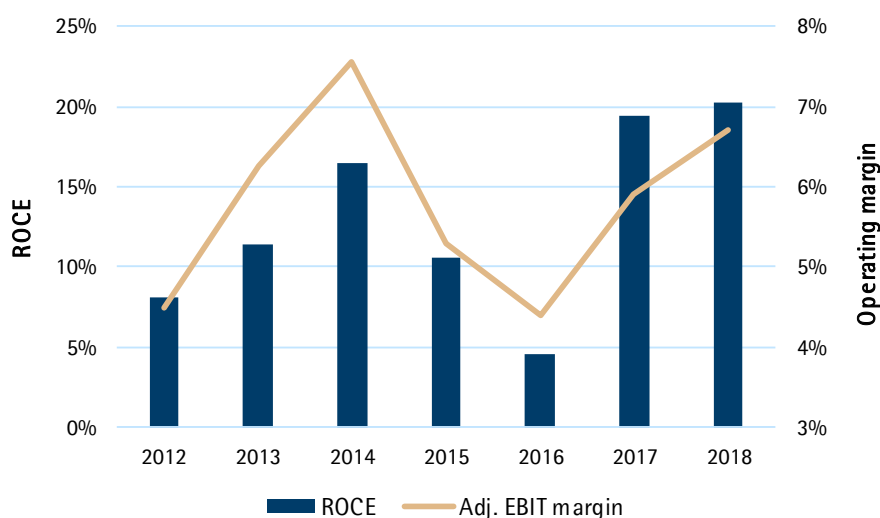
Figure 15: Scanfil's 2018 year-end personnel numbers by country and personnel number development 2012-18



Source: Scanfil

Scanfil's profitability is determined by its plant capacity utilization (i.e. product volumes) as well as the product mix. Scanfil has managed a stable level of operating profit, as the adjusted operating margin averaged almost 6% in 2012-18. The operating margin declined by a few percentage points in 2015-16 due to the PartnerTech acquisition but has since started to improve again as Scanfil has successfully managed to restructure the acquired operations. Although the range of operating margins posted by Scanfil is rather tight (roughly between 4.5-7.5%), we find the difference between the low and high points can basically mean doubling in the rate of return on capital employed.

Figure 16: Scanfil's profitability and return on capital employed



Source: Scanfil

Balance sheet

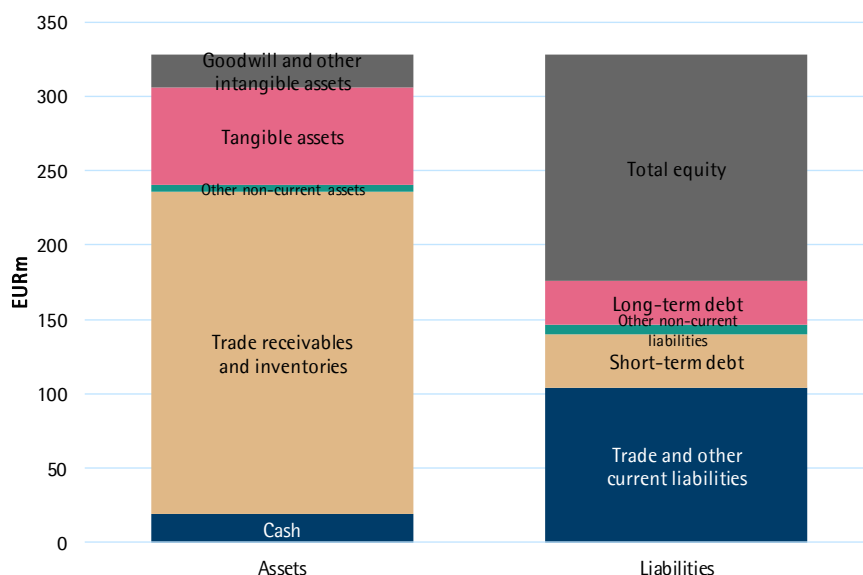
The company's business model requires only a limited amount of capital investment as electronics contract manufacturing is a rather labor-intensive process. As a result, Scanfil has achieved remarkably good return on capital employed (ROCE) even in the context of seemingly modest operating margins. Scanfil's ROCE averaged some 13% in 2012-18.

Scanfil's annual capital expenditures have in recent years averaged some EUR 9m (not counting the PartnerTech acquisition). The 2018 capex figure was some EUR 10m; Scanfil says EUR 10m is a reasonable expectation as a long-term annual capex figure.

A major portion of Scanfil's balance sheet is tied up by inventories

Scanfil carries a significant positive net working capital position that tends to amount to almost 20% of revenue. At the end of Q1'19 both accounts receivable and inventories amounted to more than EUR 100m, whereas accounts payable stood at roughly EUR 100m, meaning net working capital totaled over EUR 100m. Accounts payable mostly neutralize accounts receivable, so Scanfil's large positive working capital position is basically attributable to inventories. The EUR 105.6m tied up in inventories at the end of Q1'19 represents a pretty standard level of inventory for Scanfil. It should be noted, however, that Scanfil does not carry significant inventory-related risks as the company's customers are obliged to recompense for any component purchases that do not eventually translate into finished products.

Figure 17: Scanfil's balance sheet composition (Mar 2019)

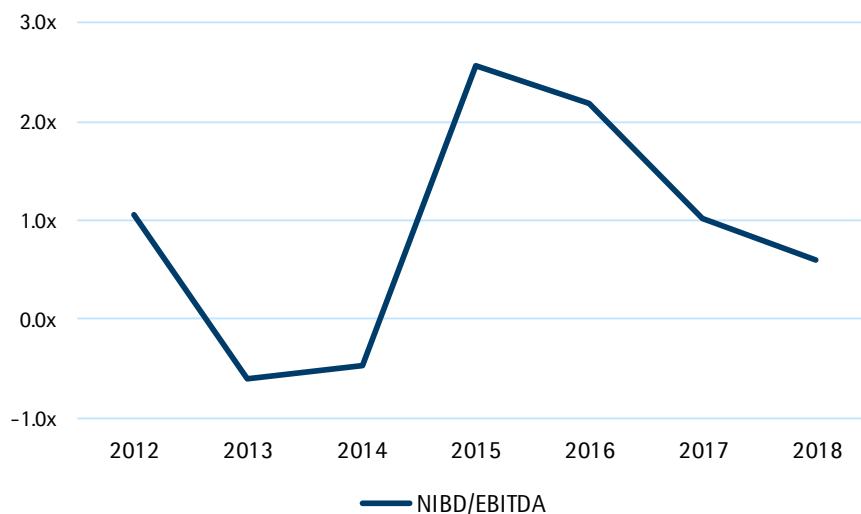


Source: Scanfil

Besides a major inventory position, Scanfil's balance sheet's assets side is mainly comprised of tangible assets, which amounted to some EUR 66m at the end of Q1'19 and are attributable to manufacturing equipment and facilities.

At the end of Q1'19 Scanfil's borrowings totaled EUR 66m while the company had EUR 19m in cash assets, therefore bringing the NIBD/EBITDA leverage ratio to roughly 1x. Scanfil has said it could stretch the ratio to around 3x. Indeed, the company's leverage did rise close to that multiple in the wake of the 2015 PartnerTech acquisition. Scanfil has since been able to de-lever significantly as the integration effort proceeded according to plan.

Figure 18: Scanfil financial leverage development



Source: Scanfil

Scanfil has communicated a policy to distribute around a third of annual net earnings as dividends. In our view the annual payout ratio and the resulting dividend yield are dwarfed in importance by the company's growth prospects (organic and inorganic) and therefore we would not put too much focus on annual dividend payments. In fact, a rather low payout level could be desirable for retaining adequate financial flexibility for capacity expansion.

Estimates

Scanfil has guided EUR 560-610m in revenue and EUR 36-41m in EBIT for 2019. The company aims to achieve EUR 600m in 2020 revenue on an organic basis while targeting 7% operating margin for the same year.

Our estimates are based on both Scanfil's guidance and our assessment of the wider EMS market potential. We estimate Scanfil to reach a 3.4% organic revenue CAGR in 2019-21. We expect Scanfil to achieve its target of EUR 600m in 2020 revenue organically. Scanfil posted a 6.7% operating margin in 2018; we estimate the operating margin to decline to 6.2% in 2019 as Q1'19 proved slow and consequently Scanfil managed only a 5.2% operating margin. We expect Scanfil's operating margin to stay close to 6.5% going forward.

We haven't included Scanfil's recent acquisition of the German contract manufacturer HASEC-Elektronik GmbH (announced in May 2019) in our estimates as the transaction was yet to be closed at the time of this report's preparation. HASEC operates from a production site in Wutha-Farnroda, employs around 200 employees and reported 2018 revenues of EUR 37.1m. Scanfil expects the acquisition's closure to have a slightly positive impact on 2019 operating profit.

Table 8: Estimates summary

Scanfil	2017	Q1'18	Q2'18	Q3'18	Q4'18	2018	Q1'19	Q2'19E	Q3'19E	Q4'19E	2019E	2020E	2021E
Revenue	530	140	152	132	140	563	130	158	153	148	589	607	622
<i>growth-%</i>	4.3 %	14.2 %	14.5 %	0.5 %	-2.9 %	6.2 %	-6.9 %	4.2 %	16.3 %	5.6 %	4.6 %	3.1 %	2.5 %
EBITDA	40	12	14	11	10	47	10	13	14	12	48	50	51
<i>EBITDA margin</i>	7.5 %	8.9 %	9.0 %	8.6 %	7.0 %	8.4 %	7.7 %	7.9 %	8.8 %	7.8 %	8.1 %	8.2 %	8.2 %
EBIT	31	10	11	9	8	38	7	10	11	9	37	39	40
<i>EBIT margin</i>	5.9 %	7.4 %	7.4 %	6.7 %	5.3 %	6.7 %	5.2 %	6.3 %	7.2 %	6.1 %	6.2 %	6.5 %	6.5 %

Source: Scanfil, Evli Research

Valuation

We value Scanfil using both DCF analysis and peer group multiples approach. Our target price of EUR 4.75 per share values Scanfil at ca. 7x EV/EBITDA '19e and 9x EV/EBIT '19e on our own estimates. These multiples are close to Scanfil's historical averages.

The peer group currently trades at approximately 5x EV/EBITDA '19e and 8x EV/EBIT '19e, whereas Scanfil is now valued at ca. 6x and 7x with respective multiples (based on our estimates). It should be noted that our projected Scanfil EBIT margin for the 2019-20 period is some 40-50% higher than that of a typical peer.

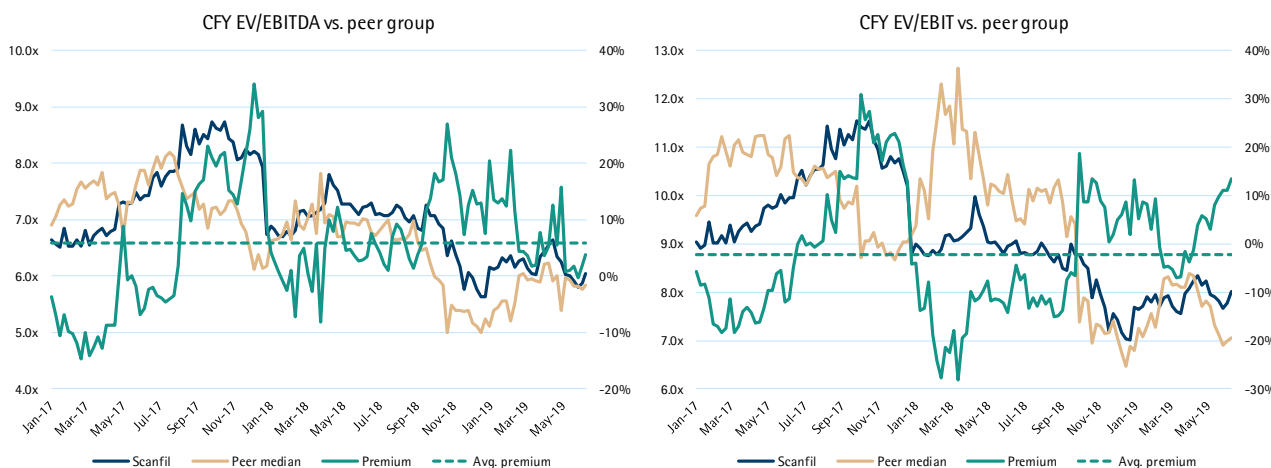
Table 9: Scanfil peer group valuation

SCANFIL PEER GROUP	MCAP MEUR	EV/EBITDA			EV/EBIT			EBIT-%		
		19	20	21	19	20	21	19	20	21
Benchmark Electronics	805				12.4x	10.6x		2.5 %	2.8 %	
Celestica	766	4.4x	3.6x	3.4x	7.4x	5.6x		2.7 %	3.5 %	
exceet Group	121	2.5x	2.3x	2.1x	4.9x	4.6x	4.1x	6.1 %	6.3 %	6.7 %
HANZA Holding	48	4.6x	4.0x	3.8x	10.0x	8.4x	6.4x	4.1 %	4.6 %	5.5 %
Kitron	161	8.1x	7.0x	6.7x	10.8x	9.2x	8.8x	6.5 %	7.0 %	6.8 %
Lacroix	79	4.0x	3.6x		6.2x	5.5x		3.8 %	4.0 %	
Neways Electronics Intl	157	5.9x	5.4x		8.1x	7.2x		4.8 %	5.1 %	
Plexus	1428	8.9x	8.0x		12.0x	10.7x		4.6 %	4.8 %	
Sanmina	1752	5.0x			6.8x			4.0 %		
SIIX	486	6.9x	6.0x	5.2x	10.3x	8.6x	7.6x	3.6 %	4.0 %	4.1 %
Valuetronics	184	2.8x	2.7x	2.5x	3.4x	3.3x	3.1x	7.7 %	7.8 %	8.1 %
Peer Group Average	544	5.3x	4.7x	4.0x	8.4x	7.4x	6.0x	4.6 %	5.0 %	6.2 %
Peer Group Median	184	4.8x	4.0x	3.6x	8.1x	7.8x	6.4x	4.1 %	4.7 %	6.7 %
Scanfil (Evli est.)	249	5.7x	5.0x	4.6x	7.3x	6.4x	5.8x	6.2 %	6.5 %	6.5 %
Scanfil prem./disc. to peer median		18 %	25 %	27 %	-9 %	-18 %	-9 %	53 %	39 %	-3 %

Source FactSet, Evli Research

We highlight Kitron, Lacroix and Neways as the most relevant peers due to their similar size (annual revenues roughly in the EUR 300-500m range) as well as geographic and sector focus. The three now trade at average 6.0x EV/EBITDA '19e and 8.4x EV/EBIT '19e multiples i.e. at a 5-10% premium compared to Scanfil, while they are expected to manage a 5% EBIT margin in 2019 (in comparison to our 6.2% expectation for Scanfil).

Figure 19: Scanfil CFY valuation multiple development vs. peer group



Source: Bloomberg

Scanfil's EV/EBITDA and EV/EBIT multiples have developed well in line with the median of the peer group we have identified. In recent years Scanfil has traded at a 5% premium compared to the peer group in terms of EV/EBITDA, and at a few percentage point discount in terms of EV/EBIT. We find Scanfil's current valuation (5.7x EV/EBITDA '19e and 7.3x EV/EBIT '19e on our estimates) is quite neutral in this context. However, both Scanfil and its peers are now trading at relatively low multiples compared to their recent histories.

Scanfil's shares have traded flat during the last couple of years while the company has continued to perform

Scanfil has historically traded at average EV/EBITDA and EV/EBIT multiples above 7x and 9x, respectively. Scanfil's current multiples, based on our estimates for 2019, represent a 20% discount to these averages. This discount is in line with the recent peer group development. Scanfil's shares have basically traded flat for the last 24 months or so, while operating profit has increased by a double-digit percentage. In our view the current low valuation multiples likely reflect general macro concerns. Some caution is justifiable as many large industrial OEMs operate in cyclical environments, and thus Scanfil's product manufacturing volumes might be negatively affected in an adverse macroeconomic scenario. However, we note the specific sectors served by Scanfil's different customer segments shouldn't be too highly correlated demand-wise. In addition, as Scanfil's customer portfolio is rather concentrated to certain key account products, both the negative and positive demand volume shocks are likely to materialize in a more idiosyncratic fashion.

VALUATION RESULTS	BASE CASE DETAILS	VALUATION ASSUMPTIONS	ASSUMPTIONS FOR WACC	
Current share price	3.98 PV of Free Cash Flow	182 Long-term growth, %	1.5 Risk-free interest rate, %	2.25
DCF share value	5.66 PV of Horizon value	212 WACC, %	8.5 Market risk premium, %	5.8
Share price potential, %	42.2 Unconsolidated equity	0 Spread, %	0.5 Debt risk premium, %	2.8
Maximum value	6.1 Marketable securities	28 Minimum WACC, %	8.0 Equity beta coefficient	1.10
Minimum value	5.2 Debt - dividend	-60 Maximum WACC, %	9.0 Target debt ratio, %	20
Horizon value, %	53.8 Value of stock	362 Nr of shares, Mn	63.9 Effective tax rate, %	20

DCF valuation, EURm	2018	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	Horizon
Net sales	563	589	607	622	637	653	666	680	690	700	711	721
<i>Sales growth, %</i>	6.2	4.6	3.0	2.5	2.5	2.5	2.0	2.0	1.5	1.5	1.5	1.5
Operating income (EBIT)	38	37	39	40	41	42	43	44	45	46	46	47
<i>EBIT margin, %</i>	6.7	6.2	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
+ Depreciation+amort.	9	11	11	11	11	11	11	11	11	12	12	
- Income taxes	-9	-8	-9	-10	-10	-10	-10	-11	-11	-11	-11	
- Change in NWC	-5	-5	-3	-3	-3	-3	-2	-2	-2	-2	-2	
<i>NWC / Sales, %</i>	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	
+ Change in other liabs	0	0	0	0	0	0	0	0	0	0	0	
- Capital Expenditure	-11	-21	-11	-11	-12	-12	-12	-13	-13	-13	-14	-14
<i>Investments / Sales, %</i>	2.0	3.6	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9
- Other items	0	0	0	0	0	0	0	0	0	0	0	
= Unlevered Free CF (FCF)	22	14	26	27	28	28	29	30	31	31	32	460
= Discounted FCF (DFCF)		13	23	22	21	20	19	17	17	16	15	212
= DFCF min WACC		13	23	22	21	20	19	18	17	16	15	239
= DFCF max WACC		13	23	22	20	19	18	17	16	15	14	189

INTERIM FIGURES

EVLI ESTIMATES, EURm	2018Q1	2018Q2	2018Q3	2018Q4	2018	2019Q1	2019Q2E	2019Q3E	2019Q4E	2019E	2020E	2021E
Net sales	140	152	132	140	563	130	158	153	148	589	607	622
EBITDA	12	14	11	10	47	10	13	14	12	48	50	51
<i>EBITDA margin (%)</i>	<i>8.9</i>	<i>9.0</i>	<i>8.6</i>	<i>7.0</i>	<i>8.4</i>	<i>7.7</i>	<i>7.9</i>	<i>8.8</i>	<i>7.8</i>	<i>8.1</i>	<i>8.2</i>	<i>8.2</i>
EBIT	10	11	9	8	38	7	10	11	9	37	39	40
<i>EBIT margin (%)</i>	<i>7.4</i>	<i>7.4</i>	<i>6.7</i>	<i>5.3</i>	<i>6.7</i>	<i>5.2</i>	<i>6.3</i>	<i>7.2</i>	<i>6.1</i>	<i>6.2</i>	<i>6.5</i>	<i>6.5</i>
Net financial items	-1	-1	1	0	-2	-1	0	0	0	-2	-1	0
Pre-tax profit	9	10	9	7	36	6	10	11	9	35	39	40
Tax	-2	-2	-2	-2	-8	-1	-2	-2	-2	-8	-9	-10
<i>Tax rate (%)</i>	<i>18.3</i>	<i>20.0</i>	<i>26.6</i>	<i>28.4</i>	<i>23.0</i>	<i>20.0</i>	<i>23.1</i>	<i>20.9</i>	<i>25.7</i>	<i>22.6</i>	<i>24.0</i>	<i>24.0</i>
Net profit	8	8	7	5	28	5	8	9	7	27	29	30
EPS	0.12	0.13	0.11	0.08	0.44	0.08	0.12	0.13	0.10	0.43	0.46	0.47
EPS adjusted (diluted no. of shares)	0.12	0.13	0.11	0.08	0.44	0.08	0.12	0.13	0.10	0.43	0.46	0.47
Dividend per share	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.14	0.15	0.16
SALES, EURm												
Group	140	152	132	140	563	130	158	153	148	589	607	622
Total	140	152	132	140	563	130	158	153	148	589	607	622
SALES GROWTH, Y/Y %												
Group	14.2	14.5	0.5	-2.9	6.2	-6.9	4.2	16.3	5.6	4.6	3.0	2.5
Total	14.2	14.5	0.5	-2.9	6.2	-6.9	4.2	16.3	5.6	4.6	3.0	2.5
EBIT, EURm												
Group	10	11	9	8	38	7	10	11	9	37	39	40
Total	10	11	9	8	38	7	10	11	9	37	39	40
EBIT margin, %												
Group	7.4	7.4	6.7	5.3	6.7	5.2	6.3	7.2	6.1	6.2	6.5	6.5
Total	7.4	7.4	6.7	5.3	6.7	5.2	6.3	7.2	6.1	6.2	6.5	6.5

INCOME STATEMENT, EURm	2014	2015	2016	2017	2018	2019E	2020E	2021E
Sales	215	377	508	530	563	589	607	622
<i>Sales growth (%)</i>	<i>13.8</i>	<i>75.9</i>	<i>34.6</i>	<i>4.3</i>	<i>6.2</i>	<i>4.6</i>	<i>3.0</i>	<i>2.5</i>
Costs	-194	-347	-475	-490	-516	-541	-557	-571
Reported EBITDA	21	30	33	40	47	48	50	51
Extraordinary items in EBITDA	0	0	0	0	0	0	0	0
<i>EBITDA margin (%)</i>	<i>9.7</i>	<i>8.1</i>	<i>6.5</i>	<i>7.5</i>	<i>8.4</i>	<i>8.1</i>	<i>8.2</i>	<i>8.2</i>
Depreciation	-5	-11	-11	-9	-9	-11	-11	-11
EBITA	16	20	22	31	38	37	39	40
Goodwill amortization / writedown	0	0	0	0	0	0	0	0
Reported EBIT	16	20	22	31	38	37	39	40
<i>EBIT margin (%)</i>	<i>7.6</i>	<i>5.2</i>	<i>4.4</i>	<i>5.9</i>	<i>6.7</i>	<i>6.2</i>	<i>6.5</i>	<i>6.5</i>
Net financials	0	0	-1	1	-2	-2	-1	0
Pre-tax profit	16	19	21	33	36	35	39	40
Extraordinary items	0	-6	-15	0	0	0	0	0
Taxes	-4	-5	-6	-7	-8	-8	-9	-10
Minority shares	0	0	0	0	0	0	0	0
Net profit	12	8	0	26	28	27	29	30
BALANCE SHEET, EURm								
Assets								
Fixed assets	32	68	57	62	64	75	75	76
<i>% of sales</i>	<i>15</i>	<i>18</i>	<i>11</i>	<i>12</i>	<i>11</i>	<i>13</i>	<i>12</i>	<i>12</i>
Goodwill	6	11	11	10	10	10	10	10
<i>% of sales</i>	<i>3</i>	<i>3</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>
Inventory	36	91	85	101	96	100	103	106
<i>% of sales</i>	<i>17</i>	<i>24</i>	<i>17</i>	<i>19</i>	<i>17</i>	<i>17</i>	<i>17</i>	<i>17</i>
Receivables	41	107	92	108	104	108	112	114
<i>% of sales</i>	<i>19</i>	<i>28</i>	<i>18</i>	<i>20</i>	<i>18</i>	<i>18</i>	<i>18</i>	<i>18</i>
Liquid funds	19	22	20	21	28	29	30	31
<i>% of sales</i>	<i>9</i>	<i>6</i>	<i>4</i>	<i>4</i>	<i>5</i>	<i>5</i>	<i>5</i>	<i>5</i>
Total assets	134	302	267	307	306	327	335	341
Liabilities								
Equity	95	100	108	125	148	167	188	208
<i>% of sales</i>	<i>44</i>	<i>27</i>	<i>21</i>	<i>24</i>	<i>26</i>	<i>28</i>	<i>31</i>	<i>34</i>
Deferred taxes	0	3	3	5	5	5	5	5
<i>% of sales</i>	<i>0</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>
Interest bearing debt	9	88	60	61	52	49	33	17
<i>% of sales</i>	<i>4</i>	<i>23</i>	<i>12</i>	<i>12</i>	<i>9</i>	<i>8</i>	<i>5</i>	<i>3</i>
Non-interest bearing current liabilities	29	105	88	113	99	103	106	109
<i>% of sales</i>	<i>13</i>	<i>28</i>	<i>17</i>	<i>21</i>	<i>18</i>	<i>18</i>	<i>18</i>	<i>18</i>
Other interest free debt	1	4	1	2	2	2	2	2
<i>% of sales</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Total liabilities	134	302	267	307	306	327	335	341
CASH FLOW, EURm								
+ EBITDA	21	30	33	40	47	48	50	51
- Net financial items	0	0	-1	1	-2	-2	-1	0
- Taxes	-3	-4	-5	-8	-8	-8	-9	-10
- Increase in Net Working Capital	-5	-8	-6	-6	-5	-5	-3	-3
+/- Other	-1	-6	-4	-7	0	0	0	0
= Cash flow from operations	11	13	16	21	32	33	37	38
- Capex	-8	-52	-5	-21	-11	-21	-11	-11
- Acquisitions	0	0	0	0	0	0	0	0
+ Divestments	0	0	0	0	0	0	0	0
= Net cash flow	3	-39	11	1	21	12	26	27
+/- Change in interest-bearing debt	-9	79	-28	1	-9	-3	-16	-17
+/- New issues/buybacks	5	1	13	-4	3	0	0	0
- Paid dividend	-3	-4	-5	-6	-7	-8	-9	-10
+/- Change in loan receivables	0	1	2	10	0	0	0	0
Change in cash	-4	38	-7	2	8	1	1	1

KEY FIGURES	2015	2016	2017	2018	2019E	2020E	2021E
M-cap	220	223	272	281	254	254	254
Net debt	66	40	41	24	20	3	-14
Enterprise value	286	263	312	305	274	257	240
Sales	377	508	530	563	589	607	622
EBITDA	30	33	40	47	48	50	51
EBIT	20	22	31	38	37	39	40
Pre-tax	19	21	33	36	35	39	40
Earnings	14	15	26	28	27	29	30
Book value	100	108	125	148	167	188	208
Valuation multiples							
EV/sales	0.8	0.5	0.6	0.5	0.5	0.4	0.4
EV/EBITDA	9.4	7.9	7.8	6.5	5.8	5.1	4.7
EV/EBITA	14.6	11.8	10.0	8.1	7.4	6.5	5.9
EV/EBIT	14.6	11.8	10.0	8.1	7.4	6.5	5.9
EV/operating cash flow	22.4	16.0	14.7	9.1	7.9	6.9	6.2
EV/cash earnings	11.1	9.9	9.2	8.2	7.2	6.4	5.9
P/E	15.8	14.7	10.5	10.1	9.3	8.7	8.4
P/E excl. goodwill	15.8	14.7	10.5	10.1	9.3	8.7	8.4
P/B	2.2	2.1	2.2	1.9	1.5	1.4	1.2
P/sales	0.6	0.4	0.5	0.5	0.4	0.4	0.4
P/CF	17.2	13.5	12.8	8.4	7.3	6.8	6.6
Target EV/EBIT	0.0	0.0	0.0	0.0	8.8	7.8	7.2
Target P/E	0.0	0.0	0.0	0.0	11.1	10.3	10.0
Target P/B	0.0	0.0	0.0	0.0	1.8	1.6	1.5
Per share measures							
Number of shares	57,730	63,670	63,895	63,895	63,895	63,895	63,895
Number of shares (diluted)	57,730	63,670	63,895	63,895	63,895	63,895	63,895
EPS	0.24	0.24	0.40	0.44	0.43	0.46	0.47
EPS excl. goodwill	0.24	0.24	0.40	0.44	0.43	0.46	0.47
Cash EPS	0.45	0.42	0.53	0.58	0.59	0.63	0.64
Operating cash flow per share	0.22	0.26	0.33	0.53	0.54	0.59	0.61
Capital employed per share	2.87	2.33	2.59	2.70	2.93	2.98	3.04
Book value per share	1.74	1.70	1.95	2.32	2.62	2.94	3.26
Book value excl. goodwill	1.55	1.53	1.79	2.16	2.46	2.78	3.10
Dividend per share	0.08	0.09	0.11	0.13	0.14	0.15	0.16
Dividend payout ratio, %	33.1	37.9	27.2	29.9	33.0	33.0	33.0
Dividend yield, %	2.1	2.6	2.6	3.0	3.5	3.8	3.9
Efficiency measures							
ROE	14.3	14.5	22.2	20.4	17.3	16.5	15.3
ROCE	13.4	12.5	17.7	19.6	17.7	18.0	18.1
Financial ratios							
Capex/sales, %	13.7	1.0	3.9	2.0	3.6	1.8	1.8
Capex/depreciation excl. goodwill,%	431.1	49.6	240.1	120.3	196.4	104.6	106.9
Net debt/EBITDA, book-weighted	2.2	1.2	1.0	0.5	0.4	0.1	-0.3
Debt/equity, market-weighted	0.4	0.3	0.2	0.2	0.2	0.1	0.1
Equity ratio, book-weighted	33.2	40.6	40.6	48.4	51.2	56.1	61.0
Gearing	0.65	0.37	0.33	0.16	0.12	0.02	-0.07
Number of employees, average	2,641	3,483	3,254	3,414	3,414	3,414	3,414
Sales per employee, EUR	142,862	145,843	162,846	164,909	172,496	177,671	182,112
EBIT per employee, EUR	7,421	6,403	9,619	11,072	10,779	11,549	11,837

COMPANY DESCRIPTION:

INVESTMENT CASE:

OWNERSHIP STRUCTURE	SHARES	EURm	%
Takanen Harri	9,776,664	38.911	15.3%
Takanen Jarkko	8,511,169	33.874	13.3%
Varikot Oy	7,606,442	30.274	11.9%
Takanen Jorma	6,079,305	24.196	9.5%
Tolonen Jonna	3,351,950	13.341	5.2%
Pöllä Reijo	3,328,745	13.248	5.2%
Laakkonen Mikko	2,531,187	10.074	4.0%
Takanen Martti	1,947,018	7.749	3.0%
Foundation of Riitta and Jorma J.Takanen	1,900,000	7.562	3.0%
Sijoitusrahasto Aktia Capital	1,528,000	6.081	2.4%
Ten largest	46,560,480	185.311	73%
Residual	17,334,959	68.993	27%
Total	63,895,439	254.304	100%

EARNINGS CALENDAR

August 09, 2019
October 25, 2019

Q2 report
Q3 report

OTHER EVENTS

COMPANY MISCELLANEOUS

CEO: Petteri Jokitalo
CFO: Kai Valo
IR:

Yritystie 6, FI-85410 Sievi
Tel: +358 8 48 82 111

DEFINITIONS

P/E	$\frac{\text{Price per share}}{\text{Earnings per share}}$	EPS	$\frac{\text{Profit before extraordinary items and taxes} - \text{income taxes} + \text{minority interest}}{\text{Number of shares}}$
P/Sales	$\frac{\text{Market cap}}{\text{Sales}}$	DPS	Dividend for the financial period per share
P/BV	$\frac{\text{Price per share}}{\text{Shareholders' equity} + \text{taxed provisions per share}}$	CEPS	$\frac{\text{Gross cash flow from operations}}{\text{Number of shares}}$
P/CF	$\frac{\text{Price per share}}{\text{Operating cash flow per share}}$	EV/Share	$\frac{\text{Enterprise value}}{\text{Number of shares}}$
EV (Enterprise value)	Market cap + net debt + minority interest at market value – share of associated companies at market value	Sales/Share	$\frac{\text{Sales}}{\text{Number of shares}}$
Net debt	Interest bearing debt – financial assets	EBITDA/Share	$\frac{\text{Earnings before interest, tax, depreciation and amortisation}}{\text{Number of shares}}$
EV/Sales	$\frac{\text{Enterprise value}}{\text{Sales}}$	EBIT/Share	$\frac{\text{Operating profit}}{\text{Number of shares}}$
EV/EBITDA	$\frac{\text{Enterprise value}}{\text{Earnings before interest, tax, depreciation and amortisation}}$	EAFI/Share	$\frac{\text{Pretax profit}}{\text{Number of shares}}$
EV/EBIT	$\frac{\text{Enterprise value}}{\text{Operating profit}}$	Capital employed/Share	$\frac{\text{Total assets} - \text{non interest bearing debt}}{\text{Number of shares}}$
Div yield, %	$\frac{\text{Dividend per share}}{\text{Price per share}}$	Total assets	Balance sheet total
Payout ratio, %	$\frac{\text{Total dividends}}{\text{Earnings before extraordinary items and taxes} - \text{income taxes} + \text{minority interest}}$	Interest coverage (x)	$\frac{\text{Operating profit}}{\text{Financial items}}$
Net cash/Share	$\frac{\text{Financial assets} - \text{interest bearing debt}}{\text{Number of shares}}$	Asset turnover (x)	$\frac{\text{Turnover}}{\text{Balance sheet total (average)}}$
ROA, %	$\frac{\text{Operating profit} + \text{financial income} + \text{extraordinary items}}{\text{Balance sheet total} - \text{interest free short term debt} - \text{long term advances received and accounts payable (average)}}$	Debt/Equity, %	$\frac{\text{Interest bearing debt}}{\text{Shareholders' equity} + \text{minority interest} + \text{taxed provisions}}$
ROCE, %	$\frac{\text{Profit before extraordinary items} + \text{interest expenses} + \text{other financial costs}}{\text{Balance sheet total} - \text{non interest bearing debt (average)}}$	Equity ratio, %	$\frac{\text{Shareholders' equity} + \text{minority interest} + \text{taxed provisions}}{\text{Total assets} - \text{interest free loans}}$
ROE, %	$\frac{\text{Profit before extraordinary items and taxes} - \text{income taxes}}{\text{Shareholders' equity} + \text{minority interest} + \text{taxed provisions (average)}}$	CAGR, %	Cumulative annual growth rate = Average growth per year

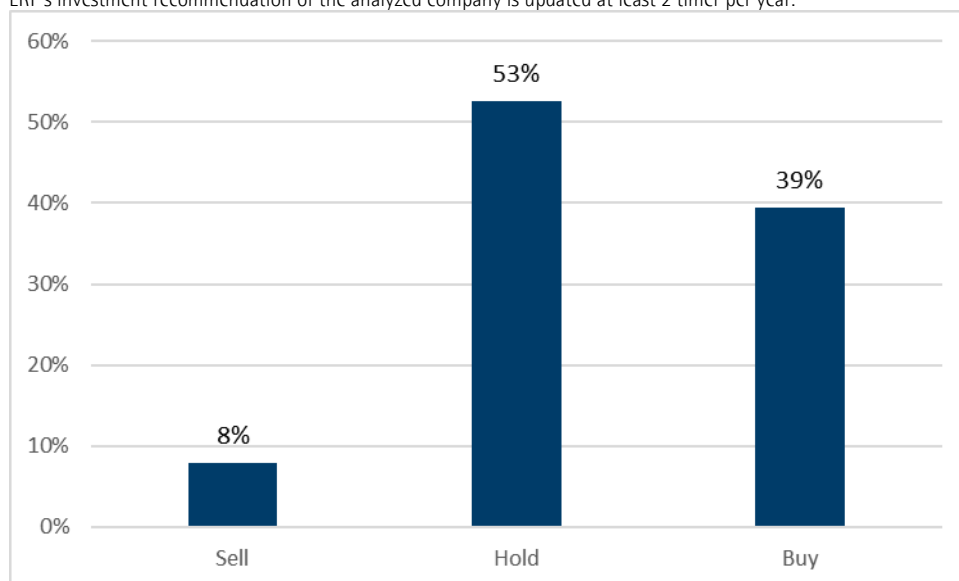
Important Disclosures

Evli Research Partners Plc ("ERP") uses 12-month target prices. Target prices are defined by utilizing analytical techniques based on financial theory including (but not limited to) discounted cash flow analysis and comparative valuation. The selection of valuation methods depends on different circumstances. Target prices may be altered on the basis of new information coming to light in the underlying company or changes in interest rates, changes in foreign exchange rates, other securities prices or market indices or outlook for the aforementioned factors or other factors that may change the conditions of financial markets. Recommendations and changes by analysts are available at <https://research.evli.com/JasperAllModels.action?authParam=key:461&authParam=x:G3rNagWrtf7K&authType=3>

Investment recommendations are defined as follows:

Target price compared to share price	Recommendation
< -10 %	SELL
-10 - (+10) %	HOLD
> 10 %	BUY

ERP's investment recommendation of the analyzed company is updated at least 2 times per year.



The graph above shows the distribution of ERP's recommendations of companies under coverage in 1st of February 2019. If recommendation is not given, it is not mentioned here.

Name(s) of the analyst(s): Ilvonen

This research report has been prepared by Evli Research Partners Plc ("ERP" or "Evli Research"). ERP is a subsidiary of Evli Bank Plc. Production of the investment recommendation has been concluded on [18.6.2019, 9:05]. This report has been published on [18.6.2019, 9:25].

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The date and time for any price of financial instruments mentioned in the recommendation refer to the previous trading day's closing price(s) unless otherwise stated in the report.

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Contact information**SALES, TRADING AND RESEARCH****Equity Sales**

Ari Laine +358 9 4766 9115
Lauri Ahokanto +358 9 4766 9117
Niclas Henelius +358 9 4766 9116

Trading

Lauri Vehkaluoto (Head) +358 9 4766 9130
Pasi Väisänen +358 9 4766 9120
Antti Kässi +358 9 4766 9120

ETFs and Derivatives

Tobias Björk (Head) +358 9 4766 9130
Joachim Dannberg +358 9 4766 9123
Kimmo Lijja +358 9 4766 9130
Sami Järvinen +358 9 4766 9110

Structured Investments

Heikki Savijoki +358 9 4766 9726
Aki Lakkisto +358 9 4766 9123

Equity Research

Jonas Forslund +358 9 4766 9314
Joonas Ilvonen +358 44 430 9071
Jerker Salokivi +358 9 4766 9149
Anna-Liisa Rissanen +358 40 157 9919

Evli Investment Solutions

Johannes Asuja +358 9 4766 9205
Markku Reinikainen +358 9 4766 9669



EVLI BANK PLC
Aleksanterinkatu 19 A
P.O. Box 1081
FIN-00101 Helsinki, FINLAND
Phone +358 9 476 690
Fax +358 9 634 382
Internet www.evli.com
E-mail firstname.lastname@evli.com

**EVLI BANK PLC,
STOCKHOLMSFILIAL**
Regeringsgatan 67 P.O. Box 16354
SE-103 26 Stockholm
Sverige
stockholm@evli.com
Tel +46 (0)8 407 8000
Fax +46 (0)8 407 8001