

F-Secure

Extensive report

11/17/2021 07:45



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Inderes Corporate customer

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Stable growth and value creation through special situation

F-Secure is currently in an interesting special situation when the company is strategically assessing the possibility to separate its consumer and corporate activities into own companies. We see consumer and corporate security as more valuable separately than together but believe that this is already fully reflected in the share value. We reiterate our Reduce recommendation for F-Secure, but raise the target price to EUR 5.3 (previously EUR 4.8).

Separating consumer and corporate security would clarify the focus and value creation of the businesses

Over the past six years, F-Secure has successfully transformed into a versatile provider of cyber security products and services, whose growth investments focus on corporate security. At the same time, the growth outlook in consumer security has also improved in recent years, and to exploit this potential, F-Secure is assessing strategic options, where one is listing consumer security as a separate company. We believe this arrangement would considerably sharpen F-Secure's strategy and also clarify the value creation of the share. Consumer security that is growing strongly and generating very good cash flow (revenue 2021e: 106 MEUR) would, in our view, be profiled as a stable dividend payer as a stand-alone listed company. Similarly, in the more rapidly growing corporate security market, growth is still the key value driver and available market shares are in part being fought for at the expense of profitability. Thus an independent corporate security business (revenue 2021e: 131 MEUR) would, in our view, be priced through a combination of the EV/Sales multiple and growth and profitability.

Accelerated growth targeted in corporate security

In the medium term, F-Secure aims for double-digit growth in corporate security and high single-digit growth in consulting. With the launch of the cloud-native and modular Elements platform last summer, F-Secure can provide modular individual solutions or comprehensive endpoint protection (EPP) solutions. The stronger product offering has also increased cross-selling potential in recent years. For example, the detection and response product EDR can help more than double the value of a traditional EPP client. Significant investments in managed detection and response solutions (MDR) in recent years have also started to bear fruit as accelerating growth.

Good growth opportunities in consumer security through partner channel

In consumer security, F-Secure's target is medium-sized single digit growth (~5%) in the medium-term. Consumers seem increasingly willing to pay for cyber security, order renewal rates (>97%) are excellent, and average invoicing (ARPU) has been raised with F-Secure's expanding product offering. In view of future growth, the operator channel (73% of revenue) is particularly important and increasingly players outside the operator realm (e.g. insurance companies) also act as F-Secure's partners.

Separating business activities creates value

We believe consumer and corporate security are more valuable as separate companies and consider the arrangement likely. Thus, a sum of the parts calculation currently works best for the valuation of F-Secure. In our updated sum of the parts calculation (EUR 5.3 per share), we rely more on 2022 estimates, which indicates that F-Secure's share seems to be neutrally priced. We feel that stretching the valuation further would require stronger growth in corporate security or a path to significant profitability improvement, which is not happening based on F-Secure's medium-term objectives (adj. EBITDA 20% vs. 2021e: 15%).

Recommendation

Reduce

(previous Reduce)

EUR 5.3

(previous EUR 4.8)

Share price:

5.46



Key figures

	2020	2021e	2022e	2023e
Revenue	220	237	255	273
growth-%	1%	7%	8%	7%
EBIT adj.	22.9	26.6	29.6	33.5
EBIT-% adj.	10.4 %	11.2 %	11.6 %	12.2 %
Net Income	12.9	15.7	19.3	22.9
EPS (adj.)	0.10	0.13	0.14	0.16
P/E (adj.)	39.8	43.4	40.3	34.6
P/B	7.4	9.4	8.3	7.2
Dividend yield-%	1.0 %	0.7 %	0.9 %	1.1 %
EV/EBIT (adj.)	26.0	31.8	28.0	24.2
EV/EBITDA	16.7	24.1	20.5	18.2
EV/S	2.7	3.6	3.3	3.0

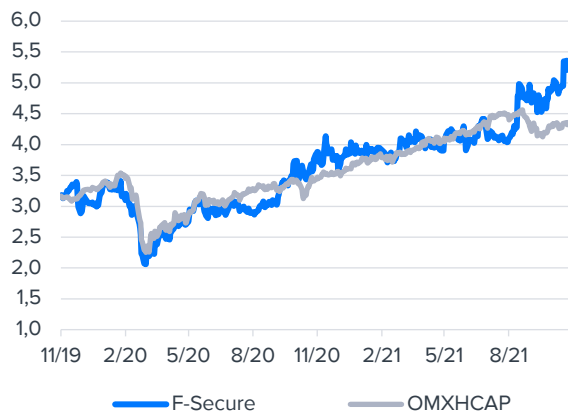
Source: Inderes

Guidance

(Unchanged)

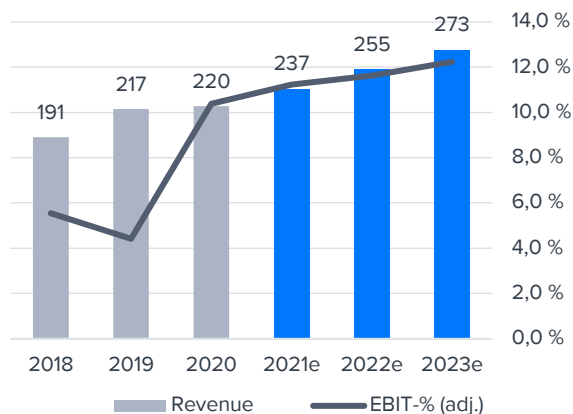
Revenue from corporate security products is expected to grow at a high single-digit rate. Revenue from consumer security is expected to grow approximately at the same rate as last year (2020: 5.5%). Adjusted EBITDA is expected to remain approximately at the previous year's level (35.7 MEUR).

Share price



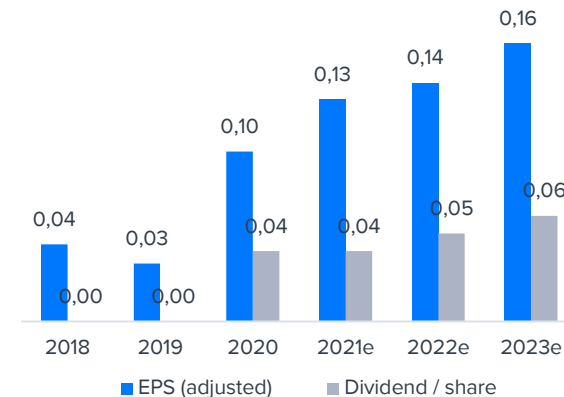
Source: Thomson Reuters

Revenue and EBIT %



Source: Inderes

EPS and dividend



Source: Inderes



Value drivers

- Separating consumer and corporate security
- Strong demand outlook on corporate security market
- F-Secure has good preconditions to invest in growth
- Stable growth and good cash flow in consumer security
- Scalable and recurring business model by nature



Risk factors

- Tight competitive situation in the market and rapid rate of change
- Success of growth investments in corporate security
- Cyber security market potentially over-invested

Valuation	2021e	2022e	2023e
Share price	5.46	5.46	5.46
Number of shares, millions	158.4	158.4	158.4
Market cap	865	865	865
EV	846	828	808
P/E (adj.)	43.4	40.3	34.6
P/E	55.0	44.7	37.7
P/FCF	62.5	33.9	31.4
P/B	9.4	8.3	7.2
P/S	3.7	3.4	3.2
EV/Sales	3.6	3.3	3.0
EV/EBITDA	24.1	20.5	18.2
EV/EBIT (adj.)	31.8	28.0	24.2
Payout ratio (%)	40.3 %	40.9 %	41.5 %
Dividend yield-%	0.7 %	0.9 %	1.1 %

Source: Inderes

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F-Secure in brief

F-Secure offers cyber security products and services, whose solutions help thousands of companies and millions of consumers protect themselves from security threats.

1988

Year of establishment

1999

IPO

EUR 220.2 million (+1.3% vs. 2019)

Revenue 2020

+16% 2015-2021e

Average revenue growth from corporate security

EUR 35.7 million (16.2% of revenue)

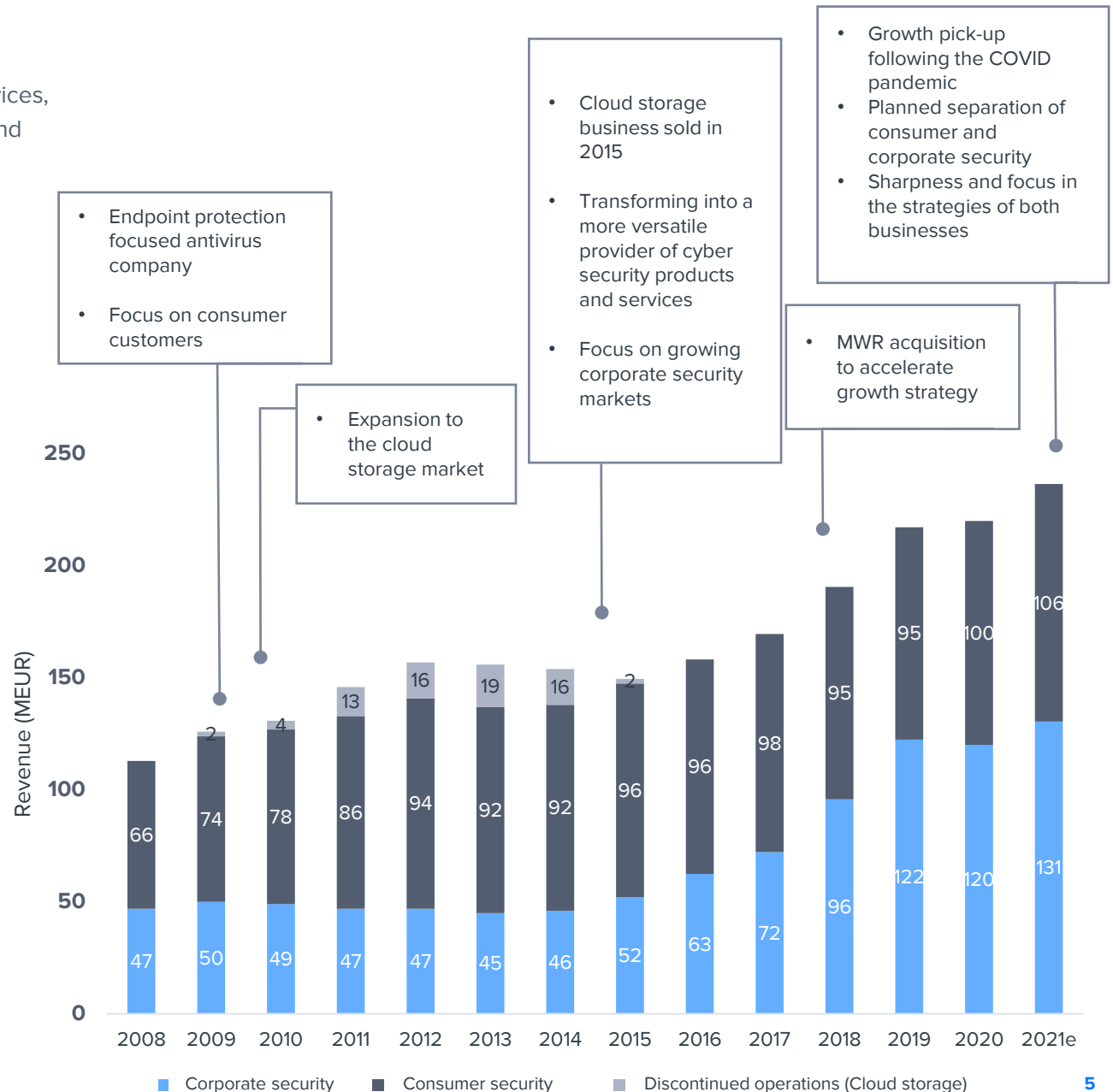
Adjusted EBITDA 2020

1,678

Personnel at the end of 2020

45% / 55%

Share of consumer/corporate security in revenue 2020



Company description and business model 1/6

Company description

Software company focusing on cyber security

F-Secure's roots are deep in antivirus software business, where the company has operated since its establishment (1988) and, in practice, for as long as computer viruses have existed. Through its history, F-Secure has developed strong expertise, reputation and brand in preventing malware and security attacks, and in how malware develop and their industrial logic works. F-Secure's antivirus software for endpoint devices have won numerous awards in international security testing and the company's endpoint device protection products have been sold to millions of consumers and hundreds of thousands of companies worldwide.

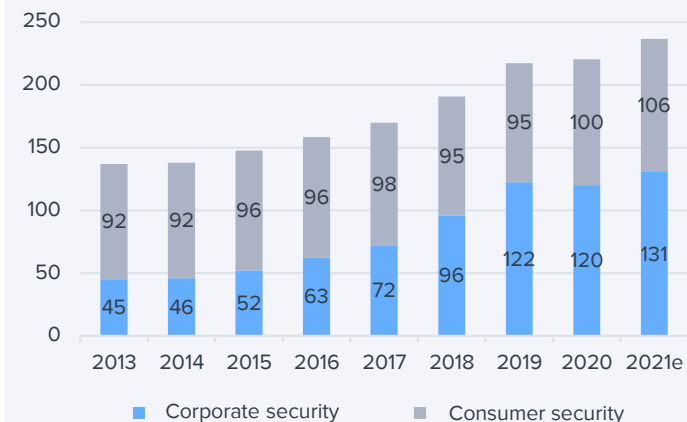
Historically, F-Secure's business has focused on strong antivirus expertise, where the basis is the prevention of attacks and threats. However, the security market has changed over the past decade and the idea of preventing all attacks has become impossible. Technological developments have made malware and data breaches much more intelligent and constantly evolving. Thus the market has shifted from attack prevention increasingly towards rapid detection and a mindset where cyber security is seen more as processes than products. This is particularly evident in the corporate security market, where the need for different detection and response solutions and consulting services has grown significantly and the market is growing strongly. In response to market changes, F-Secure has successfully transformed from an antivirus company to a versatile provider of cyber security products and services over the past six years, with growth investments focusing on corporate security.

The consumer security market is in a much more mature phase and growth is more stable. However, with the COVID pandemic and increased remote work, consumers are more willing to pay for cyber security and thus F-Secure's growth potential in this area has improved. To exploit these opportunities, F-Secure is assessing strategic options, one of which is listing consumer security as a separate company. We believe this arrangement would considerably sharpen F-Secure's strategy and also clarify the value creation of the share. In recent years, consumer security has been overshadowed by corporate security in F-Secure's strategy and its strong cash flows have primarily been invested to grow corporate security.

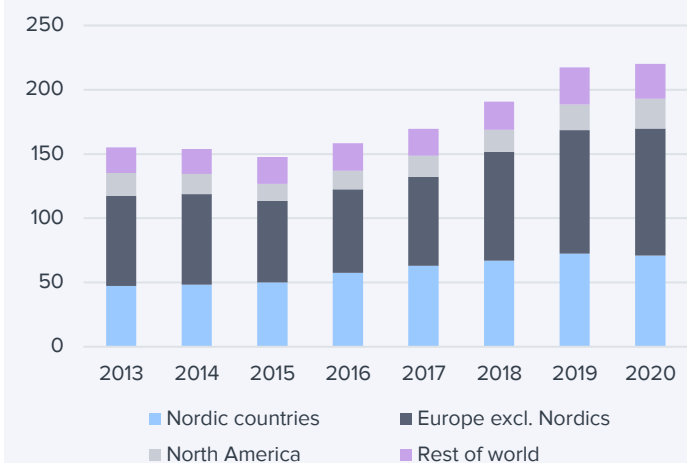
F-Secure today

In 2021, we estimate that F-Secure's revenue will grow by 7.5% to EUR 237 million and adjusted EBITDA will be EUR 37.8 million (16% of revenue). We estimate that the share of corporate security in revenue is 55% and consumer security is 45%. In corporate security, revenue growth (CAGR 15-21e: 16%) has been strong in recent years and partly supported by acquisitions. In consumer security, growth (CAGR 15-21e: 2.1%) has been stable. Revenue is highly recurring by nature and is based on annual licenses of various durations and monthly subscription sales. Geographically the company focuses on Europe. In 2020, the Nordic countries accounted for 32% of revenue and the rest of Europe for 45%. The company employed 1,689 people at the end of Q3'21.

Revenue distribution (MEUR)



Geographical revenue distribution



Company description and business model 2/6

Business model

Sales, marketing and distribution channels

In recent years, F-Secure has invested heavily in growing its corporate security revenue, which has been reflected as high investment in sales and marketing resources. The cost of sales and marketing has fallen due to COVID, but still accounted for about 43% of revenue in 2020 (2019: 49%). We believe that the relative share of sales and marketing in revenue has room to decrease in coming years, as F-Secure's largest investments in sales channel development are already over.

F-Secure sells its corporate security products through an extensive reseller network, which globally consists of over 7,000 IT service partners. The task of the company's own sales organization is to support and serve the resellers, as well as develop and grow this network. Critical in terms of success is that selling of F-Secure's products and related services is good business for the resellers. F-Secure's security product customers consists mostly of relatively small companies, but the company has shifted its focus to medium and large companies with corporate security solutions. The company provides managed security services (MDR) for large companies and cyber security consulting with outcome-based solutions through its own sales organization.

In consumer security, most of the revenue is created globally through a network that covers over 200 operators (mainly telecom operators), which is one of F-Secure's key strengths and competitive advantages. Consumer products are also sold through many online and reseller

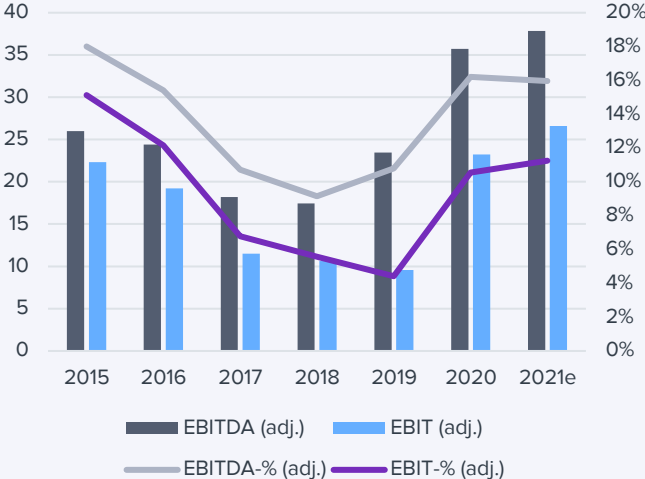
partners, and in the company's own online store.

Product development

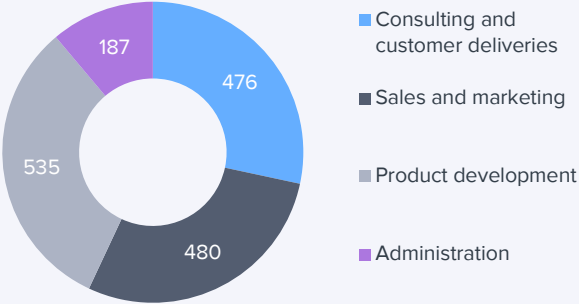
A total of 535 people worked in F-Secure's product development in 2020 and R&D costs corresponded with some 19% of revenue. The focus of R&D is on developing the functionalities of corporate security detection and response (MDR and EDR) solutions and integrating the product portfolio. The goal is to provide customers with more comprehensive security solutions. In consumer security, the development costs of endpoint device protection products are stable, but R&D investments are made in certain new product areas (Sense and ID Protection).

F-Secure's core technologies, especially in detecting malware, are basically very similar both in consumer and corporate security products, which creates certain synergies in R&D. F-Secure's consulting business also enriches product development as consultants can investigate security breaches at large companies and transfer the knowledge they gained to product development. At the same time, the company's products collect vast amounts of data from customers' online traffic that are processed with AI and machine learning to detect malware and security threats. With the help of processed information from this constant data stream, F-Secure can refine its existing products and develop new ones.

Adjusted EBITDA and EBIT



Personnel distribution 2020



Source: Inderes

Partners



IT service partners



Operators and other service providers



Resellers

Operations

Product development



Sales and marketing



F-Secure Labs research center



Resources

Long-term cyber security expertise



Cyber security technologies and software



Extensive reseller network



Strong brand, especially in Europe



Business idea

F-Secure offers a comprehensive selection of cyber security solutions and services to enterprises and consumers.



- Strong endpoint protection expertise
- New solutions for detection and response
- Ability to deliver comprehensive product and service packages
- High-quality consulting services complement the solution offering

Sales channels

Corporate security

IT resellers:
+7,000 partners

Consumer security

+200 operators
Resellers

Online store

Customer segments



Large companies & public associations



SMEs



Consumers

Products/Services

Cloud-based Elements platform for selected security solutions:

- Endpoint protection solution (EPP)
- Detection and response to targeted attacks (EDR)
- Vulnerability scanning and management platform
- Data security solution for content sharing (Elements for Microsoft 365)

Individual security solutions:

- MDR: F-Secure Countercept - managed threat hunting service to detect and respond to targeted attacks.
- Cloud Protection for Salesforce: Content sharing security solution for Salesforce's cloud service
- F-Secure Business Suite: On-site endpoint device protection solution (EPP)
- phishd: Behavior management platform to prevent phishing

Cyber security services

- High-quality consulting services in all areas of cyber security

Consumer security

- Safe, Freedom, Key, Sense and ID Protection

Cost structure (2020)



Materials and services
(22 % of revenue)



Sales and marketing
(43%)



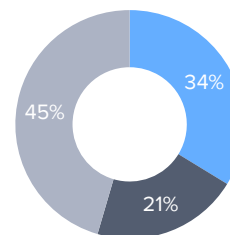
Research and development
(19%)



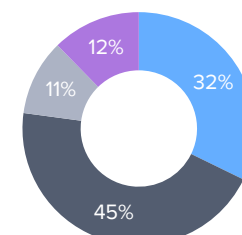
Administration
(8%)

1,678 employees (2020)

Income flows (2020) Revenue 220.2 MEUR Adj. EBITDA 35.7 MEUR



- Corporate security (products)
- Corporate security (consulting)
- Consumer security



- Nordic countries
- Europe excl. Nordics
- North America
- Rest of world

Company description and business model 3/6

Corporate security

F-Secure’s corporate security business consists of product business, managed services, where the product and service are combined, and pure service business. In 2020, the product business accounted for 62% of corporate security revenue and consulting for 38%. The product business is excellently scalable due to replicability. Managed services (MDR) are also scalable, even if a service component is included. In consulting, scalability is limited due to the nature of the business. The transition from “cyber security as a technology” towards “cyber security as a process” constantly blurs the line between products and services in F-Secure.

In Q2’21, F-Secure launched the cloud-native and modular Elements platform around which corporate security product offering is built. The platform enables the company to provide flexible individual or turnkey solutions for endpoint device security based on customer needs. Through the platform, the customer can flexibly choose from a conventional annual license, continuous monthly billing, or a usage-based security model. Elements is an essential new launch in F-Secure’s quest to win new customers and grow them over time (Land and Expand), as well as offering opportunities for additional and cross-selling to existing customers. We will now go through F-Secure’s main products .

Endpoint protection products (EPP)

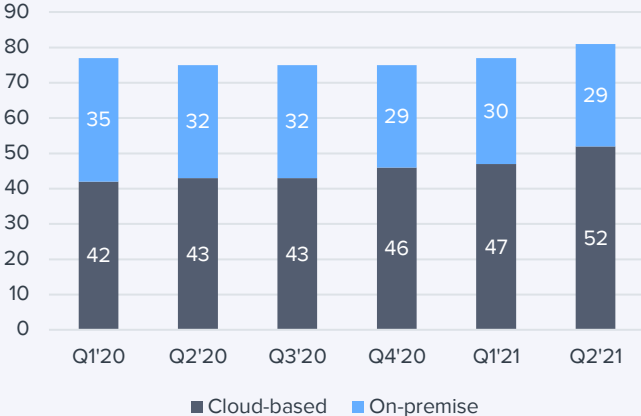
A majority of F-Secure’s corporate security revenue currently comes from selling protection products for endpoint devices (Endpoint Protection, EPP), whose demand is stable and market grows

moderately. These products represent F-Secure’s core competence, virus prevention, and are a key part of the product portfolio.

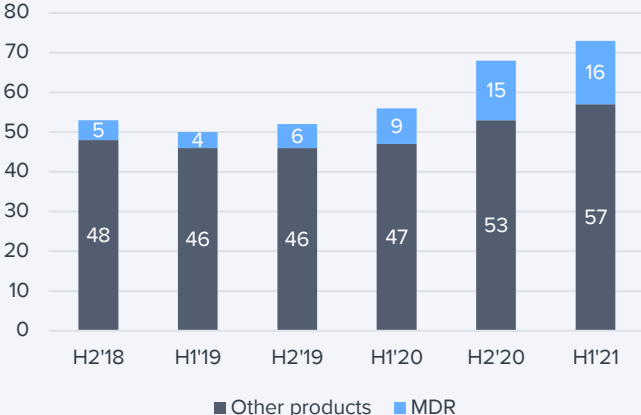
The customer target segment for these products are SMEs and F-Secure’s security products for endpoint devices are used by over 100,000 companies globally. The annual deal size in these products varies from hundreds of euros to some tens of thousands of euros.

Competition is tight in security products for endpoint devices and the field is quite established. F-Secure’s competitors are numerous companies that offer antivirus software, like NortonLifeLock, Kaspersky, McAfee, Sophos, and Trend Micro. F-Secure’s customer base in this product group focuses heavily on small companies, where the role of the reseller is emphasized in the customer’s purchase decision. Customer awareness of cyber security issues is usually low and purchasing decisions are often made based on price or the recommendation of a reseller partner. Comparisons by research institutes that test security software also significantly affect customers’ purchase decision. F-Secure’s protection products for endpoint devices have performed very well in security tests within the industry (AV-Test, AV-LAB PL, V3) over the years and their ability to detect malware are world class compared to the competition.

Development of annual recurring revenue (ARR) in corporate security products



Development of order book in corporate security products



Source: F-Secure (CMD), Inderes

Company description and business model 4/6

Countercept (MDR)

Countercept is F-Secure's response to "the paradigm shift" on the security markets, where mere prevention of malware and data breaches has evolved to rapid detection of threats that have passed the security and responding to them. Countercept is a managed service (MDR, Managed Detection & Response), where technology plays a major role. The current Countercept consists of an RDS solution introduced by F-Secure in 2016 and Countercept acquired in the MWR acquisition, which has been integrated into a unified and competitive MDR solution in the past few years.

When implementing MDR, sensors are installed on the customer's IT-network and endpoint devices to collect and transmit data to F-Secure's data center. AI and machine learning are then used to detect anomalies in the company's data traffic, which can mean a security threat has passed through or an outside entity is penetrating the customer's systems. F-Secure's data center monitors customers' IT environments 24/7 and provides immediate response to security alerts as necessary. Countercept's sensors collect a huge amount of data daily and the overall picture of the customer's IT network becomes clearer over time. Thus, machine learning constantly tailors the product to better respond to the customer's environment and the threshold to switch to a competing product grows over time.

Countercept is suitable for companies whose security requirements are high and the target group are companies with more than 1,000 employees. On average, the contracts start at around EUR

100,000 and for the largest customers, long-term contracts run around million euros. Key customer groups for Countercept include banks, media, technology, and industrial companies. MDR solutions are mainly sold as direct sales and because of the large size of contracts and complex technology, the sales cycles are typically long.

Countercept is an important product for F-Secure's growth and its sales development has a significant effect on corporate security growth due to the large size of the contracts. At the end of H1'21, Countercept's order book was EUR 16 million, indicating that it has already increased to a significant size for F-Secure. F-Secure sees growth opportunities in this product area for several years to come, and the company's efforts to scale the solution will somewhat burden profitability of corporate security. After the growth phase, MDR solutions (gross margin target >65%) have the potential to reach good profitability, as strong customer retention provides continuity in revenue and the service component scales with growth.

The rapidly growing MDR market has attracted a lot of competition and Gartner estimates that well over 100 players already offer MDR solutions. F-Secure's main competitors come mainly from the US, and include, e.g. CrowdStrike, Darktrace, Cybereason and Rapid7. According to F-Secure, it distinguishes itself from competitors with strong technological expertise, which means that Countercept's detection ability of cyber-attacks is excellent. Countercept's technology stands out especially in responding to detected threats and the fight against ongoing targeted cyber attacks. In addition, in Europe, the company has competitive advantage

against its competitors in that geopolitical factors may affect the decision making of some customers.

Endpoint Detection & Response (EDR)

At the end of 2018, F-Secure launched an automated tool for detecting and responding to endpoint device attacks (Endpoint Detection and Response, EDR). The product is based on the same technology as Countercept but does not include the service component. Thus, it scales with automation to the size class of smaller businesses as well.

EDR acts as an additional functionality on top of endpoint protection products (EPP) and on the markets this product area has integrated with EPP products in recent years. The main potential for EDR is to sell the product to F-Secure's extensive EPP customer base. Medium-sized companies have the highest cross-selling potential, as the need for detection and response to threats is growing in this segment. According to F-Secure, the value of conventional EPP customers can be more than doubled when a complete endpoint device protection solution including EDR is offered. EDR can also be sold separately on top of other security suppliers' EPP solutions.

Company description and business model 5/6

The operating principle of EDR is highly similar to Countercept but when the product detects an anomaly in the company network the information is automatically delivered to the company's IT head or reseller partner. The product also provides instructions on how to respond to the threat. The product is suitable for companies of all sizes, but the main target group is SMEs. The end customer or reseller partner will also be able to send information on the detected abnormal event to F-Secure's service center, where F-Secure experts will assist in resolving the issue. Thus, EDR also generates service revenue for F-Secure, even though the outset is a pure software product.

Next to Countercept, F-Secure's EDR is key in the growth strategy for corporate security. The EDR market is in a fast-growing phase, and, e.g., Gartner has estimated that the number of endpoint devices with detection capabilities will multiply in coming years. Also in this product category F-Secure faces competition on a broad front, as almost all competitors offering EPP products also have EDR capability. In addition, an emerging and rapidly growing market attracts new competitors.

Solutions for third-party environments

F-Secure has developed complementing security solutions for Salesforce's and Microsoft's cloud platforms that have been well received by the customers in recent years and are already visible as growth in corporate security. F-Secure has developed cyber security capabilities into Salesforce's platform for checking links and attachments for malware. The product is distributed as an application directly through Salesforce's platform, enabling high profitability. The product

has good growth prospects and currently has no actual competitor. However, the risk is that Salesforce would build its own solution to replace F-Secure's product.

In addition, F-Secure offers the Elements for 365 solution designed to complement Microsoft 365's own security features. The solution aims to protect content transmitted through Microsoft 365 applications. The product is offered via F-Secure's Elements platform, either separately or as part of the overall solution.

Cyber security services

F-Secure provides consulting for large businesses and other critical IT system owners in all areas of cyber security. The offered services include cyber security audits, cyber security stress tests (Red Teaming), strategic risk and cyber security management, cyber security in software development, and responding to data breaches and leaks.

F-Secure's consulting business focuses on the most demanding security issues, but the service portfolio has expanded in the past few years, as companies increasingly want a more extensive turnkey solution in cyber security services. The scope of the consulting business increased significantly with the MWR acquisition in 2018 and F-Secure currently employs over 300 experts in consulting. The consulting customer base consists of hundreds of large companies.

Consulting revenue decreased by 8% in 2020 to EUR 45.8 million, representing 38% of corporate security revenue. The COVID pandemic has temporarily weakened demand as companies

withdrew and slowed down their cyber projects last year. This year, demand has started to recover and medium-term growth outlook is good. Lack of experts is a growth challenge on the market and competition for top experts is tight.

F-Secure's consulting is still primarily a project driven business but F-Secure constantly tries to sign continuous consulting agreements with its customers. In the consulting business, the company's largest markets (UK and the Nordic countries) are already partly developed with profitability first, but in smaller markets operations are still clearly in a growth phase, which burdens profitability.

The strategic focus of F-Secure's consulting is not to expand its service business to compete with regular IT service companies even though the service offering sometimes overlaps with these. More extensive cyber security service packages are offered by consultancy companies (like KPMG), IT generalists (like CGI) and specialized players (like Nixu).

F-Secure's ability to offer consulting services gives the company a competitive advantage against players who only offer cyber security products. In addition, consulting offers cross-selling possibilities with the products. Consulting also polishes F-Secure's brand as a comprehensive cyber security company.

Company description and business model 6/6

Consumer security

Products

F-Secure's products are used by millions of consumer customers across the world. The main products in the current product portfolio are: 1) endpoint device security product Safe, 2) privacy protection product F-Secure Freedome, 3) password management and personal data protection product F-Secure ID Protection, and 4) security router that protects all smart devices in the home F-Secure Sense

Most of consumer security revenue comes from selling endpoint protection products (Safe). However, in direct sales, more and more customers are changing their order when renewing it to the combined solution Total, which includes all F-Secure's main consumer products. This product bundling is a key growth driver for consumer security sales.

Among newer products, Sense launched in summer 2017 and ID Protection released in 2019, have gradually started supporting the growth of consumer security. Sense's path to wider commercial distribution is taking place as a software product installed on third party routers. F-Secure has already entered into such agreements with several operators, but the base of routers with Sense software is slowly expanding, which has been further slowed down by COVID.

F-Secure's ID Protection combines monitoring of data breaches containing personal data with password management. The product has been well received in the operator channel and F-Secure has

already signed several dozen operator agreements for the product.

In consumer endpoint device protection products, F-Secure's competitors consist largely of the same companies as on the corporate side, as the product technologies are very similar. Competition is tightened by the fact that there are several free antivirus software available on the market (e.g. Avast, Avira, Windows Defender).

Service provider channel (operators)

F-Secure started building a sales channel through operators already in the early 2000s and today its over 200 operator strong network is the largest compared to other cyber security companies. 74% of consumer security revenue came from the operator channel in 2020.

Operators sell F-Secure's products as part of their own continuous security packages, and F-Secure receives wide distribution and volume for its products through operators. This way the replicability and scalability of the products enable good profitability even though the operators take a largish chunk of the gross sales of the products as they are responsible for the lion's share of product marketing.

For operators, cooperation with F-Secure is also fruitful. By providing security packages for mobile and broadband subscriptions, operators have been able to improve customer retention and satisfaction in addition to getting profitable additional sales. In our opinion, the success of F-Secure's products in this channel comes from the fact that it solves two core problems of the operator business (average price and customer turnover). In recent years, F-

Secure's operator channel has expanded from telecom operators to, e.g., insurance companies and other financial sector players whose offering is well complemented by security products.

Direct sales channel

Consumer products are also sold through many resellers operating physically and online. In addition, products are increasingly sold through its own online store, which means there are no middlemen between F-Secure and the end customer. Competition on the market is extremely tough and customer acquisition requires considerable marketing investments, and various free products and freemium models make the consumer market challenging to reach through direct sales. 26% of consumer security revenue came from direct sales channels in 2020.

Consumer security would be a stable dividend payer as an independent listed company

In connection with its CMD in August 2021 F-Secure announced that it is reviewing and evaluating various strategic options by the end of H1'22, including the possible listing of consumer security on Nasdaq Helsinki.

In our view, consumer security that is growing stably and generating good cash flow would be profiled as a stable dividend payer as an independent listed company. As an independent company, consumer security could also focus fully on pursuing growth in its own markets with a sharpened strategy without having to consider the different needs of corporate security in decision making.

F-Secure's business model



Investment profile

Separation of consumer and corporate security would clarify focus and value creation

F-Secure has been difficult to perceive for investors in its current development stage as the share combines a stable cash flow business (consumers) with a business that is still in an investment stage with negative cash flow (corporate). In addition, corporate security is made up of businesses with different profiles and development stages, which are partly complementary. All in all, there are growth opportunities in corporate security products in many areas, but the investments required for growth still burden profitability. In consulting, growth prospects are also picking up and there is clear room for improvement in profitability.

In the big picture, F-Secure's various businesses should be priced at very different valuation multiples due to different growth, scalability and profitability profiles. Thus, the current form of F-Secure is not a full-scale growth company, but not a mature stage technology company either. We therefore welcome the planned separation of consumer and corporate security, which would provide considerable clarity into the company's strategy and clarify the value creation of the share.

In our view, consumer security that is growing stably and generating good cash flow would be profiled as a stable dividend payer as an independent listed company. The share price would thus be mainly based on earnings-based valuation multiples. Similarly, in the more rapidly growing corporate security market, growth is still the key value driver and available market shares are in part being fought for at the expense of profitability. Thus, independent corporate security

would, in our view, be priced through a combination of the EV/Sales ratio, and growth and profitability. We see consumer and corporate security as more valuable separately than together and consider the arrangement likely.

Strengths and drivers

Growth in corporate security products is at the core of value creation. In many product areas, the market is still in the early phase, growing quickly and market shares are being distributed now.

A scalable and strong customer retention business model enables very good profitability in the long-term.

A unified product portfolio in corporate security offers additional and cross-selling opportunities and enables shifting toward larger customers in the value chain.

Stable and profitable growth in consumer security. In addition, the new products Sense and ID Protection offer scalable growth potential in the long term.

A stable and established position in endpoint device protection provides F-Secure good resources to expand its core competence and technology to new segments and sell new solutions to the existing customer base.

Weaknesses and key risks

The industry is potentially overinvested, which in recent years has been reflected as tightening competition. The gold rush of new players can lead to there not being enough to go around despite the growing market. This is a clear threat both in F-

Secure's established and new product areas.

Dissolving of high valuation levels in the sector would probably also have a negative effect on the accepted valuation on F-Secure's share.

Competitive threat in consumer security and slow revenue growth due to free antivirus software. Despite these threats that have been present for years, consumer security seems to remain a very dynamic business and the growth outlook has strengthened in recent years.

Growth in corporate security still burdens profitability: In a highly competed market, winning shares requires significant sales investments and continuous product development. Also, as a brand, F-Secure is not yet really seen as a provider of corporate security solutions. Therefore, the company plans to separate consumer and corporate security activities and has launched a brand reform for corporate security.

The COVID pandemic still creates certain uncertainty in consulting and MDR solution sales: The consulting business suffered significantly from COVID as customers held back their cyber security projects. COVID has also been reflected in the already long sales cycles of MDR solutions. Now the outlook is already clearly picking up in both areas, and the distance selling models learned during the pandemic will also help boost sales efficiency in the future.

Investment profile

1. Strong growth focus in corporate security

2. Stable growth and good profitability in consumer security

3. A scalable and continuous business model that generates good cash flow

4. A large and growing total market

5. Separation of consumer and corporate security would clarify focus and value creation

Potential



- Growth in corporate security, especially in detection and response solutions
- Strengthening growth and competitive edge through renewal and integration of product portfolio
- Strong demand outlook on the market
- Stable and profitable business in consumer security including growth potential in new products

Risks



- The industry is potentially overinvested, which has been reflected as tightening competition in recent years
- Success of investments in corporate security
- Dissolving of high valuation levels in the sector could have a negative effect on share valuation
- Competitive threat in consumer security and slow growth

Industry 1/4

Market definition, size and growth

Cyber security companies are solving one of the biggest problems of the digitalizing society. Big problems also mean big business opportunities, which makes the market very interesting, dynamic, and rapidly growing.

Cyber security refers to processes, technologies, solutions, and services that protect companies' and other organizations or individual users' data against criminality that occurs in networks. Cyber threats can be divided into three categories: 1) criminality that aims at financial profit, 2) hacking that aims at disrupting companies' or governments' activities, and 3) spying that aims at gaining a competitive business advantage or phishing on state security. The number of cyber threats and their intelligence is constantly growing and the market is, in practice, driven by an endless race between criminals and cyber security technologies and processes.

The cyber security market develops quickly and the estimates on the total market size and growth still vary dramatically. Gartner estimates that the global cyber security market will grow by about 12% to USD 150 billion in 2021, as last year growth temporarily slowed down due to the COVID situation. The market is expected to grow at about 10% per year and reach USD 221 billion in 2025.

Market segments

The target groups of the cyber security market can be roughly divided into three areas in a pyramid model (see next page) based on the intelligence of attacks and technologies. These also broadly

correlate with the size of the customer organizations as the biggest organizations and state administration are typically the main targets of cyber criminals. For organizations at the top of the hierarchy, solutions that have been created for the masses at the bottom of the hierarchy do not offer sufficient protection. Correspondingly, the solutions focusing on the top levels of the hierarchy are too expensive for organizations whose activities do not require a high protection level. Development of new technology focuses on the more demanding top level segments after which the technology is replicated to the lower levels for broader segments.

The top of the cyber security market is represented by state espionage and the defense industry. This is a niche market from the viewpoint of cyber security companies, but it represents the highest technology and level of expertise and is thus important.

The largest volume of the market is found in the middle of the pyramid that covers targeted attacks. In this case, the primary target group is in practice all large organizations and public administration, and especially the players whose activities include critical security of supply activities (like energy, banks and operators). Crucial in this target group is that its size is constantly growing as cyber security threats increase, which also expands the market for demanding cyber security solutions.

In the big picture, market growth is the result of 1) cyber security issues playing an important role for an increasing number of industries when planning new digital businesses and 2) the rising trends on

the IT markets (industrial IoT, social media, digital commerce, cloud transformation) force organizations to pay more attention to cyber security.

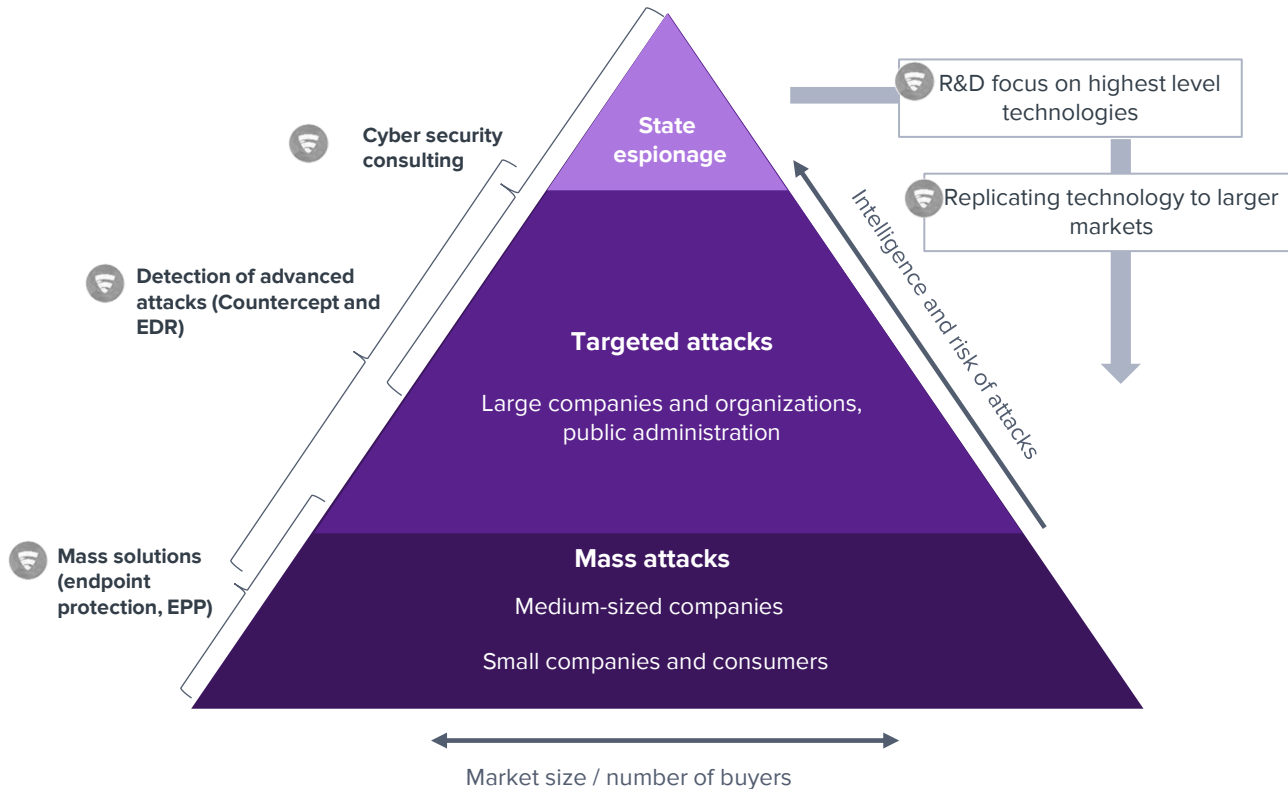
In the segment of targeted attacks (large and medium sized organizations), cyber security cannot be solved only with mass solutions. The cyber security budgets of companies in this segment are annually roughly around EUR 1-5 million, which makes it attractive to companies that offer cyber security services and products. F-Secure has expanded into this segment through acquisitions (consulting service) and a wider product portfolio (MDR).

The most important segment for F-Secure is still the bottom level of the pyramid that includes SMEs and consumers. For small companies and consumers, the main thing is to be protected against mass attacks, which can be done with regular "off the shelf" cyber security products like endpoint protection products and firewalls.

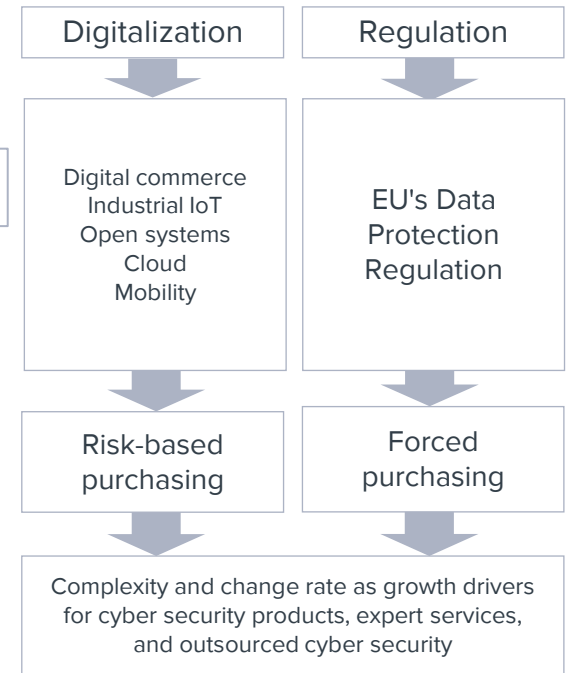
Among medium-sized enterprises, the need for cyber security beyond mere endpoint protection is increasing, but the security budgets (0.1-1.0 MEUR) are significantly lower than for large enterprises. In this case, it may not be possible to purchase the best technologies or managed/outsourced cyber security services. Especially rapid detection of threats that pass endpoint protection is emphasized in the segment.

Sector

Distribution and operating logic of the cyber security market



Market drivers



Industry 2/4

Market sub-segments for F-Secure

F-Secure's potential market can be examined more closely through the company's product and service selection. Overall, F-Secure's target market is so large that the size of the market does not limit the company's growth.

F-Secure estimates that its consumer security market in 2020 was about EUR 7.0 billion and is expected to grow steadily at an annual rate of about 4% until 2025. The relatively slow growth on the consumer security market is explained by the popularity of constantly evolving free antivirus solutions (e.g. Windows Defender) but growing product areas can be found, e.g., in privacy protection and in solutions designed to protect smart devices in the home. With the COVID pandemic and the resulting increase in remote work, consumers are more prepared to pay for cyber security, which has also been reflected in F-Secure's growth figures.

For corporate security, F-Secure has estimated the current target market to be around EUR 11 billion. The growth profiles of the different product areas are very different, but the overall market is expected to grow at an annual rate of as much as 15% until 2025.

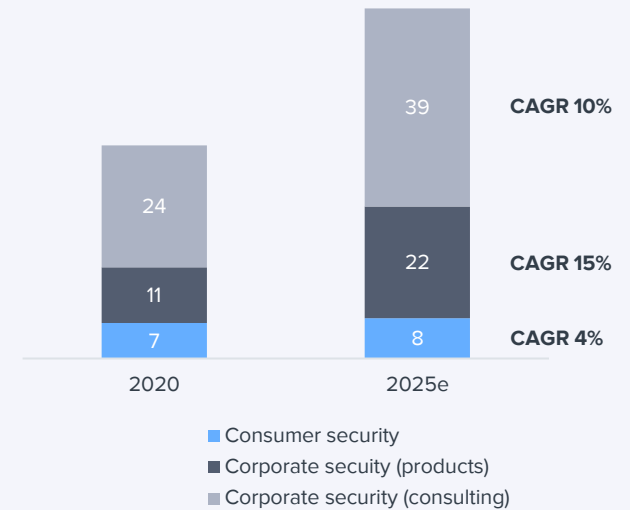
The market for enterprises' endpoint protection platforms is growing as new automated threat detection and response products (EDR) are complementing EPP products. For example, Gartner already puts these products in the same category. IDC has estimated the size of the EPP/EDR market in 2021 to be close to USD 10 billion and it is expected to grow by about 7% annually by 2024. Growth of EDR products is driven

by the fact that data breaches against companies is often not detected for months, and this has shifted the focus from merely preventing attacks towards faster detection and response. Large companies can buy detection capabilities as managed services (like F-Secure's Countercept) but especially for smaller companies a pure product solution is the only sensible solution in terms of costs. In addition, other new solutions that complement the security of endpoint devices (e.g. F-Secure Cloud Protection for Salesforce) support the growth outlook of the overall market for endpoint security platforms.

The market for managed detection and response services (MDR) is still being shaped and estimates of market size and growth are indicative. The significant growth potential is shown by Gartner's estimate that about 50% of organizations will use MDR services by 2025. F-Secure aims to contribute to the growth of this market with its Countercept solution. However, in recent years, the market has already started to mature slightly, which is visible in F-Secure's expectations for corporate security products growth (15%). Over the past five years, the rapidly developing market has attracted a lot of competition, and Gartner has estimated that there are more than 100 players offering MDR solutions.

In cyber security services, F-Secure has estimated that the size of the relevant target market is around EUR 24 billion and the market is expected to grow by some 10% p.a. in 2020-2025.

Size (EUR bn.) and growth expectations of F-Secure's market segments



Industry 3/4

Market drivers

Cyber security market growth will probably continue to be steady driven by digitalization investments. In addition, constant news of serious data breaches (risk-based purchasing) and pressure created by regulations (forced purchasing) boost market growth. At the top level, growth is, in practice, driven by three forces: digitalization, regulation, and increasing threat scenarios.

The commonly recognized megatrends in the IT world like cloud services, industrial IoT, social media and digital commerce are strongly linked with cyber security. In many of these areas, the barrier for creating new applications, products and digital services comes from cyber security challenges. These challenges are related, e.g., to privacy protection, e-commerce or security. Another megatrend worth mentioning is the ever-growing and diverse number of endpoints and linking of various systems and online services. This makes the market more attractive from a criminal's viewpoint than when companies still mainly only operated in their own individual closed environments. Thus, digitalization progressing constantly increases the potential attacking area for cyber criminals.

Building new digital services requires that companies and governments solve the challenges related to cyber security in advance. The demand for cyber security related products and services is also often supported by the fact that cyber security is increasingly becoming a critical and integral part of any new IT system, digital service, or product.

This means that problems related to cyber security cannot be solved simply by acquiring cyber security software and equipment off the shelf but also requires the use of high-level expertise services. As a result of these market drivers, F-Secure has also been transformed from an endpoint device centered antivirus company to a provider of comprehensive cyber security solutions for companies.

Consumer security changing

In consumer security, the changing device portfolio has been visible as a slight drop in endpoint protection software but, overall, the number of devices connected to the web is growing rapidly in consumers' homes. This provides growth opportunities for new cyber security products that protect smart devices in the home even though PC driven antivirus sales is a challenging market.

In consumer security, the nature of the market is changing rather than the market faltering with PC antivirus. For example, Windows' own cyber security is cannibalizing conventional cyber security, but this does not solve the consumer's problem of how to protect several different endpoint devices. In addition, demand for privacy protection solutions is growing. Thus, there is a natural need for F-Secure's comprehensive consumer solutions as the array of endpoint devices and operating systems is vast and constantly changing.

EU's Data Protection Regulation

EU's Data Protection Regulation (GDPR), that entered into force in May 2018, has increased the demand for cyber security services. The regulation imposed new obligations on organizations handling personal data, like the obligation to report any breach of security. The authority that supervises the regulation can impose sanctions if the regulation is breached. The sanctions can be massive, for more serious breaches the fine is EUR 20 million or 4% of the company's annual revenue, which has resulted in companies taking the regulation seriously. GDPR also supports F-Secure's business as the regulation means that companies must build better capabilities to detect realized security breaches.

Industry 4/4

Industry consolidation continues

Over the past decade, the growth outlook of the cyber security market has attracted a lot of investments to the sector. This has been visible as dramatic growth in venture capital investments in new cyber security companies and as lively M&A activity both in North America and Europe. Several cyber security company IPOs have been seen on stock exchanges, while some of the listed companies have also been acquired. In 2020, COVID temporarily put on hold on M&A transactions, which, considering statistics, has been dissolved as a wave of transactions in H1'21.

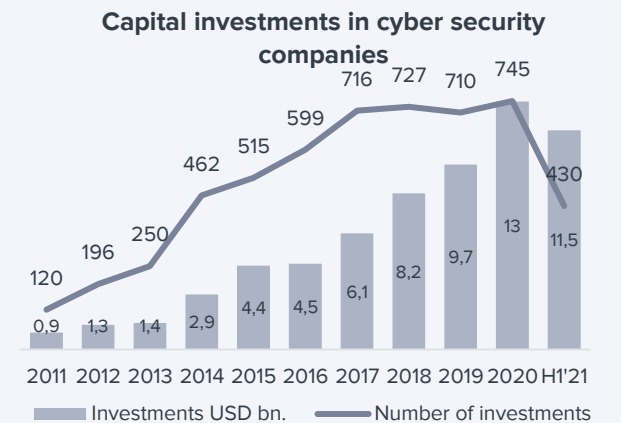
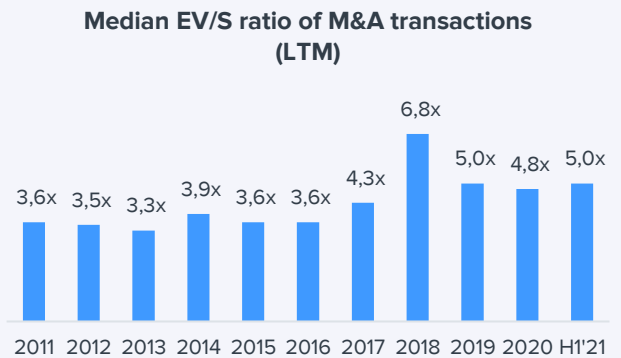
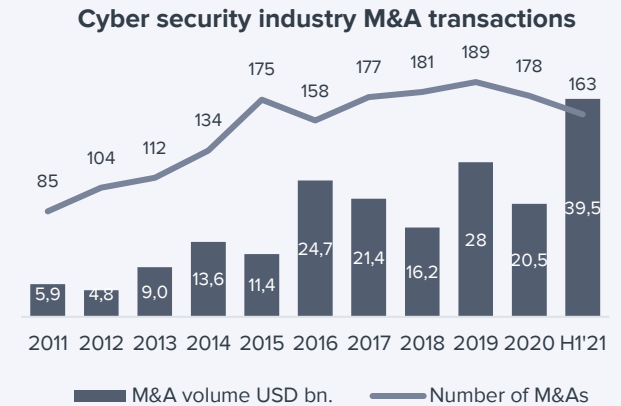
The cyber security market is still highly fragmented, and consolidation is bound to continue as, despite market growth, there is not room for all current players on the market if it starts maturing in the future. We have been worried for several years that the industry is overinvested. In our opinion, this has already been visible as a tightening competitive situation in the sector in recent years and can in future become more visible in the sector's profitability when new players enter the market with new solutions that try to solve cyber security problems more efficiently and/or cheaply than the competition. Some players in the sector are still generating heavy losses and their lifeline of external financing will end if they cannot generate growth or profitability.

The investment pressure in the sector has led to acquisitions' valuation levels remaining high, and the valuation levels of listed cyber companies have also increased significantly in recent years. This makes it more difficult for F-Secure to carry out

acquisitions that generate shareholder value. At present, well above 30x EV/S multiples are paid for the hottest listed cyber security companies.

Due to the lack of experts, acquisitions are the only way for many service companies to get a piece of the market or they can act as an alternative to recruitment. In this case, the target is often small, specialized players. In acquisitions of product companies, the buyers can seek technologies that complement their product portfolio and in larger M&A transactions the aim is to generate synergy, e.g., in product development, sales and distribution. Consolidation pressure also increases because, instead of point solutions, cyber security is increasingly turning into turnkey solution and process deliveries, which forces players to integrate their offerings. We believe that F-Secure will continue to be part of the industry consolidation as a buyer but currently the high valuation levels in the sector slow down acquisition plans.

The crucial question for investors is whether it is worth investing in the sector after the investment boom and whether it is already too late. We feel there is not much room to stretch the valuation multiples of the market and value must primarily be created from the growth and profitability of the companies in the sector.

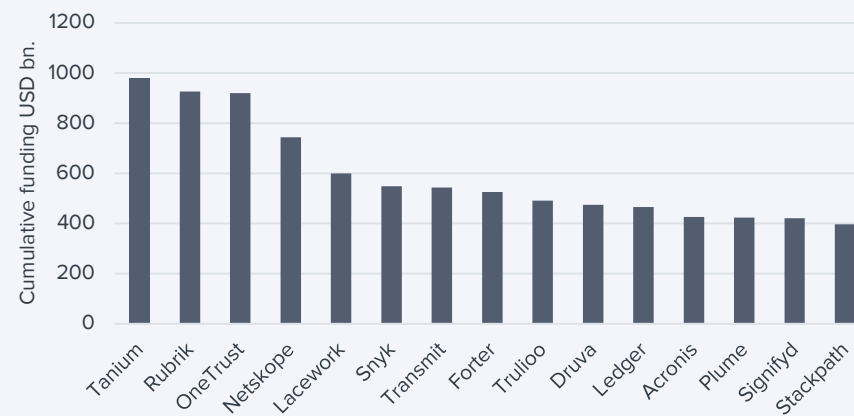


Acquisitions and investments in the industry

M&A transactions in the sector with public valuation information

Time	Buyer	Target	EV (MUSD)	EV/S
11/2021	Advent	McAfee	14,000	7.5x
4/2021	Thoma Bravo	Proofpoint	11,489	9.6x
3/2021	STG	McAfee (Yritysliiketoiminta)	4,000	3.1x
3/2021	Wipro	Capco	1,450	2.0x
11/2020	Nasdaq	Verafin	2,750	19.5x
10/2020	Francisco Partners	Forcepoint	1,100	1.7x
9/2020	Ivanti	Mobileiron	859	4.2x
2/2020	Advent	Forescout	1,884	4.8x
1/2020	LexisNexis Risk Solutions	ID Analytics	375	7.8x
12/2019	F5 Networks	Shape Security	1,028	17.1x
11/2019	Open Text	Carbonite	1,400	3.4x
10/2019	Thoma Bravo	Sophos	3,948	5.1x
8/2019	Broadcom	Symantec Enterprise	10,700	4.6x
8/2019	Vmware	Carbon Black	2,100	9.1x
5/2019	Orange	SecureLink	576	2.1x
2/2019	Carbonite	Webroot	618	2.9x
11/2018	BlackBerry	Cylance	1,500	11.5x
10/2018	Thoma Bravo	Imperva	1,800	5.2x
8/2018	Shearwater Group	Brookcourt Solutions	40	1.4x
8/2018	Cisco Systems	Duo Security	2,350	>20x
6/2018	F-Secure	MWR Infosecurity	110	3.1x
12/2017	Thales	Gemalto	5,541	1.8x
11/2017	Warburg Pingus	Cyren	119	3.8x
11/2017	Thoma Bravo	Barracuda Networks	1,405	3.8x
7/2017	Open Text	Guidance Software	245	2.1x
2/2017	Sophos Group	Invincea	120	4.8x
2/2017	Palo Alto Networks	LightCyber	105	10.5x
1/2017	Keysight Technologies	Ixia	1,603	3.3x
11/2016	Symantec	LifeLock	2,362	3.6x
9/2016	TPG	McAfee	4,200	2.5x
7/2016	Avast	AVG	1,463	3.4x
6/2016	Symantec	Blue Coat	4,722	7.9x
1/2016	FireEye	iSight Security	269	6.7x
11/2015	NCC Group	Fox-IT Group	141	4.9x
6/2015	F-Secure	nSense	20	2.6x
4/2015	Singtel	Trustwave Holdings	786	3.6x
4/2015	Marlin Equity Partners	Fidelis Cybersecurity	200	3.3x
3/2015	NCC Group	Accumuli	83	2.4x
12/2014	Belden	Tripwire	710	6.0x
7/2013	Cisco Systems	SourceFire	2,194	7.5x
		Median	1,400	3.8x
		Average	1,958	5.3x

Private cyber security companies that have raised most capital



IPO activity has been lively in the sector

Company	IPO year	2021e EV/S
Okta	2017	31.7
SailPoint	2017	13.1
Zscaler	2018	49.5
Avast	2018	9.3
Tenable	2018	10.3
Solarwinds	2018	5.4
Tufin	2019	2.8
Crowdstrike	2019	66.2
Cloudflare	2019	101.6
Ping Identity	2019	8.0
Sumo Logic	2020	7.5
McAfee	2020	6.8
Telos	2020	4.3
KnowBe4	2021	16.6
Darktrace	2021	18.0
SentinelOne	2021	91.3

Competition

Growing market attracts a lot of competition

Rapid growth of the cyber security market and the wave of investments that swept across the sector have, over the past decade, strongly shaped the competitive landscape. The market is still very fragmented and still looking for its shape. A growing share of market growth is grabbed by new cyber security industry start-ups that often are specialized in a particular niche segment of cyber security with their services or products. Some of the companies set up in the past decade have already grown to a size class where they are eating market shares from the more traditional players in the sector. For example, the very rapid growth of US-based CrowdStrike in recent years has been reflected in the market for endpoint protection in the market share of traditional players among large enterprise-size customers.

Traditional players, and those who have been on the market longer, try to make their offering more comprehensive to respond to the competition and this has accelerated consolidation in the industry as bigger players buy smaller product and service companies.

In the big picture, global IT sector giants like IBM, Microsoft and Cisco, whose cyber security revenue is in the billion range also operate on the market. In recent years, especially Microsoft has raised its head on the corporate side with good products and very strong distribution power. We have listed F-Secure's competitors in different product areas on the following page.

Competition factors on the cyber security market

In cyber security products, the quality of the product and its ability to prevent or detect malware is naturally emphasized as a competition factor. In endpoint protection products, the threshold to enter the field has, however, lowered as AI and cloud environments offer the required algorithms and capacity for virus prevention software. At the same time, detection and response capabilities are increasingly important. In addition, customers' confidence in the product, their success in various tests and the brand are emphasized in the competition.

The role of distribution channels is also important in competition as it is difficult for a product business operating without working channels to generate volume and thus scalability. Especially in corporate security, products are sold mainly through service partners and the product solutions must be built so that they also enable the possibility for the service partner to build value-added services on top of them.

In medium sized and large enterprises, the uniformity of the product portfolio is an emphasized competition factor as the customers rather purchase an extensive turnkey solution instead of several point product solutions. However, the market is still highly fragmented and there are plenty of entities to protect in an organization, even outside F-Secure's solution offering. F-Secure estimates that on average, larger customers have security solutions from six different suppliers and the total number of different solutions easily reaches 20-30.

F-Secure's competitive advantages

F-Secure's strong brand, especially in Northern Europe, is based on the company's long-term and solid expertise in virus prevention technologies. A testament of this are the numerous awards the company has won in malware detection tests. F-Secure's brand is particularly strong in endpoint protection products among SMEs and consumers. The company still has brand work to do on the corporate side to be perceived more as a comprehensive cyber security house whose solutions also cover the cyber security needs of larger companies. F-Secure's consulting services polish the company's brand on the corporate side and help it to position itself more strongly as a comprehensive cyber company. Consulting also gives a competitive edge to companies that only offer cyber security products.

F-Secure's extensive reseller channel in corporate security and operator channel in consumer security are an asset especially among small companies and consumers. In Europe, the company has competitive advantage against its competitors in that geopolitical factors may affect the decision making of some customers.

In addition to antivirus expertise, we feel that F-Secure also has technological competitive advantage in new corporate solutions (Countercept). This is partly reflected in the already strong customer relationships among demanding customers, like large banks.

Competitive field

F-Secure's competence areas	Weight in F-Secure's business and strategy	Main competitors	Other competitors
Endpoint protection (EPP)	✓✓✓	 	 Carbon Black.
Endpoint detection and response (EDR)	✓✓	 Carbon Black. 	
Managed detection and response (MDR)	✓✓	Carbon Black. 	
Cyber security services	✓✓	No individual main competitors	
Vulnerability management	✓	 	

Strategy 1/2

Successful transformation into a cyber security house

In 2015, F-Secure started evolving from an antivirus company focusing on consumer business towards a more comprehensive cyber security company, whose business focus lies on the rapidly growing corporate security markets. The change was launched by selling the consumer-focused cloud storage business and acquiring nSense that expanded the corporate security portfolio and expertise considerably. Simultaneously, the focus of R&D in corporate security shifted to developing detection and response solutions. Cyber security consulting was also strengthened with two smaller acquisitions in 2017.

In 2018, the MWR acquisition moved F-Secure's growth strategy and transformation process based on corporate security forward in bounds and leaps. The weight of consulting in the company's business grew significantly and the Countercept product obtained in the acquisition strengthened the company's detection and response solution offering. MWR's integration into F-Secure was successful as expected.

The change in F-Secure has required significant investment in unifying the product and service offerings and the development of the partner channel. At the same time, the business model has changed from selling one-time licenses to continuous subscription sales. With the Elements platform launched last summer, F-Secure is taking further steps in servitization of cyber security. Now customers can also buy cyber security with a

usage-based model, which is not yet very common in the industry.

Overall, F-Secure has been successful in its transformation and a strong corporate security business has grown alongside consumer security. However, these businesses are in very different stages and must be managed with very different strategies. We therefore welcome F-Secure's plan to list consumer security as a separate company. Reflecting business separation, F-Secure has started preparing a brand reform in corporate security.

The separation of business activities would sharpen F-Secure's strategy considerably. In a rapidly growing corporate security market, growth is still the key value driver and available market shares are being fought for partly at the expense of profitability. Thus the business must be driven with growth first for years and profitability optimization can only begin when the market starts to mature. We believe that the independent corporate security business would be priced based on a combination of the EV/Sales ratio and growth and profitability.

In consumer security, the growth outlook is more stable and the business already generates strong cash flow. In our view, the strategy would thus focus more on optimizing the capital structure and striking the right balance between growth investments and profit distribution to owners. Consumer security would, in our view, be profiled as a stable dividend payer as an independent listed company.

Financial targets

In August 2021, F-Secure published new medium-term financial targets. In corporate security products, the company aims to achieve a double-digit revenue growth rate. In cyber security consulting, the aim is high single-digit growth %. We believe that achieving low double-digit growth in products organically is realistically achievable with good strategy implementation. In consulting, growth roughly in line with the market should also be achievable, as market recovery from COVID alone supports growth in coming years.

In consumer security, F-Secure aims to grow at a medium single-digit growth rate (~5%). In practice, this means that the growth rate seen in 2020-2021 will continue in coming years, which seems to be a realistic target.

In terms of profitability, F-Secure expects the adjusted EBITDA margin to develop towards 20% in the medium term (2021e: 16%). Achieving this level should be more than possible thanks to the company's scalable software business. According to our estimates, consumer security is already well above the target level, so we feel the profitability improvement must come mainly from corporate security products where growth investments still burden profitability. We estimate that the profitability potential of consulting is around 15%, but currently profitability is still far from this level.

Strategy 2/2

F-Secure's dividend policy is to distribute around one-half of the company's annual profit to shareholders. In 2018-2019, the company skipped dividend payment after the MWR transaction increased debt in the balance sheet and the reported result was low due to growth investments. In 2020, the company returned to dividend payment, paying approximately half (EUR 0.04 per share) of its earnings as dividends. F-Secure's value creation is primarily based on growth in corporate security and the company is not profiled as a dividend company.

Acquisitions

Acquisitions are part of F-Secure's strategic tools and the company has boosted its transformation into a comprehensive cyber security company with acquisitions in the past. In consulting, acquisitions are carried out to increase geographical coverage or acquire experts, in which case the acquisition also acts as an alternative to recruitment. Examples of these are the small (3.5 MEUR) acquisitions (Inverse Path in Italy and Digital Assurance Consulting in Britain) in 2017.

On the product side, F-Secure looks for small acquisitions to complement its current product offering. In 2015, F-Secure acquired the Finnish-Danish service company nSense for EUR 18 million which, in addition to cyber security consultants, gave the company a product for vulnerability management. We consider it most likely that any subsequent acquisitions would fall into this category.

In 2018, F-Secure acquired the British MWR InfoSecurity with approximately 400 employees and about EUR 31 million in revenue. The cash purchase price was GBP 80 million (91.6 MEUR) and the earn-out was GBP 5 million. At the final purchase price, the EV/Sales multiple of the acquisition was around 3.1x, which can be considered as neutral reflecting F-Secure's own valuation at the time of the transaction (EV/S last 12 months: 3.1x) or acquisitions in the sector. The acquisition increased F-Secure's geographical coverage, significantly strengthened consulting (>50% of revenue from services) and introduced complementing technologies for strategically important detection and response solutions (Countercept) to F-Secure's product portfolio.

We believe that given the right opportunity, F-Secure is also ready for a larger M&A transaction to achieve economies of scale in corporate security or to establish a wider distribution channel in SMEs. We expect a larger transaction could only become topical after the likely separation of consumer security is completed. We also believe that the high valuation levels of the cyber security sector slow down F-Secure's willingness for larger transactions.

Strategy



Success factors of the strategy

Implemented

- Strengthening corporate security product and service offering
- Increase revenue from corporate security to exceed consumer security
- Competitiveness of consumer security remains strong and turns to growth path
- Adapting the organization and culture to correspond with the growth strategy

Near future, 1-2 years

- Separation of consumer and corporate businesses and brands
- Growth in corporate security with the modular Elements cloud platform and additional/cross-selling, as well as MDR solutions
- Raising the average price and expanding the operator channel in consumer security
- Focus in consulting will shift from growth to profitability on more mature markets, achieving sufficient scale on smaller markets

The next 5 years

- Strong growth and achieving sufficient scale in all areas in corporate security
- Maintaining a strong distribution channel and partner network for medium sized and large companies
- In the consumer business, optimizing profitability and stable growth, maintaining the viability of the operator channel
- Ability to continuously strengthen the product and service portfolio in line with market trends and technology shifts organically or through acquisitions

Financial position

Growth and earnings development in 2015 to 2020

In 2015, F-Secure sold its cloud storage business for EUR 52 million (purchase price EUR 30 million in 2009). Since then, F-Secure started to invest significantly in rapidly growing corporate security markets, and growth has been sought both organically and through acquisitions. Corporate security revenue has grown from EUR 46 million in 2014 to EUR 120 million by 2020 with an average annual growth percent of 17%. A rough estimation is that half of the growth is organic and half comes from acquisitions. In consumer security, the company grew modestly by some 1.4% per year during this period and revenue was EUR 100 million in 2020. In 2020-2021, however, consumer security growth has risen to around 5-6%.

F-Secure accelerated its growth investments in line with its strategy in 2017-2019, which was reflected in the company's profitability. The adjusted EBIT% in 2015-2016 was about 12-15% and decreased to some 4-6% in 2018-2019. The biggest growth investments have now been made and 2020 profitability was already above 10%. This was partly due to one-off cost savings caused by COVID, but we also expect a slightly improvement in profitability this year. Depreciation of intangible assets related to the MWR acquisition (some 3 MEUR p.a.) burdened the reported result.

Cost structure

F-Secure's gross margin was 78% in 2020, which is a good level for a software company in general. For example costs arising from producing cloud-based services and customer support, as well as direct costs from producing cyber security services are

recorded under direct sales costs. We see a slight upside in the gross margin as the share of new corporate security products in company revenue increases.

Sales and marketing expenses stood at EUR 95.6 million, representing 43% of revenue in 2020. The expense item includes salaries, marketing expenses and other operating expenses. According to our estimates, the cost of sales and marketing will have most downward flexibility as F-Secure's focus moves from growth to profitability.

R&D costs were EUR 41.9 million in 2020 or 19% of revenue. We do not expect the relative share of the expense item to scale down significantly in the long term. Most R&D costs are personnel costs. F-Secure capitalizes product development costs quite modestly in the balance sheet as capitalized costs amounted to EUR 5.5 million in 2020 (2019: 6.2 MEUR).

Administrative costs stood at EUR 17.1 million in 2020 (2019: 28.1 MEUR) or 7.8% of revenue. We see a slight potential for long-term scalability in the expense item with growth.

Cash flow

F-Secure's business normally generates good cash flow and operating cash flow was EUR 22-29 million p.a. in 2013-2017. Cash flow weakened to EUR 6.8 million in 2018, mainly due to the MWR acquisition and its integration. Cash flow improved to EUR 18.5 million in 2019 and to as much as EUR 46.7 million in 2020. Cash flow was supported by a significant earnings improvement, higher deferred revenue from increased orders, and otherwise good working capital control in the midst of the

COVID pandemic.

In general, F-Secure's cash flow is supported by deferred revenue from customers, as contract payments are often received at the beginning of the contract period. As a result, F-Secure's working capital is typically negative. The improved growth rate in deferred revenue last year indicates that growth will also continue in coming quarters.

Balance sheet and financial position

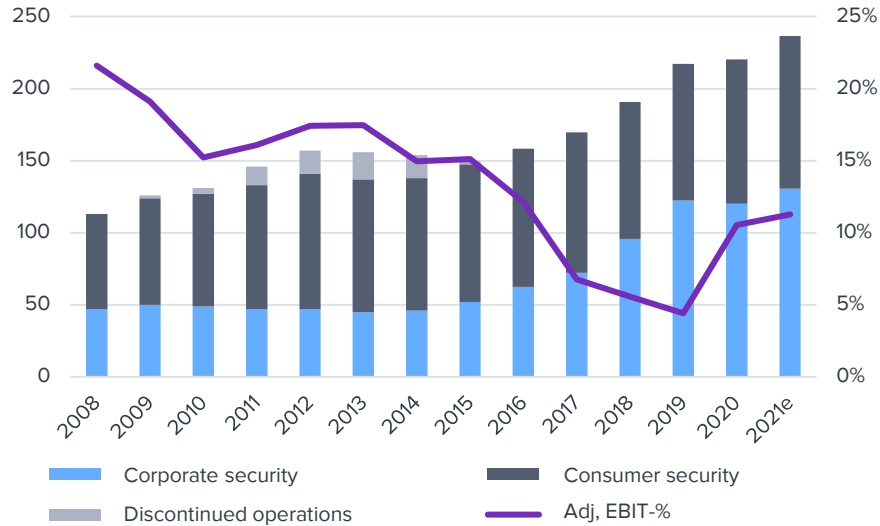
F-Secure's balance sheet is in good condition and the balance sheet figures (Q3'21: equity ratio 61%, gearing -14%) indicate that the large MWR acquisition from 2018 has been fully merged. The balance sheet that has strengthened quarter by quarter and good cash flow provide F-Secure with a backrest for strategy implementation and enables M&A transactions.

At the end of Q3'21, the balance sheet total was EUR 234 million. The balance sheet contains EUR 85 million in goodwill from acquisitions. Goodwill testing is based on a high WACC of about 11-15% and we do not consider significant impairment risk likely. Other intangible assets stood at EUR 34 million. Balance sheet assets consisted primarily of cash in hand (44 MEUR) and receivables (47 MEUR).

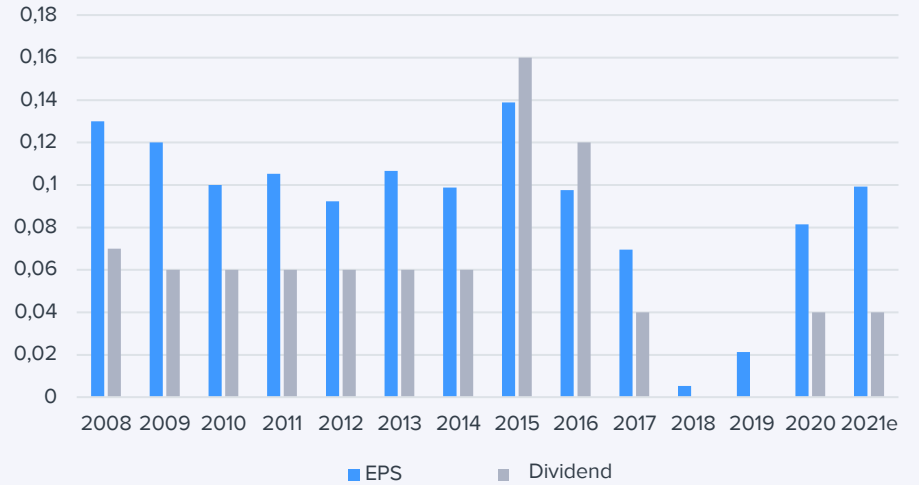
Balance sheet liabilities consisted mainly of equity (93 MEUR) and non-current (25 MEUR) and current (84 MEUR) non-interest bearing liabilities. Of non-interest bearing liabilities, EUR 82 million were deferred revenue. Interest-bearing debt totaled EUR 31 million at the end of Q3'21.

Historical development

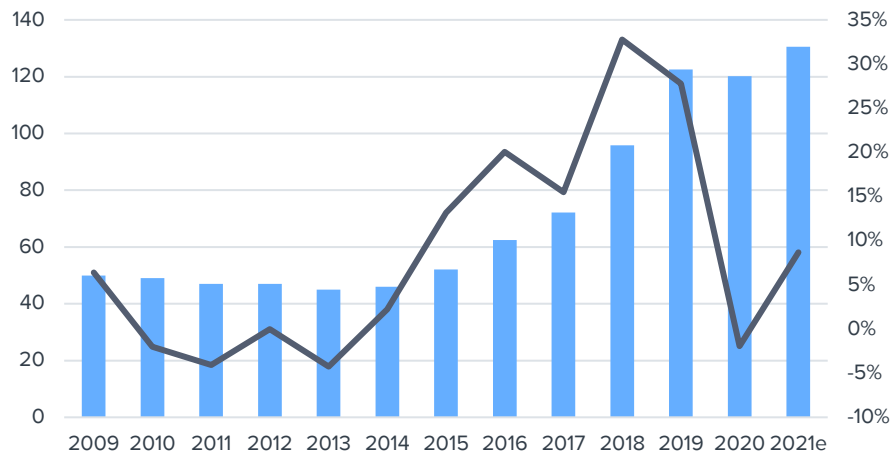
Revenue and profitability



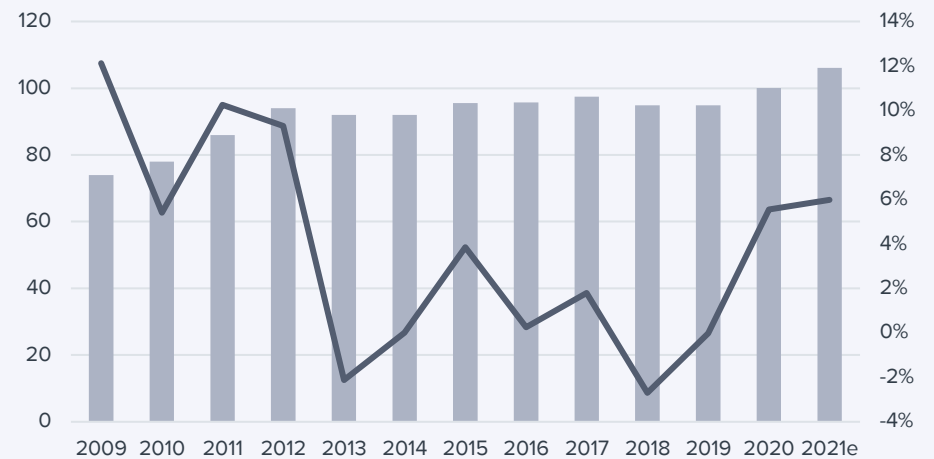
EPS and dividend



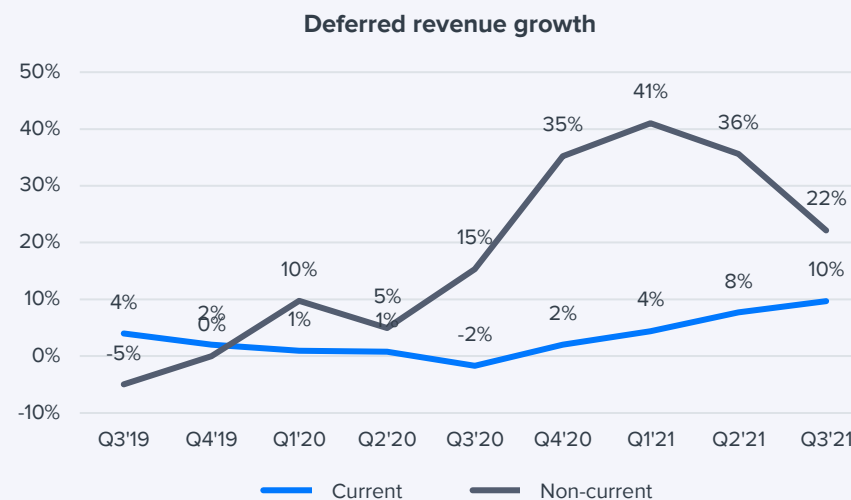
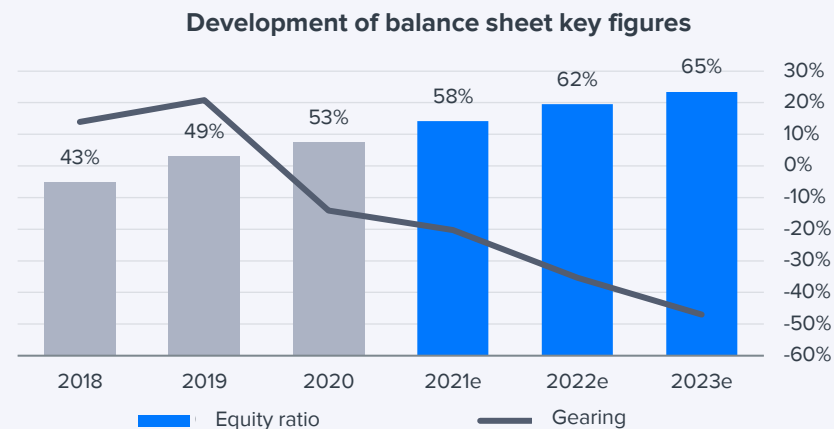
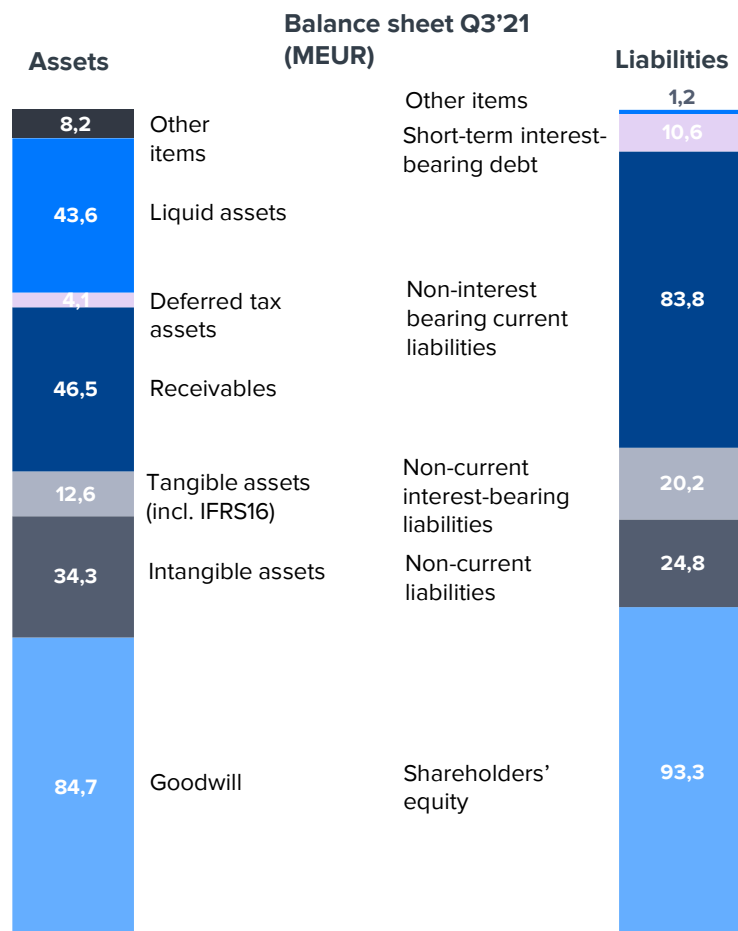
Revenue and growth % of corporate security



Revenue and growth % of consumer security



Financial position



Estimates and valuation 1/5

Estimates

Basis for the estimates

Our estimates are in line with F-Secure's financial targets, and we expect the company to continue on the strengthened growth path also in coming years. In corporate security, especially in MDR and EDR solutions, growth potential is considerable, and we estimate that F-Secure's significant investments in these areas will continue to be reflected as product revenue growth in future as well. In coming years, growth should also be visible as a gradual profitability improvement, as the largest investments have been completed.

In consulting, the demand outlook looking beyond COVID is good and consulting revenue has already started to recover in 2021. The profitability of consulting in the next few years is, in addition to the rate of demand pick-up, largely dependent on how F-Secure can grow in smaller markets to achieve sufficient scale.

In corporate security, a significant share of revenue (estimated to be close on half) still comes from endpoint protection products (EPP). However, new solutions have already reached a scale where they are becoming more and more apparent in revenue growth. Bundling products into larger comprehensive solutions through the new Elements platform offers clear additional/cross-selling opportunities in F-Secure's extensive EPP customer base. Among newer products, Cloud Protection for Salesforce has also become an important product for growth in recent years.

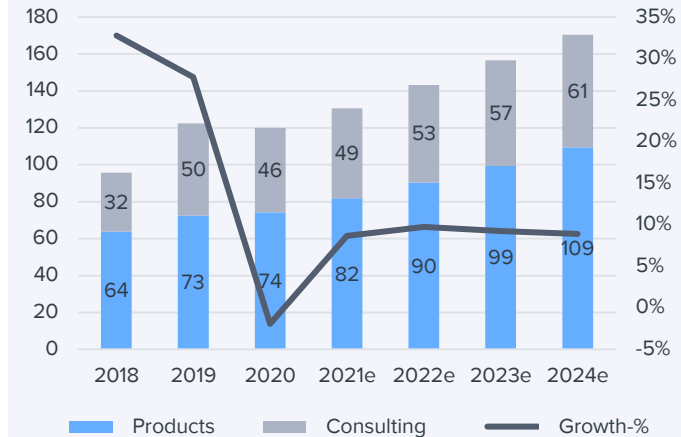
In consumer security, the growth outlook has picked up by a few percentage points from the previous very low single-digit growth in recent years. A key factor behind this is increased remote working caused by the COVID pandemic and, thus the increased desire of consumers to pay for cyber security. F-Secure has managed to grow the operator channel and increasingly players outside the operator realm (e.g. insurance companies) also act as F-Secure's partners. This will support the growth of the partner channel in coming years as well.

Estimates for 2021

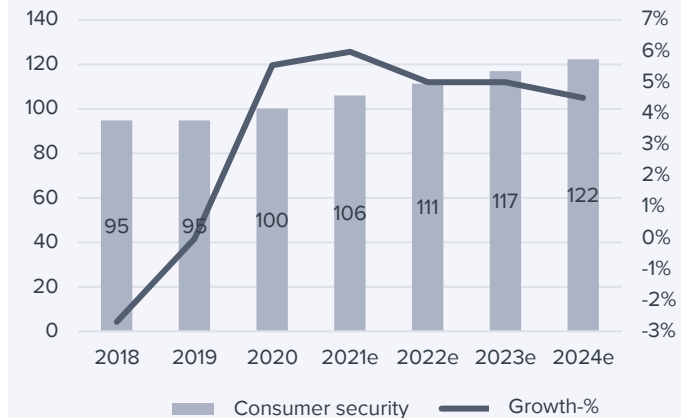
Our estimates for 2021 are in line with F-Secure's guidance. 2021 has been a time of increasing growth for F-Secure after the COVID year. Overall, visibility into F-Secure's short-term revenue development is relatively good thanks to its stable and continuous software business.

In its guidance, F-Secure expects high single-digit growth from its corporate security product revenue. This seems cautious considering 1-9/2021 (YTD: 9%), and especially Q3 (+13%) growth (our estimate 10%). F-Secure expects consulting to grow (our estimate 6%) and in the first 9 months, a clear recovery was already been seen in revenue (7%). Consumer security is expected to grow at about the same rate as in 2020 (5.5%) and our estimate is 6%. As a whole we expect that F-Secure's 2021 revenue will grow by 7.5% to EUR 237 million.

Revenue and growth % in corporate security



Revenue and growth % in consumer security



Estimates and valuation 2/5

Adjusted EBITDA is expected to remain approximately at 2020 level (35.7 MEUR). In line with the comments from F-Secure, we expect the company's cost level to continue increasing from exceptional COVID times. Nevertheless, our adjusted EBITDA estimate for 2021 (37.8 MEUR) is some 6% above the previous year. It is therefore very likely that F-Secure will revise its outlook for the result upward closer to year end.

Estimates for the next few years

In 2022-2023, we expect corporate security to grow at an annual rate of about 10-9%. The most important growth driver for the product business (+10%) is MDR solutions and the growing sales of comprehensive endpoint protection solutions. In consulting (+8%), we expect demand recovery to continue once COVID lets up. In our estimates the share of corporate security (2023e: 157 MEUR) of F-Secure's revenue rises to 57% by 2023 (2020: 55%). We expect consumer security revenue to continue on a good 5% growth path and the revenue to rise to EUR 117 million in 2023.

According to our estimates, accelerating growth in corporate security will still burden the performance in the next few years, while good margins in consumer security will support profitability. We expect some normalization in the cost level from COVID times over the next few years, for example in terms of sales and marketing and travel expenses.

We estimate that F-Secure's profitability will gradually scale toward the company's medium-term target of 20% adjusted EBITDA margin. We expect that profitability will improve mainly as the

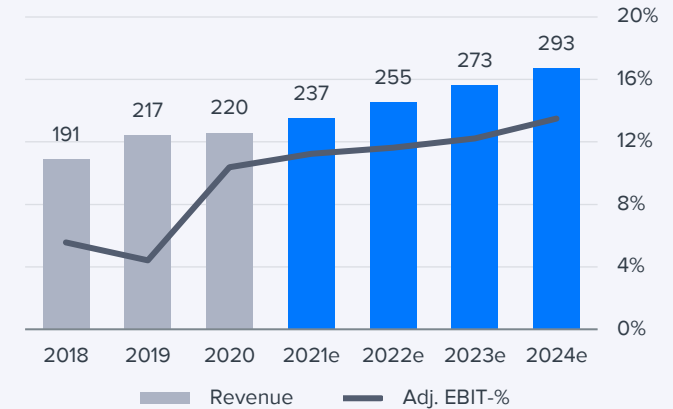
gross margin increases and the relative share of sales and marketing costs decrease with growth. Overall, however, we do not expect significant profitability scaling in the next few years. In 2022-2023, we expect the adjusted EBITDA to be around 16% and adjusted EBIT of 12%.

Long term estimates

In 2024-2029, the growth rate of corporate security will gradually fall in our estimates from 9% to 4%. In turn, we expect consumer security revenue growth to gradually decrease from 5% to 2%. We expect that the terminal growth of F-Secure's revenue needed for the DCF cash flow calculation, will be 2.5% from 2030 onwards.

We estimate that F-Secure's adjusted EBIT margin will be 13.5% in 2024 and gradually increase to 19% by 2029 as growth stabilizes. This is also our profitability expectation in the terminal period. In the past, before increasing investment in corporate security, F-Secure's adjusted operating profit was 15.0-17.5% in 2010-2015, considering which the profitability estimate seems realistic. In light of scalable software business, F-Secure could reach even better profitability in a positive scenario. However, the strong competitive pressure and speed of change in the cyber security market create uncertainty in assessing long-term sustainable profitability levels.

Development of revenue and profitability



EPS and dividend



Estimates

Income statement	2019	Q1'20	Q2'20	Q3'20	Q4'20	2020	Q1'21	Q2'21	Q3'21	Q4'21e	2021e	2022e	2023e	2024e
Revenue	217	54.8	53.0	54.5	57.9	220	57.8	58.2	58.7	62.0	237	255	273	293
Corporate security (products)	72.5	18.6	18.5	18.5	18.7	74.3	19.5	20.2	21.0	21.1	81.8	90.4	99.4	109
Corporate security (consulting)	50.0	11.9	9.7	10.9	13.3	45.8	12.0	11.6	11.2	14.0	48.8	52.9	57.1	61.1
Consumer security	94.8	24.4	24.8	25.0	25.9	100	26.3	26.3	26.5	26.9	106	111	117	122
EBITDA excl. NRI	23.2	7.2	10.2	11.1	7.3	35.7	9.6	8.1	11.0	9.0	37.8	40.4	44.5	50.5
EBITDA	31.1	7.6	10.2	11.1	6.9	35.7	9.6	5.8	10.6	9.0	35.1	40.4	44.5	50.5
Depreciation	-24.0	-4.0	-4.2	-4.1	-3.7	-16.0	-3.5	-3.5	-3.4	-3.6	-14.0	-13.6	-13.8	-13.8
EBIT (excl. NRI)	9.6	4.0	6.8	7.7	4.3	22.9	6.9	5.4	8.2	6.1	26.6	29.6	33.5	39.5
EBIT	7.2	3.6	6.0	7.0	3.1	19.7	6.2	2.4	7.2	5.4	21.1	26.8	30.7	36.7
Net financial items	-2.9	-1.3	-0.7	-0.7	-0.5	-3.2	0.3	-0.3	-0.3	-0.3	-0.6	-1.0	-0.5	-0.5
PTP	4.2	2.3	5.3	6.3	2.6	16.5	6.4	2.0	7.0	5.1	20.5	25.8	30.2	36.2
Taxes	-0.9	-0.2	-2.2	-1.3	0.1	-3.6	-1.5	-0.5	-1.5	-1.3	-4.8	-6.4	-7.2	-8.7
Net earnings	3.4	2.1	3.1	5.0	2.7	12.9	4.9	1.5	5.5	3.8	15.7	19.3	22.9	27.5
EPS (adj.)	0.03	0.02	0.02	0.03	0.02	0.10	0.03	0.02	0.04	0.03	0.13	0.14	0.16	0.19
EPS (rep.)	0.02	0.01	0.02	0.03	0.02	0.08	0.03	0.01	0.03	0.02	0.10	0.12	0.14	0.17
Key figures	2019	Q1'20	Q2'20	Q3'20	Q4'20	2020	Q1'21	Q2'21	Q3'21	Q4'21e	2021e	2022e	2023e	2024e
Revenue growth-%	14.0 %	2.6 %	-2.0 %	1.4 %	3.3 %	1.3 %	5.4 %	9.8 %	7.8 %	7.1 %	7.5 %	7.6 %	7.4 %	7.0 %
Adjusted EBIT growth-%	-9.4 %	130.4 %	396.9 %	125.1 %	40.9 %	138.3 %	71.2 %	-21.1 %	7.1 %	41.1 %	16.4 %	11.3 %	13.0 %	18.0 %
EBITDA-%	14.3 %	13.9 %	19.2 %	20.3 %	11.8 %	16.2 %	16.7 %	10.0 %	18.1 %	14.5 %	14.8 %	15.9 %	16.3 %	17.3 %
Adjusted EBIT-%	4.4 %	7.4 %	12.9 %	14.1 %	7.4 %	10.4 %	11.9 %	9.3 %	14.0 %	9.8 %	11.2 %	11.6 %	12.2 %	13.5 %
Net earnings-%	1.5 %	3.8 %	5.8 %	9.1 %	4.7 %	5.8 %	8.5 %	2.7 %	9.3 %	6.1 %	6.6 %	7.6 %	8.4 %	9.4 %

Source: Inderes

Estimates and valuation 3/5

Valuation

Investment view

F-Secure's business is currently moving in the right direction in all areas and COVID has proven the stability and quality of the company's software business. The stability of the software business and thus relatively low risk level supports the high valuation of the share in the current market environment.

In the short term, a key value driver for the share is the planned separation of consumer and corporate security. We see consumer and corporate security as more valuable separately than together but believe that this is already fully reflected in the share value. We feel that stretching the valuation further would require stronger growth in corporate security or a path to significant profitability improvement, which is not happening, however, based on F-Secure's medium-term targets.

Valuation multiples

With our estimates, F-Secure's earnings-based valuation multiples look high for the next few years. The adjusted 2021e-2022e P/E multiples are 43x and 40x and the corresponding EV/EBIT multiples are 32x and 28x. In 2024, when we expect profitability (adj. EBITDA 17%) to be closer to the medium-term target, the P/E multiple is 29x and EV/EBIT 20x. These multiples can still not be seen as especially cheap and, to materialize, they require moderate success of the company's strategy, which naturally involves risks. With our earnings growth estimate for the next few years, the PEG

ratio of the share (2.4x) is high. When looking solely at earnings-based multiples, F-Secure's share seems expensive.

With the EV/Sales multiple, F-Secure's valuation is clearly more modest compared to earnings-based multiples. With our estimates, the 2021e-2022e EV/Sales multiples are 3.6x and 3.3x. F-Secure's forward looking EV/Sales multiple has varied between 1.5x and 3.7x in 2014-2021 with a median of 2.5x. Thus, the current valuation is at the top of the historical valuation range.

F-Secure's sales-based valuation looks particularly low when comparing to the valuation level of cyber security sector peer companies (see page 36). The low sales-based valuation, in our view, explained by F-Secure's combined growth (2021e +7.5%) and profitability (2021e adj. EBIT: 11%) that is low compared to many peers. Also with our 2022 estimates (growth +7.6%, adj. EBIT% 12%) the situation doesn't change much. We believe that a sustained increase in sales-based valuation from the current level would require a better combination of growth and profitability.

The growth expectations loaded into F-Secure's share can be illustrated by assuming that the company will reach the adjusted EBIT% of 15-20% already next year, which reflects the mature stage. In this case the share's P/E ratio would be 23x-31x and EV/EBIT 16x-22x. Even these multiples do not appear to be particularly low, which indicates that F-Secure's current valuation requires good growth in coming years.

Valuation	2021e	2022e	2023e
Share price	5.46	5.46	5.46
Number of shares, millions	158.4	158.4	158.4
Market cap	865	865	865
EV	846	828	808
P/E (adj.)	43.4	40.3	34.6
P/E	55.0	44.7	37.7
P/FCF	62.5	33.9	31.4
P/B	9.4	8.3	7.2
P/S	3.7	3.4	3.2
EV/Sales	3.6	3.3	3.0
EV/EBITDA	24.1	20.5	18.2
EV/EBIT (adj.)	31.8	28.0	24.2
Payout ratio (%)	40.3 %	40.9 %	41.5 %
Dividend yield-%	0.7 %	0.9 %	1.1 %

Source: Inderes

F-Secure's historical EV/S-multiple



Source: Inderes, Bloomberg

Estimates and valuation 4/5

Peer group

We have included listed cyber security companies in F-Secure's peer group, most of which are F-Secure's direct competitors or compete, at least to some extent, with F-Secure in a particular product area. The companies in the peer group are, for the most part, clearly larger than F-Secure and this should be partly reflected in F-Secure's pricing compared to peers. The companies are also in different business development stages, which is visible in their growth and profitability profiles and, to some extent, makes comparison difficult.

Measured by the EV/Sales multiple, F-Secure is valued at a discount of over 60% compared to its peers. However, the combination of F-Secure's growth and profitability is well below the average level of the peer group, which is rightly reflected as a lower valuation. Most of F-Secure's business comes from stable consumer business and less scalable consulting, which means that the company cannot be profiled in the same basket with the fastest growing SaaS companies in the sector. We also point out that the sales-based valuation level of the peers is very high in absolute terms (2021e-2022e 10x-9x) and there is a risk that the market will not necessarily accept such high multiples for the companies in future.

Comparing F-Secure's earnings-based valuation multiples with the peers is not particularly meaningful, as most peer group companies still have low profitability or are loss making due to growth investments. F-Secure's profitability also still has scalability potential. The median EV/EBIT multiples of the peer group are 45x-26x this year

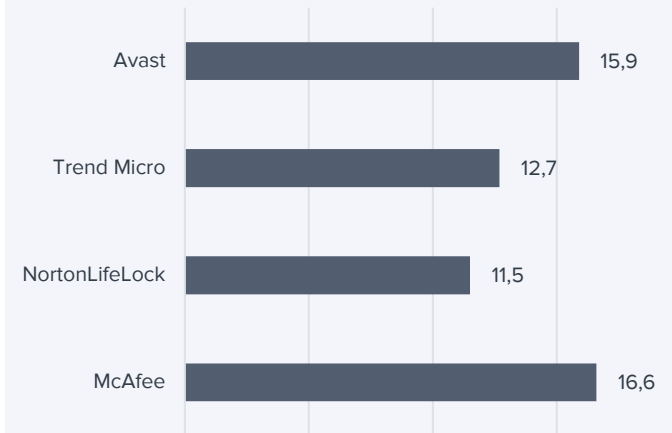
and next. Looking at 2022, the premium of F-Secure's multiple is around 10% to the peer group.

DCF model

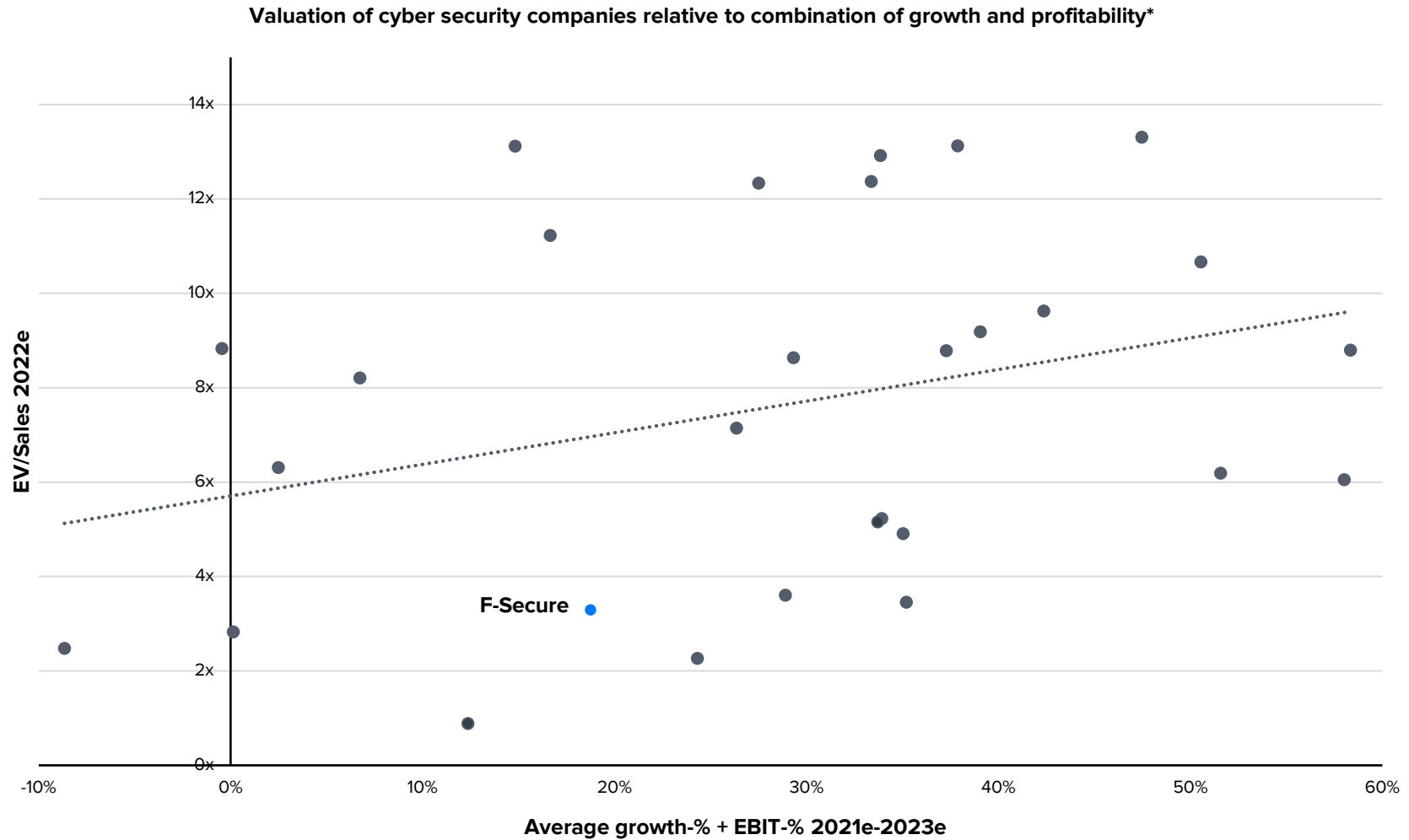
The DCF value for equity for F-Secure is EUR 836 million, i.e. EUR 5.3 per share. Considering the DCF model, the good and stable growth outlook we expect is already fully priced in F-Secure's share.

Our terminal assumption is that EBIT % is 19% and growth 2.5%. The cost of capital (WACC) in the DCF model is 7.7%. This is justified considering the relatively low risk profile of F-Secure's stable software business in the current interest rate environment. The weight of the terminal assumption is 68% of the enterprise value, which in part indicates that most of F-Secure's value will be generated from cash flow long in the future, which increases uncertainty.

2022e EV/EBITDA of consumer security peers



Valuation of F-Secure and cyber security companies



Source: Refinitiv, Inderes, *Cloudflare and CrowdStrike found in the peer group that are extremely highly valued have been excluded from the graph

Estimates and valuation 5/5

Sum of the parts calculation

We use the sum of the parts method to illustrate F-Secure's value creation. This method requires certain assumptions, but it now serves as a more relevant approach as consumer and corporate security are being separated. The calculation is now based on 2022 (previously 2021) estimates that have resulted in the sum of the parts increasing from our previous update.

We price consumer security on an earnings basis due to its stable growth profile. F-Secure does not break down business profitability, so we assume that consumer security EBIT% is 22-28%, which reflects good profitability for a mature business. F-Secure's significantly larger consumer security peers are priced at 11x-16x EV/EBITDA ratios, and a short while ago, a purchase offer was made for McAfee with a 16.6x EBITDA. Applying this we assume that consumer security could be priced with an 11x-15x EV/EBIT ratio as an independent listed company. Thus, consumer security would be valued at EUR 362 million in the neutral scenario, the range being EUR 270-468 million.

In corporate security, F-Secure opens the share of consulting and products of revenue, based on which we have separately assessed the values of these businesses. We believe the EV/Sales multiple of consulting (revenue 2022e 53 MEUR) that is personnel driven and thus less scalable requires less interpretation. The multiples of IT service companies, for example, can be used as a good benchmark. Thus we have set the acceptable EV/Sales ratio for consulting in the range of 1.2x-1.8x.

A significant share of product turnover (2021e: 82 MEUR) consists of stably growing endpoint protection products (EPP), whose growth is accelerated by new products (e.g. EDR) and their bundling into a comprehensive solution. Managed detection and response (MDR) solutions are also a rapidly growing product area that is strategically important for F-Secure. F-Secure targets double-digit growth in product revenue, and our estimate for the next few years is about 10%. We believe, the profitability of the product business will not be particularly high in coming years, reflecting the combination of growth and profitability, which will remain relatively low compared to many fast-growing product companies. Considering all this, we price product turnover in a neutral scenario with a 4.0x EV/Sales ratio, the range being 3.0x-4.5x. By comparison, McAfee's corporate operations were sold in March 2021 to a private equity company with a 3.1x EV/Sales ratio.

By applying the above assumptions, the value of corporate security in the neutral scenario is EUR 441 million with a range of EUR 335-502 million. By adding F-Secure's estimated net cash on top of the business activities, the value of F-Secure's entire stock is EUR 840 million or EUR 5.3 per share. The range of the pessimistic and optimistic scenario is EUR 4.0-6.4. The sum of the parts calculation does not indicate an upside for the share based on the neutral scenario. The risk in the sum of the parts calculation is cyber security companies' high valuation levels, which could also have a negative impact on the multiples we use in the sum of the parts model.

Consumer security	Pessimistic	Neutral	Optimistic
Assumed EBIT-%	22 %	25 %	28 %
EBIT 2022e	25	28	31
x multiple (EV/EBIT)	11.0x	13.0x	15.0x
EV	270	362	468

Corporate security	Pessimistic	Neutral	Optimistic
Revenue 2022e	143	143	143
Product revenue	90	90	90
x multiple (EV/S)	3.0x	4.0x	4.5x
Value of product business	271	362	407
Consulting revenue	53	53	53
x multiple (EV/S)	1.2x	1.5x	1.8x
Value of consulting	63	79	95
Total value of corporate security	335	441	502

Sum of the parts	Pessimistic	Neutral	Optimistic
Consumer security	270	362	468
Corporate security	335	441	502
EV	604	803	970
+ Net debt at end of 2022	37	37	37
Equity value	641	840	1,007
<i>Value per share</i>	4.0	5.3	6.4

Peer group valuation

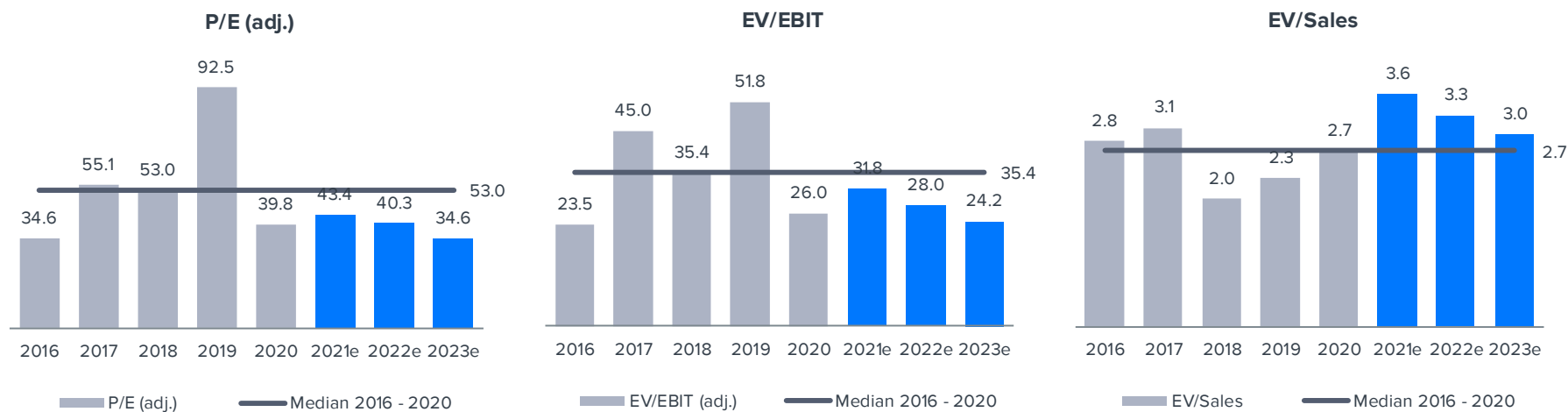
Peer group valuation Company	Share price	Market cap MEUR	EV MEUR	EV/EBIT		EV/EBITDA		EV/S		P/E	
				2021e	2022e	2021e	2022e	2021e	2022e	2021e	2022e
Mandiant Inc	18.7	3990	4149					9.7	8.2		
NortonLifeLock Inc	25.3	12872	14905	13.5	11.7	13.2	11.5	6.7	6.1	17.6	14.4
Trend Micro Inc	6740.0	7312	5462	16.5	15.8	12.7	12.7	3.8	3.6	29.8	29.3
Rapid7 Inc	130.9	6582	7067					15.2	12.3		
Fortinet Inc	341.1	48204	46359	61.2	51.2	55.7	47.3	15.8	13.3	85.8	72.6
Cyberark Software Ltd	197.4	6893	6486					14.9	13.1		
Palo Alto Networks Inc	524.6	44673	44959	65.8	51.5	56.6	45.6	12.1	9.6	86.5	71.5
Check Point Software Technologies Ltd	116.3	13667	12139	13.3	13.0	13.0	12.7	6.4	6.2	16.9	15.9
Qualys Inc	139.0	4662	4358	31.0	29.5	26.1	25.0	12.1	10.7	43.0	41.0
NCC Group PLC	244.5	904	847	20.6	14.0	14.6	11.0	2.6	2.3	27.5	20.9
Nixu Oyj	7.0	52	54	108.0	21.6	21.6	12.0	1.0	0.9		25.9
Crowdstrike	261.0	51021	50105					66.2	40.5		
Avast PLC	597.4	7310	7763	18.2	16.9	16.9	15.9	9.3	8.8	21.9	20.6
Tenable Holdings Inc	54.5	5101	4851	116.8	92.8	94.0	75.9	10.3	8.6	172.7	
SolarWinds Corp	16.7	2337	3379	11.1	13.1	10.3	12.5	5.4	5.2	12.5	15.3
SecureWorks Corp	20.5	1508	1335	71.3		45.0		2.7	2.8	89.6	
Splunk Inc	139.8	19524	20014					10.5	8.8		
Mimecast Ltd	83.6	4831	4581	58.9	40.2	42.4	31.6	10.4	8.8	75.6	60.0
SailPoint Technologies Holdings Inc	59.2	4837	4804					13.1	11.2		
Tufin Software Technologies Ltd	10.0	332	268					2.8	2.5		
Cloudflare Inc	211.7	58479	57889					101.6	74.5		
Ping Identity Holding Corp	27.8	2018	2078	89.7	77.6	79.3	64.6	8.0	7.1	114.1	82.5
Varonis Systems Inc	60.1	5707	5188					15.3	12.4		
Telos Corp	17.94	1030	928		49.4	43.0	27.7	4.3	3.5	70.1	48.9
Sumo Logic Inc	15.97	1575	1320					7.5	6.3		
Knowbe4 Inc	25.38	3808	3568					16.6	13.1		
Darktrace PLC	545.50	4680	4410					18.0	12.9		
F-Secure (Inderes)	5.46	865	846	31.8	28.0	24.1	20.5	3.6	3.3	43.4	40.3
Average				49.7	35.6	36.3	29.0	14.9	14.5	61.7	39.9
Median				45.0	25.5	26.1	20.4	10.3	8.8	56.6	29.3
Diff-% to median				-29%	10%	-8%	0%	-65%	-63%	-23%	37%

Source: Thomson Reuters / Inderes. NB: The market cap Inderes uses does not consider own shares held by the company.

Valuation table

Valuation	2016	2017	2018	2019	2020	2021e	2022e	2023e	2024e
Share price	3.48	3.89	2.32	3.05	3.84	5.46	5.46	5.46	5.46
Number of shares, millions	156.0	156.7	157.5	157.8	158.1	158.4	158.4	158.4	158.4
Market cap	544	610	365	480	606	865	865	865	865
EV	451	519	375	496	595	846	828	808	785
P/E (adj.)	34.6	55.1	53.0	92.5	39.8	43.4	40.3	34.6	29.2
P/E	34.6	55.1	>100	>100	47.1	55.0	44.7	37.7	31.5
P/FCF	40.1	43.3	neg.	neg.	16.5	62.5	33.9	31.4	26.0
P/B	7.2	8.6	5.5	6.3	7.4	9.4	8.3	7.2	6.3
P/S	3.4	3.6	1.9	2.2	2.8	3.7	3.4	3.2	3.0
EV/Sales	2.8	3.1	2.0	2.3	2.7	3.6	3.3	3.0	2.7
EV/EBITDA	18.4	29.1	27.1	15.9	16.7	24.1	20.5	18.2	15.5
EV/EBIT (adj.)	23.5	45.0	35.4	51.8	26.0	31.8	28.0	24.2	19.9
Payout ratio (%)	119.5 %	56.7 %	0.0 %	0.0 %	49.1 %	40.3 %	40.9 %	41.5 %	50.0 %
Dividend yield-%	3.4 %	1.0 %	0.0 %	0.0 %	1.0 %	0.7 %	0.9 %	1.1 %	1.6 %

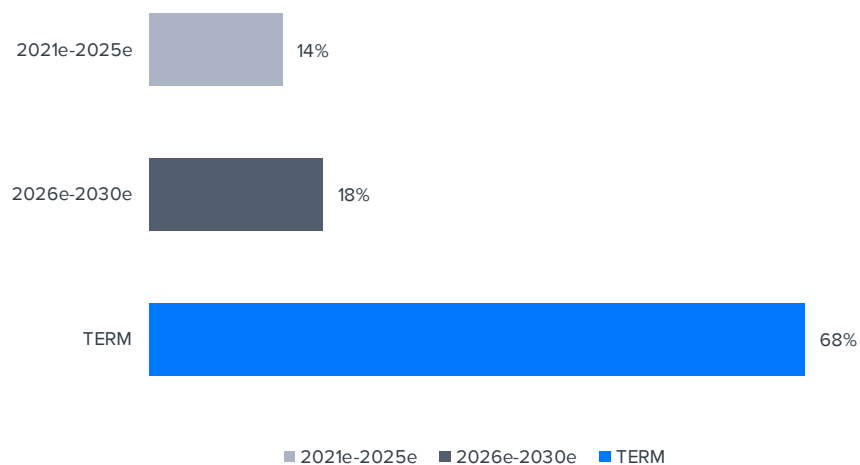
Source: Inderes



DCF calculation

DCF model	2020	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e	TERM
EBIT (operating profit)	19.7	21.1	26.8	30.7	36.7	44.0	49.2	58.9	65.1	70.8	72.6	
+ Depreciation	16.0	14.0	13.6	13.8	13.8	13.7	13.3	11.7	12.1	11.9	11.8	
- Paid taxes	-5.6	-4.8	-6.4	-7.2	-8.7	-10.1	-11.3	-13.5	-15.0	-16.3	-16.7	
- Tax, financial expenses	-0.7	-0.1	-0.3	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	
+ Tax, financial income	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
- Change in working capital	10.0	-3.0	2.5	1.3	2.6	0.9	2.4	2.1	2.0	1.4	1.2	
Operating cash flow	39.4	27.2	36.2	38.4	44.3	48.6	53.6	59.2	64.2	67.9	68.9	
+ Change in other long-term liabilities	2.8	-1.3	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	
- Gross CAPEX	-5.5	-12.0	-11.2	-11.3	-11.5	-11.5	-11.5	-11.5	-11.5	-11.5	-12.0	
Free operating cash flow	36.6	13.8	25.5	27.6	33.3	37.6	42.6	47.7	52.7	56.4	56.9	
+/- Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
FCFF	36.6	13.8	25.5	27.6	33.3	37.6	42.6	47.7	52.7	56.4	56.9	1116
Discounted FCFF		13.7	23.5	23.6	26.4	27.7	29.1	30.3	31.1	30.8	28.9	567
Sum of FCFF present value		831	818	794	771	744	717	688	657	626	595	567
Enterprise value DCF		831										
- Interesting bearing debt		-39.9										
+ Cash and cash equivalents		51.4										
-Minorities		0.0										
-Dividend/capital return		-6.3										
Equity value DCF		837										
Equity value DCF per share		5.3										

Cash flow distribution



Wacc	
Tax-% (WACC)	25.0 %
Target debt ratio (D/(D+E))	0.0 %
Cost of debt	4.0 %
Equity Beta	1.10
Market risk premium	4.75%
Liquidity premium	0.50%
Risk free interest rate	2.0 %
Cost of equity	7.7 %
Weighted average cost of capital (WACC)	7.7 %

Source: Inderes

Balance sheet

Assets	2019	2020	2021e	2022e	2023e
Non-current assets	125	142	139	136	133
Goodwill	88.4	81.9	81.9	81.9	81.9
Intangible assets	17.3	41.4	38.5	36.9	34.6
Tangible assets	15.6	14.1	13.6	12.4	12.2
Associated companies	0.0	0.0	0.0	0.0	0.0
Other investments	0.0	0.0	0.0	0.0	0.0
Other non-current assets	0.6	0.6	0.6	0.6	0.6
Deferred tax assets	3.1	4.0	4.0	4.0	4.0
Current assets	85.2	103	107	123	142
Inventories	0.1	0.1	0.1	0.1	0.1
Other current assets	2.3	0.9	0.9	0.9	0.9
Receivables	57.3	50.9	59.2	63.7	69.7
Cash and equivalents	25.5	51.4	47.3	58.0	71.3
Balance sheet total	229	238	240	253	270

Source: Inderes

Liabilities & equity	2019	2020	2021e	2022e	2023e
Equity	76.2	82.3	91.7	105	120
Share capital	1.6	1.6	1.6	1.6	1.6
Retained earnings	67.2	79.6	89.0	102	117
Hybrid bonds	0.0	0.0	0.0	0.0	0.0
Revaluation reserve	0.0	0.0	0.0	0.0	0.0
Other equity	7.4	1.2	1.2	1.2	1.2
Minorities	0.0	0.0	0.0	0.0	0.0
Non-current liabilities	54.4	50.6	47.8	41.8	36.3
Deferred tax liabilities	2.5	1.3	1.3	1.3	1.3
Provisions	3.0	0.0	0.0	0.0	0.0
Long term debt	29.5	23.9	22.5	16.0	10.0
Convertibles	0.0	0.0	0.0	0.0	0.0
Other long term liabilities	19.5	25.3	24.0	24.5	25.0
Current liabilities	98.8	105	101	106	114
Short term debt	11.9	15.9	6.2	5.0	5.0
Payables	85.4	83.3	92.3	99.3	107
Other current liabilities	1.5	5.7	2.0	2.0	2.0
Balance sheet total	229	238	240	253	270

Summary

Income statement	2018	2019	2020	2021e	2022e	Per share data	2018	2019	2020	2021e	2022e
Revenue	190.7	217.3	220.2	236.7	254.7	EPS (reported)	0.01	0.02	0.08	0.10	0.12
EBITDA	13.8	31.1	35.7	35.1	40.4	EPS (adj.)	0.04	0.03	0.10	0.13	0.14
EBIT	4.5	7.2	19.7	21.1	26.8	OCF / share	0.06	0.20	0.25	0.17	0.23
PTP	1.7	4.2	16.5	20.5	25.8	FCF / share	-0.59	-0.07	0.23	0.09	0.16
Net Income	0.8	3.4	12.9	15.7	19.3	Book value / share	0.42	0.48	0.52	0.58	0.66
Extraordinary items	-6.1	-2.4	-3.2	-5.5	-2.8	Dividend / share	0.00	0.00	0.04	0.04	0.05
Balance sheet	2018	2019	2020	2021e	2022e	Growth and profitability	2018	2019	2020	2021e	2022e
Balance sheet total	228.0	229.4	237.8	240.0	252.8	Revenue growth-%	12%	14%	1%	7%	8%
Equity capital	66.3	76.2	82.3	91.7	104.7	EBITDA growth-%	-23%	126%	15%	-2%	15%
Goodwill	90.7	88.4	81.9	81.9	81.9	EBIT (adj.) growth-%	-8%	-9%	138%	16%	11%
Net debt	9.3	15.8	-11.6	-18.6	-37.0	EPS (adj.) growth-%	-38%	-25%	193%	31%	8%
Cash flow	2018	2019	2020	2021e	2022e	EBITDA-%	7.2 %	14.3 %	16.2 %	14.8 %	15.9 %
EBITDA	13.8	31.1	35.7	35.1	40.4	EBIT (adj.)-%	5.6 %	4.4 %	10.4 %	11.2 %	11.6 %
Change in working capital	-5.8	3.0	10.0	-3.0	2.5	EBIT-%	2.4 %	3.3 %	8.9 %	8.9 %	10.5 %
Operating cash flow	9.3	32.0	39.4	27.2	36.2	ROE-%	1.2 %	4.7 %	16.2 %	18.1 %	19.7 %
CAPEX	-115.3	-30.4	-5.5	-12.0	-11.2	ROI-%	5.7 %	6.5 %	16.4 %	17.4 %	21.8 %
Free cash flow	-92.1	-10.8	36.6	13.8	25.5	Equity ratio	42.7 %	49.0 %	52.5 %	57.7 %	61.8 %
Valuation multiples	2018	2019	2020	2021e	2022e	Gearing	14.0 %	20.8 %	-14.1 %	-20.3 %	-35.3 %
EV/S	2.0	2.3	2.7	3.6	3.3						
EV/EBITDA (adj.)	27.1	15.9	16.7	24.1	20.5						
EV/EBIT (adj.)	35.4	51.8	26.0	31.8	28.0						
P/E (adj.)	53.0	92.5	39.8	43.4	40.3						
P/E	5.5	6.3	7.4	9.4	8.3						
Dividend-%	0.0 %	0.0 %	1.0 %	0.7 %	0.9 %						

Source: Inderes

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Recommendation history (>12 mo)

Date	Recommendation	Target price	Share price
09-03-18	Accumulate	3.90 €	3.65 €
07-05-18	Accumulate	3.90 €	3.68 €
20-06-18	Accumulate	4.20 €	3.85 €
09-08-18	Accumulate	4.00 €	3.62 €
19-10-18	Reduce	2.70 €	2.88 €
05-11-18	Accumulate	2.90 €	2.65 €
14-02-19	Accumulate	2.90 €	2.51 €
09-05-19	Accumulate	2.90 €	2.60 €
22-07-19	Accumulate	2.90 €	2.55 €
31-10-19	Accumulate	3.00 €	2.85 €
13-12-19	Reduce	3.00 €	3.13 €
13-02-20	Reduce	3.10 €	3.25 €
07-04-20	Reduce	2.60 €	2.54 €
04-05-20	Reduce	2.60 €	2.75 €
17-07-20	Reduce	2.90 €	3.08 €
23-09-20	Reduce	3.00 €	3.06 €
30-10-20	Reduce	3.50 €	3.57 €
10-02-21	Reduce	3.60 €	3.92 €
30-04-21	Reduce	3.80 €	4.09 €
15-07-21	Reduce	4.00 €	4.30 €
01-09-21	Reduce	4.60 €	4.79 €
22-10-21	Reduce	4.80 €	4.95 €
17-11-21	Reduce	5.30 €	5.46 €



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