# Annual Report 2017

Squeezing 40 grapes
into a single glass

# Contents



**Wine.**
The art of winemaking goes back about 8,000 years. Today the world's annual production is close to 28,000 million litres. To manufacture this volume, around six trillion grapes are used. To make just a single glass of wine requires some 40 grapes!

The processes are mostly traditional, using conventional pressing and settling. Alfa Laval's equipment naturally also plays an important role in the business. But we are now adding a new bouquet to winemaking by introducing a continuous centrifugal decanter system. The advantages are obvious: the entire winemaking process can be better controlled. The results are more efficient production, less by-product and reduced environmental impact. Changing the name of the game of winemaking.

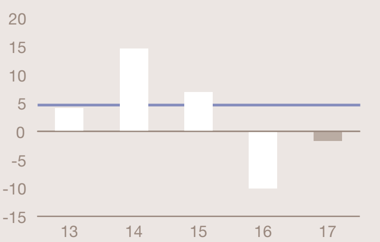
**Pure Performance.** Food. Energy. Environment. Marine. Mechanical engineering. Sanitary. Chemical. You name the industry. Alfa Laval is helping all of them to purify and refine their processes and products. Time and time again.

We are hard at work in more than 100 countries implementing our expertise, technical support and service. Helping to create safer and more comfortable living conditions for all mankind. And now and then offering them the pleasure of enjoying a glass of wine, decanted the Alfa Laval way.

# To optimize the performance of our customers' processes – time and time again

Alfa Laval is a leading, global provider of first-rate products in the areas of heat transfer, separation and fluid handling. With these as its base, Alfa Laval aims to help enhance the productivity and competitiveness of its customers in various industries throughout the world. We define their challenges and deliver products and solutions that meet their requirements – mainly in energy, the environment, marine and food.

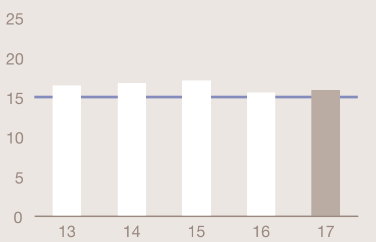

**Invoicing growth, %***




The goal is to grow an average of at least 5 percent measured over a business cycle.

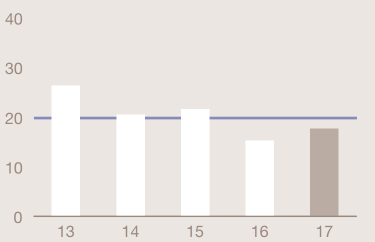
* Excluding exchange rate variations

**Operating margin, %**




The goal is to have an operating margin of 15 percent measured over a business cycle.

**Return on capital employed, %**




The goal is to have a return on capital employed of at least 20 percent.

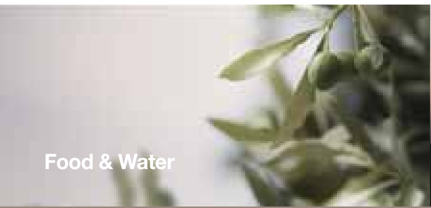
OFFERING

## Three key technologies that are suited to most industries

### Heat transfer
Alfa Laval's heat exchangers transfer heat or cooling from, for example, one liquid to another. The company's compact heat exchangers have the capability to recycle heat, optimize customers' energy consumption, cut costs and reduce their environmental impact.

### Separation
The technology is used to separate liquids from other liquids and solid particles from liquids or gases. The offering includes separators, decanter centrifuges, filters, strainers and membranes.

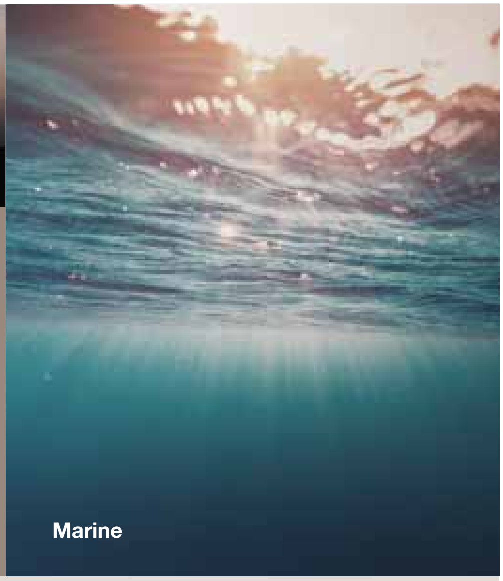
### Fluid handling
Alfa Laval offers pumps, valves, tank cleaning equipment and installation material for industries with stringent hygiene requirements as well as pumping systems specifically for the marine industry and the offshore market.





THE MARKET

## Three industry-based divisions: Food & Water, Energy and Marine, with a shared supply chain




### Operations Division
The division is responsible for the Group's production-related procurement, manufacturing, distribution and logistics. This centralized, coordinated and global supply chain helps to create the necessary prerequisites to ensure reliable access to the company's products worldwide.

### Global market presence

Alfa Laval's sales and aftermarket organization helps customers in more than 100 countries to optimize their processes, directly or together with the company's external partners. The production structure is also global, encompassing 40 major production facilities spread across Europe, Asia, the US and Latin America. At the same time, Alfa Laval has more than 100 service centers distributed globally to meet its customers' needs. In 2017, Service accounted for 29.8 percent of the Group's total order intake.

### Ten largest markets (order intake, SEK million)

| | SEK million | %* |
|---|---|---|
| United States | 6,082 | 16.6% |
| China (incl Hong Kong) | 5,104 | 13.9% |
| Nordic | 3,270 | 8.9% |
| South Korea | 2,918 | 8.0% |
| Region Germany, Austria, Switzerland | 1,784 | 4.9% |
| Japan | 1,753 | 4.8% |
| Adriatic Region | 1,700 | 4.6% |
| South East Asia | 1,576 | 4.3% |
| Benelux | 1,243 | 3.4% |
| India | 1,217 | 3.3% |

* Percentage of total order intake

# 2017 in brief

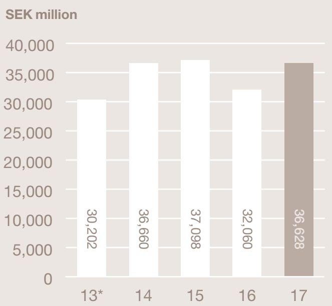
- Order intake amounted to SEK 36.6 billion, compared to SEK 32.1 billion in 2016.
- Invoicing fell 1 percent to SEK 35.3 billion.
- The adjusted EBITA margin, or operating margin, was 15.9 percent, compared with 15.6 percent in 2016.

| Amounts in SEK million unless otherwise stated | +/- %[6] | 2017 | 2016 | 2015 | 2014 | 2013* |
|---|---|---|---|---|---|---|
| Order intake | +14 | 36,628 | 32,060 | 37,098 | 36,660 | 30,202 |
| Net sales | -1 | 35,314 | 35,634 | 39,746 | 35,067 | 29,801 |
| Adjusted EBITDA [1] | +1 | 6,239 | 6,196 | 7,478 | 6,456 | 5,360 |
| Adjusted EBITA [2] | +1 | 5,610 | 5,553 | 6,811 | 5,891 | 4,914 |
| Operating margin (adjusted EBITA [2]), % | | 15.9 | 15.6 | 17.1 | 16.8 | 16.5 |
| Profit after financial items | +31 | 4,371 | 3,325 | 5,444 | 4,117 | 4,172 |
| Return on capital employed, % | | 17.7 | 15.3 | 21.6 | 20.5 | 26.4 |
| Return on shareholders' equity, % | | 13.9 | 11.8 | 21.7 | 17.6 | 20.4 |
| Earnings per share, SEK | +30 | 7.09 | 5.46 | 9.15 | 7.02 | 7.22 |
| Dividend per share, SEK | | 4.25 [3] | 4.25 | 4.25 | 4.00 | 3.75 |
| Equity per share, SEK | +1 | 48.87 | 48.34 | 43.92 | 41.01 | 38.53 |
| Free cash flow per share, SEK [4] | -11 | 8.92 | 9.97 | 12.25 | -23.48 | 7.82 |
| Equity ratio, % | | 39.0 | 38.0 | 35.5 | 30.8 | 46.3 |
| Net debt to EBITDA, times | | 1.31 | 1.81 | 1.56 | 2.46 | 0.49 |
| Number of employees [5] | -3 | 16,367 | 16,941 | 17,417 | 17,753 | 16,262 |

* Restated to IFRS 11.

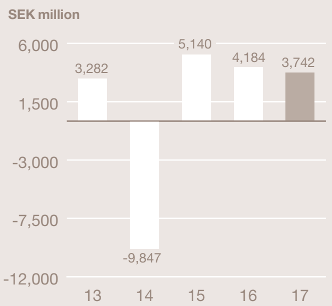
1) Adjusted EBITDA – Operating income before depreciation, amortization of goodwill and amortization of other surplus values, adjusted for items affecting comparability.
2) Adjusted EBITA – Operating income before amortization of goodwill and other surplus values, adjusted for items affecting comparability.
3) Board proposal to the Annual General Meeting.
4) Free cash flow is the sum of cash flow from operating and investing activities.
5) Number of employees at year-end.
6) Percentage change between 2016 and 2017.

## Order intake



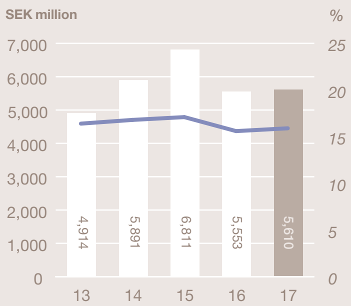

Order intake amounted to SEK 36,628 million in 2017, an increase with 14 percent. Excluding exchange rate variations, order intake rose 13 percent.

## Free cash flow




Alfa Laval generated a free cash flow of SEK 3,742 million (4,184) in 2017.

## Adjusted EBITA




Adjusted EBITA amounted to SEK 5,610 million. The adjusted EBITA margin was 15.9 percent.

# Improved business climate and internal investments began to bear fruit

**Signs of recovery**

The global economy displayed a positive trend in 2017, with clear growth in nearly all key geographic markets. After several years of restraint, investments in general industry also increased, which was important for most of Alfa Laval's end markets.

The recovery was particularly significant in the oil sector, where there was a gradual upturn after several years of low prices. Toward the end of the year, a price level was reached that once again enabled profitable new investments – both on land and offshore. Shipbuilding contracts for new vessels also rose considerably, from a 30-year low of about 600 vessels in 2016 to approximately 900. The recovery was very strong for tankers, which is a key segment for Alfa Laval.

Overall, we benefitted from the improved business climate and our order intake grew 14 percent compared with 2016. However, there was not enough time for the upturn to impact our sales, which ended the year at SEK 35.3 billion, largely unchanged compared with the preceding year. At the same time, our profitability was stable, with an operating margin of 15.9 percent, partly as a result of the structural changes and the cost-saving program we implemented during the year.

**Growth in all divisions**

The positive trend permeated all three divisions. Marine, Energy and Food & Water all displayed favorable organic growth. The order intake in Marine grew 30 percent compared with 2016, partly driven by better vessel contracting. Further support for the order intake came from the commercial breakthrough for our marine environment applications in ballast water treatment and sulfur reduction. For both, there was a strong increase in demand in the wake of new environmental rules that require vessels' ballast water to be cleansed of organisms and the sulfur content of exhaust emissions to be reduced. The combined order intake for Alfa Laval PureBallast and PureSOx nearly tripled and thus now represents a significant share of the Marine Division's total order intake, with continued favorable growth opportunities.

The order intake in the Food & Water Division grew 9 percent, with a positive trend in all areas of the division. Despite an intensified focus on projects with applications in which Alfa Laval commands a leading position, the project business also showed considerable growth. As a result of the positive order intake trend, invoicing increased somewhat, which – combined with strong cost control – led to improved profitability and a strong platform ahead of the coming year.

Energy also experienced improved demand compared with the preceding year, partly supported by a higher oil price, and the order intake grew almost 10 percent. Continued favorable organic growth in the volume segment for brazed heat exchangers, combined with a growing investment appetite in several energy-related areas, made a positive contribution to development during the year. Invoicing grew somewhat compared with 2016, and our operating margin increased. A sound cost control contributed to this, as did our decision to transfer products that were not entirely compatible with Alfa Laval's business model, and thus struggling with profitability, to an independent unit – Greenhouse.

**One year into the new strategy**

We opened the year by implementing a new strategic approach to increase organic growth. The strategy focuses on three areas, including intensified customer focus. As we reached the end of the year, it felt gratifying to see that our new organizational structure had led to a more focused sales organization and shorter offering times to customers – in line with our ambition that it should be easy to do business with Alfa Laval.

The second area involves ensuring clear technology leadership and developing our future business. With increased product focus as our base, we improved our research and development process, while also investing significantly in development to be able to accelerate the pace of new launches going forward. Accordingly, over the next four years, a considerable portion of the current product platforms will be replaced by new and more competitive platforms. We invested nearly SEK 900 million in research and development – the highest level in Alfa Laval's history and a 6-percent increase compared with the preceding year. This investment began to yield results in November, when we commenced the launch of the new product platform for plate heat exchangers. The year's investments also laid the foundation for all the innovations that will gradually be rolled out going forward.

The third area that we worked on during the year was Service – a key factor if we are to uphold our ambition of close customer relations. We added further service centers, completed our automated distribution center in Kolding, Denmark, and continued to develop our offering, not least in digitalization. Although we are at the start of our digital journey, we are now able to offer connected products with constant performance monitoring. The goal from 2018 is to offer connection opportunities for all new rotating products.

A further aspect of our efforts to increase our competitiveness was the implementation of a structural change at our production units. This work was initiated in 2017 and will continue in the coming years. The aim is to concentrate the production of our large product groups to fewer units to ensure annual productivity improvements. This consolidation is a natural result of the technology level increasing, both for our own products and for our manufacturing technologies. A number of production units in China, India, the US and Europe will have been strengthened once the program is fully implemented at the beginning of 2019.

**Our vision: to help create better everyday conditions for people**

Alfa Laval's technologies are important when it comes to the world's ability to address future challenges in energy efficiency, water supply, and safe food and pharmaceuticals. Besides the fact that the requirements and demands for solutions in these areas will likely continue to increase, this has special meaning for us at Alfa Laval as we go to work. Some examples of important projects undertaken in 2017 can serve to illustrate my point.

The energy adjustment in Germany has resulted in intensive work to enhance energy efficiency. Alfa Laval is active in several areas and, in 2017, a major order was booked for converting waste heat from a smelting works to heat about 3,500 homes in a new area in Hamburg. The system uses Alfa Laval's gasketed plate heat exchangers and is expected to reduce $CO_2$ emissions by 20,000 tons annually. This single project – we conduct many similar projects throughout the world every year – corresponds to approximately 30 percent of Alfa Laval's own annual $CO_2$ impact.

The recovery of wastewater and industrial process water is a key area for Alfa Laval. During the year we secured, for example, our largest order to date for membrane bioreactors for wastewater treatment. The order comprises 150 modules for installation in a completely new treatment plant to be constructed in Finland. Ultimately, all wastewater will be so clean after treatment that it can be returned to nature.

Biopharmaceuticals are becoming increasingly important in global healthcare. These pharmaceuticals contain active substances that are produced in cells. Alfa Laval's unique Culturefuge separators are world-leading in biopharmaceutical production, since they can effectively separate active substances from cell material. We secured a number of different orders for this type of project during the year, including orders in China, Taiwan, Switzerland and Hungary. These projects will produce the next generation's pharmaceuticals for the treatment of, for example, cancer, rheumatism and blood diseases.

**As we leave 2017 behind us**

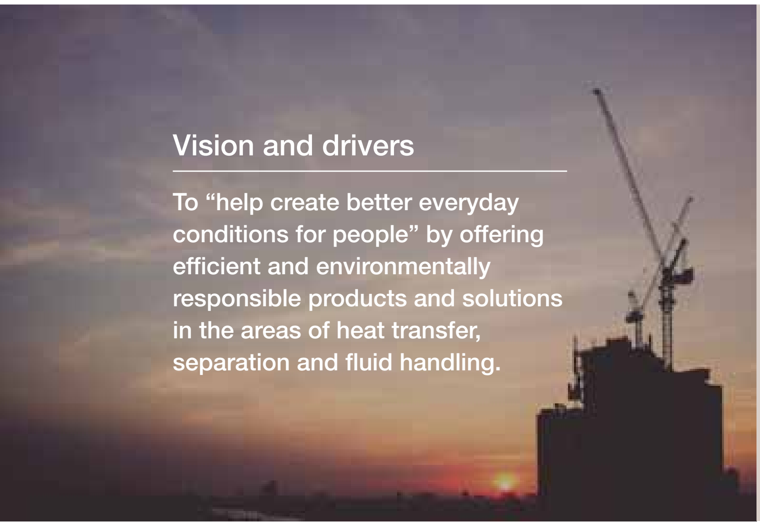
In summary, we are feeling positive about the years to come. Alfa Laval is well positioned in key growth areas. Our focus on organic growth has produced early results in the form of an increased order intake. The product portfolio to be launched in 2018 and onward is highly promising.

Most important of all, our organization has become even more customer oriented. Our work to ensure shorter lead times, more rapid response times and delivery as agreed made a positive contribution to the year's earnings. Finally, I want to take this opportunity to thank all of our employees for the major change we implemented in 2017!

Lund, February 2018

**Tom Erixon**
President and CEO

# Vision, business concept, goals and strategy



## Vision and drivers

To "help create better everyday conditions for people" by offering efficient and environmentally responsible products and solutions in the areas of heat transfer, separation and fluid handling.

## Business concept

The vision is at the core of the company's efforts to realize its business concept: "To optimize the performance of our customers' processes, time and time again." This is achieved by helping customers to become more productive and competitive through the delivery of high-quality products and solutions in the three key technologies.

## Financial goals

Alfa Laval's is governed with the aim of realizing its business concept, while at the same time meeting the financial goals established with regard to growth, profitability and return. By achieving or exceeding these goals, Alfa Laval creates the necessary scope for its continued development as well as generating increased value for its shareholders in the form of an annual dividend and by boosting the value of the company.

### Growth

5% Alfa Laval's target is to achieve average annual sales growth of at least 5 percent measured over a business cycle. This target is regarded as realistic, viewed in light of the prevailing business scenario and against the backdrop of Alfa Laval's achievements in recent years.

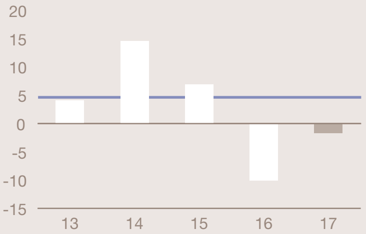
### Profitability

15% Alfa Laval is to achieve an operating margin – adjusted EBITA – of 15 percent measured over a business cycle. This goal was established based on historical margins, while also taking the company's growth ambitions into consideration.

### Capital utilization

20% The goal is to have a return on capital employed of at least 20 percent, a realistic ambition based on a combination of organic and acquired growth.

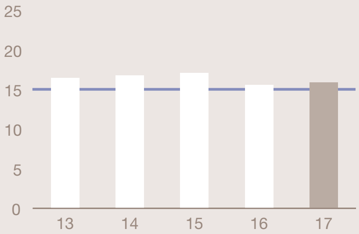
### Outcome




Invoicing fell -1.7 percent* in 2017.

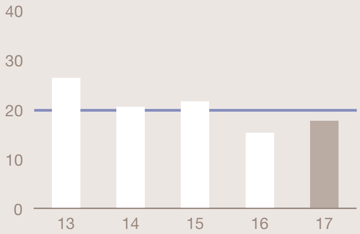
*Excluding exchange rate variations

### Outcome




The operating margin for 2017 was 15.9 percent, compared with 15.6 percent for full-year 2016.

### Outcome




The return on capital employed for 2017 was 17.7 percent.

## Sustainability goals

In addition to its financial goals, Alfa Laval also has a number of non-financial target parameters. These reflect the company's ambitions with respect to the environment, health and safety. Among other areas, these targets encompass: a reduction in water consumption, a reduction in the use of chemicals and a reduction in greenhouse gas emissions. For more information about these goals and Alfa Laval's sustainability work, see the Sustainability Report that is available at: www.alfalaval.com

## Financial benchmark values

In addition to the Group's financial goals, the Board has established benchmark values for three key financial ratios, which further specify the framework and goals for the operation of the company.

### Net debt in relation to EBITDA

2x In the long term, net debt in relation to EBITDA, meaning operating profit before depreciation and amortization of step-up values, is not to be more than 2. Although the ratio may exceed the goal in connection with major acquisitions, this should be viewed as a temporary situation, since the company's cash flow is expected to offset this effect.

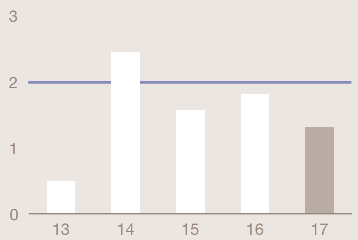
### Investments

2% The benchmark value states that 2 percent of sales should go to investments. Given the investments and capacity expansion carried out in recent years, this investment level is deemed sufficient to create the scope for replacement investments and an expansion of capacity that matches the organic growth of the Group's core products.

### Cash flow from operating activities

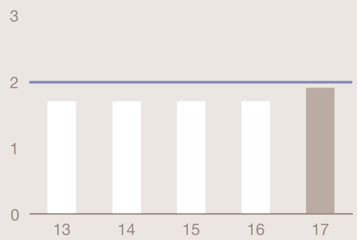
10% Cash flow from operating activities is to amount to 10 percent of sales, including investments in fixed assets. This value is lower than the goal for the operating margin, since organic growth normally requires an increase in working capital. In addition, taxes are paid in an amount corresponding to approximately 28 percent of earnings before tax.

### Outcome




Net debt/EBITDA at year-end 2017 was 1.31.

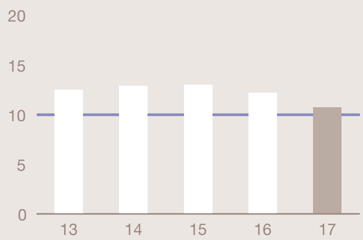
### Outcome*




Investments in 2017 amounted to 1.9 percent.

* As a percentage of sales

### Outcome*



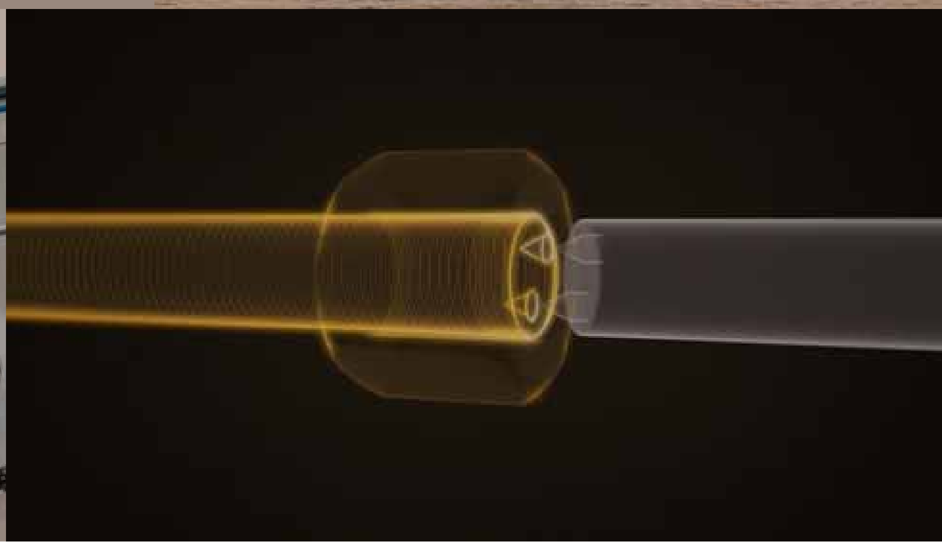

In 2017, cash flow from operating activities totaled 10.7 percent**.

* As a percentage of sales
** Including investments in fixed assets

# A strategy that rests on three pillars

## Strategy

To achieve its vision, implement its business concept and attain its growth, profitability and capital utilization goals, Alfa Laval has established various strategic priorities that encompass customer collaboration, a focus on products and working to further strengthen the aftermarket offering.



**CUSTOMERS**

Improve our interaction with customers

**PRODUCTS**

Capitalize on our technical competence

**SERVICE**

Continue to develop our service offering

**Customers**

Alfa Laval endeavors to optimize its customers' processes. In conjunction with the strategic review conducted in 2016, further key areas for attention were identified to improve the customers' overall experience and thus ensure that Alfa Laval remains their first choice, even when the criteria are somewhat broader. One such area pertains to the need to simplify collaboration with the customer. This is enabled by the new, lighter organizational structure implemented in January. The new organization defines distinct roles, authorization and areas of responsibility, leading to shorter decision-making paths and thus a higher pace in contacts with the company's customers. At the same time, three standardized business processes were established, which address the customers' differing needs, challenges and purchasing processes:

1. Standard – sale of standardized components through channels and online, with a focus on easy accessibility and lead times.
2. Configured – standardized components with standard configuration formats for adaptation to specific applications, capacities, etc.
3. Project – customized systems and solutions for customers with specific requirements.

**Products**

Alfa Laval's product offering in the three key technologies of heat transfer, separation and fluid handling serve as the foundation for achieving the company's goal for profitable, organic growth. The efficiency and quality of these products are considered – and expected to remain – key criteria for customers who want to improve their competitiveness, lower their energy consumption and reduce their environmental impact. Every year, the company invests between 2 and 2.5 percent of its sales in R&D in order to ensure that Alfa Laval's product offering is constantly one step ahead of its competitors. This may result in brand new products as well as improved and even more efficient versions of existing products. Identifying new areas of application for existing products and key technologies is another important approach for development work.

When it comes to products, the company also turned up the pace by introducing more focused activities to ensure that the time from concept to product launch is substantially shortened. This includes, for example, high-speed separators, where there is a focus on new, differentiated platforms for various areas of application. As part of this work, new competence centers were established. One example of this is the center for Food & Water, which was established in Søborg, Denmark during the year, with the aim of strengthening the company's global position in food and water, two key growth areas. With a focus on more rapid product launches in the next few years, the benchmark value for investments in R&D was raised to 2.5 percent of sales or slightly lower.

A further step in the effort to strengthen the products' competitiveness involved a change that started with the consolidation of the manufacturing operations to fewer units in Europe.

At the same time, the product offering can naturally be strengthened and expanded through acquisitions, primarily of supplementary products in the three key areas, but also of products that are new to the company and complement the offering in application areas where Alfa Laval is already represented.

**Service**

The aftermarket – meaning service and spare parts – is a highly significant part of the company's business. It involves local activity with a global presence comprising more than 100 service centers worldwide. Alfa Laval's products have a long service life, which forms the foundation for a large installed base that – to varying degrees and with varying frequency – requires both spare parts and service. Hence the installed base has inherent revenue potential that the company aims to capitalize on through various reinforced activities. These may comprise an expansion of additional service centers or the introduction of further automation or standardization of the service execution.

Alfa Laval has a comprehensive aftermarket portfolio and can tailor its offering to individual customers. The work to further refine this packaging of aftermarket products will continue, most likely with elements of digitalization.

At the same time, this focus on service goes hand-in-hand with the other two strategies – being swift in dialogue and collaboration with the customer and supporting the offering of high-quality products with an equally high-quality offering of spare parts and service. It should be easy to do business with Alfa Laval.

**Acquisitions**

Between 2013 and 2017, Alfa Laval acquired four companies with combined sales of SEK 4,115 million, corresponding to average annual growth of SEK 823.

| YEAR | ACQUISITIONS | DIVESTMENTS | REASON | SALES, SEK MILLION* |
|---|---|---|---|---|
| 2013 | Gas combustion unit | | Product | 40** |
| | Niagara Blower Company | – | Product | 425 |
| 2014 | Frank Mohn AS | – | Product | 3 600 |
| 2015 | Service Multibrand | – | Channel | 50*** |
| 2016 | – | – | – | – |
| 2017 | – | – | – | – |

* Refers to sales for the year preceding the acquisition or divestment. ** Expected sales for 2013 on the acquisition date.
*** Expected sales for 2015 on the acquisition date.

# Favourable price trend for the Alfa Laval share in 2017

The price trend for the Alfa Laval share was favorable in 2017. A share price of SEK 193.80 (150.80) was quoted at the close of the final trading day of the year, corresponding to a total upswing of 28.5 percent. Including the dividend of SEK 4.25 per share, the total return for the Alfa Laval share was 31.3 percent.

The highest closing price for the share was SEK 213.90, quoted on November 3. The lowest closing price was SEK 152.60, quoted on January 30. Alfa Laval's market capitalization at year-end was SEK 81.3 billion (63.3).

OMX Stockholm Industrials, the sector index for industrial shares in which Alfa Laval is listed, rose 15.6 percent in 2017, while the Stockholm Stock Exchange as a whole rose 6.4 percent. The Alfa Laval share is listed on Nasdaq Stockholm and is included in the large cap segment in Stockholm and the Nordic region as well as OMXS30, which includes 30 companies with the most-traded shares in Stockholm.

### Strong long-term return

Since Alfa Laval was re-listed on the Stockholm Stock Exchange on May 17, 2002, the company's share, including reinvested dividends, has generated a yield of 1,073 percent. Measured over the full listing period, this corresponds to an average annual effective yield of 16.3 percent, compared with an annual effective yield of 8.4 percent for the Stockholm Stock Exchange (SIX Return Index) during the same period.

### Share turnover

Alfa Laval's share is not traded exclusively on Nasdaq Stockholm, but also on Cboe European Equities (formerly BATS), Turquoise and the London Stock Exchange, to name a few examples of major alternative marketplaces. In 2017, the Stockholm Stock Exchange accounted for 37.3 percent (35.0) of all trading in the share. Trading on Cboe European Equities accounted for the largest share at 39.2 percent (34.8). Despite a slight decline in 2017, the liquidity of the Alfa Laval share remains favourable. The number of shares traded declined to 887.3 million (1,092.9), corresponding to a combined value of SEK 160 billion (147), including all alternative marketplaces. This corresponds to a share turnover rate of 2.1 (2.6) times the total number of shares outstanding. In 2017, the average number of transactions completed in Alfa Laval shares increased to 8,467 (8,268) per trading day.

### Dividend policy

The Board of Directors' goal is to regularly propose a dividend that reflects the Group's performance, financial status, and current and expected capital requirements. Taking into account the Group's cash-generating capacity, the goal is to pay a dividend of between 40 and 50 percent of adjusted earnings per share over a business cycle. For 2017, the Board has proposed that the Annual General Meeting approve a dividend of SEK 4.25 (4.25). The proposed dividend corresponds to 48.0 percent (50.1) of earnings per share, adjusted for surplus value.

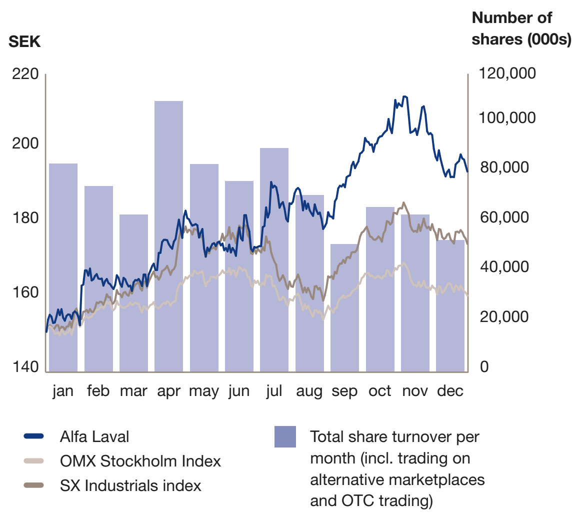
### Share capital

The par value at year-end was SEK 2.84 (2.84) per share. All shares carry equal voting rights and equal right to the company's assets. Alfa Laval has no options outstanding that could create a dilution effect for shareholders. The total number of shares during the year was unchanged at 419,456,315.

### Shareholders

At year-end 2017, Alfa Laval had 32,967 (35,840) shareholders, corresponding to a decrease of 2,873 shareholders (decrease: 1,257). The ten largest shareholders controlled 47.9 percent (54.0) of the shares at year-end 2017, excluding nominee-registered shares. The single largest shareholder was Tetra Laval B.V., whose holding remained unchanged during the year at 29.1 percent. The fifth largest shareholder in 2016, FAM AB (Foundation Asset Management), divested its entire shareholding of 3.0 percent during 2017. SPP Fonder AB and Nordea Investment Funds were no longer among the ten largest shareholders at year-end, while Norges Bank, Blackrock Global Funds and Livförsäkringsbolaget Skandia became the fifth, sixth and tenth largest shareholders, respectively, in 2017.

**Price trend, January 2 – December 29, 2017**




Source: SIX / Fidessa

**Total return, May 17, 2002 – December 29, 2017**


Source: SIX

## Ownership distribution by size at December 29, 2017

| | No. of share-holders | No. of share-holders, % | No. of shares | Holding, % |
|---|---|---|---|---|
| 1 – 500 | 23,910 | 72.5 | 3,549,778 | 0.8 |
| 501 – 1,000 | 3,850 | 11.7 | 3,200,920 | 0.8 |
| 1,001 – 5,000 | 3,640 | 11.0 | 8,422,640 | 2.0 |
| 5,001 – 10,000 | 557 | 1.7 | 4,104,375 | 1.0 |
| 10,001 – 20,000 | 319 | 1.0 | 4,700,873 | 1.1 |
| 20,001 – 50,000 | 276 | 0.8 | 8,984,150 | 2.1 |
| 50,001 – | 415 | 1.3 | 386,493,579 | 92.1 |
| **Total** | **32,967** | | **419,456,315** | |

Source: Euroclear

## Ownership categories at December 29, 2017

| | No. of shares | Holding, % |
|---|---|---|
| Financial companies | 84,057,907 | 20.0 |
| Other financial companies | 366,422 | 0.1 |
| Social insurance funds | 5,052,162 | 1.2 |
| Government | 305,049 | 0.1 |
| Municipal sector | 35,420 | 0.0 |
| Trade organizations | 3,767,533 | 0.9 |
| Other Swedish legal entities | 5,256,553 | 1.3 |
| Shareholders domiciled abroad (legal entities and individuals) | 300,185,192 | 71.6 |
| Swedish individuals | 19,345,195 | 4.6 |
| Uncategorized legal entities | 1,084,882 | 0.3 |

Source: Euroclear

## Data per share

| | 2017 | 2016 | 2015 | 2014 | 2013 |
|---|---|---|---|---|---|
| Share price at year-end, SEK | 193.80 | 150.80 | 155.00 | 148.30 | 165.00 |
| Highest paid, SEK | 213.90 | 154.40 | 176.90 | 187.00 | 167.00 |
| Lowest paid, SEK | 152.60 | 121.30 | 126.10 | 138.70 | 133.00 |
| Shareholders' equity, SEK | 48.87 | 48.34 | 43.92 | 41.01 | 38.53 |
| Earnings per share | 7.09 | 5.46 | 9.15 | 7.02 | 7.22 |
| Dividend, SEK | 4.25[1] | 4.25 | 4.25 | 4.00 | 3.75 |
| Free cash flow, SEK [2] | 8.92 | 9.97 | 12.25 | -23.48 | 7.82 |
| Price change during the year, % | 29 | -3 | 5 | -10 | 22 |
| Dividend as % of EPS, % | 59.9 | 77.8 | 46.0 | 57.0 | 51.9 |
| Direct return, % [3] | 2.2 | 2.8 | 2.7 | 2.7 | 2.3 |
| Share price/shareholders' equity, multiple | 4.0 | 3.1 | 3.5 | 3.6 | 4.3 |
| P/E ratio [4] | 27 | 28 | 17 | 21 | 23 |
| No. of shareholders | 32,967 | 35,840 | 37,097 | 40,505 | 36,212 |

Source: SIX

[1] Board motion to the Annual General Meeting.
[2] Free cash flow is the sum of cash flow from operating and investing activities.
[3] Measured as the proposed dividend in relation to closing price on the last trading day.
[4] Closing price on the last trading day in relation to earnings per share.

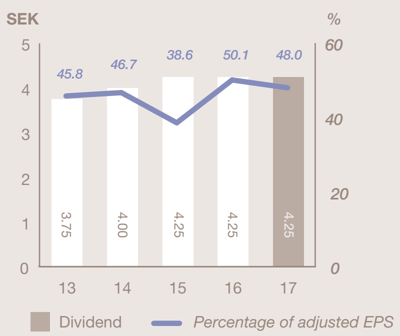
## Ten largest shareholders at December 29, 2017*

| | No. of shares | Capital/voting rights,% | Change in holding in 2017, percentage points |
|---|---|---|---|
| Tetra Laval BV | 122,037,736 | 29.1% | 0.0 |
| Alecta | 22,809,962 | 5.4% | -1.7 |
| Swedbank Robur Funds | 17,870,549 | 4.3% | -1.2 |
| AMF Insurance and Funds | 11,535,792 | 2.8% | -2.4 |
| CBNY – Norges Bank | 10,935,895 | 2.6% | 0.0 |
| Blackrock Global Funds | 3,595,583 | 0.9% | 0.0 |
| SEB Investment Management | 3,578,829 | 0.9% | 0.1 |
| Fourth Swedish Pension Insurance Fund | 2,959,120 | 0.7% | -0.9 |
| Folksam | 2,826,729 | 0.7% | 0.0 |
| Livförsäkringsbolaget Skandia | 2,709,678 | 0.6% | 0.4 |
| **Total ten largest shareholders** | **200,859,873** | **47.9%** | |

Source: Euroclear

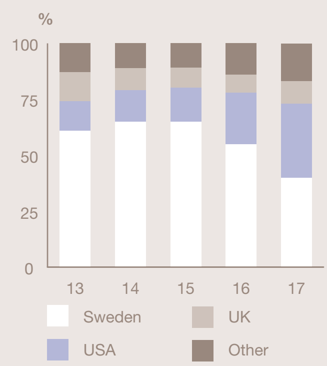
* The table is adjusted for nominee-registered shares. Were they to be included, they would represent a total holding of 12.4 percent.

## Dividend and percentage of adjusted EPS**




* Board motion to the Annual General Meeting.
** Adjusted for step up amortization net of taxes.

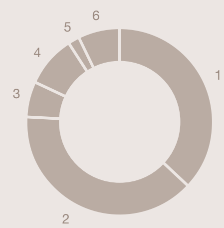
## Geographic distribution of the free float, % of capital and voting rights




Excluding Tetra Laval (Netherlands) 29.1%.

Source: Euroclear

## Share turnover on various marketplaces




| | | |
|---|---|---|
| 1 | Nasdaq OMX | 37% |
| 2 | CBOE | 39% |
| 3 | Turquoise | 6% |
| 4 | London Stock Exchange | 9% |
| 5 | Aquis | 2% |
| 6 | Other | 7% |

Source: Fidessa

# World-leading in three key technologies

Alfa Laval's operations are based on three key technologies – heat transfer, separation and fluid handling. These technologies play a key role in a number of industrial processes and Alfa Laval commands a world-leading position in all three areas.

## Heat transfer

**Heat and cooling are basic needs for both the individual and most industrial processes. There is a large number of industries today in which heat transfer solutions are required for heating, cooling, ventilation, evaporation and/or condensation. All of this can be achieved efficiently using a heat exchanger. Therefore, heat transfer products from Alfa Laval are now found in numerous areas – within everything from food production and petrochemicals to the creation of a pleasant indoor climate or hot tap water in private households, to name only a few examples.**

**The key word is efficiency**
Heat exchangers transfer heat or cooling, often from one liquid to another. The main product in Alfa Laval's offering – the compact plate heat exchanger – is more efficient than alternative technologies, allowing it to play a crucial role in boosting the overall efficiency of the customer's manufacturing process. Energy efficiency results in lower costs and reduces environmental impact. Plate heat exchangers are made up of a series of plates assembled closely to each other. Between these plates run two channels containing media at different temperatures – often liquids. These flow on either side of the thin plates and in opposite directions to each other, resulting in a transfer of heating or cooling.

**A complete offering**
There are different types of plate heat exchangers – gasketed, brazed and welded, for example – each designed to withstand different pressure and temperature levels. Alfa Laval's offering also includes air heat exchangers, spiral heat exchangers, shell-and-tube heat exchangers, thermal fluid systems and boilers, to name only a few examples. With the industry's broadest product portfolio, Alfa Laval offers efficient, compact products – that are easy to service and maintain – for most industries worldwide.

**Business units with heat transfer products in their range**

ENERGY DIVISION
- Brazed & Fusion Bonded Heat Exchangers
- Gasketed Plate Heat Exchangers
- Welded Heat Exchangers

FOOD & WATER DIVISION
- Food Heat Transfer
- Food Systems

MARINE DIVISION
- Marine Separation & Heat Transfer Equipment
- Boilers & Gas Systems

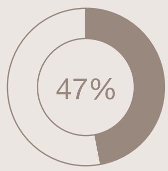
### Competitors

- Kelvion (Germany)
- HISAKA (Japan)
- SPX FLOW/APV (US)
- SWEP (US)
- KANGRIM (Korea)
- SAACKE (Germany)
- MIURA (Japan)
- HEATMASTER (Netherlands)
- OSAKA (Japan)
- Danfoss A/S (Denmark)

### Market position


More than 30 percent of the world market

### Sales




Share of Group sales

## Separation

**Separation is the technology that represents the origin of the Alfa Laval we see today. The business began in 1883, based solely on separation, and this technology remains a core feature to this day. With precision and a high degree of reliability, liquids, solid particles and gases are separated from one another, which is a requirement in a large number of industries.**

**High-speed separators and decanter centrifuges**

Alfa Laval's separation products are dominated by high-speed separators and decanter centrifuges. Separators have high rotation speeds, are generally mounted vertically and can separate small particles from liquids and gases. Decanter centrifuges are normally mounted horizontally, operate at lower speeds and are used to separate larger particles from liquids. They are used, for example, in the dewatering of sludge in wastewater treatment plants.

**Key role in a number of processes**

Separators and decanter centrifuges play a crucial role in numerous industrial processes, such as:

- food, pharmaceutical, bioengineering, chemical and petrochemical processes.
- extraction and production of crude oil, and treatment and recovery of drilling mud.
- handling and treatment of fuel and lubricants aboard vessels and at diesel/gas power plants.
- dewatering of sludge and treatment of process water in private and municipal facilities.

**Business units with separation products in their range**

ENERGY DIVISION
- Energy Separation

FOOD & WATER DIVISION
- High Speed Separators
- Decanters
- Food Systems

MARINE DIVISION
- Marine Separation & Heat Transfer Equipment

**Competitors**

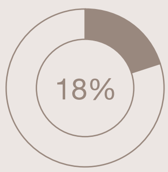
Separators
- GEA (Germany)
- MITSUBISHI KAKOKI KAISHA (Japan)
- PIERALISI (Italy)
- SPX FLOW/Seital (US)

Decanters
- GEA (Germany)
- GUINARD/ANDRITZ (France, Austria)
- Flottweg (Germany)
- PIERALISI (Italy)

**Market position**


25–30 percent of the world market

**Sales**




Share of Group sales

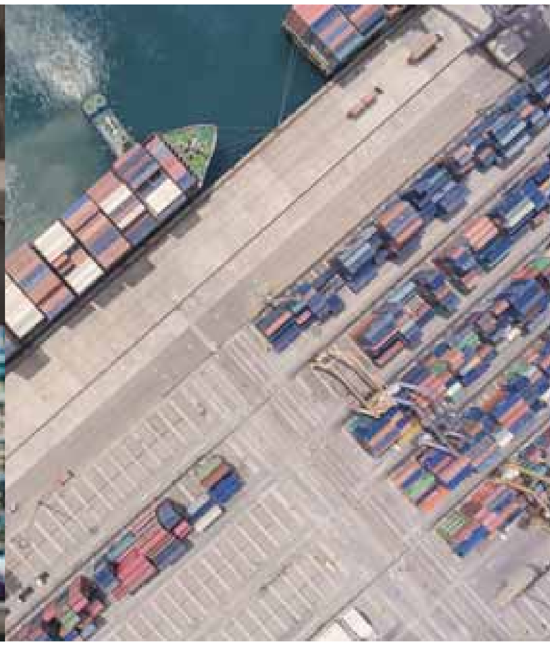
## Fluid handling

**The transportation and regulation of fluids in an efficient and safe manner is crucial to many industries. Alfa Laval focuses on fluid handling products, such as pumps and valves, for industries with stringent hygiene requirements and on pumping systems for the marine industry and the offshore market.**

**Efficient and precise**

The company's pumps, valves and installation material are used in production processes with strict hygiene requirements, such as the production of beverages, dairy products, food and pharmaceuticals.

Pumps drive the flow of liquids, while valves are used to guide the flow by opening and closing. For hygienic applications, Alfa Laval mainly offers centrifugal, liquid ring and rotary lobe pumps. The most common types of valves include control valves, constant-pressure valves, butterfly valves and diaphragm valves. The offering also includes hygienic tank equipment ranging from mixers to cleaning equipment. Mixers can be used to mix both high and low-viscosity fluids, such as milk, wine, juice, yoghurt, desserts and fruit drinks. For the marine sector, Alfa Laval offers submerged, hydraulic pumping systems for product and chemical tankers. These systems enable safe and flexible load handling, which results in less time in port and fewer journeys without commercial loads. For the offshore industry, the offering includes pumping systems for collecting sea water for various onboard applications, water injection in drill holes and fire extinguishing, which contribute to safe and efficient operation.



**Business units with fluid handling products in their range**

FOOD & WATER DIVISION
- Food Systems
- Hygienic Fluid Handling

MARINE DIVISION
- Pumping Systems

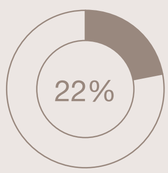
**Competitors**

- GEA (Germany)
- SPX FLOW/APV/Waukesha Cherry-Burrell (US)
- Fristam (Germany)
- Hamworthy/WÄRTSILÄ (Finland)
- SULZER (Switzerland)

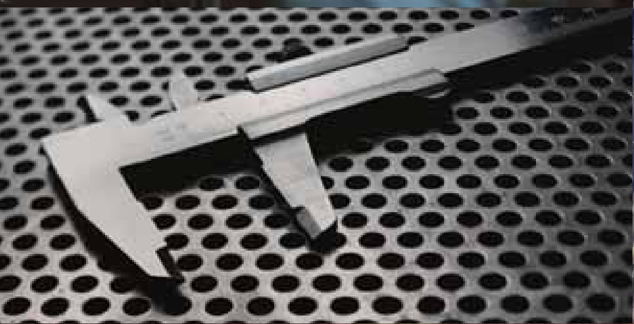
**Market position**


10–12 percent of the world market

**Sales**




Share of Group sales



# Development on the agenda

**Alfa Laval delivers first-class products and solutions to a large number of industries as a result of the company's continuous focus on research and development. The pace is now being stepped up further to ensure the company's continued leadership in its three key technologies of heat transfer, separation and fluid handling.**

**2.5%**

Investments in R&D will amount to 2.5 percent of sales, or slightly lower, per year.

**35–70**

Every year, the patent department handles a large number of internal reports on new inventions, of which approximately 35–70 lead to new patent applications.

**>3,000**

At year-end 2017, Alfa Laval had more than 3,000 patents in its portfolio.

Alfa Laval is a company that employs numerous engineers who constantly challenge the existing offering to identify what can be done better. This has been the case for decades and every day, the foundation is laid for it to remain so in future. It is not only the offering that is challenged, but also the processes for how R&D is conducted. In conjunction with the company's strategic review in 2016, possibilities for improvement were found also in this area. The company's strong market position forms the base from which work in R&D starts, but could it be done more quickly and efficiently? Could it become even more focused, with more selective activities in the areas that make a genuine difference to the customers and thus to the company's future development?

The answer was yes and the work has already started. In Tumba, Sweden, it resulted in a new center for the development of high-speed separators; in Søborg, Denmark, a decision was made to convert the production facility for large decanters into a center focusing on the development of products and systems for the food industry as well as water treatment; and at the test and training center in Aalborg, Denmark, continuous initiatives related to the further development of marine products are being carried out. The activities at product level will result in new platforms for both separators and heat exchangers, while investments are also being made in the service offering as well as the possibilities offered by digitalization. This is only the beginning. Alfa Laval will continue to challenge its offering – area by area – to ensure that the products that are developed and launched continue to make a difference for our customers.

At Alfa Laval, there are technology-focused product centers that are responsible for the further development of existing product platforms, R&D of new products, and launches and follow-up of how these are received by the market. There are a number of product centers focusing on various technology portfolios, such as air heat exchangers, compact heat exchangers, fluid handling, boilers, decanter centrifuges, high-speed separators and welded heat exchangers.

**Protecting business**

Going forward, investments in R&D will amount to 2.5 percent of sales, or slightly lower, per year. With annual investments of many hundreds of millions of Swedish kronor, it is important that the products that are the end result really are protected so that the revenue benefits the company. Support for this comes from the patent department. This organization works to protect and defend the company's technologies and thus its business. Every year, the patent department handles a large number of internal reports on new inventions, of which approximately 35-70 lead to new patent applications. At year-end 2017, Alfa Laval had more than 3,000 patents in its portfolio.

**Development is about more than new products**

Development not only involves the R&D process and new products and services, but also the development work that takes place in the supply chain, driven by a unit known as Operations Development. Its task is to contribute to the development and optimization of the supply chain, which comprises evaluation and development of procurement, production, distribution and logistics. It refines procurement processes and investigates, develops and evaluates new cost-efficient production technologies. Its work focuses on change, which can include everything from major structural interventions to minor adjustments.

Another unit that also works with development is Corporate Development. This unit takes a strategic, long-term view of technical development in terms of potential future growth areas and new market concepts for the company as a whole.

## Operations Development

Contributes to the development and optimization of the supply chain. Refines procurement processes and investigates, develops and evaluates new cost-efficient production technologies.

## Corporate Development

Takes a strategic, long-term view of technical development in terms of potential future growth areas and new market concepts for the company as a whole.

## Food & Water

The division targets customers in industries such as: food, pharmaceuticals, biotech, vegetable oils, breweries, dairy and body care products. In addition, it focuses on public and industrial water treatment as well as wastewater and waste treatment.

## Energy

The division targets customers in: oil and gas extraction, oil and gas processing and transport, refineries, petrochemicals and power generation. The division also works with construction-related applications, such as heating, ventilation and cooling, and has an offering for customers in the mining and metal industries and lighter industries, to name a few examples. Energy efficiency is a focus area in which the division helps its customers to reduce their energy consumption, which is both economically and environmentally favorable.

## Marine

The division's customers include shipowners, ship yards, manufacturers of diesel and gas engines and companies that specialize in offshore extraction of oil and gas.

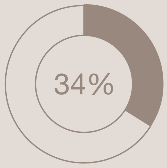
# Three industry-based divisions and a shared supply chain

**Realizing Alfa Laval's business concept – "to optimize the performance of our customers' processes, time and time again" – requires a solid product offering, high technological competence and a structure that is fast moving and has a high level of insight into the customers' needs, purchasing behavior and processes. Accordingly, Alfa Laval has established three industry-based sales divisions: Energy, Food & Water and Marine, which are supported by Operations, the Group's shared supply organization with responsibility for procurement, manufacturing and distribution.**

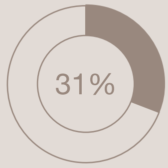
**Business units**

- High Speed Separators
- Food Heat Transfer
- Food Systems
- Decanters
- Hygienic Fluid Handling

**Share of Group order intake**



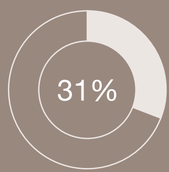

**Aftermarket's share of the division**



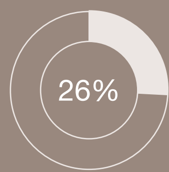

**Business units**

- Energy Separation
- Welded Heat Exchangers
- Brazed & Fusion Bonded Heat Exchangers
- Gasketed Plate Heat Exchangers

**Share of Group order intake**



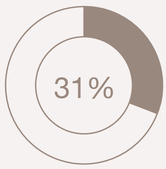

**Aftermarket's share of the division**



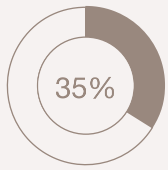

**Business units**

- Pumping Systems
- Boilers & Gas Systems
- Marine Separation & Heat Transfer Equipment

**Share of Group order intake**




**Aftermarket's share of the division**





## Operations

The division is responsible for the Group's production-related procurement, manufacturing, distribution and logistics. This centralized, coordinated and global supply chain creates the necessary prerequisites to ensure reliable access to the company's products worldwide.

# Food & Water

## Target industries

The division targets customers in industries such as food, pharma, biotech, edible oil, brewery, dairy and personal care products. It also focuses on municipal waste water treatment, as well as industrial water and waste treatment.

## Offering

Alfa Laval's three core technologies are all included in the offering. That means all types of heat exchangers and separation products, but also fluid handling equipment such as pumps and valves.

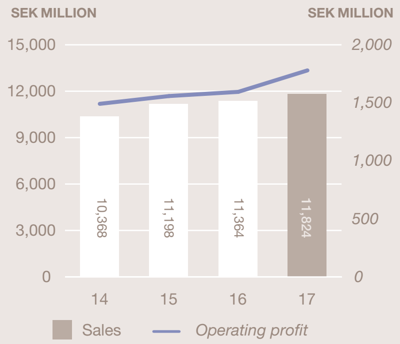
## Way to market

The division's business model is a mix of component, configured and project sales. That means it goes to market through channels such as contractors, integrators, OEMs, system-builders and distributors but also directly to end users.

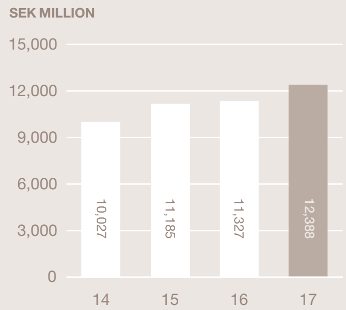
## Business units

The division has five technology-based business units. These units have full profit & loss responsibility and are in charge of driving the global business for a defined group of products, covering everything from product development and management, to marketing, sales and service across the industry areas.

### Sales and operating profit




### Order intake




| | |
|---|---|
| Sweden | 4% |
| Other EU | 26% |
| Other Europe | 6% |
| North America | 26% |
| Latin America | 7% |
| Asia | 28% |
| Other | 3% |

## High Speed Separators

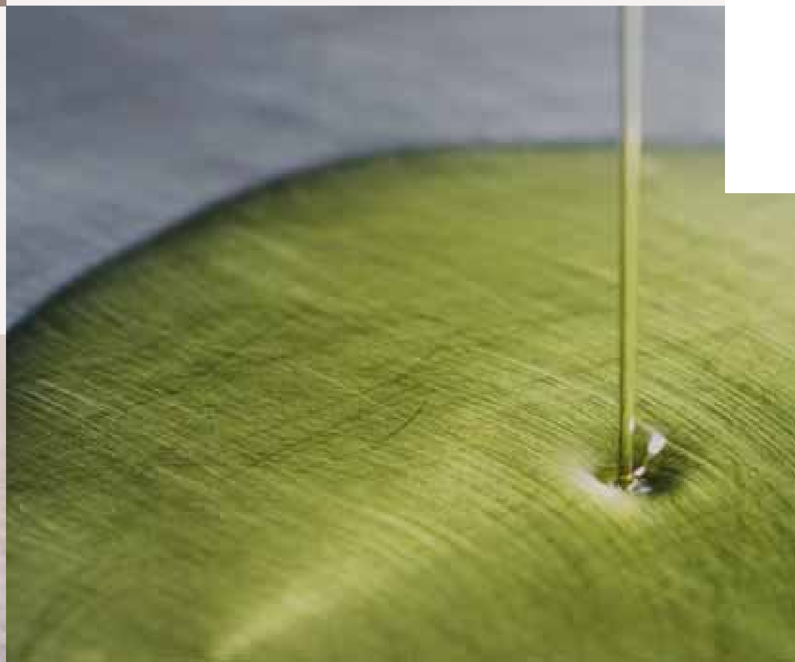
High-speed separators for breweries, dairies, edible oil refineries as well as for applications in pharma & biotech, ethanol, starch and sugar.

## Food Heat Transfer

Provider of gasketed, tubular, brazed, welded and scraped-surface heat exchangers – to give some examples - to a wide range of industries such as food, brewery, dairy, pharma, ethanol, sugar and starch.

## Food Systems

The unit integrate Alfa Laval's core technologies into process solutions for the food sector, especially targeting brewery, edible oils, meat & fish processing, fruit & vegetable processing, as well fermentation and starch & sugar processing.



## Decanters

Decanters, presses, filters and membranes as components or modules for food or life science applications as well as waste management such as dewatering of sludge in municipal waste water treatment plants, or water treatment for industrial waste water.

## Hygienic Fluid Handling

Pumps, valves, installation material and tank equipment for hygienic applications in the food and pharma industry.

### Significant events 2017

**Nish Patel**
President, Food & Water Division

- The division benefitted from solid growth in several end-markets; edible oil, starch, ethanol, industrial fermentation as well as water & waste, to mention a few. Macro drivers such as a growing population and middle class gave the pharma and biotech sectors a strong boost, especially in Asia. At the same time, demand from customers in the food as well as water & waste industries was lifted by stricter regulations in these areas.
- The strong focus on identified key industries, the increased product focus and the addition of distributors and integrators to further expand the sales channel network, all contributed to generate growth. On top of that – the continuous development of e-commerce added to the base business. And, the vision to further simplify our customer's interface with Alfa Laval through the e-commerce platform, led to further adaptation of configuration tools.
- End customers' investments in capacity, process efficiency and improved yield and quality of their output, led to increased demand for everything from components to systems and solutions.
- Service delivered stable growth, partly through an expanded offering that targeted specific products and industries, and partly as a result of the continuous efforts to capitalize on the installed base.

# China says yes to yoghurt

## Structural growth drivers

### Food

A growing number of people are joining the middle class, urbanization is continuing at an undiminished rate and women now account for a higher percentage of the workforce. This is contributing to growing demand for ready-made food and the development of more efficient supply chains with the capacity to reduce waste.

Alfa Laval's history began in 1883 with the development of a separator for separating cream from milk. Since then, the company's offering for hygienic applications in the food industry has been expanded to include heat exchangers, pumps and valves. These products meet the strictest hygiene requirements and can help to optimize the use of raw materials. Alfa Laval can also help to reduce waste by offering cooling solutions for transport and storage.

### Environment

Human impact on the environment is coming under greater scrutiny, resulting in new, increasingly stringent laws. In parallel with this, a sustainability mindset has also evolved and is encouraging companies to voluntarily take steps that contribute to environmental improvements.

Alfa Laval has a wide range of products for managing various environmental problems. The Food & Water division offering includes decanter centrifuges to dewater sludge in municipal wastewater treatment plants and they are also involved in handling industrial waste and water. Within food manufacturing, Alfa Laval can offer processes and solution that can reduce waste, by increasing the yield.

**The fact that the vast majority of its population of 1.35 billion people are lactose intolerant means that the Chinese dairy market has historically been relatively small. So why has yoghurt taken off?**

Despite its thousands of years of civilization and its highly developed cuisine, dairy products have been almost completely absent from Chinese tables until the last couple of decades. Other than the traditions of the nomadic and pastoral populations around Mongolia and Tibet, the idea of using milk in food was as un-Chinese as one could get.

One reason is simply the fact that the vast majority of Chinese are lactose intolerant, meaning they cannot digest lactose – milk sugar. But, there are dairy products that even those who are lactose intolerant can eat – one being yoghurt.

During the yoghurt manufacturing process, the lactose is converted into lactic acid making yoghurt easily digested by people with lactose intolerance. This fact, paired with changing tastes and habits over the past three decades of China's reform and opening period, has opened up a massive new market for dairy products, and yoghurt in particular.

According to data from Euromonitor, China's yoghurt industry is already valued at more than $10 billion. And researchers expect yoghurt to continue to grow faster than any other dairy category in the short-term, increasing in value at a compound annual growth rate of 14 percent. With this will come more investment in production. One of China's largest dairy producers, Bright Dairy, has for example invested CNY1.2 billion ($179 million) in a dairy factory in Wuhan to produce Zhiwu Huoli pre/probiotic drinking yoghurt. The factory's 64 production lines are projected to produce 360,000 tonnes annually. What then is fuelling China's growing thirst for yoghurt?

Andrei Soroka, Marketing, Category and Portfolio Director, Greater China, South Asia, East Asia and Oceania at Tetra Pak, puts it down to a shift in consumer preferences driven by health concerns.

"With more disposable income, people began to ask themselves: 'Can I afford to drink something better?'" He adds that premium Western brands, including Yoplait and Danone have benefited from this change in thinking.

But besides a higher disposable income and health concerns, the gradual improvement of the yoghurt products available to Chinese consumers also play a role. Another important factor is the growing urbanization of China. As Soroka notes, the vast majority of yoghurt is consumed in cities.

"The urban population of China is growing," he says. "Right now it's 52 percent – compare that with Russia, where it's 75 percent, or Europe, where it's 80 percent." Currently about 700 million Chinese live in cities, and the United Nations predicts that will increase by up to 70 percent by 2035.

But with opportunity comes risk associated with food safety. Following a number of high-profile food scandals in the country, more than 2,000 national food regulations have been brought in, and the government is making significant efforts to improve food safety and quality. But even as legal frameworks have been established a lot remains to be done to both enforce these laws and cultivate a wider food safety consciousness.

"Food producers in general pay really close attention to food safety — they're really trying to maintain a very high standard," says Soroka. "Building modern factories and buying the right equipment are important, but you also have to change people's thinking [on food safety], and that is more difficult."

### Lactose intolerance explained

- Lactose intolerance is the inability to digest lactose a sugar in milk and dairy products. It results from low levels of lactase the enzyme that breaks down lactose.
- Individuals with lactose intolerance who consume milk or dairy products can experience bloating, cramps, flatulence or diarrhea.
- Lactose intolerance is less common in cultures with a dairy tradition. Therefore, in Northern Europe, around 5 percent of people have lactose intolerance, compared with 90 percent or more in some Asian and African countries. In Southern Europe, around half of the population is lactose intolerant.

# Energy

## Target industries

The division targets customers in markets such as: oil and gas exploration, oil and gas processing and transportation, refineries, petrochemicals and the power industry. Furthermore, it focuses on construction-related applications such as HVAC, and it also has an offering for customers in the mining, metals and light manufacturing industries, to mention a few. Energy efficiency is a focus area, where the division helps customers lower their energy consumption which is beneficial both from a financial and environmental point of view.

## Offering

Heat transfer is the main technology offered, comprising everything from gasketed plate heat exchangers for gentler applications to different types of welded heat exchangers for more demanding applications. Separation technology is the other main technology offered - both high speed separators and decanter centrifuges.

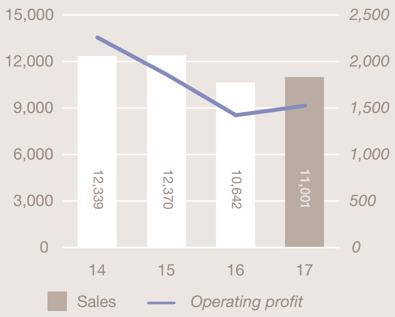
## Way to market

The Energy division's business is a mix of component, configured and project sales. It goes to market directly to end users, but also through channels such as contractors, OEMs, system-builders and distributors.

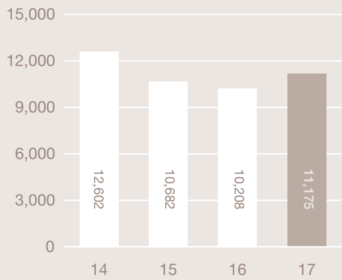
## Business units

The division has four technology-based business units. These units have a full profit & loss responsibility and are responsible for driving the global business for a defined group of products, covering everything from product development and management, to marketing, sales and service.

### Sales and operating profit




### Order intake




| | |
|---|---|
| Sweden | 2% |
| Other EU | 25% |
| Other Europe | 6% |
| North America | 25% |
| Latin America | 3% |
| Asia | 36% |
| Other | 3% |

### Brazed & Fusion Bonded Heat Exchangers

A clear majority of the business targets HVAC applications – heating, ventilation, air conditioning and cooling – meaning that the unit, to a large extent, is exposed to the construction industry as well as to public investments in district heating. A smaller part of the business is involved in engine or industrial applications, such as engine cooling for off-road vehicles or pleasure boats as well as cooling and cleaning of liquids in light manufacturing.

### Energy Separation

Separation equipment and solutions for the up- and downstream part of the hydro carbon chain, for the manufacturing of chemicals, for power, mining, minerals, pulp & paper and several other industries. The main technologies offered are high speed separators and decanter centrifuges, but the offering also includes mixing equipment and fresh water generators.

### Gasketed Plate Heat Exchangers

While this business unit is responsible for supporting all three divisions and the product range is extremely wide, in the Energy division it focuses on supplying gasketed plate heat exchangers for HVAC, refrigeration, engine cooling, chemical processing, oil production and power generation.

### Welded Heat Exchangers

All types of welded heat exchangers including compact plate heat exchangers, spirals, plate-and-shell, air-cooled, wet-surface air coolers, Packinox, shell-and-tube as well as air heat exchangers for demanding process applications, clean, dirty and fouling process duties, high pressure process duties in the refinery, petrochemical, gas processing, pulp, paper and mining industries.

### Significant events 2017

**Susanne Pahlén Åklundh**
President, Energy Division

- The division saw an overall increase in order intake in 2017, partly due to a generally good economic climate and partly as a result of an improved activity level in the hydro-carbon chain compared with 2016.
- Investments in energy efficiency among customers in the refinery and petrochemical industries contributed to generating several large orders for welded heat exchangers during the year. At the same time, Chinese investments to expand capacity in the same two areas resulted in a number of larger projects.
- We saw good growth in brazed heat exchangers, with an increased order intake from most of our key customers. Brazed heat exchangers have developed well over a long period of time, which will require an increase in capacity in the coming years, for example, in the US.
- Channel sales also displayed a highly favorable performance in 2017. We continued to roll out our e-commerce solutions in more geographies and, as a result, were able to offer e-sales of our standard products to customers globally by the end of the year.
- Overall, most of our key end markets performed well. However, Service displayed modest growth during the year. This reflected a varied underlying trend, with several areas characterized by good to very good demand, muted by a number of large service projects in 2016, which were not repeated in 2017.

# ‘Roof of the world’ gets unique heating solution

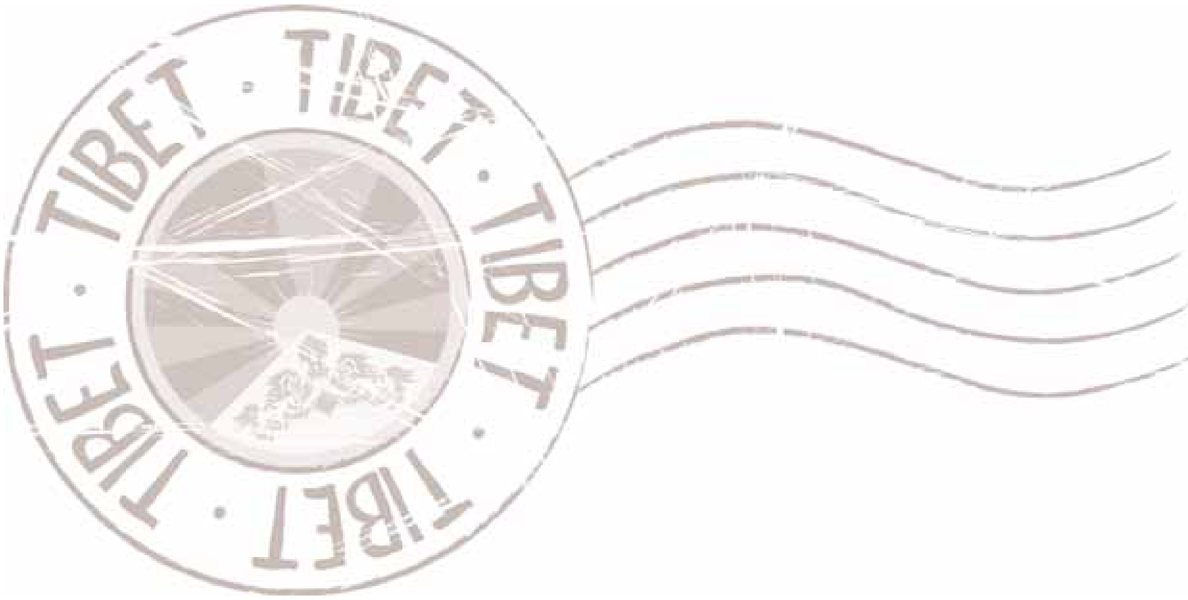
## Structural growth drivers

**Energy**
The world’s energy needs are continuing to intensify – at a faster rate in some areas of the world than others. There are two ways to handle this challenge: increase the total energy production and make greater use of technologies that enable more efficient use or recycling of the energy generated.

Alfa Laval’s offering encompasses products and solutions for oil and gas exploration, power production, renewable fuels, refinement and much more. With its compact heat exchangers at the heart of its solutions, the company’s products also play an important role in the efforts to make the world’s industrial processes more energy efficient.

**Environment**
Human impact on the environment is coming under greater scrutiny, resulting in new, increasingly stringent laws. In parallel with this, a sustainability mindset has also evolved and is encouraging companies to voluntarily take steps that contribute to environmental improvements.

Alfa Laval has a wide range of products for managing various environmental problems. The Energy division’s efficient heat exchangers and its focus on recovering waste heat creates an opportunity for substantial energy savings and smaller carbon dioxide emissions for the customer.




**Despite being closer to the sun than most places on Earth, the Tibetan capital, Lhasa, has a frosty climate that makes effective building heating essential. The city's first centralized heating system relies on Alfa Laval gasketed plate heat exchangers to keep residents warm.**

Deep in the spectacular Himalayas, at an altitude of around 3,600 metres, the city of Lhasa is known as "the roof of the world". With a cultural and spiritual history spanning over 1,000 years, Lhasa was for long the centre of Tibetan Buddhism and is now the capital of the Tibet Autonomous Region of the People's Republic of China. Because of the high altitude, Lhasa has a cool semi-arid climate with frosty winters and mild summers. Heating of buildings is therefore essential.

For the first time in China, a centralized heating system has been installed at such a high altitude. The Lhasa Educational District project, which comprises schools, a university and other educational institutions along with residential buildings, uses gasketed plate heat exchangers in its heating system. Construction started in 2012 and was completed in 2015, after which it accommodates 50,000 people. The city's public utility, Lhasa Nuanx- in gas heating, chose Alfa Laval to ensure safe and highly efficient performance.

"At high altitude, it's not easy to carry out maintenance, so the client needed to select a product with a stable and good performance," says Ryan Guo, project manager for heat exchanger systems at Alfa Laval in China. "Since the substations are located far from each other, the product also needed to have an advanced control system with a web-based solution. This way the customer can easily read and write the data remotely, using a terminal unit such as a computer or a smartphone."

The motor and the electric components had to be adapted for the high-altitude working conditions. "Because of the low air pressure we adjusted the calculation of the gasket plate heat exchanger and the circulation pumps to make sure the components could achieve the best performance," Guo explains. Crucially for the customer, Alfa Laval's control system has proved that it can reduce annual energy consumption by 10 to 15 percent.

### From one extreme to another

Alfa Laval is a world leader in heat exchanger systems that meet the challenge where the climatic going gets tough.


Close to the city centre of Qatar's capital, Doha, the man-made island of Pearl Qatar spans almost 4 million square metres. The area bakes in temperatures up to 50°C, but the island's residential, entertainment and retail areas are cooled by the largest integrated district cooling plant (IDCP) in the world. Reliability and performance are key factors for the plant, and more than 120 Alfa Laval plate heat exchangers are key components.


Temperatures in parts of Siberia can drop far below minus 50°C, and the heating infrastructure there is often in dire need of renovation. Investments in municipal heating projects have included hundreds of Alfa Laval heat exchangers for individual thermal substations, small boilers as well as central heating substations. The result: significant energy savings and improved reliability.

# Marine

## Target industries

The division’s customers include ship owners, ship yards, diesel and gas-engine manufacturers and offshore oil and gas exploration companies.

## Way to market

The division’s sales force targets customers directly. The number of customers is limited and very well-defined – so a direct approach is possible with a limited sales force.

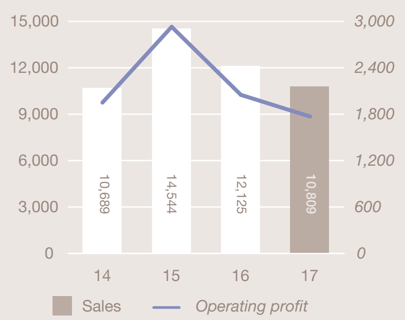
## Offering

The offering includes heat transfer equipment, high-speed separators, pumping systems and several different environmental products such as ballast water treatment systems and exhaust gas cleaning systems, to give a few examples.

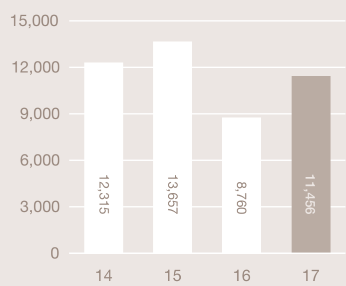
## Business units

The division has three technology-based business units. These units have a full profit & loss responsibility and are responsible for driving the global business for a defined group of products, covering everything from product development and management, to marketing, sales and service.

### Sales and operating profit




### Order intake




| | |
|---|---|
| Sweden | 0% |
| Other EU | 27% |
| Other Europe | 9% |
| North America | 5% |
| Latin America | 3% |
| Asia | 54% |
| Other | 2% |

## Pumping Systems

Submerged cargo pumping systems for product and chemical tankers and pumping systems for utilities and safety applications onboard offshore platforms.

## Boilers & Gas Systems

The unit supplies boilers, waste-heat recovery systems, exhaust gas cleaning systems, inert gas systems, gas combustion units and thermal fluid heating systems to customers in the marine and offshore industries.

## Marine Separation & Heat Transfer Equipment

High-speed separators, heat exchangers, ballast water treatment systems and filters are some of the products that this unit offers to the marine industry and diesel and gas-engine manufacturers.

### Significant events 2017

**Peter Leifland**
President, Marine Division

- Ship contracting increased somewhat, from a historically low level. Some of the main ship types showing growth were tankers and cruise ships. These are typically built with a high content of solutions from Alfa Laval's marine portfolio. The increase in contracting hence lifted demand for Alfa Laval's products.
- In 2017, the implementation of the ballast water convention was determined. Despite the fact that the requirement for retrofit installations was pushed two years, until 2019, the increased clarity led to higher demand for Alfa Laval PureBallast.
- IMO's global regulation which, from 2020, sets a 0.5 percent limit to sulphur emissions from ships' exhaust gases, contributed to lift demand for Alfa Laval PureSOx.
- In 2017, Alfa Laval celebrated 100 years in the marine industry. Alfa Laval's long and close relationship with yards and ship owners resulted in a number of new, value-adding products and services during the year, such as digital monitoring.


## Structural growth drivers

**World trade – globalization**
International trade helps to connect a world where raw materials are extracted in one country and processed in another, after which the end products are transported to customers across the globe. Shipping is the most efficient – and at the same time economical – transport solution, which is why approximately 90 percent of commercial tonnage is now shipped by sea.

Alfa Laval has delivered equipment to the marine industry since 1917. It started in the engine room with separators for cleaning lube oil and has since grown to include everything from heat exchangers for generating freshwater to pumping systems for efficient loading and unloading.

**Environment**
Human impact on the environment is coming under greater scrutiny, resulting in new, increasingly stringent laws. In parallel with this, a sustainability mindset has also evolved and is encouraging companies to voluntarily take steps that contribute to environmental improvements.

The division offers a number of solutions that reduce the impact on the environment, such as systems for treating ballast water, for lowering the sulphur and nitrogen content in ships' exhaust gas or to clean the bilge water onboard.

# 1917

## The marine separator that started it all

In 1917, the U.S. Navy turned to Alfa Laval with a challenge. Water emulsions in lube oil were causing difficulties for naval vessels driven by steam turbines. Could an Alfa Laval centrifugal separator provide a solution?

Gustaf de Laval's separation technology had made huge strides since its introduction for dairy use in the 1870s. Disc stacks had increased separator capacity, and work with oil separation was already underway. But the U.S. Navy's request for a reliable emulsion breaker would influence both separator development and maritime history. The new marine separator was a pioneering answer to the customer's challenge. But above all, it paved the way for a century of cooperation between Alfa Laval and the marine industry.

Over 2,000 patents later, Alfa Laval is still finding solutions for an industry in constant development. Today Alfa Laval products and services support most vessels at sea, in oil treatment, environmental compliance and beyond.

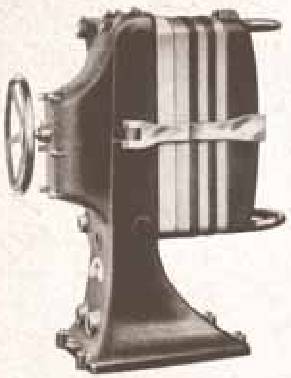
## The self-cleaning revolution begins

In 1917, using a centrifugal separator at sea was an innovation in itself. But marine customers would see even more dramatic changes in the 1940s and 1950s. During this period, Alfa Laval's self-cleaning separators enabled a shift towards the residual fuels that are still in use today.

The idea of a separator that could eject solids instead of being cleaned manually was not new. Several manufacturers had attempted it during the 1920s and 1930s, but the result was always high separator complexity.

By the end of the 1940s, however, Alfa Laval had solved the problem. Using a bowl with a moving discharge slide, sludge could be ejected with the separator rotating at full speed. A prototype was installed on the M/S Svealand in 1950, and by the next decade sales of Alfa Laval PX separators had reached 600-700 per year.

The new technology did more than reduce manual labour. It allowed impure residual fuels to be separated effectively without residue remaining in the bowl, where it might cause imbalance and breakdown. This gave ships with diesel engines a means to avoid the high distillate prices that persisted after WWII, much as they do today.



## The thermal transformation

In 1952, Eriksbergs Verkstäder ordered an Alfa Laval P12 plate heat exchanger (PHE) to cool the auxiliary engines of the M/S Markland. An unusual choice then, it sparked a shift in marine technology.

At the time of the M/S Markland order, the marine industry depended on larger shell-and-tube heat exchangers. PHEs were used for pasteurization, and their development was driven by the dairy industry. But this order and others like it led Alfa Laval to investigate, and soon it was clear that PHEs had high potential for onboard cooling.

Alfa Laval introduced the first true marine PHE, optimized for duties at sea, in 1959. And the decades to come would see more marine innovations, such as corrosion-resistant titanium plates and plate designs to minimize fouling.

Today PHEs are the norm on board, and Alfa Laval is still advancing marine heat exchanger technology.

# 2017

## Pure dedication to meeting legislation

Environmental legislation has had a major impact on the marine industry. But Pure Thinking is minimizing its impact on marine customers.

Ballast water treatment and emissions limits are additional concerns in an already complicated business. For more than a decade, Alfa Laval's Pure Thinking concept has helped ship owners and ship operators balance compliance with ease of use and operating economy.

Pure Thinking began as a vision in 2004. But today it represents a growing range of real solutions: Alfa Laval PureBallast, PureBilge, PureDry, PureNOx, PureSOx and PureVent. PureBallast, for example, was beginning its first sea trials in 2004. PureBallast has today type approval from both the IMO and the U.S. Coast Guard.

# A common supply chain from start to finish

**The Operations Division is Alfa Laval's Group-wide supply organization, with responsibility for everything from manufacturing-related procurement and production to logistics and distribution of the products sold by the three divisions: Marine, Food & Water and Energy. The sales divisions are newly established and their structure is founded on product-based business units – a result of the strategic review performed in 2016. This review also had an impact on Operations, which further developed an already product-based structure for a seamless interface between sales and supply. The new structure is expected to contribute to creating an even stronger, faster-moving and more flexible Alfa Laval.**

**Manufacturing**

For Operations, the strategic review resulted in further changes. "Footprint" – a multi-year initiative for change – was started up with the goal of concentrating production to fewer units. Within this framework, announcements in 2017 included:

A change at the unit in Søborg, Denmark, from production to serving as a competence center for Food & Water. Accordingly, the production of ballast water systems and decanter centrifuges is being transferred to existing plants in Aalborg, Denmark, and Krakow, Poland.

The manufacture of air heat exchangers in Krakow is being moved to the plant in Alonte, Italy.

Closure of the shell-and-tube heat exchanger production in India and in the US.

The closure of a unit in Pennsylvania in the US, and the transfer of the production of spiral heat exchangers to an existing facility in Oklahoma. This plant will become a competence center for both spiral heat exchangers and air heat exchangers.

The work to adapt the production structure, within the framework of the Footprint program, is expected to be completed at the end of 2018.

Despite major structural changes, customers must not be affected and the daily work in Operations proceeded tirelessly, with continued focus on safety, lead times, quality and cost. In times of great change, the delivery of the right product with the right quality, at the right place, with the right documentation and a short lead time must be assured. The division is the heart of the process that contributes to Alfa Laval living up to the promises it gives its customers.

The actual production structure is organized to give the most even load possible in Alfa Laval's production units. Separators and heat exchangers, for example, are sold in all three divisions and to a large number of application areas. Since the plants are shared – regardless of what industry or application the product is destined for – individual plants meet the total demand from several end markets, rather than only one, which has a clear equalizing effect on load.

**Procurement**

The procurement organization was also impacted by the changes initiated as a result of the strategic review. For example, all procurement units were integrated into the new division structure. At the same time, the daily efforts to further enhance the efficiency of the procurement process continued. For Alfa Laval, direct materials comprise about 70 percent of the costs of

**Production units**

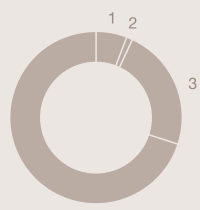
Alfa Laval's production includes 40 major manufacturing units:

| | |
|---|---|
| US (7) | Korea (2) |
| Brazil (2) | China (4) |
| Sweden (4) | Japan (1) |
| Norway (3) | UK (1) |
| Denmark (3) | France (4) |
| Finland (1) | Italy (2) |
| Russia (1) | Poland (1) |
| India (4) | |

**Distribution centers**

- US (2)
- Sweden (2)
- Denmark (1)
- China (1)
- Singapore (2)
- Japan (1)
- India (1)
- Netherlands (1)
- Norway (1)

**Distribution 2017**




| | |
|---|---|
| 1 Air | 6% |
| 2 Railway | 1% |
| 3 Ship | 23% |
| 4 Truck | 70% |

goods sold, so it is crucial that there is continuous improvement to ensure the company's competitiveness. Reviewing the cost base, incorporating an ever-larger portion of the total procurement volumes into global contracts and reducing the number of suppliers are significant factors for reducing costs and minimizing complexity. At the same time, internal projects are being conducted to identify new ways to minimize consumption and waste.

Alfa Laval has a strong focus on procurement, since a structured manner of working can generate considerable savings. To this end, a training program was rolled out during the year to ensure that all training for procurement employees is the same, regardless of where they are located in the world.

However, procurement involves so much more than dollars and cents; it is about finding and continuously assessing that the company's suppliers can also guarantee quality and lead times. They are also evaluated according to how well they live up to Alfa Laval's business principles for the environment, health and safety, and ethics. For this purpose, Alfa Laval has a platform for the audit of suppliers, which leads to a uniform audit with comparable results.

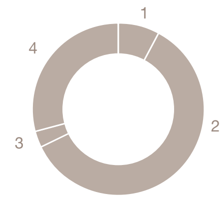
**Distribution**

Logistics and the distribution of components include everything from order handling and inventory management to stock picking, delivery and invoicing. These operations are managed at centers located in Sweden, Denmark, Norway, the Netherlands, the US, Singapore, India, Japan and China. These centers process millions of orders every year, comprising several million components and spare parts. They are also responsible for Alfa Laval's overall transport needs, which generates economies of scale and thus an efficient and cost-effective solution.

Consideration for the environment is one of the criteria that characterizes the choice of transport solution, with the aim of shipping as little as possible by air and thereby reducing Alfa Laval's carbon dioxide emissions from freight. However, there are also occasions when the organization has limited opportunity to influence this choice, such as when a customer has an acute need for a product, making air freight the only viable solution in practice. Just a few additional air freight flights can jeopardize the entire year's efforts in terms of emissions and make it impossible to achieve the environmental targets. Accordingly, Alfa Laval also has a role in explaining to customers what the effects are in the case of various transport choices, in order to avoid air freight as far as possible. In 2017, 6 percent was transported by air, 70 percent by road and 23 percent was shipped by sea.

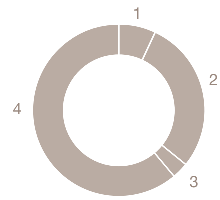
The new distribution center in Kolding, Denmark, was completed during the year. The center is the result of a decision to expand after the business had outgrown its old premises. The new center has a high level of automation, while the organization has been built up to be able to shorten the lead times for order management and providing quotes.

**Investments by geographic market, %**



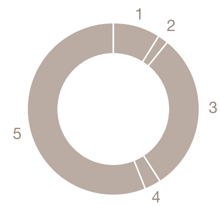

| | | |
|---|---|---|
| 1 | North America | 8% |
| 2 | Western Europe | 60% |
| 3 | Central and Eastern Europe | 3% |
| 4 | Asia | 29% |

**Procurement by geographic market, %**




| | | |
|---|---|---|
| 1 | North and Latin America | 7% |
| 2 | Asia | 29% |
| 3 | Central and Eastern Europe | 3% |
| 4 | Western Europe | 61% |

**Geographic distribution of the number of directly worked hours in production, %**




| | | |
|---|---|---|
| 1 | North America | 9% |
| 2 | Latin America | 2% |
| 3 | Western Europe | 30% |
| 4 | Central and Eastern Europe | 3% |
| 5 | Asia | 56% |

**Significant events in 2017**

**Mikael Tydén**
President, Operations Division

– During the year, we continued our efforts to further strengthen our competitiveness and delivery capacity in order to better satisfy our customers' needs.

– Our procurement operations continued to perform well, delivering strong results to ensure a reliable supply of materials and components.

– We invested in equipment to enhance capacity and productivity at our distribution centers and in the production of, for example, brazed and gasketed heat exchangers, boilers and separators.

– In addition to structural changes under the Footprint program, we prepared a plan as part of the strategic review to increase the automation and digitalization of our production and distribution units. At the same time, we placed even greater focus on reducing energy consumption at our production units and increased our use of renewable energy.

– We continued our ongoing efforts to implement improvements in the areas of health and safety, quality, lead times and increased productivity. This was achieved through increased employee commitment – within the framework of our production system – and a focus on Lean Six Sigma as well as employee and management development.

# Always at your service!

**With fast access to spare parts, a well-developed service network and a staff of competent employees, the Service organization has an unsurpassed offering for all of its customers who want to secure high performance and prevent unplanned operational disruptions. Choosing Service from Alfa Laval is a good investment, which provides rewards in terms of efficient processes and lower operating costs over time.**

The difference that the aftermarket organization can make for customers is as great as the difference it makes for Alfa Laval. With a 25 to 30-percent share of the Group's sales, limited sensitivity to economic trends and good profitability, it has a stabilizing effect on the company's invoicing and earnings. At the same time, its frequent customer contacts play a key role in terms of gathering information about customers' future needs or signs of new trends, which are passed on to the company's R&D units. It also fulfills a function as an engine for new sales; service staff are key ambassadors who can sway the balance when customers are planning their next new investment and evaluating the total experience delivered by Alfa Laval. Overall, Service is of significant importance to the company and the way it is perceived, as was further highlighted in conjunction with the launch of Alfa Laval's new strategy, which emphasizes the importance of Service.

### Proximity on a global basis

Service is a local operation conducted through a global network: more than 100 service centers with the capacity to deliver services in over 160 countries and employing more than a thousand service technicians and field service engineers. Proximity is a decisive factor to be able to satisfy customer expectations and build trust. During the year, the investment in the service network continued with the expansion of certain existing centers, while new ones were opened in such locations as Algete, Spain, and Fresno, California, in the US. The new US center was opened to be able to provide even better service for Alfa Laval's customers on the West Coast. Among other activities, the center can manage heat exchangers, separators and decanter centrifuges.

At the same time, a new service concept was introduced, specifically aimed at customers in the marine industry. For many decades, Alfa Laval has had a presence in most major ports, the world over. In 2017, a new, more cohesive approach was adopted through the development of three specialist marine service hubs, located across North America, Europe/the Middle East/Africa and Asia. These will further improve availability through a seamless transfer of customer service across time zones and national borders, with operators able to book in service assignments globally.

### Service connection 24/7

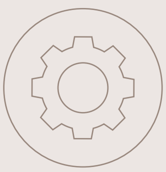
However, the offering is not only about the ability to react quickly when needs are acute. It is also a matter of developing digitized services, which continuously monitor the products' performance and make it possible to provide preventive assistance, thus avoiding emergency situations. Alfa Laval's business concept is to optimize the performance of its customers' processes, which also means "no disruption to operations."

For Service, digital solutions are thus already a reality and the offering is gradually further developed. One example is the separation equipment that operates at oil and gas drilling rigs. These rigs can be spread over large distances, generating considerable travel costs for the customer in conjunction with the inspection of the installed equipment. With a system for remote monitoring, it is possible to steer the separation process from a control panel in the office, which reduces the number of trips, prevents unnecessary disruption of operations, improves reporting of data and enables the customer to optimize the staffing and decanter centrifuge process remotely. The results are received in the office, thus eliminating the need for physical inspection. If problems are detected, it is instead possible to travel there directly bringing along the right spare part.

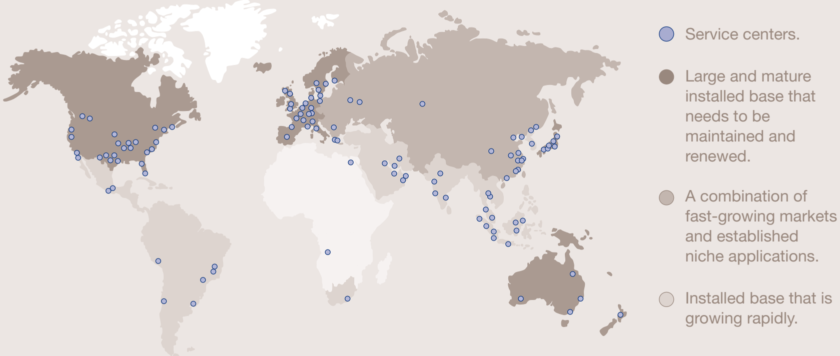
### Many alternatives on the menu

Alfa Laval's business is highly diversified and comprises the sale of products that can be used for everything from HVAC applications and municipal treatment plants to refineries and pharmaceuticals production. This means that the company's products are used in such varying environments that the recurring need for spare parts and service could be everything from a few months to a decade – or more. The Service offering must be able to meet both extremes as well as everything in-between. Accordingly, the portfolio is comprehensive and covers, for example, start-up and installation assistance, calibration, maintenance, cleaning, upgrades, reconditioning, repairs, spare parts, technical support, training, monitoring and troubleshooting. Customers are then free to choose a customized solution that is precisely suited to their needs.

**Service centers**



More than 100 service centers with the capacity to deliver services in over 160 countries



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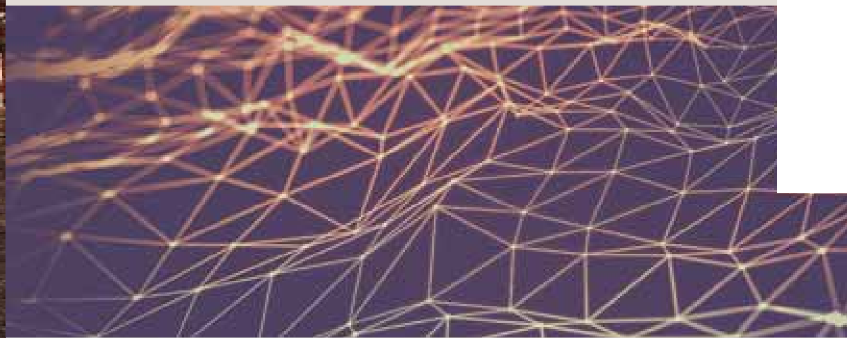
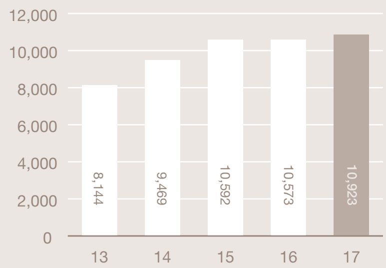
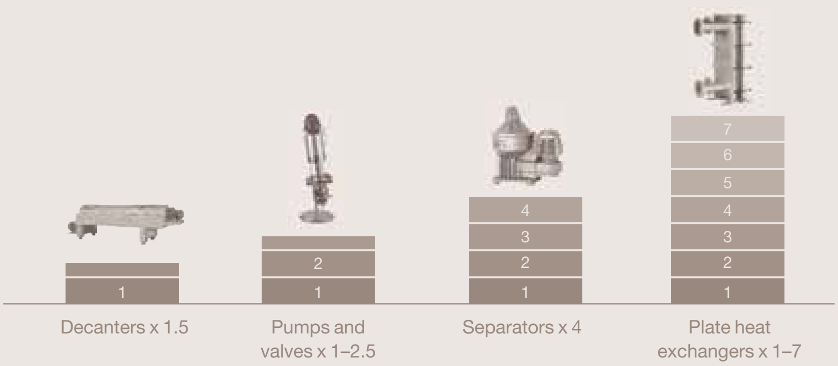


In 2017, a new, more cohesive approach was adopted through the development of three specialist marine service hubs, located across North America, Europe/the Middle East/Africa and Asia. These will further improve availability through a seamless transfer of customer service across time zones and national borders, with operators able to book in service assignments globally.

**Order intake, SEK million**




**Long-term potential – Value of the aftermarket relative to new sales**



# Employees

**Alfa Laval is a global company operating in a large number of countries, with a Scandinavian background that permeates its culture. With a new strategy in place as of January 1, which focuses on organic growth, a new structure was also launched to support the strategy. The aim was to create a new, more agile organization, with distinct areas of responsibility and a focus on the customer. All of these changes – new organization, with many employees in new positions – needed to be digested during the year and fall into place for the company as a whole as well as for the individuals involved. The employees are the company's most important resource and they are the ones who ultimately deliver what the customers want. Achieving this requires a highly cohesive organization of colleagues that move in the same direction – together.**

To enable this, Alfa Laval needs to provide its employees with the right conditions to tackle all of the challenges constantly faced by the business. They must feel confident in a safe working environment that is characterized by equal career opportunities and is free from discrimination. Alfa Laval encourages diversity as it creates a dynamic environment. It also makes it easier to see things from different angles, which better reflects the complexity of the business environment and ensures that the organization is better equipped to understand the customers and offer them what they really want. To support these efforts, the company must ensure it creates a stimulating work environment, with possibilities for individuals to grow and develop.

### A safe workplace

The foundation for success lies with the employees. Alfa Laval works to create a healthy, safe and attractive environment – both for the employees and for those who have reason to find themselves at one of the company's places of operation. The vision is of a workplace entirely free of accidents and work-related illnesses. All employees and visitors should be able to return home safely, every day.

Comprehensive work is being conducted to ensure that the work environment is designed so as to minimize the risk of accidents. At the same time, employees must also receive training so that they themselves have the right mindset. Since the most common cause of accidents is the human factor, the individual's behaviour is also one of the most important building blocks in the work to eliminate health and safety risks.

The company's work in the area of health and safety is carried out on an ongoing basis and is supported by an occupational health and safety (OHS) program, developed to incorporate safety issues and considerations into the company's daily procedures. This means that the program covers not only Alfa Laval's employees but also visitors, contractors and suppliers – individuals visiting the company's facilities for any reason. OHS develops guidelines, global priority areas and action plans, which entails not only determining the direction

Work in the area of health and safety is carried out on an ongoing basis and is supported by an occupational health and safety (OHS) program, developed to incorporate safety issues and considerations into daily procedures. This means that the program covers not only Alfa Laval's employees but also visitors, contractors and suppliers – all individuals visiting the company's facilities for any reason.

**Employee training and development – 70-20-10**

70 percent is to come from the challenges faced during the course of the individual's day-to-day work.

20 percent is to come from various types of developmental relationships, meaning what the individual learns from managers, more experienced colleagues or mentors.

10 percent of what an individual learns is to come from formal training programs, either online or in a classroom setting.

During the year, about 7,500 employees participated in the courses offered via the portal. The total number of training days was approximately 13,500.

but also providing tools to support the realization of the company's vision. All of Alfa Laval's facilities are expected to comply with local legislation and regulations in the area and to establish an organization with responsibility for ensuring that all mandatory OHS requirements are met.

**The world is developing and so are we**

The world is continuously changing. New demands, new wishes, new legislation and rules, new preferences. As an employee, you must have the tools you need to manage such changes in order to ensure Alfa Laval's continued development, with sights set on organic growth. Accordingly, the HR organization focuses on, for example, leadership development, talent development and the identification of competence gaps in the organization. It is also responsible for the development and upkeep of employee training.

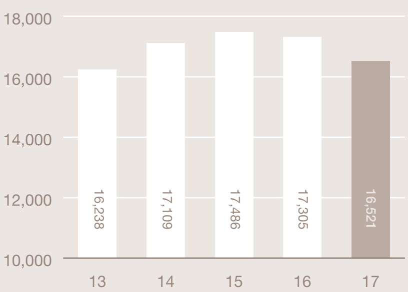
Within Alfa Laval, the 70-20-10 model is generally applied when it comes to employee training and development. 70 percent is to come from the challenges faced during the course of the individual's day-to-day work. 20 percent is to come from various types of relationships, meaning what the individual learns from managers, more experienced colleagues or mentors, and 10 percent of what an individual learns is to come from formal training programs, either online or in a classroom setting. Alfa Laval offers a broad range of training opportunities, some of which are managed locally, while others are part of a central program. The hub for these is a training portal, available on the company intranet. This portal offers a large number of courses, many of which are Internet-based (e-learning). These can be completed in groups in real time or be carried out individually at the pace and the time that best suits the participant. The offering is continuously developed to reflect the needs of both the employees and the company. There is a large amount of interest in participating in these training programs and courses. During the year, about 7,500 employees participated in the courses offered via the portal. The total number of training days was approximately 13,500.

**Diversity – an effective base for growth**

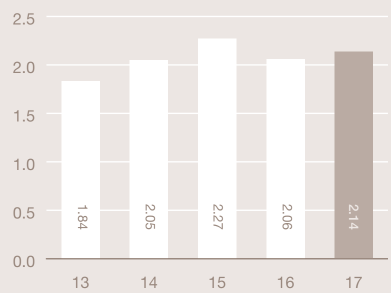
Alfa Laval has Scandinavian roots, but is an international company with a global presence. It is therefore only natural that the company is characterized by a diversity of nationalities. Alfa Laval's local organizations are to reflect the markets in which they operate and, at the end of 2017, the company thus had employees of 93 (89) different nationalities. But diversity is much more than simply nationality; it is about bringing together individuals who are different, who think differently and contribute different perspectives, are of different genders and ages, and bring different experiences. Alfa Laval strives for this variety, which in itself forms a basis for innovative thinking, flexibility, creativity and an ability to change in pace with the driving forces that impact the business.

With a focus on variety, all employees must feel they are treated on equal terms and that they have career paths open to them. To accomplish this, Alfa Laval uses an open internal recruiting process. All available positions are published on the company's intranet and all employees are welcome to apply. An open recruitment process combined with an explicit focus on performance creates an inclusive work environment with equal opportunities for development. This encourages mobility and, in this way, the company can retain individuals with a high level of competence, who may otherwise have chosen to leave to take on an external challenge. Creating an inclusive work environment, which stimulates the individual's development, is a key step in reaching the company's overall goals.

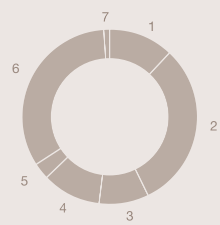
**Average number of employees**




**Sales per employee, SEK million**




**Employees by region**




| | |
|---|---|
| 1 Sweden | 13% |
| 2 Other EU | 31% |
| 3 Other Europe | 8% |
| 4 North America | 11% |
| 5 Latin America | 3% |
| 6 Asia | 33% |
| 7 Other | 1% |

# Sustainability and reporting

For many years, Alfa Laval's annual report has included a section on sustainability. This has been supplemented by further sustainability information that has been published on the company's website.

As a result of new requirements contained in the Swedish Annual Accounts Act, Alfa Laval has chosen to publish a separate Sustainability Report as of this Annual Report. The Sustainability Report follows Swedish legal requirements and the UN Global Compact. The report is available in English only and you can find it here: **www.alfalaval.com/about-us/sustainability.**

Below is a brief introduction to the foundations of Alfa Laval's sustainability work as well as a few words on this year's focus areas.

## Alfa Laval's business principles

**Alfa Laval's four business principles represent the foundation of the company's sustainability work. They are aimed at continuously improving Alfa Laval's social, environmental and ethical work as well as its transparency. Alfa Laval's business principles incorporate the "Protect, Respect and Remedy" framework introduced in the UN Guiding Principles on Business and Human Rights as well as the OECD Guidelines for Multinational Enterprises.**


**Social Responsibility – respect for human rights is fundamental**
One of our foremost priorities is to prevent the occurrence of workplace accidents. The company has a vision of a workplace that is free from accidents and work-related illnesses. During the year, we also prioritized efforts to improve the working conditions among our suppliers.

**Business integrity – high ethical standards guide our conduct**
This principle is based on the expectation that the company is to comply with the laws in effect in the countries where we operate. The principle covers such areas as anti-bribery and anti-corruption (ABAC) efforts. During the year, we developed a training course in anti-corruption for all white-collar employees.

**The environment – we optimize the use of natural resources**
It is important that our production and service operations continuously enhance the efficiency of their energy and water use. During the year, we focused on improving reporting and identifying areas for improvement. Equally as important as Alfa Laval's internal work – and with infinitely greater potential – is the provision of products, services and solutions that can optimize our customers' use of natural resources.

**Transparency – our commitment to open dialogue builds trust**
Alfa Laval's ambition is to build trust through open dialogue with various stakeholders, for example, by addressing the opportunities and challenges within the area of sustainability. Read more about our stakeholder dialogue and materiality analysis in our separate Sustainability Report.

### Reduced water consumption in the bioenergy process

Alfa Laval's work, products and solutions contribute to many of the UN's sustainability targets for 2030. The example presented below explains how we contribute to reaching the goal of clean water. More examples can be found in our separate Sustainability Report.

**Relevant UN goal**


**Project description:**

One of Alfa Laval's customers in the bioenergy sector converts food waste from restaurants, school cafeterias and local food industries into biogas. This is used to generate electricity, heat and fertilizer.

By using Alfa Laval's membrane filtration solution, the water can be treated and reused in the process. Instead of using new fresh water, about 150 m3 of water can be reused daily.

Alfa Laval MBR membrane filtration solution

# Contents – Corporate Governance Report

# Introduction by the Chairman of the Board

**Alfa Laval and its corporate governance**
The Board's goal is to optimally manage the responsibility delegated by the Annual General Meeting by working consistently for the best of the company and its owners. Alfa Laval has a long history as a world-leading supplier of products and solutions in the areas of heat transfer, separation and fluid handling. The business concept is to optimize the customers' processes using high-quality products, technical competence and an efficient production apparatus. At the same time, Alfa Laval's own processes are an important focus area. Everyone in the company, from the Board of Directors and management to individual employees, must act in line with legislation and rules as well as the business principles established in the areas of the environment, ethics, transparency and social responsibility. This requires clear control, distinct areas of responsibility and appropriate structures for good follow-up. Over the next few pages, we describe in greater detail how this is managed at Alfa Laval.

**The year in brief**
2017 saw the launch of Alfa Laval's new organizational structure – the result of the strategic review conducted in 2016. The organizational change took place on schedule, as did the financial reporting structure, which also needed to change to correctly reflect the new organization. Thus, a large number of people began the year at new desks, with new work assignments, new areas of responsibility and on a new level of the Alfa Laval hierarchy. It was a challenge on both an individual level and for the company as a whole.

In parallel – also as a result of the strategic review – investments continued to be made in R&D. The pace was stepped up and, toward the end of the year, the company's work to develop new platforms for high-speed separators and heat exchangers gave us a first taste of what is to come. This work will gradually accelerate in the coming years, which is expected to strengthen Alfa Laval's number one position in both heat transfer and separation.

Another area characterized by change was Alfa Laval's supply chain. Within the framework of the Footprint program, a number of closures and production transfers were implemented. By concentrating production to fewer units, efficiency can be enhanced, which in turn will lead to strengthened competitiveness.

At the same time, we began to see signs of recovery in an end market that has been struggling for a number of years. The contracting of new vessels in the marine sector displayed growth – a satisfying development that was reflected in Alfa Laval's order intake during the year. We also saw positive effects from our marine customers' investments in products and solutions that help them comply with new environmental requirements.

We started from a new base in 2017. Following the restructuring, we have an Alfa Laval that is even more efficient and agile and has a higher pace of product launches ahead. At the same time, we see signs of an improved business climate in important end markets. Overall, this means that, after the end of the year, Alfa Laval is in a strengthened position to handle come what may.

Lund, February 2018

**Anders Narvinger**
*Chairman of the Board*

# Corporate Governance Report 2017

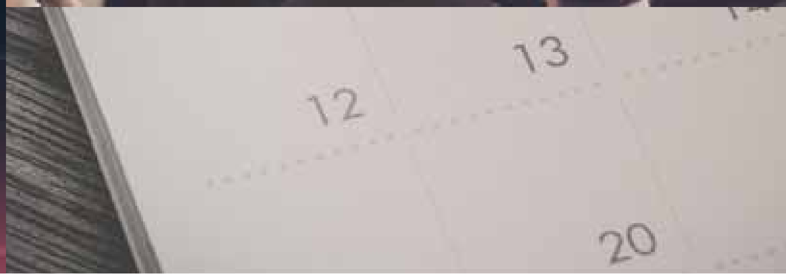
Alfa Laval is to offer efficient and environmentally responsible products and solutions in the areas of heat transfer, separation and fluid handling. The business has established clear goals for growth, profitability and returns, at the same time as there are distinct requirements on Alfa Laval to act in a manner that is sustainable from a long-term perspective for its shareholders, employees, customers, suppliers and other stakeholders.


The framework for the company's corporate governance is based on various laws and regulations, such as the Swedish Companies Act, the Swedish Annual Accounts Act, the rules of the stock exchange and the Swedish Corporate Governance Code (the "Code"). These are supplemented by the company's business principles regarding the environment, human rights, ethics and transparency. The company's control is also subject to internal regulations, including governing documents with guidelines and instructions as well as procedures for control and risk management. The work of the Board and the President is governed by formal work plans. Alfa Laval's Corporate Governance Report for 2017 aims to describe the guidelines that are in place, the division of responsibility within the company and the interaction between the Annual General Meeting, the Board of Directors and the President. The Report was reviewed by the company's auditors.



## Alfa Laval – the company

The registered name of the company is Alfa Laval AB (publ) and the registered office of the Board of Directors shall be in Lund Municipality in Sweden. The company's share capital shall amount to not less than SEK 745,000,000 and not more than SEK 2,980,000,000. The number of shares shall be not less than 298,000,000 and not more than 1,192,000,000. The fiscal year is the calendar year. The objective of the company's operations is to, directly or through subsidiaries and joint venture companies in and outside Sweden, develop, manufacture and sell equipment and installations, primarily in the areas of separation, heat transfer and fluid handling, and to administer fixed and movable property, and other related operations. The Articles of Association do not include any limitations regarding the number of votes a shareholder can cast at a General Meeting. Nor does it include any specific rules regarding the appointment and dismissal of Board members or changes in the Articles of Association. Alfa Laval's currently prevailing Articles of Association were adopted at the Annual General Meeting on April 20, 2009 and are available in their entirety on www.alfalaval.com.




## Share and ownership structure

At December 29, 2017, Alfa Laval had 419,456,315 shares outstanding, allocated among 32,967 shareholders according to Euroclear Sweden's shareholders' register. Alfa Laval has only one class of shares and each share corresponds to one vote. Tetra Laval was the largest owner, with 29.1 percent of the shares in Alfa Laval at year-end, and the only owner with a stake larger than 10 percent. The second largest owner was Alecta with 5.4 percent, followed by Swedbank Robur with a holding of 4.3 percent. Legal entities accounted for slightly more than 95 percent of holdings, while individuals accounted for the remainder. From a geographic perspective, the following five countries represented a total of 92.1 percent of the shareholdings: the Netherlands, Sweden, the US, the UK and Luxembourg. For more information about Alfa Laval's share, share performance and ownership structure, refer to the Share section on pages 12–13.

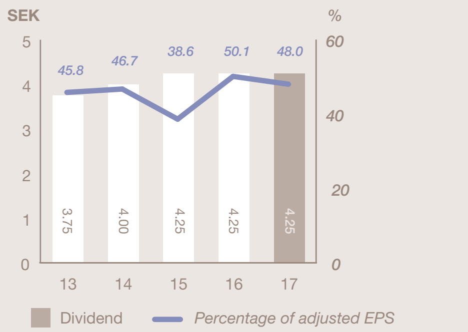
## Annual General Meeting

The Annual General Meeting is the company's highest decision-making body in which all shareholders are entitled to participate and each share entitles its holder to one vote. The majority of motions addressed at the Annual General Meeting are decided by a simple majority. However, certain points require a qualified majority, for example, amendments to the company's Articles of Association or resolutions to buy back shares. The Annual General Meeting is to be held annually within six months of the close of the fiscal year in either Lund or Stockholm. Normally, the Annual General Meeting takes place in late April in Lund. The date and location are announced not later than in conjunction with the publication of the interim report for the third quarter. To be entitled to participate and vote in the Annual General Meeting, shareholders must be registered in the shareholders' register maintained by Euroclear Sweden AB. Any shareholder who is unable to attend in person may participate through a proxy with a power of attorney. Shareholders with nominee-registered shares must have the shares temporarily registered under their own name. The Annual General Meeting is held in Swedish and all documentation is available in Swedish and English. Alfa Laval endeavors to ensure that all Board members participate as well as, in so far as it is possible, all members of Group management. The company's auditors are always present.

## Annual General Meeting for the 2016 fiscal year

The Annual General Meeting for the 2016 fiscal year was held at Sparbanken Skåne Arena in Lund on April 26, 2017. The Annual General Meeting was attended by 291 people,

### Dividend and percentage of adjusted EPS**



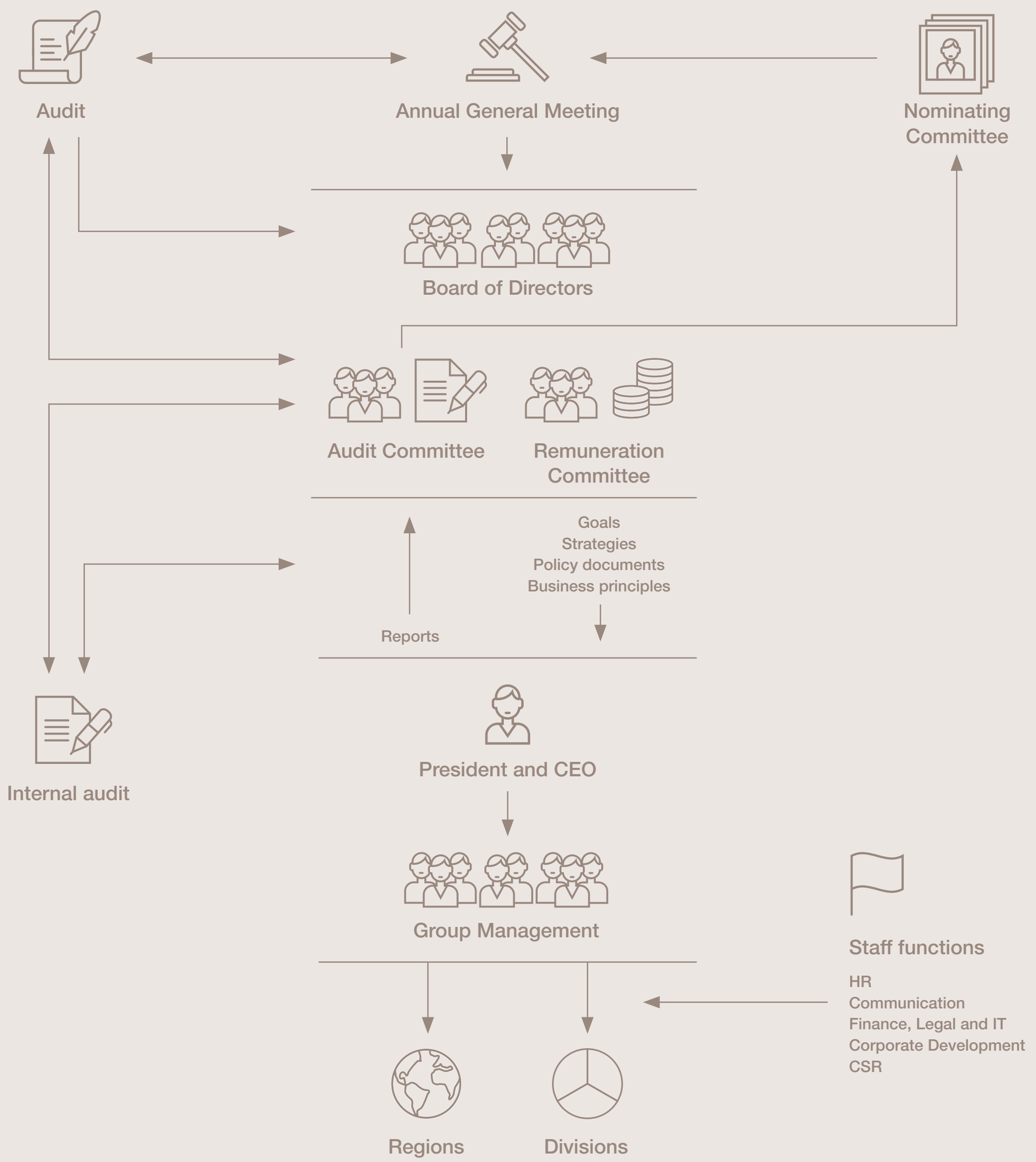

* Board motion to the Annual General Meeting.
** Adjusted for step up amortization net of taxes.

### Ownership categories at December 29, 2017

| | No. of shares | Holding, % |
|---|---|---|
| Financial companies | 84,057,907 | 20.0 |
| Other financial companies | 366,422 | 0.1 |
| Social insurance funds | 5,052,162 | 1.2 |
| Government | 305,049 | 0.1 |
| Municipal sector | 35,420 | 0.0 |
| Trade organizations | 3,767,533 | 0.9 |
| Other Swedish legal entities | 5,256,553 | 1.3 |
| Shareholders domiciled abroad (legal entities and individuals) | 300,185,192 | 71.6 |
| Swedish individuals | 19,345,195 | 4.6 |
| Uncategorized legal entities | 1,084,882 | 0.3 |

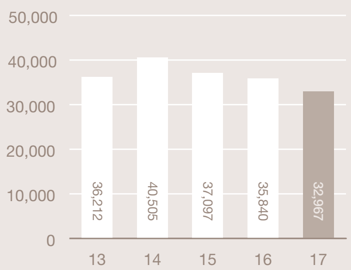
Source: Euroclear

## Corporate governance






## Total number of shareholders




Source: Euroclear

## Ten largest shareholders at December 29, 2017*

| | No. of shares | Capital/voting rights, % | Change in holding in 2017, percentage points |
|---|---|---|---|
| Tetra Laval BV | 122,037,736 | 29.1% | 0.0 |
| Alecta | 22,809,962 | 5.4% | -1.7 |
| Swedbank Robur Funds | 17,870,549 | 4.3% | -1.2 |
| AMF Insurance and Funds | 11,535,792 | 2.8% | -2.4 |
| CBNY – Norges Bank | 10,935,895 | 2.6% | 0.0 |
| Blackrock Global Funds | 3,595,583 | 0.9% | 0.0 |
| SEB Investment Management | 3,578,829 | 0.9% | 0.1 |
| Fourth Swedish Pension Insurance Fund | 2,959,120 | 0.7% | -0.9 |
| Folksam | 2,826,729 | 0.7% | 0.0 |
| Livförsäkringsbolaget Skandia | 2,709,678 | 0.6% | 0.4 |
| **Total ten largest shareholders** | **200,859,873** | **47.9%** | |

* The table is adjusted for nominee-registered shares. Were they to be included, they would represent a total holding of 12.4 percent.

including shareholders, proxies, assistants, guests and officials. The total number of votes represented corresponded to 64 percent of the total number of votes in the company. Chairman of the Board Anders Narvinger was elected as the Meeting Chairman. The minutes from the Annual General Meeting, and all other information related to the Meeting, are available at www.alfalaval.com/investors/corporate-governance/. The resolutions passed at the Meeting included the following:

– A resolution was passed to adopt the income statement and balance sheet and discharge the Board of Directors and President from liability.

– A resolution was passed in accordance with the Board's motion that a dividend of SEK 4.25 per share be paid.

– A resolution was passed that the number of Board members is to amount to eight, with no deputies.

– A resolution was passed to re-elect Board members Arne Frank, Anders Narvinger, Finn Rausing, Jörn Rausing, Ulla Litzén, Ulf Wiinberg and Margareth Øvrum. Gunilla Berg declined re-election. Anna Ohlsson-Leijon was elected as a new Board member.

– A resolution was passed in favor of the Nominating Committee's motion for auditors, resulting in the re-election of Authorized Public Accountants Håkan Olsson Reising and Joakim Thilstedt. Authorized Public Accountants David Olow and Duane Swanson were re-elected as deputy auditors.

– A resolution was passed that fees paid to non-executive directors on the Board would amount to SEK 5,250,000. In addition, fees are payable for work on the Board's committees.

– A resolution was passed accepting the Board's motion for remuneration principles for senior executives. These principles comprise fixed remuneration and short-term and long-term programs for variable remuneration.

## Nominating Committee

### Work of the Nominating Committee

The Nominating Committee, which comprises representatives of the largest shareholders, is responsible for preparing and submitting motions regarding candidates for Board members and, if applicable, auditors. The supporting documentation utilized for the Committee's work includes the annual evaluation of the work of the Board, which is initiated by the Chairman of the Board. Other key factors to be considered, against the background of the company's strategy, include the type of competence required. The Nominating Committee can call upon the assistance of external resources in its search for suitable candidates and can also conduct interviews with individual Board members. The Nominating Committee is also responsible for submitting motions in respect of remuneration to members of the Board and its committees.

### Composition

The composition of the Nominating Committee is determined in accordance with the process approved by the Annual General Meeting. The Chairman of the Board contacts representatives of the largest shareholders at the end of the third quarter and requests that they each appoint one member. The Nominating Committee may decide whether or not to include the Chairman of the Board or other Board members. The composition is then announced in a press release, in the third-quarter interim report and on Alfa Laval's website. Ahead of the 2018 Annual General Meeting, the composition of the Nominating Committee was announced on October 12, 2017. It was also included in Alfa Laval's third-quarter interim report, which was published on October 25.

### Ahead of the Annual General Meeting for the 2017 fiscal year

The Nominating Committee for the Annual General Meeting comprised the following individuals: Finn Rausing (Tetra Laval), Ramsay Brufer (Alecta), Jan Andersson (Swedbank Robur Funds), Lars-Åke Bokenberger (AMF) and Johan Strandberg (SEB Investment Management). The holdings of the Nominating Committee represented 42.8 percent of the number of shares outstanding at September 30, 2017.

The Chairman of the Board Anders Narvinger was elected as a member and secretary, and Finn Rausing was elected as Chairman of the Nominating Committee. Due to Finn Rausing's position as a Board member, his role as Chairman is a deviation from the Code. The reason for this deviation is that the Nominating Committee deemed Finn Rausing to be particularly well suited to lead the work of the Committee and obtain the best possible results for the company's owners.

### Proposals to the Nominating Committee

Shareholders wishing to submit proposals to the Nominating Committee prior to the Annual General Meeting were able to contact Alfa Laval's Board Chairman Anders Narvinger, or one of the owner representatives.

### Annual General Meeting for the 2017 fiscal year

The Annual General Meeting of Alfa Laval AB (publ) will be held on Monday, April 23, 2018, at 4:00 p.m. at Sparbanken Skåne Arena, Klostergården's sports area, Stattenavägen, in Lund. Light refreshments will be served after the Meeting. In accordance with the company's Articles of Association, notice of the Annual General Meeting will be inserted as an announcement in the Swedish Official Gazette and on the company's website not more than six and not less than four weeks prior to the Meeting. An announcement that notification has been issued will be placed in Dagens Nyheter. As a service to existing shareholders, a notice of the Annual General Meeting can also be sent to them by mail.

### Composition of the Nominating Committee ahead of the Annual General Meeting for the 2017 fiscal year

| Name | Representing | Shareholding in Alfa Laval, %* |
|---|---|---|
| Finn Rausing | Tetra Laval | 29.1 |
| Ramsay Brufer | Alecta | 5.4 |
| Jan Andersson | Swedbank Robur Funds | 4.6 |
| Lars-Åke Bokenberger | AMF | 2.4 |
| Johan Strandberg | SEB Investment Management | 1.3 |

*As of September 30, 2017.

Contact could also take place directly via e-mail at valberedningen@alfalaval.com. The final day for submitting matters to be addressed by the Annual General Meeting was March 5.

### Work of the Nominating Committee ahead of the Annual General Meeting for the 2016 fiscal year

The Nominating Committee held tree meetings ahead of the Annual General Meeting and also conducted a number of discussions by phone and e-mail. The focus of the Committee's meetings included an assessment of the composition of the Board, based on the evaluation of the work of the Board carried out by the Chairman of the Board, as well as the potential future competence requirements of the Board.

The reasoned statement of the Nominating Committee ahead of the 2017 Annual General Meeting stated that the Nominating Committee applied Rule 4.1 of the Code as its diversity policy when preparing its motion. The aim of the policy is to ensure that the composition of the Board of Directors is appropriate to the company's operations, phase of development and other relevant circumstances, and that it is characterized by diversity and breadth of qualifications, experience and background, and that an even gender balance is sought after. The 2017 Annual General Meeting resolved to appoint Board members in accordance with the motion of the Nominating Committee, which resulted in a Board of Directors deemed by the Nominating Committee to have an appropriate composition in relation to the diversity policy as well as the company's operations, phase of development and other relevant circumstances. Eight Board members were elected at the 2017 Annual General Meeting, of whom three were women and five were men.

## Board of Directors

### Work and responsibilities

The Board administers the company on behalf of the shareholders and thus bears the ultimate responsibility for the organization and administration of the company. The work and responsibilities of the Board are governed by the Swedish Companies Act, the Swedish Board Representation (Private Sector Employees) Act, the Articles of Association, the Board's own formal work plan, Nasdaq's Rule Book for Issuers and the Code. The Board establishes and evaluates Alfa Laval's overall long-term objectives and strategies. This includes establishing business and financial plans, reviewing and approving financial statements, adopting guidelines, making decisions on issues relating to acquisitions and divestments, and deciding on major investments and significant changes to Alfa Laval's organization and operations. The Board is also responsible for Alfa Laval's business principles, which determine how the company and its employees are to conduct themselves in society, taking into consideration the environment, ethics, social responsibility and transparency. The Board is responsible for the Corporate Governance Report.

The Board is responsible for ensuring that processes are in place for monitoring compliance with relevant laws and rules. The Board also appoints, evaluates and dismisses the company's President, establishes the instructions for the President with respect to the Group's daily operations and approves the President's commitments outside the company. Through the Audit Committee, the Board procures auditing services, maintains ongoing contact with the company's auditors and works to ensure that a sound internal control function and formalized procedures are in place to enable monitoring and assessment of the company's financial situation. Through the Remuneration Committee, the Board determines salaries and remuneration for the President and senior executives.

### Composition

The Board of Directors is to comprise a minimum of four and maximum of ten members, with a maximum of four deputy members. At the Annual General Meeting for the fiscal year 2016, eight members were elected, and no deputies. The members are elected annually for the period until the conclusion of the next Annual General Meeting and are to dedicate the requisite time and diligence to the assignment as well as have the necessary knowledge to best look after the interests of the company and its owners.

The Board is to have a composition appropriate to the company's operations, phase of development and other relevant circumstances, characterized by diversity and breadth with respect to the experience, expertise, qualifications and background of the members elected by the Annual General Meeting. The company strives for gender balance on the Board.

The trade-union organizations appoint three employee representatives and three deputy employee representatives. Salaried employees in the company are invited to Board meetings as presenters and experts. The company's Chief Financial Officer participates in all meetings, as does its Chief Legal Counsel, who serves as Board Secretary.

### Independence of Board members

All members of the Alfa Laval Board elected by the Annual General Meeting are considered independent of the company. All members are also considered independent of the company's major shareholders, except Finn



### Proposals to the Nominating Committee

Shareholders wishing to submit proposals to the Nominating Committee prior to the Annual General Meeting were able to contact Alfa Laval's Board Chairman Anders Narvinger, or one of the owner representatives. Contact could also take place directly via e-mail at valberedningen@alfalaval.com. The final day for submitting matters to be addressed by the Annual General Meeting was March 5, 2018.

### Board training

Each year, a combined training course and field trip takes place at one of Alfa Laval's facilities. In 2017, the destination for the trip was Alfa Laval's unit in Fontanil, France.

Rausing and Jörn Rausing, who cannot be considered independent due to their relation to Tetra Laval, which owned 29.1 percent of the shares in the company as of December 31, 2017.

### The Board's formal work plan

The work of the Board is governed by a formal work plan that is determined annually at the statutory meeting. This formal work plan describes the Board's work assignments and the division of responsibility between the Board, the committees and the President. It also defines the role of the Chairman of the Board and includes separate instructions for the company's President regarding the financial reporting to be submitted to the Board to enable ongoing assessment of the financial position.

### Work of the Board in 2017

The Board held eight meetings in 2017, all of which were scheduled meetings. Two meetings were held by phone, while the other meetings were held in Lund and Stockholm in Sweden and Lyon in France. The company's President prepares an agenda for each meeting in consultation with the Chairman of the Board. Normal agenda items include earnings results, order trends, investments and acquisitions. In addition, considerable time was devoted to following up on: the cost-cutting program, the new organization and the strategy as well as various areas pertaining to sustainability. The Board also focused on following up and developing the structure of the Group's supply chain and a review of personnel issues such as management development and succession planning.

### Board training

All new Board members receive an extensive introduction program. In addition, each year, a combined training course and field trip takes place at one of Alfa Laval's facilities. In 2017, the destination for the trip was Alfa Laval's unit in Fontanil, France.

### Evaluation of the Board's work

The Chairman of the Board ensures that an annual evaluation is conducted of the work of the Board. The evaluation focuses on work methods and work climate as well as its access to and the need for particular Board competence in order to lay the foundation for a well-functioning and efficient Board. External resources are brought in at regular intervals to evaluate the work of the Board. Regardless of whether it is conducted internally or externally, the evaluation forms a foundation for the Nominating Committee's work related to the nomination of Board members and proposed remuneration levels. In 2017, the evaluation was conducted by the Chairman of Board, who held individual discussions with all Board members. The evaluation followed a clear structure based on standard models. The results were reported to the Board and communicated to the Nominating Committee.

### Responsibilities of the Chairman of the Board

The Chairman of the Board directs the work of the Board in a manner that ensures it complies with prevailing laws and regulations, the Code and the Board's formal work plan. The Chairman must ensure that the work is well organized and conducted efficiently, and that the Board fulfills its tasks. In dialogue with the company's President, the Chairman monitors operational developments and is responsible for ensuring that the other members continuously receive all information necessary for the work of the Board to be performed in the most effective manner. Together with the company's President, the Chairman also approves the proposed agenda for Board meetings. The Chairman is responsible for ensuring that new Board members receive an introduction to the company and any other training agreed on by the Chairman and the individual member within six months from the member's election. In addition to being responsible for evaluating the Board's work, the Chairman also participates in evaluation and development matters with respect to the Group's senior executives. The Chairman ensures that the Board's decisions are executed and represents the company in ownership issues.

### Remuneration of the Board

Remuneration to the Board is determined by the Annual General Meeting based on the motions submitted by the Nominating Committee. The Chairman and members of the Audit Committee and the Remuneration Committee receive supplementary remuneration. No Board member is entitled to pension payments from the company.

## Committees

Alfa Laval's Articles of Association stipulate that there must be a Remuneration Committee and an Audit Committee that report to the Board. Committee members are appointed from among the Board members for a period of one year.

### Audit Committee

*Areas of responsibility*

The Audit Committee ensures compliance with the principles for financial reporting and internal control. The Committee formulates guidelines for the company's financial reporting and follow-up, and has the right to determine the focus of the internal audit. The Committee examines

## Remuneration of Board members and attendance at Board meetings

| | Name | Present | Remuneration |
|---|---|---|---|
| **Appointed by the Annual General Meeting** | Anders Narvinger | ● 8 | 1,575,000 |
| | Anna Ohlsson-Leijon* | 5 | 525,000 |
| | Gunilla Berg*' | 2 | |
| | Arne Frank**' | 1 | 262,500 |
| | Ulla Litzén | 7 | 525,000 |
| | Ulf Wiinberg | 6 | 525,000 |
| | Margareth Øvrum | 7 | 525,000 |
| | Finn Rausing | 7 | 525,000 |
| | Jörn Rausing | 8 | 525,000 |
| | **Total** | **8** | **4,987,500** |

| | Name | Present |
|---|---|---|
| **Employee representatives** | Bror García Lantz | 8 |
| | Susanne Jonsson | 8 |
| | Henrik Nielsen | 8 |
| | **Total** | **8** |

● Chairman *Took up position in conjunction with the Annual General Meeting **Declined re-election at the Annual General Meeting ***Passed away during the year the procedures for reporting and financial controls as well as the work, qualifications and independence of the external auditors. For further information regarding the responsibilities of the Audit Committee, refer to “The Board of Directors’ report on internal control” on page 54.

*Members and meetings in 2017*

Members are appointed annually at the Board’s statutory meeting. In 2017, the Committee comprised Finn Rausing (Chairman), Anna Ohlsson-Leijon and Ulla Litzén, with the company’s Chief Legal Counsel serving as secretary. Eight meetings were held during the year, three of which were conducted by phone and two per capsulam. The company’s Chief Financial Officer, the Head of the Internal Audit Function and the company’s auditors were also present at the meetings. Among other items, the meetings addressed the following: review of the procedures for corporate governance, review and follow-up of the results of the annual feedback from, at present, approximately 200 managers regarding governance, updates regarding new IFRS developments, amendments to the Code, a review of Group provisions and allocations, and a review of CBC reporting and Group surplus values. The Committee also reviewed the Group’s IT security and updated the work instructions for the internal audit. The external audit was planned and the fees to the external auditors were discussed. At the request of the Nominating Committee, a procurement procedure was initiated for external auditing services.

### Remuneration Committee

*Areas of responsibility*

The Remuneration Committee is involved in recruitment, appointments, and matters pertaining to other conditions of employment relating to the President and Group management. The Committee is responsible for preparing the guidelines for remuneration to senior executives to be resolved on by the Annual General Meeting and for submitting motions to the Board of Directors regarding salary and employment terms for the President. In addition, the Committee addresses matters regarding salary and employment terms for senior executives who report directly to the President.

*Members and meetings in 2017*

The Remuneration Committee is appointed annually at the Board’s statutory meeting. In 2017, the Committee comprised Anders Narvinger (Chairman), Jörn Rausing and, for part of the year, Arne Frank. The Committee held three meetings during the year. Phone meetings were also held to address ongoing issues. Minutes are taken at all meetings and the contents are distributed to the Board members, except in certain cases when the minutes are noted directly in the corresponding Board minutes. During the year, the Remuneration Committee, among other things, conducted a review and follow-up of the guidelines for remuneration to senior executives, prepared a motion for a new incentive program and reviewed the Group’s management development program.

## The company’s auditors

The auditors comprise a supervisory body appointed by the Annual General Meeting. The assignment includes the following: auditing the accounting and financial statements of individual companies, evaluating the accounting policies applied, assessing the administration of company management, reviewing the interim report for the third quarter and evaluating the overall presentation in the Annual Report. The results of the audit – the Audit Report – are communicated to shareholders in the Annual Report and at the Annual General Meeting. In addition, the auditors present a statement regarding the discharge from liability of the Board of Directors, a statement regarding the adoption of the income statement and balance sheet by the Annual General Meeting and a statement regarding the Corporate Governance Report. The Group must have a minimum of one and maximum of two auditors, with not more than two deputy auditors. An authorized public accountant or registered auditing firm is to be appointed as the company’s auditor and, where applicable, as deputy auditor. At the Annual General Meeting on April 26, 2017, Authorized Public Accountants Håkan Olsson Reising and Joakim Thilstedt were elected as the company’s auditors. David Olow and Duane Swanson were elected as deputy auditors. According to Alfa Laval’s assessment, none of these auditors has any relationship to Alfa Laval, or any company related to Alfa Laval, that could affect their independent status. In 2017, the entire Board received reports from the company’s external auditors on two occasions. On one occasion, this occurred without the presence of the President or other members of Group management. The Audit Committee received separate reports on three occasions.

## Remuneration to auditors

Refer to Note 7 on page 105.

### Remuneration Committee: fees and attendance

| Name | Present | Remuneration |
|---|---|---|
| Jörn Rausing | 3 | 50,000 |
| Anders Narvinger | ● 3 | 50,000 |
| Arne Frank* | | 25,000 |
| **Total** | **3** | **125,000** |

● Chairman

### Audit Committee: fees and attendance

| Name | Present | Remuneration |
|---|---|---|
| Finn Rausing | ● 7 | 175,000 |
| Anna Ohlsson-Leijon** | 5 | 125,000 |
| Gunilla Berg*** | 3 | |
| Ulla Litzén | 7 | 125,000 |
| **Total** | **7** | **425,000** |

● Chairman

*Passed away during the year

**Took up position in conjunction with the Annual General Meeting

***Declined re-election at the Annual General Meeting

# Board of Directors and auditors

## Appointed by the Annual General Meeting

**Anders Narvinger**
**Chairman since 2003.**
*Born: 1948*

Formerly President of Teknikföretagen and President and CEO of ABB Sweden.

**Education:** BSc. Eng. from the Faculty of Engineering at Lund University, BSc. Econ from Uppsala University.

**Chairman of the Board:** ÅF AB.

Independent of the company and major shareholders.

**Number of shares in Alfa Laval:** 40,000* (40,000**)

**Ulf Wiinberg**
**Board member since 2013.**
*Born: 1958*

Acting CEO of Hansa Medical AB. Formerly CEO of H. Lundbeck A/S, Director of Wyeth Pharmaceuticals, EMEA/Canada & BioPharma, and a number of other senior positions in Wyeth.

**Chairman of the Board:** Trialbee AB and Sigrid Therapeutics.

**Board member:** UCB Pharma, Agenus Inc and Hansa Medical AB.

Independent of the company and major shareholders.

**Number of shares in Alfa Laval:** 20,000* (20,000**)

**Margareth Øvrum**
**Board member since 2015.**
*Born: 1958*

Executive Vice President and member of Group management at Statoil ASA. Previously held senior positions in a number of areas in Statoil's Norwegian operations, including technology, projects, production, maintenance, health, safety, environment and purchasing.

**Education:** Master's degree in Technical Physics from the Norwegian University of Science and Technology in Trondheim.

**Board member:** FMC Corporation.

Independent of the company and major shareholders.

**Number of shares in Alfa Laval:** –

**Ulla Litzén**
**Board member since 2006.**
*Born: 1956*

Former positions include President of W Capital Management and various senior positions at Investor.

**Education:** BSc. Econ from the Stockholm School of Economics, MBA from the Massachusetts Institute of Technology.

**Board member:** Electrolux AB, Husqvarna AB, NCC AB and Ratos AB.

Independent of the company and major shareholders.

**Number of shares in Alfa Laval:** 29,000* (29,000**)

**Finn Rausing**
**Board member since 2000.**
*Born: 1955*

**Education:** B.L., MBA from INSEAD.

**Board member:** Tetra Laval Group, DeLaval Holding AB, EQT AB, Swede Ship Marine AB and Excillum AB.

Independent of the company.

**Number of shares in Alfa Laval:** –

**Jörn Rausing**
**Board member since 2000.**
*Born: 1960*

Head of Mergers and Acquisitions (M&A) in the Tetra Laval Group.

**Education:** BSc. Econ.

**Board member:** Tetra Laval Group, Ocado PLC and DeLaval Holding AB.

Independent of the company.

**Number of shares in Alfa Laval:** –

**Anna Ohlsson-Leijon**
**Board member since 2017.**
*Born: 1968*

CFO of AB Electrolux.

Former positions include CFO of Electrolux Major Appliances EMEA, Head of Corporate Control and Services at Electrolux, Group Treasurer and Head of Internal Audit at Electrolux.

**Education:** BSc. Econ. from Linköping University.

Independent of the company and major shareholders.

**Number of shares in Alfa Laval:** –

**Gunilla Berg**
**Board member since 2004.**
*Born: 1960*

CFO of the PostNord Group.

Former positions include Executive Vice President and CFO of the SAS Group and Executive Vice President and CFO of the KF Group.

Declined re-election at the 2017 Annual General Meeting.

**Arne Frank**
Re-elected by the 2017 Annual General Meeting but passed away during the year.

*Holdings at December 31, 2017. **Holdings at December 31, 2016.

## Employee representatives

**Henrik Nielsen**
**Employee representative since 2015.**

*Born: 1968*

Employed by Alfa Laval since 1994.

Employee representative for the Swedish Metal Workers' Union (IF Metall).

**Number of shares in Alfa Laval:**
–

**Susanne Jonsson**
**Employee representative since 2016.**

*Born: 1958*

Employed by Alfa Laval since 2008.

Employee representative for the Swedish Confederation of Professional Associations (SACO).

**Number of shares in Alfa Laval:**
–

**Bror García Lantz**
**Employee representative since 2012.**

*Born: 1965*

Employed by Alfa Laval since 1990.

Employee representative for the Swedish Union of Clerical and Technical Employees in Industry (Unionen).

**Number of shares in Alfa Laval:**
100* (100)**

## Deputy employee representatives

**Leif Norkvist**
**Deputy member since 2009.**

*Born: 1961*

Employed by Alfa Laval since 1993.

Deputy employee representative for the Swedish Metal Workers' Union (IF Metall).

**Stefan Sandell**
**Deputy member since 2005.**

*Born: 1971*

Employed by Alfa Laval since 1989.

Deputy employee representative for the Swedish Organization for Managers (Ledarna).

**Johnny Hultén**
**Deputy member since 2017.**

*Born: 1961*

Employed by Alfa Laval since 1977.

Deputy employee representative for the Swedish Metal Workers' Union (IF Metall).*

**Christer Olofsson**
**Deputy member since 2015.**

*Born: 1972*

Employed by Alfa Laval since 1998.

Deputy employee representative for the Swedish Metal Workers' Union (IF Metall).**

*Took up position on July 24, 2017. **Stepped down as deputy employee representative on July 24, 2017.

## Auditors

**Håkan Olsson Reising**
**Authorized Public Accountant, KPMG.**

*Born: 1961*

Company auditor since 2014.

**Joakim Thilstedt**
**Authorized Public Accountant, KPMG.**

*Born: 1967*

Company auditor since 2016.

## Deputy auditors

**David Olow**
**Authorized Public Accountant, KPMG.**

*Born: 1963*

Deputy auditor for Alfa Laval since 2014.

**Duane Swanson**
**Authorized Public Accountant, KPMG.**

*Born: 1959*

Deputy auditor for Alfa Laval since 2014.

*Holdings at December 31, 2017. **Holdings at December 31, 2016.

# President and Group management

**Tom Erixon**
**President and CEO.**
*Born: 1960*

CEO since March 1, 2016.

Former positions include President and CEO of OVAKO AB and President of Sandvik Coromant.

**Board member:** Boliden AB.

**Education:** MA Law from the University of Lund in Sweden and MBA Business Administration from IESE in Spain.

**Number of shares in Alfa Laval:**
61,200* (39,200**)

**Thomas Thuresson**
**Chief Financial Officer.**
*Born: 1957*

Employed by Alfa Laval since 1988.

Chief Financial Officer since 1995. Former positions include Controller of the Flow business area and Group Controller of the Alfa Laval Group.

**Board member:** JM AB.

**Education:** BSc. Econ., IMD (BPSE).

**Number of shares in Alfa Laval:**
130,000* (130,095**)

**Peter Bailliere**
**Senior Vice President, Human Resources.**
*Born: 1963*

Employed by Alfa Laval since 2007. Senior Vice President, Human Resources since July 1, 2007.

Previously Head of Group Human Resources at Volvo Cars.

**Education:** Master of Sociology, Bachelor in Fiscal Law.

**Number of shares in Alfa Laval:**
–

**Peter Torstensson**
**Senior Vice President, Corporate Communications.**
*Born: 1955*

Employed by Alfa Laval since 1999.

Senior Vice President, Corporate Communications since 1999. Former positions include President of Borstahusen Informationsdesign.

**Number of shares in Alfa Laval:**
66,000* (66,000**)

**Mikael Tydén**
**President, Operations Division.**
*Born: 1967*

Employed by Alfa Laval since 1995.

President of the Operations Division since January 2017. Former positions include head of global manufacturing and supply of separators, decanters, hygienic fluid handling equipment and air heat exchangers 2005–2016.

**Education:** BSc. Eng.

**Number of shares in Alfa Laval:**
1,000* (1,000**)

*Holdings at December 31, 2017. **Holdings at December 31, 2016.

## Areas of responsibility

The President directs the daily operations and is responsible for ensuring that the Board has access to the necessary information and supporting documentation for its decision-making purposes. The President is also responsible for ensuring that the company's accounting complies with applicable laws and provisions, and that the ethical guidelines included in Alfa Laval's business principles are reflected in the conduct of the company. The President has the support of the Group management, to which responsibilities and authority are delegated. The members of Group management include a head of global sales and service, four divisional managers and the heads of HR, Communications and Finance/Legal.

## Group management meetings in 2017

Group management held nine scheduled meetings in 2017 during which minutes were taken. In addition, quarterly reviews were performed to discuss the business developments in the divisions and regions. These reviews addressed the business climate, earnings, earnings projections for the next 12 months and specific issues affecting the respective business areas. Separate strategy meetings were also held to address, among other areas, management's proposals concerning the future direction with regard to organic growth and growth through acquisitions. In 2017, the review concentrated on risks and opportunities in individual business units, products, application areas and geographic regions as well as the consequences on the supply chain of the new structure introduced in January. Group management also addressed the company's new strategies and the future direction of the individual divisions. The review also focused on structures concerning processes, system support and the service business as well as market communications regarding digitalization and the development of solutions for electronic development and control of the company's products.

**Joakim Vilson**
**Senior Vice President, Global Sales & Service.**

*Born: 1965*

Employed by Alfa Laval since 1990.

Former positions include Executive Vice President in charge of the Central and Eastern Europe, Latin America, Middle East and Africa Regions, Head of Mid Europe Region and Head of the Process Industry segment.

**Education:** BSc. Eng.

**Number of shares in Alfa Laval:** 6,520* (6,520**)

**Susanne Pahlén Åklundh**
**President, Energy Division.**

*Born: 1960*

Employed by Alfa Laval since 1983.

President of the Energy Division since 2017. Former positions include President of the Equipment Division, Head of Mid Europe and Nordic, and Head of the Process Industry segment.

**Board member:** Trelleborg AB.

**Education:** BSc. Eng.

**Number of shares in Alfa Laval:** 10,000* (10,000**)

**Nish Patel**
**President, Food & Water Division.**

*Born: 1962*

Employed by Alfa Laval since 1984.

Former positions include Executive Vice President in charge of the Western Europe and North America Regions, and Head of India and the UK.

**Education:** BSc. Eng.

**Number of shares in Alfa Laval:** 47,552* (47,552**)

**Peter Leifland**
**President, Marine Division.**

*Born: 1954*

Employed by Alfa Laval since 1985.

President of the Marine Division since 2011.Former positions include Regional Manager in charge of the Western Europe and North America Region 2004-2011, the Asia and Latin America Region 2001-2004 and the Eastern Europe and Latin America Region 1999-2001.

**Education:** B.L., lic.spec. IMD (PED).

**Number of shares in Alfa Laval:** 400,000* (430,000**)

*Holdings at December 31, 2017. **Holdings at December 31, 2016.

President and CEO*

HR* | CSR | Communications* | Corporate development | Finance, Legal & IT*

Global Sales & Service*

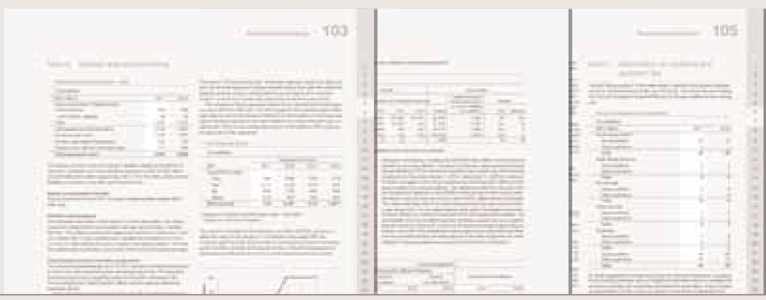
Operations*

Food & Water* | Energy* | Marine*

*Members of Group Management

## Remuneration to senior executives, pensions and severance pay/termination of employment

The remuneration principles for the President and other members of Group management are determined by the Annual General Meeting. For additional information, refer to pages 103–105.



## Operational control

Alfa Laval's operational control model comprises a matrix in which the Group's divisions are presented vertically, intersecting with the Group's geographic regions, which are presented horizontally. The Operations Division, which is responsible for production-related procurement, production, logistics and distribution, serves as a shared supply chain for the sales divisions.

# Board of Directors' report on internal control

**The Board is responsible for the internal control of the company, with the aim of safeguarding the company's assets and thus the interests of the shareholders. Through sound internal control, the Board ensures the reliability of Alfa Laval's reporting and its compliance with legislation, regulations, applicable accounting policies and the company's business principles. All communication and financial reporting is to be correct, relevant, objective and transparent.**

**Control environment**
The control environment includes the internal governance instruments adopted by the Board for the company's daily operations. These control instruments comprise policy documents, which are continuously assessed, reviewed and updated. These documents include, for example, the Board's formal work plan, the President's instructions, reporting instructions, the company's finance policy, business principles, investment policy and communication policy.

**The Board** has overriding responsibility for financial reporting, among other things, and must therefore assess the performance and earnings of the operations through a package of reports including results, forecasts and analyses of key indicators. The Board also reviews the company's interim reports and year-end report and is to meet with the external auditors at least once a year without the presence of the President or other members of Group management.

**The Board's Audit Committee** is tasked with ensuring compliance with the principles for financial reporting and internal control. The Committee follows up the effectiveness of the internal control system and reviews the financial procedures to ensure that the information can be traced back to underlying financial systems and that it is in line with legislation and relevant standards. The Committee examines procedures for reporting and financial controls as well as addressing the company's financial reports.

It also monitors, evaluates and discusses significant issues related to accounting and financial reporting. The Committee evaluates and manages information pertaining to disputes and potential improprieties, and assists management with identifying and evaluating mainly financial and similar risks that are relevant to the operations in order to ensure that the focus is on managing these risks. It also reviews the company's information security system and the contingency plans in place to ensure delivery of financial information.

The Audit Committee has the right to determine the focus of the internal audit and is responsible for ensuring the efficiency of the function by assessing its activities, resources and structure. The Committee is also responsible for reviewing the results and recommendations of the internal audit to ensure that they are handled in an appropriate manner. It is responsible for reviewing the internal audit plan every six months to ensure that it addresses the relevant risk areas and for ensuring that there is suitable coordination between the internal and external audit. The Audit Committee holds regular meetings with the external auditors and reviews their work, qualifications and independence, and the results of this review are reported to the company's Nominating Committee on an annual basis. The Audit Committee supports the Nominating Committee in its work to nominate auditors and conducts an annual review of the proposed scope of the audit. Reports are provided to the Board regarding internal meetings as well as meetings with the internal auditors, the external auditors and various specialists in Group management and its support functions. The Committee is responsible for reviewing significant results from the external audit and the recommendations issued by the external auditors as a result. It is also responsible for establishing guidelines that ensure the independence of the external auditors.

**The President** is subject to instructions issued by the Board and is responsible for ensuring an effective control environment. The President is also responsible for the ongoing control work and for ensuring that the company's accounting complies with legislation and that the management of assets is adequately performed. The President is also responsible for ensuring that all Board members regularly receive sufficient information to be able to assess the company's financial position.

**Group management** is responsible for managing and maintaining the internal control systems required to manage significant risks in the company's operating activities. Management is also responsible for clearly ensuring that all employees understand the requirements for and the individual's role in maintaining sound internal control.

**The internal auditors** review and implement improvements to the internal control function, conduct internal audits – which are reported to the Audit Committee – and propose plans for the coming six to eight months. The internal auditors also issue reports from individual audits to the appropriate members of Group management. Procedures are in place for performing regular reviews of the agreed actions to guarantee that specific actions are taken following the internal audit. These are based on an agreed schedule set with the party responsible for the individual activities. The Internal Audit Function comprises three internal auditors, internal specialist resources and external auditors. Internal audits encompass a broad spectrum of functions and issues determined by the Board. The areas audited include: compliance with the systems, guidelines, policies and processes established for the Group's business operations; the existence of systems to ensure that financial transactions are carried out, archived and reported in an accurate and lawful manner; and opportunities to improve management control, the company's profitability and the organization, which may be identified during audits. In 2017, 38 internal audits were performed.

**Risk assessment**
Within the framework of the company's operating activities and review functions, procedures are in place for risk assessments

pertaining to the financial reporting. These procedures aim to identify and evaluate the risks that may affect internal control. The procedures encompass risk assessments in conjunction with strategic planning and acquisition activities as well as processes for identifying amendments to the accounting policies to ensure that they are accurately reflected in the financial reporting.

**Control structures**

Control structures are in place in all areas of the organization in order to prevent, identify and adjust errors or deviations. They manage the risks that the Board and management consider to be significant to the business, internal control and financial reporting. These structures comprise both an organization with clearly defined roles that enables an effective and – from an internal control perspective – appropriate division of responsibility, and specific control activities that enable the identification and timely prevention of risks becoming a reality. Control activities also include clearly defined decision-making processes and a policy for decision-making with respect to, for example, investments, agreements, acquisitions and divestments, earnings analyses and other forms of analytical reviews, reconciliations, inventory-taking and automatic controls in the IT systems.

**Information and communication**

The company's regulations, guidelines and manuals are communicated through several internal channels and the efficiency of this communication is monitored on an ongoing basis. There are formal and informal information channels that enable employees to communicate important information to relevant recipients and ultimately, if necessary, to the Board of Directors. Clear guidelines have also been established for external communications, the aim of which is to provide the most accurate and relevant overview possible while at the same time ensuring that all obligations are met.

**Follow-up**

The internal control process is mainly followed up by two bodies: the Audit Committee and the Internal Audit function. The Audit Committee establishes the principles that apply for the company with respect to accounting and financial reporting, and monitors compliance with these regulations. The Committee meets with the external auditors to obtain information about the focus and scope of the audit and to discuss results and coordination of the external and internal audits. In addition, the Committee establishes the direction, scope and time schedules for the work of the internal audit team, whose audits are reported to the Audit Committee and continuously to Group management so that any necessary measures may be taken. The scope of the internal audit includes, among other factors, operational efficiency, compliance with regulations and guidelines, and the quality of financial reporting from the subsidiaries. An annual feedback function is also in place, which is geared toward the company's senior executives. This feedback function is designed to ensure that Alfa Laval's internal instructions and rules are fully implemented. All managers who report directly to a member of Group management are expected to review the guidelines and rules that apply to their respective areas. They must sign and submit documents confirming their understanding of the significance of these guidelines and compliance with these guidelines in their area of responsibility. If there are any deviations compared with the instructions, they must specify what actions they intend to take to ensure compliance. This process also aims to increase transparency and thus facilitate assessments by the external and internal auditors.

Lund, February 2018
***Board of Directors***

# Auditor's statement on the Corporate Governance Report

**To the general meeting of the shareholders in Alfa Laval AB (publ), corporate identity number 556587-8054**

**Engagement and responsibility**
It is the board of directors and managing director who is responsible for the corporate governance statement for the year 2017 on pages 42–55 and that it has been prepared in accordance with the Annual Accounts Act.

**The scope of the audit**
Our examination has been conducted in accordance with FAR's auditing standard RevU 16 The auditor's examination of the corporate governance statement. This means that our examination of the corporate governance statement is different and substantially less in scope than an audit conducted in accordance with International Standards on Auditing and generally accepted auditing standards in Sweden. We believe that the examination has provided us with sufficient basis for our opinions.

**Opinions**
A corporate governance statement has been prepared. Disclosures in accordance with chapter 6 section 6 the second paragraph points 2-6 the Annual Accounts Act and chapter 7 section 31 the second paragraph the same law are consistent with the annual accounts and the consolidated accounts and are in accordance with the Annual Accounts Act.

Stockholm 8 March 2018

Håkan Olsson Reising
Authorized Public Accountant
KPMG AB

Joakim Thilstedt
Authorized Public Accountant
KPMG AB

# Financial statements

# Board of Directors' Report

**The Board of Directors and the President of Alfa Laval AB (publ) hereby submit their annual report for the year of operation January 1, 2017 to December 31, 2017.**

The information in this annual report is such information that Alfa Laval AB (publ) must publish in accordance with the Securities Market Act. The information was made public by publishing the annual report on Alfa Laval's website on March 26, 2018 at 10.00 CET and by sending the printed annual report to the shareholders in week 14, 2018 starting at April 3, 2018.

Alfa Laval AB is a public limited liability company. The seat of the Board is in Lund and the company is registered in Sweden under corporate registration number 556587-8054. The visiting address of the head office is Rudeboksvägen 1 in Lund and the postal address is Box 73, 221 00 Lund, Sweden. Alfa Laval's website is: www.alfalaval.com.

### Financial statements

The following parts of the annual report are financial statements: the Board of Directors' Report, the ten-year overview, the consolidated cash flows, the consolidated comprehensive income, the consolidated financial position, the changes in consolidated equity, the parent company cash flows, the parent company income, the parent company financial position, the changes in parent company equity and the notes. All of these have been audited by the auditors.

The Corporate Governance Report, which also has been audited, is to be found on page 41.

The sustainability report is to be found on Alfa Lavals website and was published at the same time as the annual report.

### Ownership and legal structure

Alfa Laval AB (publ) is the parent company of the Alfa Laval Group.

The company had 32,967 (35,840) shareholders on December 31, 2017. The largest owner is Tetra Laval B.V., the Netherlands who owns 29.1 (29.1) percent. Next to the largest owner there are nine institutional investors with ownership in the range of 5.4 to 0.6 percent. These ten largest shareholders owned 47.9 (54.7) percent of the shares.

### Operations

The Alfa Laval Group is engaged in the development, production and sales of products and systems based on three main technologies: separation/filtration, heat transfer and fluid handling.

Alfa Laval's business is divided into four Business Divisions "Energy", "Food & Water", "Marine" and "Greenhouse" that sell to external customers and one division "Operations & Other" covering procurement, production and logistics as well as corporate overhead and non-core businesses. These five divisions constitute Alfa Laval's five operating segments.

The customers to the Energy Division purchase products and systems for energy applications, whereas the customers to the Food & Water Division purchase products and systems for food and water applications. The customers to the Marine Division purchase products and systems for marine and offshore applications.

The three first Business Divisions are in turn split into a number of Business Units. The Energy Division consists of four Business Units: Brazed & Fusion Bonded Heat Exchangers, Energy Separation, Gasketed Plate Heat Exchangers and Welded Heat Exchangers. The Food & Water Division consists of five Business Units: Decanters, Food Heat Transfer, Food Systems, Hygienic Fluid Handling and High Speed Separators. The Marine Division consists of three Business Units: Boiler & Gas Systems, Marine Separation & Heat Transfer Equipment and Pumping Systems.

### Material factors of risk and uncertainty

The main factors of risk and uncertainty facing the Group concern the price development of metals, fluctuations in major currencies and the business cycle. For additional information, see the sections on financial and operational risks and the section on critical accounting principles, the section on key sources of estimation uncertainty and the section on judgements under accounting principles.

### Acquisition of businesses

The full information on the acquisitions is found in Note 16. Below follows a shorter summary of each acquisition during 2017.

On May 19, 2017 Alfa Laval has acquired the remaining 16.67 percent of the shares in the subsidiary Chang San Engineering Co Ltd in South Korea, which made it a fully owned subsidiary. The shareholding in the company was part of the acquisition of Frank Mohn AS in 2014.

### Divestment of businesses

During the year, the Standard Refrigeration operations in Wood Dale in the U.S. has been taken over by one of the customers in exchange for them taking over the rent agreement for the premises.

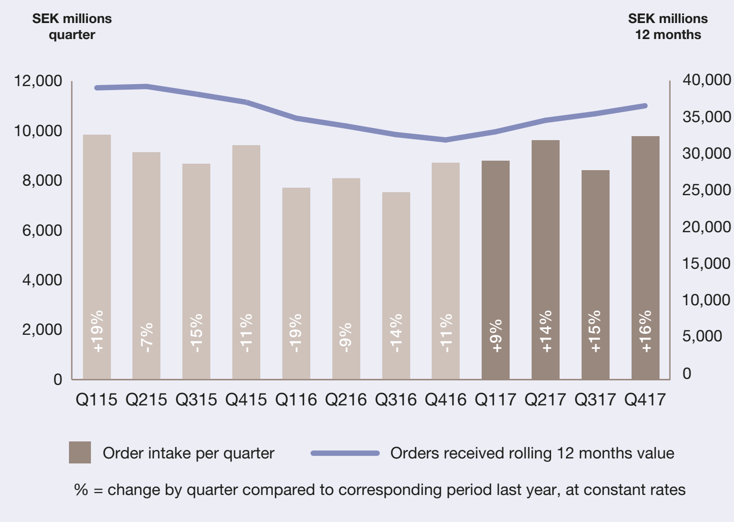
### Sale of real estate

During 2017 a few minor properties in different countries have been sold for SEK 12 (33) million with a realised result of SEK 8 (20) million, which has been reported in other operating income.

The operations in Lykens in the U.S. will move to Broken Arrow during 2019 after new premises have been built in Broken Arrow during 2018. After the move the property in Lykens will be sold. The empty property in Spijkenisse in the Netherlands is to be sold and a small property in France is empty and has been for sale for several years. They are not expected to be sold within the next year.

A property in Lima in Peru is for sale and is expected to be sold within the next year and is therefore classified as current assets held for sale with SEK 2 (2) million. The fair value of the properties for sale exceeds the book value by approximately SEK 74 (90) million.

**Orders received**




Orders received amounted to SEK 36,628 (32,060) million during 2017.

**Order bridge**

| Consolidated | | |
|---|---|---|
| SEK millions, unless otherwise stated | 2017 | 2016 |
| **Order intake last year** | 32,060 | 37,098 |
| Structural change [1] | – | 0.3% |
| Organic development [2] | 13.3% | -13.7% |
| Currency effects | 0.9% | -0.2% |
| Total | 14.2% | -13.6% |
| **Order intake current year** | 36,628 | 32,060 |

Orders received from the aftermarket Service[3] constituted 29.8 (33.0) percent of the Group's total orders received for 2017. Excluding currency effects, the order intake for Service increased by 2.6 percent during 2017 compared to last year, which entirely was due to organic development.

1) Structural change relates to acquisition of businesses.
2) Organic development relates to change excluding acquisition of businesses.
3) Parts & Service.

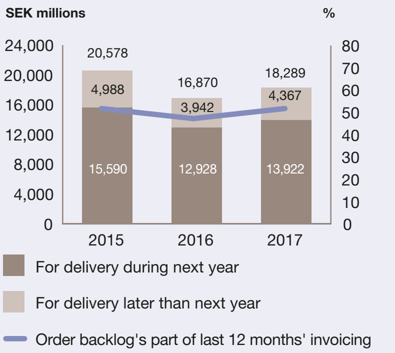
## Large orders

Large orders are orders with a value over EUR 5 million. The volume of large orders is an important indicator of the demand situation and is therefore monitored separately within Alfa Laval. A large volume of large orders normally also means a good load in the factories. During 2017 Alfa Laval has received the following large orders:

**Large orders**

| Division / Business Unit / Scope of supply | Order received in | Delivery date | Order amount | Total per Business Unit 2017 | Total per Business Unit 2016 |
|---|---|---|---|---|---|
| | | | | SEK millions | |
| **Energy** | | | | | |
| Welded Heat Exchangers | | | | | |
| Alfa Laval Packinox heat exchangers to a petrochemical plant in China. | Q1 | 2017/2018 | 170 | | |
| Alfa Laval Packinox heat exchangers to a petrochemical plant in China. | Q1 | 2017/2018 | 155 | | |
| Alfa Laval Packinox heat exchangers to a refinery in West Africa. | Q1 | 2017/2018 | 55 | | |
| Compact heat exchangers to a refinery in China. | Q2 | 2018 | 210 | | |
| Evaporative air cooler systems to a gas processing plant in the U.S. | Q2 | 2017 | 85 | | |
| Welded heat exchangers to a refinery in the Middle East. | Q4 | 2018 | 55 | | |
| Evaporative air-cooler systems to a gas processing plant in the U.S. | Q4 | 2018 | 95 | | |
| Alfa Laval Packinox heat exchangers to a petrochemical plant in India. | Q4 | 2018 | 65 | | |
| Alfa Laval Packinox heat exchangers to a refinery in the Middle East. | Q4 | 2018 | 55 | 945 | 435 |
| Energy Separation | | | | | 50 |
| Gasketed Plate Heat Exchangers | | | | | |
| Compact heat exchangers to a refinery in China. | Q2 | 2018 | 90 | 90 | 55 |
| **Food & Water** | | | | | |
| Decanters | | | | | 50 |
| Food Systems | | | | | |
| A process solution for a soybean oil refining plant in Brazil. | Q2 | 2018 | 125 | | |
| Equipment to a fermentation plant in India. | Q3 | 2017/2018 | 60 | 185 | 55 |
| **Marine** | | | | | |
| Boiler & Gas Systems | | | | | |
| Waste heat recovery systems for diesel power plants that will be built in Asia. | Q1 | 2017 | 80 | | |
| Alfa Laval PureSOx exhaust gas cleaning systems. | Q1 | 2017/2018 | 125 | | |
| A waste heat recovery system to a power plant in Southeast Asia. | Q3 | 2018 | 50 | 255 | 65 |
| Pumping Systems | | | | | |
| Framo pumping systems to an oil platform in the North Sea. | Q4 | 2018 | 60 | 60 | |
| **Total** | | | | **1,535** | **710** |

## Order backlog December 31




Excluding currency effects and adjusted for acquisitions of businesses the order backlog was 7.5 percent larger than the order backlog at the end of 2016.

## Net sales

Net sales amounted to SEK 35,314 (35,634) million during 2017.

### Sales bridge

| Consolidated | | |
|---|---|---|
| SEK millions, unless otherwise stated | 2017 | 2016 |
| **Net sales last year** | 35,634 | 39,746 |
| Structural change | – | 0.3% |
| Organic development | -1.7% | -10.4% |
| Currency effects | 0.8% | -0.2% |
| Total | -0.9% | -10.3% |
| **Net sales current year** | 35,314 | 35,634 |

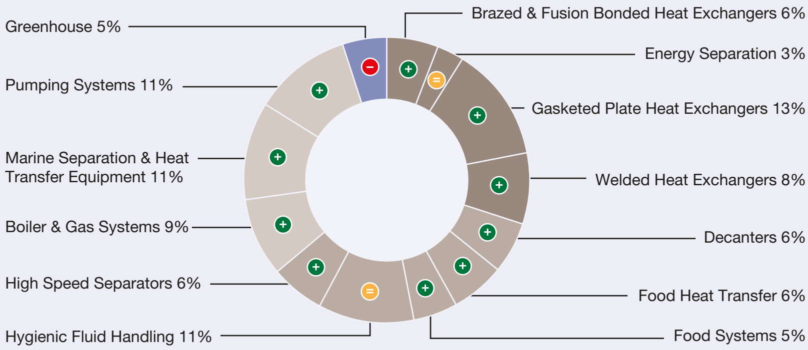
Net invoicing relating to Service constituted 30.5 (29.6) percent of the Group's total net invoicing for 2017. Excluding currency effects, the net invoicing for Service increased by 1.2 percent during 2017 compared to last year, which entirely was due to organic development.

## Operating segments

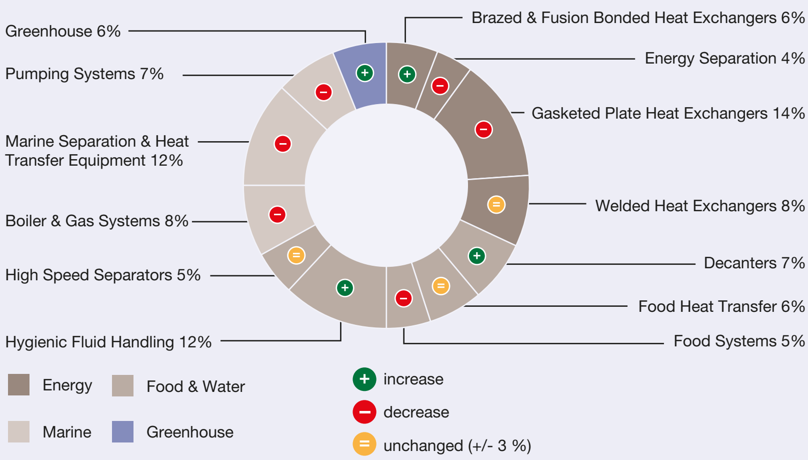
The development of the order intake for the divisions and their business units appears in the following charts.

### Orders received by Business Unit

**Orders received by Business Unit 2017**




**Orders received by Business Unit 2016**




Compared to previous year, at constant rates adjusted for acquisition of businesses.

*ENERGY DIVISION*

The Energy Division consists of four Business Units: Brazed & Fusion Bonded Heat Exchangers, Energy Separation, Gasketed Plate Heat Exchangers and Welded Heat Exchangers.

*Order intake*

*(all comments are excluding currency effects)*

Taking a quarterly view, the development for Energy Division during 2017 has been as follows:

The Energy Division's overall order intake declined somewhat in the **first quarter** compared to the fourth quarter, due to fewer larger projects. The base business* was unchanged from the previous quarter. **Welded Heat Exchangers** was the main explanatory factor for the division's decline as the Business Unit booked fewer larger projects in for example power, gas production and petrochemicals. The large Packinox orders that were taken in the quarter could not compensate. At the same time, the base business was unchanged, reflecting a generally cautious market sentiment in the hydro carbon chain. The **Energy Separation** Business Unit was also influenced by having fewer large project orders, mainly related to power and refinery. The base business increased, with the strongest development in North America and Asia. Business Unit **Gasketed Heat Exchangers** showed a modest decline due to the non-repeat of a large nuclear power order in the fourth quarter. In general, however, the demand situation was good, driven by an increased order intake from the fertilizer and semi-conductor production industries. The base business was unchanged compared to the

* Base business and base orders refer to orders with an order value of less than EUR 0.5 million.

previous quarter. The **Brazed and Fusion Bonded Heat Exchangers** Business Unit experienced a good development driven by increased demand for refrigeration and HVAC among customers in Europe and Northern Asia. The increase is partly due to seasonality.

Service had a flat development in the first quarter versus the fourth, completely related to the non-repeat of the large nuclear service order. Excluding that, service had an overall positive development.

The Energy Division's overall order volume increased in the **second quarter** compared to the previous quarter. Growth was recorded from service and base business across to large orders. **Welded Heat Exchangers** showed a continued positive development and grew compared to the previous quarter. The main explanatory factor was the base business, which grew throughout the hydro carbon chain as well as in areas like inorganic chemicals and mining. Larger projects remained on the same level as in the previous quarter. The best development, from a geographical perspective, was seen in the USA. For the **Energy Separation** Business Unit, the base business showed overall growth, with the strongest development seen in Europe. The order level for project orders was still relatively low, despite growth compared to the first quarter. The growth was driven by some wastewater treatment projects in mining. Business Unit **Gasketed Heat Exchangers** also grew compared to the first quarter. The base business showed a good development in HVAC, in line with the normal seasonal development. But base business growth was also recorded in areas like inorganic and organic chemical production. A large order in the same areas reinforced the development. The **Brazed and Fusion Bonded Heat Exchangers** Business Unit experienced a good development driven by a seasonal upswing in demand from customers in the heat pump and A/C industries. All the major markets – North East Asia, North America and Europe – developed well.

Service also reported growth compared to the previous quarter, the main driver being larger orders in the hydro carbon chain as well as in power.

The Energy Division's overall order volume decreased in the **third quarter** compared to the previous quarter, mainly due to fewer large orders. The overall base business, however, remained on the good level recorded in the second quarter. **Welded Heat Exchangers** showed a continued positive base business development, but declined overall as the number of larger projects that was booked in the quarter declined.

**Energy Division**

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| Orders received | 11,175 | 10,208 |
| Order backlog* | 4,471 | 4,230 |
| Net sales | 11,001 | 10,641 |
| Operating income** | 1,525 | 1,423 |
| Operating margin | 13.9% | 13.4% |
| Depreciation and amortisation | 317 | 302 |
| Investments | 84 | 76 |
| Assets* | 9,555 | 8,797 |
| Liabilities* | 3,743 | 2,608 |
| Number of employees* | 3,016 | 3,440 |

* At the end of the period. ** In management accounts.

**Change excluding currency effects**

Consolidated

| | Order intake | | | Net sales | | |
|---|---|---|---|---|---|---|
| % | Structural change | Organic development | Total | Structural change | Organic development | Total |
| 2017/2016 | – | 9.8 | 9.8 | – | 3.3 | 3.3 |
| 2016/2015 | – | -4.9 | -4.9 | – | -14.2 | -14.2 |

The main driver for the positive base business outcome was the volumes generated by customers in the hydro carbon chain. Also for the **Energy Separation** Business Unit, the overall order volumes were down, due to non-repeat larger orders in oil & gas. Power, steel, mining and petrochemicals, however, all grew. The base business developed well across the business unit. The order intake for the Business Unit **Gasketed Heat Exchangers** was down, due to the non-repeat of a very large petrochemical order in the previous quarter. Equipment for HVAC and oil & gas-related applications, however, did well. The base business was flat compared to the previous quarter. The **Brazed & Fusion Bonded Heat Exchangers** Business Unit saw order volumes come down compared to the record-high levels seen in the second quarter. This is in line with normal seasonality for the customers in the heat pump and A/C industries.

Service also reported a decline compared to the previous quarter, the main reason being the non-repeat of larger service orders in oil & gas, refinery and power.

The Energy Division's overall order volume showed good growth in the **fourth quarter**, mainly driven by large orders for applications in the hydro carbon chain. The base business remained unchanged. From a geographical point of view, the best performance was noted in the U.S., Europe and Asia. **Welded Heat Exchangers** did very well in the quarter driven by a number of larger orders from customers throughout the hydrocarbon chain. The base business contracted somewhat compared to the third quarter. In **Energy Separation**, the overall order volumes were down, due to a decline in base business demand. At the same time, larger orders were on the same level as in the previous quarter. **Gasketed Heat Exchangers** reported a small increase in order intake thanks to larger orders in oil and gas processing as well as power. The base business was flat. The **Brazed & Fusion Bonded Heat Exchangers** Business Unit saw order volumes grow compared to the third quarter – the main driver being demand from manufacturers of boilers and A/C equipment.

Service declined somewhat. Most areas were flat to positive, the exception being aftermarket demand for spares and service for separation products.

*Operating income*

*(excluding comparison distortion items)*

The increase in operating income for 2017 compared to last year is explained by higher sales volume, the division's part of an improved utilisation in certain factories and the effects of the Group's restructuring programme. The improvement was mitigated by negative mix effects within capital sales and increased development costs.

*FOOD & WATER DIVISION*

The Food & Water Division consists of five Business Units: Decanters, Food Heat Transfer, Food Systems, Hygienic Fluid Handling and High Speed Separators.

*Order intake*

*(all comments are excluding currency effects)*

Taking a quarterly view, the development for the Food & Water Division during 2017 has been as follows:

The Division reported growth in the **first quarter** compared to the previous quarter, driven by a positive demand situation in the food as well as pharma and biotech markets. Both the base business and the project business contributed to the positive development. Geographically, growth was reported in all regions except Latin America, which reported a contraction due to the non-repeat of larger projects. **High Speed Separation** was the Business Unit to perform the best, boosted by traditional food markets such as fish, meat and crude palm oil, but also starch. The most significant growth was however recorded in biotech and pharma. Larger projects contributed to the Business Unit's overall positive development. Business Unit **Decanters** also did very well in the quarter, driven by food applications, such as olive oil and crude palm oil. The business exposed to the water treatment and waste water sector was unchanged compared to the fourth quarter. North America – by far the largest market – showed significant growth. Order intake in Business Unit **Food Heat Transfer** also reported growth compared to the previous quarter. While several end market areas had a positive development, the strongest development was reported by dairy, pharma and biotech. Order intake in Business Unit **Hygienic Fluid Handling** was unchanged compared to the fourth quarter as a marginal increase in the dairy and food markets was neutralized by a similar marginal decline in pharma. North America showed a healthy development, whereas Latin America and Asia contracted. Order intake in Business Unit **Food Systems** was slightly down compared to the fourth quarter, due to the non-repeat of larger orders in the brewery industry. Asia continued to constitute an important market for the Business Unit.

Service had a strong quarter driven by an equally good growth for spare parts and services.

The division reported growth in the **second quarter** compared to the previous quarter, benefitting from a strong demand in the dairy, food, pharma, starch and sugar markets as well as within waste water treatment. A good base business development was recorded, but an even bigger contribution came from larger orders. Geographically the growth was largely driven by Nordic and Western Europe as well as Latin America and China. Business Unit **High Speed Separation** showed solid growth and gained not only from traditional food markets such as dairy, brewery and starch but also from biotech and industrial fermentation. The biggest contribution to the positive development came from Asia and Western Europe. Business Unit **Decanters** also grew, thanks to the water treatment and waste water sector, whereas demand in typical food applications was overall unchanged. Order intake in Business Unit **Food Heat Transfer** was unchanged with some food-related end markets reporting a slight contraction while pharma grew. Business Unit **Hygienic Fluid Handling** also reported an unchanged order intake compared to the previous quarter. A slight increase in the dairy and pharma markets was neutralized by a limited decline in other food markets. North America showed a marginal contraction, whereas Asia, and in particular China, showed steady growth. Business Unit **Food Systems** showed a very strong development compared to the previous quarter, driven by larger projects as well as a very large order for a process solution for a soy bean refining plant in Brazil. Fish processing was another important industry in the quarter, whereas the brewery sector was lower than in the previous quarter.

Service had a strong quarter. The growth was generated by orders for spare parts and upgrades, whereas repair and field service came in slightly lower. Geographically North America and China were the explanatory factors for the overall very positive development.

The division showed a decline in order intake in the **third quarter** compared to the previous quarter, primarily due to fewer larger orders. The effect was particularly evident in edible oil, but also in ethanol, starch and sugar. Dairy was unchanged compared to the second quarter, while growth was recorded in areas exposed to the pharma and biotech markets. Geographically, contractions were seen in Western and Eastern Europe as well as the Americas, while Asia was unchanged. Business Unit **High Speed Separation** declined due to lower demand from brewery, pharma and biotech as well as dairy, whereas the edible oil business recorded growth. Business Unit **Decanters** declined, partly due to a certain decline in general food applications, but more so because activity in the water treatment and waste water sector came down from the high level seen in the second quarter. A good development was noted in the areas of ethanol and starch. Order intake in Business Unit **Food Heat Transfer** was affected by a decline in traditional food applications. Brewery, however, was unchanged and the dairy sector showed a strong increase. Business Unit **Hygienic Fluid Handling** reported an unchanged order intake compared to the previous quarter. Pharma was flat, dairy developed favourably while a certain decline was noted for applications towards the other food markets. Business Unit **Food Systems** showed a decline, due to the non-repeat of larger orders, particularly in edible oil, but to some extent also within other food applications.

**Food & Water Division**

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| Orders received | 12,388 | 11,327 |
| Order backlog* | 4,317 | 3,741 |
| Net sales | 11,824 | 11,364 |
| Operating income** | 1,780 | 1,596 |
| Operating margin | 15.1% | 14.0% |
| Depreciation and amortisation | 142 | 165 |
| Investments | 73 | 82 |
| Assets* | 8,124 | 7,525 |
| Liabilities* | 3,652 | 2,785 |
| Number of employees* | 3,997 | 3,674 |

* At the end of the period. ** In management accounts.

**Change excluding currency effects**

Consolidated

| | Order intake | | | Net sales | | |
|---|---|---|---|---|---|---|
| % | Structural change | Organic development | Total | Structural change | Organic development | Total |
| 2017/2016 | – | 9.4 | 9.4 | – | 3.9 | 3.9 |
| 2016/2015 | 0.8 | 1.4 | 2.2 | 0.9 | 1.6 | 2.5 |

A very large order was recorded in India, giving a strong boost to the biotech sector. Brewery also showed growth.

The aftermarket showed an overall slight decline, although both Food Heat Transfer and Hygienic Fluid Handling noted unchanged levels from the previous quarter.

The **fourth quarter** meant order intake growth compared to the previous quarter, supported by the base business development and further boosted by a higher level of larger orders. Brewery and ethanol applications were particularly strong, followed by the more general food applications. Water treatment and waste water, however, contracted somewhat. Business Unit **High Speed Separation** developed well, primarily thanks to the brewery, pharma and biotech sectors. Dairy and edible oil also recorded good growth. Business Unit **Decanters** also showed a strong development, to a large extent through a positive development in edible oil as well as in ethanol and starch, but also from a healthy growth in general food applications. A slight contraction was noted in the areas of water treatment and waste water. Business Unit **Food Heat Transfer** delivered robust growth among customers in more general food applications and even more so in ethanol, starch and dairy. Brewery, edible oil and pharma were unchanged. Business Unit **Hygienic Fluid Handling** reported a slight increase in order intake compared to the third quarter. Dairy and the broader food markets, which constitute the bulk of the business, were both unchanged. The smaller pharma business developed favourably. Business Unit **Food Systems** ended up marginally below the third quarter. The non-repeat of a large pharma/bio-tech order was partly compensated for by a strong development in brewery as well as a healthy growth in general food applications.

The aftermarket showed a slight decline compared to the previous quarter, mainly as fewer larger repair orders were received.

*Operating income*
*(excluding comparison distortion items)*
The increase in operating income during 2017 compared to last year is explained by a higher sales volume, improvements concerning project execution, the division's part of an improved utilisation in certain factories and effects of the Group's change programme. The increase was mitigated by increased development costs.

*MARINE DIVISION*
The Marine Division consists of three Business Units: Boiler & Gas Systems, Marine Separation & Heat Transfer Equipment and Pumping Systems.

*Order intake*
*(all comments are excluding currency effects)*
Taking a quarterly view, the development for the Marine Division during 2017 has been as follows:

Order intake for the Marine Division increased in the **first quarter** compared to the fourth quarter of 2016, mainly due to higher demand for environmental solutions as well as for marine pumping systems. Business Unit **Marine Separation & Heat Transfer Equipment** reported an unchanged order intake in the first quarter compared to the fourth. Demand for equipment and systems for the engine room remained at a low level, following the very low contracting for new vessels during 2016. At the same time, fresh water generators showed a decline compared to the previous quarter as cruise-ship orders in the fourth quarter were not repeated. Demand for equipment for power plants was slightly down from a very strong fourth quarter. On the other hand, there was an increase in orders for the environmental solution PureBallast, mainly for new ships. The quotation activity is high in the retrofit area for PureBallast, but the decision making is lagging. The **Boiler & Gas Systems** Business Unit reported order growth in the quarter compared to the fourth quarter, driven by increased demand for Alfa Laval PureSOx. Marine boilers were unchanged from the previous quarter. The **Pumping Systems** Business Unit grew, as contracting of chemical tankers at yards in South Korea and Japan led to increased demand for cargo pumping systems. Offshore pumping systems, however, declined as investments in the oil and gas sector remained low.

After sales orders remained unchanged as higher demand for parts and field service off-set a lower demand for repairs.

Order intake for the Marine Division increased in the **second quarter** compared to the first quarter 2017, mainly due to higher demand for environmental solutions as well as marine pumping systems. Business Unit **Marine Separation & Heat Transfer Equipment** reported an increased order intake in the second quarter compared to the first. The increase was driven by higher demand for PureBallast as well as heat exchangers. The order intake for PureBallast showed a good mix between new build and retrofit. Demand for equipment for diesel power plants was unchanged compared to the first quarter. The **Boiler & Gas Systems** Business Unit reported a decline in order intake in the second quarter compared to the previous quarter, as a continued effect of the low contracting for new shipbuilding. The lower order intake for boilers was only partly off-set by higher demand for Alfa Laval PureSOx for sulphur oxide cleaning. The **Pumping Systems** Business Unit grew, as contracting of chemical tankers at yards in South Korea and China led to increased demand for cargo pumping systems. Offshore pumping systems also recorded growth, compared to the low level seen in the previous quarter.

After sales orders declined slightly compared to the first quarter due to a lower demand for spare parts and upgrades. Demand for repair and field services grew.

Order intake for the Marine Division increased somewhat in the **third quarter** compared to the second quarter 2017, mainly due to higher demand for boilers. Business Unit **Marine Separation & Heat Transfer Equipment** reported an unchanged order intake in the third quarter compared to the second. Demand for separators and heat exchangers grew, while demand for equipment for engine power plants was down from the previous quarter. PureBallast only declined somewhat from the very strong level seen in the previous quarter, with a good mix between new-build orders and retrofit. The **Boiler & Gas Systems** Business Unit reported a good quarter, as demand for boilers increased for marine as well as diesel engine power applications. The higher order intake for boilers was only partly off-set by lower demand for Alfa Laval PureSOx. The **Pumping Systems** Business Unit was unchanged from the previous quarter, as contracting of chemical tankers at yards in South Korea and China led to a continued good demand for cargo pumping systems.

Service declined, partly as there was less of offshore commissioning for pumping systems, following a very strong second quarter. The order intake increased somewhat compared to last year.

Order intake for the Marine Division increased in the **fourth quarter** compared with the third. The main explanation to the uplift was higher demand for marine pumping systems and exhaust gas cleaning. Business Unit **Marine Separation & Heat Transfer Equipment** reported an unchanged level of order intake in the fourth quarter compared to the third. Demand for fresh water generators grew, driven by a higher level of contracting of cruise ships. Equipment for engine power plants also saw higher order intake and demand for PureBallast remained strong, with a good mix between new-build orders and retrofit. At the same time gasketed plate heat exchangers, which recorded an extraordinary level of order intake in the previous quarter, came back to a more normal level. The **Boiler & Gas Systems**

**Marine Division**

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| Orders received | 11,456 | 8,760 |
| Order backlog* | 9,027 | 8,285 |
| Net sales | 10,809 | 12,125 |
| Operating income** | 1,771 | 2,051 |
| Operating margin | 16.4% | 16.9% |
| Depreciation and amortisation | 772 | 765 |
| Investments | 59 | 77 |
| Assets* | 23,861 | 23,380 |
| Liabilities* | 5,963 | 5,126 |
| Number of employees* | 2,914 | 2,962 |

* At the end of the period. ** In management accounts.

**Change excluding currency effects**

Consolidated

| | Order intake | | | Net sales | | |
|---|---|---|---|---|---|---|
| % | Structural change | Organic development | Total | Structural change | Organic development | Total |
| 2017/2016 | – | 30.1 | 30.1 | – | -11.2 | -11.2 |
| 2016/2015 | 0.3 | -36.1 | -35.8 | 0.2 | -16.8 | -16.6 |

Business Unit reported a good quarter, as demand for gas systems grew. The increase was seen for exhaust gas cleaning systems as well as for inert gas systems. Marine boilers declined from the very high level seen in the previous quarter, while boilers for onshore engine power grew. The **Pumping Systems** Business Unit saw order intake rise compared to the previous quarter, reflecting a higher level of contracting of chemical tankers. In addition, an increase in order intake was reported from the offshore sector, be it from a low level.

Service increased, due to strong demand for parts as well as field service.

*Operating income*
*(excluding comparison distortion items)*
The decrease in operating income during 2017 compared to last year is above all explained by lower sales volume, but also by lower utilisation in certain marine specific production facilities. The operating income was supported by positive currency effects and the effects from the Group's change programme.

*GREENHOUSE DIVISION*
*Order intake*
*(all comments are excluding currency effects)*
Taking a quarterly view, the development for the Greenhouse Division during 2017 has been as follows:

Greenhouse's overall order intake declined in the **first quarter** compared to the previous quarter due to the non-repeat of larger orders for air and tubular heat exchangers. Air heat exchangers declined as a number of larger industrial cooling orders in the Nordic region in the fourth quarter failed to be repeated. Another factor explaining the lower order volume was the closure of a factory in China during the quarter. Underlying demand, however, remained steady. Heat exchanger systems increased on the back of a good demand for district heating systems in Russia, Nordic, UK and Benelux as well as a good development for tap water heating systems in France. Tubular heat exchangers declined due to the non-repeat of the larger HVAC and refrigeration orders in the fourth quarter. Underlying demand for tubular heat exchangers for HVAC and refrigeration applications remained steady.

Order intake in the Greenhouse Division increased in the **second quarter** compared to the previous quarter, mainly lifted by a seasonal increase in demand for air heat exchangers and heat exchanger systems. Air heat exchangers increased with a good level of demand for industrial cooling applications in the power industry, as well as strong demand for equipment for industrial refrigeration and HVAC applications. Mid-Europe, Russia and Benelux saw a particularly good development. Heat exchanger systems increased on the back of a good order intake for district heating systems in the Nordic area and Central Europe along with a steady seasonal demand situation in most other regions. Tubular heat exchangers showed a slight increase in order intake, mainly due to higher demand for products going into HVAC and refrigeration applications in Europe and the Middle East. Implemented and ongoing structural changes have impacted the order intake negatively, especially compared to the second quarter last year.

Greenhouse's overall order intake decreased in the **third quarter** compared to the previous quarter, as heat exchanger systems saw a seasonally reduced demand and as a structural change was implemented in tubular heat exchangers. Heat exchanger systems decreased from the seasonal peak in the second quarter. Demand was steady in most regions with a particularly good development in Russia and Benelux. Tubular heat exchangers decreased due to the closure of a factory in the U.S. Air heat exchangers on the other hand, saw continued good order intake in the quarter. Demand was particularly good for industrial cooling applications in the power related industries as well as for industrial refrigeration for the cold chain in the food industry. The Nordic region and Russia showed good development.

The overall order intake for Greenhouse decreased in the **fourth quarter** compared to the previous quarter in line with the low season for heat exchanger systems and the structural change in tubular heat exchangers. Air heat exchangers still increased with continuing good order intake for industrial cooling applications in the conventional power industry as well as strong demand in commercial and industrial refrigeration applications. The Nordic region and India showed good development. Heat exchanger systems decreased as the fourth quarter is typically the low season for district heating systems. Regions with continued underlying good development were Norway, Finland and Benelux. Tubular heat exchangers decreased following the disposal of the Standard Refrigeration operations in the U.S. Demand for the remaining businesses in the product group increased slightly in the quarter.

*Operating income*
*(excluding comparison distortion items)*
The improved operating income during 2017 compared to last year is partly explained by increased volume, but above all by the effects of the comprehensive change programme that was initiated during the autumn 2016. The result has improved despite the fact that it has been burdened by costs in connection with a factory closure in the U.S.

*OPERATIONS & OTHER*
Operations & Other is covering procurement, production and logistics as well as corporate overhead and non-core businesses.

The lower operating income during 2017 compared to last year is mainly explained by higher group-wide and project related costs.

**Information about geographical areas**
All comments are reflecting the quarterly development during the year and are excluding currency effects.

*Western Europe including Nordic*
The region reported a decrease in order intake in the **first quarter** compared to the fourth mainly due to non-repeat orders in the Energy Division. Meanwhile, the service business developed well across the region. Mid Europe reported strong order growth compared to the previous quarter driven by a good development for capital sales as well as service in the Food & Water Division and a large scrubber order in Marine. The UK also reported a higher level of order intake, with service performing well across all three divisions and with larger orders both in Energy and in Food & Water.

The region reported a modest decline in order intake in the **second quarter** compared to the first, with growth in the Nordic area, while Western Europe declined. This was mainly explained by a negative development in the Marine Division, which was outweighed by growth in the Food & Water Division and a flat development for the Energy Division. The Nordic area did very well in the quarter, as did France, which followed up a strong first quarter with an even stronger development in the second, mainly thanks to the Food & Water Division. Benelux saw order intake decline across all three divisions.

The region reported a decline in order intake in the **third quarter** compared to the previous quarter, driven by the Energy and Food & Water Divisions. The Marine Division developed well, lifted by a large waste heat recovery order as well as an increase in demand for pumping systems.

The region reported growth in the **fourth quarter** compared to the previous quarter, supported by higher demand in all three divisions for base business* and larger orders alike. Geographically all areas grew, except for Mid Europe, which declined somewhat amid lower order intake in Energy and Marine while Food & Water had a very good quarter. Service grew in the region, driven by Marine.

*Central and Eastern Europe*
Order intake in the **first quarter** dropped compared to the previous quarter mainly due to lower order intake for marine pumping systems and fewer larger orders in the Energy Division. The Food & Water Division, however, reported growth driven by larger orders and a good service order intake.

Order intake in the **second quarter** grew for the region compared to the previous quarter, with Russia as the main driver. All three divisions reported good growth in Russia, for both capital sales and service. South East Europe also did well and region Poland, Ukraine and the Baltic states was unchanged compared to the previous quarter.

Order intake dropped across the whole region in the **third quarter** compared to the second quarter. The Food & Water and Marine Divisions both declined, while the Energy Division was overall flat as a lower order intake in certain parts of the region were compensated for by a number of energy related projects in Russia.

Order intake developed very well in the **fourth quarter**, completely explained by Turkey, which saw increased order intake across the three divisions. Russia delivered a somewhat lower order intake than in the previous quarter as growth in the Food & Water Division could not fully compensate for a lower order intake in Energy and Marine. The service business in the region reported growth compared to the third quarter.

*North America*
The region reported growth in the **first quarter** compared to the previous quarter supported by an overall positive development in Canada as well as the U.S. Service grew across all three divisions. For capital sales in the U.S., the Food & Water Division was

**Greenhouse Division**

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| Orders received | 1,609 | 1,765 |
| Order backlog* | 474 | 614 |
| Net sales | 1,680 | 1,504 |
| Operating income** | -12 | -143 |
| Operating margin | -0.7% | -9.6% |
| Depreciation and amortisation | 26 | 77 |
| Investments | 17 | 21 |
| Assets* | 806 | 1,162 |
| Liabilities* | 593 | 572 |
| Number of employees* | 642 | 1,082 |

* At the end of the period. ** In management accounts.

**Change excluding currency effects**

Consolidated

| | Order intake | | | Net sales | | |
|---|---|---|---|---|---|---|
| % | Structural change | Organic development | Total | Structural change | Organic development | Total |
| 2017/2016 | – | -11.2 | -11.2 | – | 9.2 | 9.2 |
| 2016/2015 | – | 11.9 | 11.9 | – | -8.0 | -8.0 |

**Operations & Other**

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| Orders received | 0 | 0 |
| Order backlog* | 0 | 0 |
| Net sales | 0 | 0 |
| Operating income** | -533 | -471 |
| Depreciation and amortisation | 393 | 398 |
| Investments | 442 | 361 |
| Assets* | 5,372 | 5,826 |
| Liabilities* | 2,591 | 1,996 |
| Number of employees* | 5,798 | 5,783 |

* At the end of the period. ** In management accounts.

* Base business and base orders refer to orders with an order value of less than EUR 0.5 million.

the main driver due to a solid base business development combined with a number of larger orders. In Canada, capital sales within the Energy Division grew, from a low level, driven by the base business as well as a number of larger orders.

The region reported growth in the **second quarter** compared to the previous quarter, driven by a very positive development in the U.S. where both the Energy Division and Marine Division grew, while order intake for the Food & Water Division was unchanged compared to the previous quarter. The strong development for the Energy Division was partly explained by a large natural gas related order.

Overall the region reported a decline in the **third quarter** compared to the previous quarter, as the strong development in Canada could not compensate for a decline in the U.S. Canada was boosted by a strong development for capital sales and service in both Food & Water and Energy. The U.S. reported a good base business development in the Energy Division, but the overall order intake still declined due to the non-repeat of a large order booked in the second quarter.

Overall the region reported a modest decline in the **fourth quarter** compared to the previous quarter, explained by Canada which was unable to repeat the very strong order intake. The U.S. reported growth compared to the third quarter, supported by a good capital sales development in Food & Water as well as Energy and a growing service business across all the three divisions.

*Latin America*

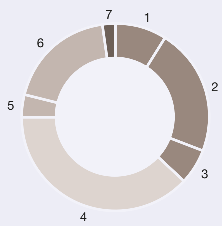
Latin America reported a lower order intake in the **first quarter** compared to the fourth, mainly due to the non-repeat of larger orders in Mexico. Brazil, on the other hand reported growth, completely driven by service which increased in all three divisions, while capital sales was flat.

Latin America reported a growing order intake in the **second quarter** compared to the previous quarter as all parts of the region recovered from a weak first quarter. The underlying Brazilian market remained weak, so the positive development in the quarter was all due to a large order for vegetable oil processing.

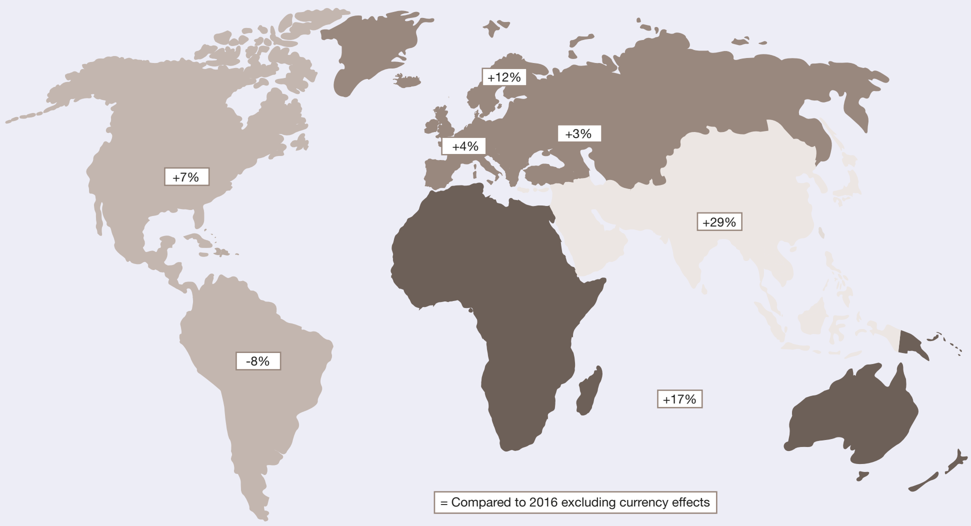
Latin America reported a decline in order intake in the **third quarter** compared to the second quarter, mainly due to the non-repeat

**Information about geographical areas**

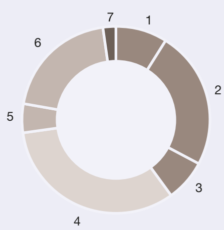
**Orders received 2017**



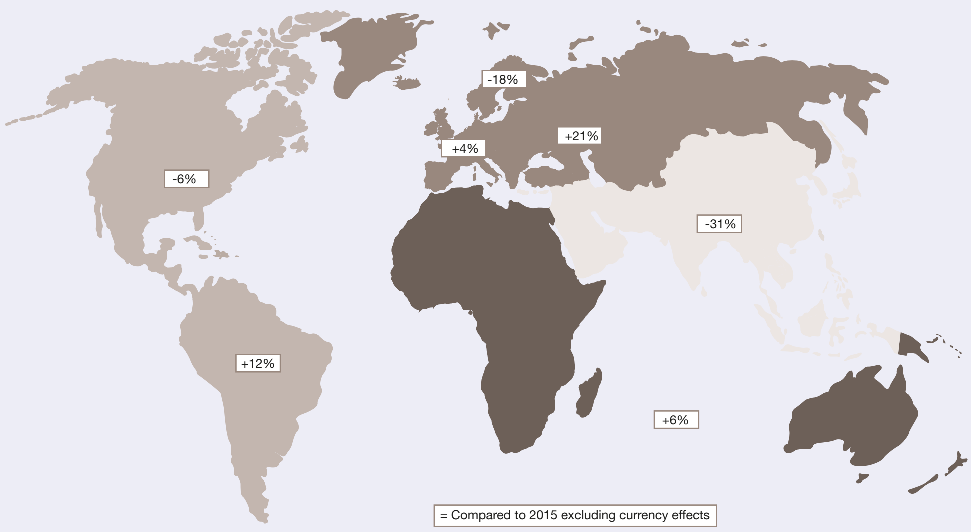

| | | |
|---|---|---|
| 1 | Nordic | 9% |
| 2 | Western Europe | 22% |
| 3 | Central & Eastern Europe | 6% |
| 4 | Asia | 38% |
| 5 | Latin America | 4% |
| 6 | North America | 19% |
| 7 | Africa & Oceania | 2% |




**Orders received 2016**




| | | |
|---|---|---|
| 1 | Nordic | 9% |
| 2 | Western Europe | 24% |
| 3 | Central & Eastern Europe | 7% |
| 4 | Asia | 33% |
| 5 | Latin America | 5% |
| 6 | North America | 20% |
| 7 | Africa & Oceania | 2% |



of a large vegetable oil order booked in Brazil in the second quarter. The base business developed well across the region with Brazil and Argentina as the main drivers. Still, Brazil continues to see the lingering effects from recent years' difficult economic climate as well as the political situation.

The order intake showed a very positive development in the **fourth quarter** compared to the third, driven by a strong Food & Water performance in Brazil and Mexico. Brazil grew, thanks to the positive trend in Food & Water, but also due to an improved service business in Marine.

*Asia*

The region reported growth in the **first quarter** compared to the previous quarter in all three divisions. Main drivers were a strong order intake for Marine Pumping Systems in China, Japan and South Korea, as well as large petrochemical orders for Energy in China. The Food & Water Division also reported growth driven by larger orders as well as a strong base business, across most countries in the region. From a country perspective, China was the main driver in the quarter with a good base business development in Marine and Food & Water supported by the large orders in the Energy Division mentioned above.

The region reported growth in the **second quarter** compared to the previous quarter, mainly thanks to a strong development for Marine in South Korea. The Marine activities in the rest of the region, however, remained on a low level. China remained on the strong order level seen in the first quarter. Food & Water reported a very positive development while the Marine Division declined.

The region reported a slight drop in order intake in the **third quarter** compared to the previous quarter, mainly due to the non-repeat of orders booked in the Energy Division in the second quarter. The Food & Water Division was unchanged from the previous quarter. The Marine Division did well, as both South Korea and China benefitted from an increased level of contracting at the ship yards earlier in the year. Overall, China reported a small decrease in order intake stemming from the Energy Division, which was exposed to substantial non-repeat large refinery orders. The Food & Water Division was flat, the Marine Division grew, as did the Energy Division, excluding the non-repeats. The base business was strong, across all divisions.

Asia reported growth in the **fourth quarter** compared to the previous quarter, which applied to most countries in the region. China, Japan and India performed the best with both China and Japan benefitting from an increase in ship yard contracting. India's positive development was explained by the Energy division. The same applied to the Middle East, following large downstream contracts being booked in the quarter.

**Personnel**

The parent company does not have any employees.

The Group has on average had 16,521 (17,305) employees. At the end of December 2017, the Group had 16,367 (16,941) employees. The employee turnover rate for 2017 is 11.1 (9.5) percent and mainly relates to employees within central management & administration, piece part production units and service and repair workshops.

Alfa Laval has the ambition to develop the employees on all levels within the Group. The largest part of the competence development takes place in the daily work when our employees continuously get more demanding tasks as well as get the opportunity to participate in different projects together with more experienced colleagues. Local training and development efforts in the different factories and sales companies around the world are equally important, for instance ALPS (Alfa Laval Production System) that is based on the well-known concepts of Lean and Six Sigma, while the more comprehensive group-wide training programmes and development projects are performed within the Alfa Laval Academy framework. Examples of these training programmes are Challenger (for young talents with international leadership potential), Impact (for women in the middle of the career), Project Management, Product trainings, Information Security (mandatory training via E-learning) and Pure Leadership (for middle management). During 2016 we carried through the up till now most extensive leadership development programme, called "Drive", for our 124 top international executives. It consisted of five modules, with both virtual and live seminars. Focus was on development of the personal leadership where the importance of being an "authentic" leader was emphasised as well as an extensive concentration on leading change. The latter was a skill that was high on the agenda considering the large changes that have been implemented in the Group during 2016 and 2017. In 2017 a global certification in "Learning Facilitation Capabilities" called "Licence to Train" was introduced. This is implemented to secure quality and consistency in the way we deliver our learning programmes internally as well as towards customers and partners.

Alfa Laval is working to achieve equal career opportunities independent of for instance gender or ethnic origin. The latter is not the least important in an international company. Likewise, the number of female managers shall increase in order to better reflect the females' part of the total number of employees. To facilitate this, a mentor programme has started for women with capacity to become future leaders.

The distribution of employees per country and per municipality in Sweden and between males and females can be found in Note 5 in the notes to the financial statements. The specification of salaries, wages, remunerations, social costs and pension costs are provided in Note 6 in the notes to the financial statements.

**Guidelines for remunerations to executive officers**

The guidelines for remunerations to executive officers are established by the Annual General Meeting, see further description in Note 6.

The Annual General Meeting 2017 decided to implement step seven of a cash based long term incentive programme for maximum 85 senior managers in the Group including the Chief Executive Officer and the persons defined as executive officers. The Board of Directors will propose the Annual General Meeting 2018 to implement a modified cash-based long-term incentive programme for the period January 1, 2018 – December 31, 2020 for maximum 95 senior managers in the Group including the Chief Executive Officer and the persons defined as executive officers. The difference is that the outcome of the new programme depends on how EBITA and the growth in net invoicing have developed during the three-year period, with a 50/50 weight between the targets. This means that there will be no award during the first two years since it is first in year three that it can be determined to what extent the targets have been achieved. Maximum outcome is awarded when the targets are exceeded. The remuneration from the modified long-term incentive programme can constitute between maximum 20 and 50 percent of the fixed remuneration depending on position. Payment to the participants in the programme is made after year three and only provided that they are still employed at the date of payment. No other changes of these guidelines are proposed by the Board of Directors.

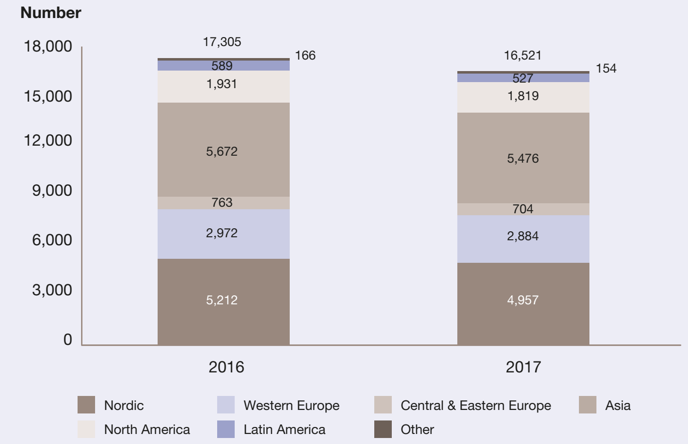
**Research and development**

As the result of an intensive and consistent commitment over many years to research and development, Alfa Laval has achieved a world-leading position within the areas of separation and heat transfer. The product development within fluid handling has resulted in a strong market position for a

## Employees

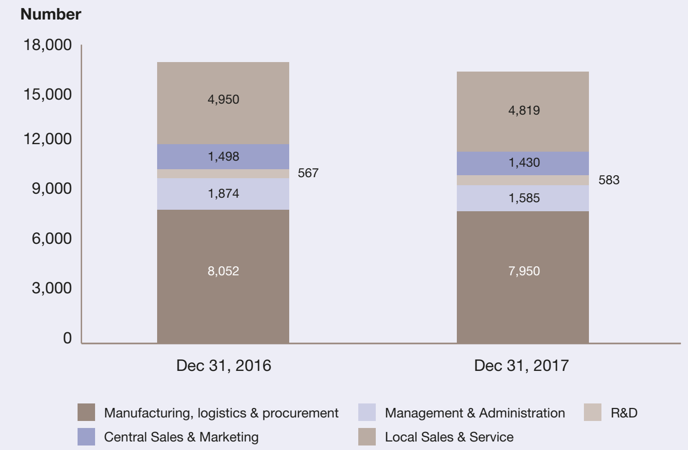
The distribution of the number of employees by region is:

### Average number of employees – by region




The distribution of the number of employees by personnel category at year end is:

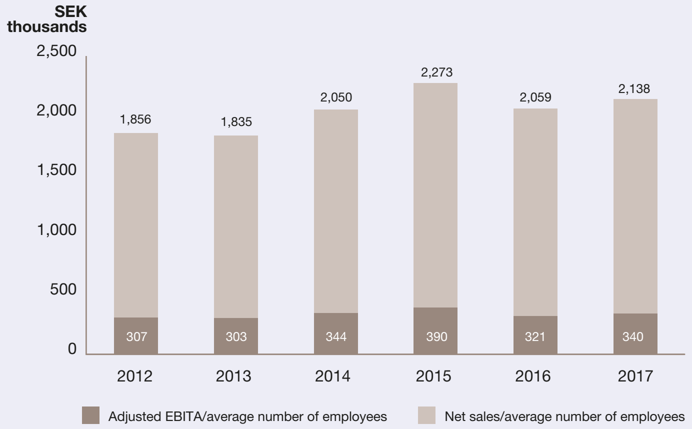
### Employees – by category




The productivity by employee has developed as follows:

The outcome for 2012 was affected by the acquisition of Aalborg Industries and the Euro crisis. Aalborg Industries has a lower turnover per employee than Alfa Laval. Both 2012 and 2013 were affected by the strengthening of the Swedish krona. The outcome for 2015 was affected by the weakening of the Swedish krona and the acquisition of Frank Mohn. The outcome for 2016 was affected by the receding demand, mitigated by the continued weakening of the Swedish krona. The improvement for 2017 is entirely explained by the change programme that was launched during the autumn 2016.

### Employees – Productivity development



number of products. In order to strengthen the Group's position and to support the organic growth, by identifying new applications for existing products as well as developing new products, research and development is always an activity of high priority. Research and development is conducted at approximately twenty facilities around the world.

The costs for research and development have amounted to SEK 874 (822) million, corresponding to 2.5 (2.3) percent of net sales. Excluding currency effects and acquisition of businesses, the costs for research and development have increased by 5.3 percent compared to last year.

**Ethics and social responsibility**

Two of Alfa Laval's four business principles are: "Respect for human rights is fundamental" and "High ethical standards guide our conduct". This means that Alfa Laval respects human rights and the very different social cultures in which the company works and supplies its products and services and that Alfa Laval conducts its business with honesty, integrity and respect for others.

Globalisation gives Alfa Laval new business opportunities for increased sales as well as lower costs for manufacturing the products. But when part of the supply chain is moved to countries with lower costs the company is often confronted with ethical questions in a more obvious manner. Health, security and working conditions for the employees at the company's suppliers are some of Alfa Laval's main topics. When Alfa Laval procures products from quickly growing economies like China and India it is important for the company to secure that the cost reduction opportunities are not at the expense of those performing the work in each country. Alfa Laval regards it as an obligation to make sure that its suppliers develop quickly if the work, health and security conditions are not acceptable.

Alfa Laval has developed an internal training programme to give sales people and purchase departments knowledge on legal business practice.

**Environment**

One of Alfa Laval's four business principles is: "Optimizing the use of natural resources in the most efficient manner is our business." The company's products make a significant contribution to reducing the environmental impact of industrial processes and are used to produce renewable energy.

Since 2004 the Group runs a project to improve the internal environmental management systems. Today all sites (except recent acquisitions) have an environmental management system in place. At the end of 2017 26 (29) production sites with ISO 14001 certification accounted for about 95 (94) percent of the delivery value. The goal is to have a certification level of at least 95 percent. The reason for the decrease in the number of certified production sites is that some sites have disappeared due to closures/mergers.

The subsidiary Alfa Laval Corporate AB is involved in operational activities that are subject to an obligation to report and compulsory licensing according to Swedish environmental legislation. The permits mainly relate to the manufacturing of heat exchangers in Lund and Ronneby and the manufacturing of separators in Tumba and Eskilstuna. The external environment is affected through limited discharges into the air and water, through waste and noise.

The foreign manufacturing sites within the Alfa Laval Group are engaged in operational activities with a similar effect on the external environment. To what extent this activity is subject to an obligation to report and/or compulsory licensing according to local environmental legislation varies from country to country. Alfa Laval has an overall intention to operate well within the limits that are set by local legislation.

**Asbestos-related lawsuits**

The Alfa Laval Group was as of December 31, 2017, named as a co-defendant in a total of 902 asbestos-related lawsuits with a total of approximately 902 plaintiffs. Alfa Laval strongly believes the claims against the Group are without merit and intends to vigorously contest each lawsuit.

Based on current information and Alfa Laval's understanding of these lawsuits, Alfa Laval continues to believe that these lawsuits will not have a material adverse effect on the Group's financial condition or results of operation.

**Result for the parent company**

The parent company's result after financial items was SEK 1,073 (66) million, out of which dividends from subsidiaries SEK 1,094 (76) million, net interests SEK 0 (1) million, realised and unrealised exchange rate gains and losses SEK -0 (7) million, costs related to the listing SEK -4 (-4) million, fees to the Board SEK -8 (-7) million, cost for annual report and annual general meeting SEK -2 (-2) million and other operating income and operating costs the remaining SEK -7 (-5) million. Change of tax allocation reserve has been made with SEK -251 (-264) million. Group contributions amount to SEK 1,439 (2,002) million. Tax on this year's result amount to SEK -258 (-381) million. Net income for the year was SEK 2,003 (1,423) million.

**Unrestricted equity for the parent company**

The unrestricted equity of Alfa Laval AB (publ) was SEK 9,417 (9,197) million.

**Proposed disposition of earnings**

The Board of Directors propose a dividend of SEK 4.25 (4.25) per share corresponding to SEK 1,783 (1,783) million and that the remaining income available for distribution in Alfa Laval AB (publ) of SEK 7,635 (7,414) million be carried forward, see Note 37.

The Board of Directors are of the opinion that the proposed dividend is in line with the requirements that the type and size of operations, the associated risks, the capital needs, liquidity and financial position put on the company.

**Disclosure on share related information**

Paragraph 2a in chapter 6 of the Swedish Annual Accounts Act requires listed companies to disclose certain information relating to the company's shares in the Board of Directors' Report. This information is found in the following paragraphs, in the "Changes in consolidated equity" and in Note 6.

**Outlook for the first quarter**

In the fourth quarter and full year 2017 report issued on January 30, 2018 the President and Chief Executive Officer Tom Erixon stated:

"We expect that demand during the first quarter 2018 will be somewhat lower than in the fourth quarter."

Earlier published outlook (October 25, 2017): "We expect that demand during the fourth quarter 2017 will be somewhat higher than in the third quarter."

**Date for the next financial reports during 2018**

Alfa Laval will publish interim reports during 2018 at the following dates:

| | |
|---|---|
| Interim report for the first quarter | April 23 |
| Interim report for the second quarter | July 17 |
| Interim report for the third quarter | October 23 |

# Consolidated cash flows

## Consolidated cash flows

| SEK millions | *Note* | 2017 | 2016 |
|---|---|---|---|
| **Operating activities** | | | |
| Operating income | | 4,589 | 2,989 |
| Adjustment for depreciation, amortisation and write down | | 1,650 | 2,334 |
| Adjustment for other non-cash items | | 107 | 16 |
| | | 6,346 | 5,339 |
| Taxes paid | | -1,583 | -1,161 |
| | | 4,763 | 4,178 |
| Changes in working capital: | | | |
| Increase(-)/decrease(+) of receivables | | -517 | 592 |
| Increase(-)/decrease(+) of inventories | | -774 | 32 |
| Increase(+)/decrease(-) of liabilities | | 1,273 | -424 |
| Increase(+)/decrease(-) of provisions | | -282 | 601 |
| **Increase(-)/decrease(+) in working capital** | | **-300** | **801** |
| | | **4,463** | **4,979** |
| **Investing activities** | | | |
| Investments in fixed assets (Capex) | | -675 | -617 |
| Divestment of fixed assets | | 23 | 39 |
| Acquisition of businesses | *16* | -69 | -230 |
| Divestment of businesses | | – | 13 |
| | | **-721** | **-795** |
| **Financing activities** | | | |
| Received interests and dividends | | 168 | 163 |
| Paid interests | | -214 | -243 |
| Realised financial exchange gains | | 77 | 316 |
| Realised financial exchange losses | | -245 | -89 |
| Dividends to owners of the parent | | -1,783 | -1,783 |
| Dividends to non-controlling interests | | -14 | -17 |
| Increase(-) of financial assets | | -187 | 0 |
| Decrease(+) of financial assets | | 0 | 8 |
| Increase of loans | | 715 | 1,860 |
| Amortisation of loans | | -1,676 | -3,781 |
| | | **-3,159** | **-3,566** |
| **Cash flow for the year** | | **583** | **618** |
| Cash and cash equivalents at the beginning of the year | | 2,619 | 1,876 |
| Translation difference in cash and cash equivalents | | -65 | 125 |
| **Cash and cash equivalents at the end of the year** | *25* | **3,137** | **2,619** |
| Free cash flow per share (SEK) * | | 8.92 | 9.97 |
| Capex in relation to net sales | | 1.9% | 1.7% |
| Average number of shares | | 419,456,315 | 419,456,315 |

* Free cash flow is the sum of cash flows from operating and investing activities.

# Comments to the consolidated cash-flows

For further comments on certain individual lines in the cash-flow statement, reference is made to Notes 16 and 25.

**Cash flows from operating activities**
The decrease in cash flows from operating activities in 2017 is explained by:

- an increase in working capital, as a result of an increased order intake and

- higher tax payments, that to a large extent are explained by two non-recurring items concerning a dividend distribution tax in India of SEK -100 million and additional tax of SEK -113 million relating to prior years concerning acquired businesses according to a settlement with the former owners,

+ mitigated by higher operating income before depreciation and amortisation.

**Cash and cash equivalents**
The item cash and cash equivalents is mainly relating to bank deposits and liquid deposits.

**Cash flow**
Cash flow from operating and investing activities amounted to SEK 3,742 (4,184) million during 2017. Out of this, acquisitions of businesses were SEK -69 (-230) million whereas divestments generated cash of SEK 23 (52) million.

**Adjustment for other non-cash items**
Other non-cash items are mainly referring to realised gains and losses in connection with sale of assets. These have to be eliminated since the cash impact of divestments of fixed assets and businesses are reported separately under cash flow from investing activities.

**Working capital**
Working capital increased by SEK 300 million during 2017, whereas it decreased by SEK 801 million during 2016.

**Investments**
Investments in property, plant and equipment amounted to SEK 675 (617) million during 2017. The investments made for the individual product groups are as follows:

*Heat exchangers*
Investments have been made in machines for increased capacity and manufacturing of new products and in productivity enhancing equipment in Alonte in Italy, Ronneby in Sweden and Jiang Yin in China for brazed heat exchangers. Investments have been made in Jiang Yin in China and in Lund in Sweden in equipment to widen the product range and increase the productivity for gasketed heat exchangers. Investments have also been made to rationalize the manufacturing of boilers in Qingdao in China.

*High speed separators*
Investments in machining equipment for separators have been made in Eskilstuna in Sweden and Krakow in Poland.

*Decanters*
Productivity enhancing investments have been made in Pune in India.

*Fluid handling products*
Major investments in productivity and capacity increasing equipment have been made concerning a brand new distribution centre in Kolding in Denmark.

**Depreciations**
Depreciation, excluding allocated step-up values, amounted to SEK 629 (643) million during the year.

**Acquisitions and disposals**
For a further analysis of the impact on the cash flow by acquisitions and disposals, see Note 16.

**Free cash flow per share**
The free cash flow per share is SEK 8.92 (9.97).

# Consolidated comprehensive income

## Consolidated comprehensive income

| SEK millions | Note | 2017 | 2016 |
|---|---|---|---|
| Net sales | *1, 2, 3, 4* | 35,314 | 35,634 |
| Cost of goods sold | *9* | -23,379 | -24,581 |
| Gross profit | | 11,935 | 11,053 |
| | | | |
| Sales costs | *5, 6, 9* | -4,127 | -4,328 |
| Administration costs | *5, 6, 7, 9* | -1,809 | -1,649 |
| Research and development costs | *9* | -874 | -822 |
| Other operating income | *8* | 588 | 613 |
| Other operating costs | *8, 9* | -1,135 | -1,893 |
| Share of result in joint ventures | *33* | 11 | 15 |
| Operating income | | 4,589 | 2,989 |
| | | | |
| Dividends and other financial income | *10* | 47 | 47 |
| Interest income and financial exchange rate gains | *11* | 237 | 645 |
| Interest expense and financial exchange rate losses | *11* | -502 | -356 |
| Result after financial items | | 4,371 | 3,325 |
| | | | |
| Tax on this year's result | *15* | -1,357 | -960 |
| Other taxes | *15* | -26 | -53 |
| **Net income for the year** | | **2,988** | **2,312** |
| | | | |
| Other comprehensive income: | | | |
| Items that will subsequently be reclassified to net income | | | |
| Cash flow hedges | | 257 | 245 |
| Market valuation of external shares | | 2 | 0 |
| Translation difference | | -1,339 | 1,882 |
| Deferred tax on other comprehensive income | *15* | 152 | -143 |
| Sum | | -928 | 1,984 |
| Items that will subsequently not be reclassified to net income | | | |
| Revaluations of defined benefit obligations | | 15 | -505 |
| Deferred tax on other comprehensive income | *15* | 4 | 67 |
| Sum | | 19 | -438 |
| **Comprehensive income for the year** | | **2,079** | **3,858** |
| | | | |
| **Net income attributable to:** | | | |
| Owners of the parent | | 2,976 | 2,289 |
| Non-controlling interests | | 12 | 23 |
| Earnings per share (SEK) | | 7.09 | 5.46 |
| Average number of shares | | 419,456,315 | 419,456,315 |
| | | | |
| **Comprehensive income attributable to:** | | | |
| Owners of the parent | | 2,069 | 3,815 |
| Non-controlling interests | | 10 | 43 |

# Comments to the consolidated comprehensive income

For comments on the individual lines in the consolidated comprehensive income statement, reference is made to Notes 1 to 15 and Note 28. For comments on the operating segments, see Note 1.

As a basis for comments on the various main items of the consolidated comprehensive income statement, please find a comparison between the last two years:

**Income analysis**

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| Net sales | 35,314 | 35,634 |
| Adjusted gross profit * | 12,956 | 12,744 |
| ***- adjusted gross margin (%) **** | ***36.7*** | ***35.8*** |
| Expenses ** | -6,717 | -6,548 |
| *- in % of net sales* | *19.0* | *18.4* |
| **Adjusted EBITDA *** | **6,239** | **6,196** |
| *- adjusted EBITDA margin (%) ** | *17.7* | *17.4* |
| Depreciation | -629 | -643 |
| **Adjusted EBITA *** | **5,610** | **5,553** |
| ***- adjusted EBITA margin (%) **** | ***15.9*** | ***15.6*** |
| Amortisation of step-up values | -1,021 | -1,064 |
| Comparison distortion items: | | |
| Write down of goodwill and step-up values | – | -627 |
| Restructuring | – | -873 |
| Operating income | 4,589 | 2,989 |

* Alternative performance measures, defined on page 138. ** Excluding comparison distortion items.

The gross margin has increased by 0.9 percentage units between 2016 and 2017. The increase of the gross margin is explained by a better utilisation in most production facilities, improvements concerning execution of customer projects and positive currency effects.

Sales and administration expenses amounted to SEK 5,936 (5,977) million. Excluding currency effects and acquisition of businesses, sales and administration expenses were 1.4 percent lower than last year.

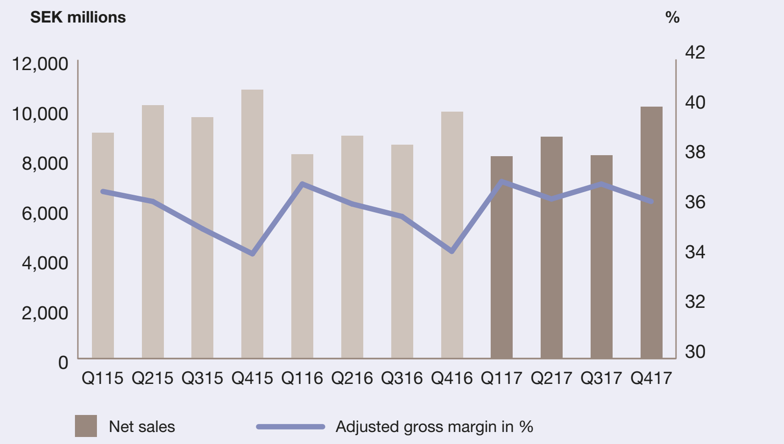
The costs for research and development have amounted to SEK 874 (822) million, corresponding to 2.5 (2.3) percent of net sales. Excluding currency effects and acquisition of businesses, the costs for research and development have increased by 5.3 percent compared to last year.

The net income attributable to the owners of the parent, excluding depreciation of step-up values and the corresponding tax, is SEK 8.85 (8.48) per share.

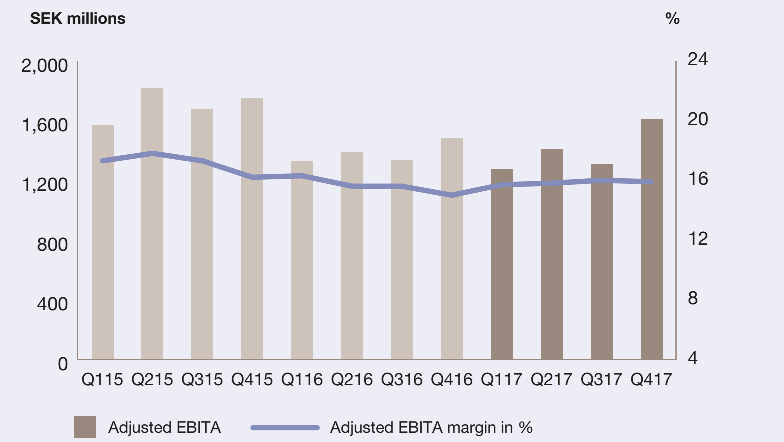
Compared with last year Alfa Laval has been affected during 2017 by exchange rate differences, both through translation differences and through the net exposure when trading in foreign currencies. The effect on adjusted EBITA has been calculated to totally about SEK 223 (478) million for 2017 compared with last year. The effect of the exchange rate variations has been limited through exchange rate hedging and through the distribution of the company's financial debts in relation to its net assets in different currencies.

In order to illustrate the quarterly development, the last 12 quarters are shown below for four of the parameters in the income analysis:

### Net sales & adjusted gross margin




### Adjusted EBITA




The operating income has been affected by comparison distortion items of SEK - (-1,500) million, which are specified below. In the consolidated comprehensive income statement these are reported gross as a part of each concerned line.

The comparison distortion costs during 2016 related to three initiatives that Group Management started for cost adaptations and a new organisation, restructuring of the manufacturing structure and transformation of the activities within "Greenhouse". During the full year 2017 savings of SEK 330 million were realised as a result of the initiatives.

### Consolidated financial net and taxes

The financial net has amounted to SEK -54 (-76) million, excluding realised and unrealised exchange rate losses and gains. The main elements of costs were interest on the debt to the banking syndicate of SEK -5 (-8) million, interest on the bilateral term loans of SEK -41 (-56) million, interest on the private placement of SEK - (-3) million, interest on the commercial papers of SEK 0 (-0) million, interest on the corporate bonds of SEK -79 (-80) million and a net of dividends, changes in fair value and other interest income and interest costs of SEK 71 (71) million.

The net of realised and unrealised exchange rate differences has amounted to SEK -164 (412) million.

The tax on the result after financial items was SEK -1,383 (-1,013) million in 2017. The effective tax has been affected by the write down of goodwill of SEK - (-533) million, where no corresponding deferred tax has been released. The tax cost for 2017 has been affected by a dividend distribution tax in India of SEK -100 million and a non-recurring item of SEK -113 million concerning additional tax relating to prior years concerning acquired businesses according to a settlement with the former owners. The tax cost for the full year 2017 has been affected by non-recurring items of about SEK +29 (+132) million concerning adjustments of deferred taxes relating to step up values, due to reduced company taxes in the U.S. (2017) and Norway and Denmark (2016) and thereby decreased deferred tax liabilities.

Cash flow hedges in other comprehensive income are explained by the following components:

**Fair value changes in cash flow hedges**

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| Opening balance | -448 | -693 |
| Booked into other comprehensive income during the year | 241 | 263 |
| Reversed from other comprehensive income due to inefficiency: | | |
| booked against cost of goods sold | 1 | -5 |
| Reversed from other comprehensive income: | | |
| booked against cost of goods sold | 16 | -17 |
| booked against interest income/interest costs | -1 | 4 |
| **Closing balance** | **-191** | **-448** |
| Change reported against other comprehensive income | 257 | 245 |

The Group has not had any cash flow hedges that have affected the initially recognised carrying amount of non-financial assets.

**Accumulated translation differences ***

Consolidated

SEK millions

| Year | Main explanation to translation differences* | Change | Accumulated | Pre-tax effect on change by hedging measures |
|---|---|---|---|---|
| Formation of the Group | | | | |
| 2000 | The EUR was appreciated by 6 %, which affected the EUR based acquisition loans | -94 | -94 | -312 |
| 2001 | The USD was appreciated by 10.7 % | 97 | 3 | -105 |
| 2002 | The USD was depreciated by 16.7 % | -190 | -187 | 165 |
| 2003 | The USD was depreciated by 17.5 % | -38 | -225 | 195 |
| 2004 | The USD was depreciated by 9.0 % | -103 | -328 | -19 |
| 2005 | The USD was appreciated by 20.3 % and the EUR was appreciated by 4.8 % | 264 | -64 | -65 |
| 2006 | The USD was depreciated by 13.5 % and the EUR was depreciated by 4.0 % | -269 | -333 | 56 |
| 2007 | The USD was depreciated by 5.7 % whereas the EUR was appreciated by 4.7 % | 224 | -109 | 13 |
| 2008 | The USD was appreciated by 20.5 % and the EUR was appreciated by 16.2 % | 850 | 744 | -468 |
| 2009 | The USD was depreciated by 7.5 % and the EUR was depreciated by 6.0 % | -392 | 352 | 220 |
| 2010 | The USD was depreciated by 5.7 % and the EUR was depreciated by 12.9 % | -554 | -202 | 99 |
| 2011 | The USD was appreciated by 1.4 % whereas the EUR was depreciated by 0.8 % | -254 | -456 | 34 |
| 2012 | The USD was depreciated by 5.8 % and the EUR was depreciated by 3.6 % | -798 | -1,254 | 214 |
| 2013 | The USD was appreciated by 0.3 % and the EUR was appreciated by 4.1 % | 39 | -1,215 | -83 |
| 2014 | The USD was appreciated by 20.5 % and the EUR was appreciated by 6.3 % | 439 | -776 | -1,033 |
| 2015 | The USD was appreciated by 6.6 % whereas the EUR was depreciated by 4.0 % | -1,056 | -1,832 | 301 |
| 2016 | The USD was appreciated by 8.6 % and the EUR was appreciated by 4.6 % | 1,882 | 50 | -643 |
| 2017 | The USD was depreciated by 9.4 % and the EUR was appreciated by 2.8 % | -1,339 | -1,289 | -207 |

* Reported against other comprehensive income. Prior to 2009 these translation differences were reported against equity.

# Consolidated financial position

## Consolidated financial position

| ASSETS | | | |
|---|---|---|---|
| SEK millions | Note | 2017 | 2016 |
| **Non-current assets** | | | |
| ***Intangible assets*** | *16, 17* | | |
| Patents and unpatented know-how | | 1,653 | 2,142 |
| Trademarks | | 3,002 | 3,766 |
| Licenses, renting rights and similar rights | | 37 | 38 |
| Goodwill | | 19,775 | 20,436 |
| | | 24,467 | 26,382 |
| ***Property, plant and equipment*** | *16, 18* | | |
| Real estate | | 2,491 | 2,450 |
| Machinery and other technical installations | | 1,493 | 1,629 |
| Equipment, tools and installations | | 567 | 580 |
| Construction in progress and advances to suppliers concerning property, plant and equipment | | 300 | 281 |
| | | 4,851 | 4,940 |
| ***Other non-current assets*** | | | |
| Other long-term securities | *13, 14, 19* | 35 | 25 |
| Pension assets | *26* | 6 | 3 |
| Derivative assets | *13, 14* | 24 | 16 |
| Deferred tax assets | *15* | 1,589 | 2,056 |
| | | 1,654 | 2,100 |
| **Total non-current assets** | | **30,972** | **33,422** |
| **Current assets** | | | |
| ***Inventories*** | *20* | 8,424 | 7,831 |
| ***Assets held for sale*** | | | |
| Real estate | *18* | 2 | 2 |
| ***Current receivables*** | | | |
| Accounts receivable | *13, 21* | 5,941 | 5,830 |
| Current tax assets | | 791 | 739 |
| Other receivables | *13, 22* | 1,525 | 1,339 |
| Prepaid costs and accrued income | *13, 23* | 384 | 368 |
| Derivative assets | *13, 14* | 165 | 153 |
| | | 8,806 | 8,429 |
| ***Current deposits*** | | | |
| Other current deposits | *13, 24* | 1,208 | 1,075 |
| ***Cash and cash equivalents*** | *13, 25* | 3,137 | 2,619 |
| **Total current assets** | | **21,577** | **19,956** |
| **TOTAL ASSETS** | | **52,549** | **53,378** |

Consolidated financial position, continued

| EQUITY AND LIABILITIES | | | |
|---|---|---|---|
| SEK millions | *Note* | 2017 | 2016 |
| **Equity** | | | |
| ***Attributable to owners of the parent*** | | | |
| Share capital | | 1,117 | 1,117 |
| Other contributed capital | | 2,770 | 2,770 |
| Other reserves | | -2,649 | -1,742 |
| Retained earnings | | 19,160 | 18,014 |
| | | 20,398 | 20,159 |
| ***Attributable to non-controlling interests*** | *12* | 102 | 117 |
| **Total equity** | | **20,500** | **20,276** |
| ***Non-current liabilities*** | | | |
| Liabilities to credit institutions etc | *13, 28* | 11,092 | 12,169 |
| Provisions for pensions and similar commitments | *26* | 2,297 | 2,425 |
| Provision for deferred tax | *15* | 2,100 | 2,722 |
| Other provisions | *27* | 661 | 599 |
| Derivative liabilities | *13, 14* | 16 | 37 |
| **Total non-current liabilities** | | **16,166** | **17,952** |
| ***Current liabilities*** | | | |
| Liabilities to credit institutions etc | *13, 28* | 1,404 | 1,078 |
| Advances from customers | | 3,537 | 2,721 |
| Accounts payable | *13* | 2,802 | 2,490 |
| Notes payable | *13* | 162 | 178 |
| Current tax liabilities | | 1,033 | 1,256 |
| Other liabilities | *13, 29* | 2,211 | 2,352 |
| Other provisions | *27* | 2,024 | 2,365 |
| Accrued costs and prepaid income | *13, 30* | 2,539 | 2,433 |
| Derivative liabilities | *13, 14* | 171 | 277 |
| **Total current liabilities** | | **15,883** | **15,150** |
| **Total liabilities** | | **32,049** | **33,102** |
| **TOTAL EQUITY AND LIABILITIES** | | **52,549** | **53,378** |

# Comments on the consolidated financial position

For comments on the individual lines in the statement on financial position, reference is made to Notes 12 to 34. For comments on the operating segments, see Note 1.

**Capital employed**
The average capital employed including goodwill and step-up values amounted to SEK 31,698 (30,663) million during the year.

**Return on capital employed**
The return on average capital employed including goodwill and step-up values amounted to 17.7 (15.3) percent during the year.

**Capital turnover rate**
The capital turnover rate calculated on the average capital employed including goodwill and step-up values amounted to 1.1 (1.2) times for the year.

**Return on equity**
Net income in relation to the average equity was 13.9 (11.8) percent during the year.

**Solidity**
The solidity, that is the equity in relation to total assets, was 39.0 (38.0) percent at the end of the year.

**Net debt**
The net debt was SEK 8,200 (9,619) million at the end of the year.

**Net debt to EBITDA**
Net debt in relation to EBITDA was 1.31 (1.81) times at the end of December.

**Debt ratio**
The debt ratio, that is the net debt in relation to equity, was 0.40 (0.47) times at the end of December.

# Changes in consolidated equity

**Changes in consolidated equity**

| Attributable to: | Owners of the parent | | | | | | | | Non-controlling interests | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Other reserves | | | | | | | | | |
| SEK millions | Share capital | Other contributed capital | Cash flow hedges | Market valuation of external shares | Translation differences | Revaluations | Retained earnings | Subtotal | Translation differences | Retained earnings | Subtotal | |
| **As of December 31, 2015** | **1,117** | **2,770** | **-545** | **1** | **-1,747** | **-977** | **17,683** | **18,302** | **-5** | **126** | **121** | **18,423** |
| **2016** | | | | | | | | | | | | |
| **Comprehensive income** | | | | | | | | | | | | |
| Net income | – | – | – | – | – | – | 2,289 | 2,289 | – | 23 | 23 | 2,312 |
| Other comprehensive income | – | – | 191 | 0 | 1,773 | -438 | – | 1,526 | 20 | – | 20 | 1,546 |
| Comprehensive income | – | – | 191 | 0 | 1,773 | -438 | 2,289 | 3,815 | 20 | 23 | 43 | 3,858 |
| **Transactions with shareholders** | | | | | | | | | | | | |
| Decrease of non-controlling interests | – | – | – | – | – | – | -175 | -175 | – | -30 | -30 | -205 |
| Dividends to owners of the parent | – | – | – | – | – | – | -1,783 | -1,783 | – | – | – | -1,783 |
| Dividends to non-controlling interests | – | – | – | – | – | – | – | – | – | -17 | -17 | -17 |
| **As of December 31, 2016** | **1,117** | **2,770** | **-354** | **1** | **26** | **-1,415** | **18,014** | **20,159** | **15** | **102** | **117** | **20,276** |
| **2017** | | | | | | | | | | | | |
| **Comprehensive income** | | | | | | | | | | | | |
| Net income | – | – | – | – | – | – | 2,976 | 2,976 | – | 12 | 12 | 2,988 |
| Other comprehensive income | – | – | 201 | 1 | -1,128 | 19 | – | -907 | -2 | – | -2 | -909 |
| Comprehensive income | – | – | 201 | 1 | -1,128 | 19 | 2,976 | 2,069 | -2 | 12 | 10 | 2,079 |
| **Transactions with shareholders** | | | | | | | | | | | | |
| Decrease of non-controlling interests | – | – | – | – | – | – | -47 | -47 | – | -11 | -11 | -58 |
| Dividends to owners of the parent | – | – | – | – | – | – | -1,783 | -1,783 | – | – | – | -1,783 |
| Dividends to non-controlling interests | – | – | – | – | – | – | – | – | – | -14 | -14 | -14 |
| **As of December 31, 2017** | **1,117** | **2,770** | **-153** | **2** | **-1,102** | **-1,396** | **19,160** | **20,398** | **13** | **89** | **102** | **20,500** |

**Specification of changes in number of shares and share capital**

| Year | Event | Date | Change in number of shares | Total number of shares | Change in share capital SEK millions | Total share capital SEK millions |
|---|---|---|---|---|---|---|
| 2000 | Company formation | March 27, 2000 | 10,000,000 | 10,000,000 | 0.1 | 0.1 |
| | New issue of shares | August 24, 2000 | 27,496,325 | 37,496,325 | 0.3 | 0.4 |
| 2002 | Bonus issue of shares | May 3, 2002 | 37,496,325 | 74,992,650 | 0.4 | 1 |
| | Bonus issue of shares | May 16, 2002 | – | – | 749 | 750 |
| | New issue of shares | May 16, 2002 | 3,712,310 | 78,704,960 | 37 | 787 |
| | New issue of shares | May 17, 2002 | 32,967,033 | 111,671,993 | 330 | 1,117 |
| 2008 | Cancellation of repurchased shares | May 27, 2008 | -4,323,639 | 107,348,354 | -43 | |
| | Bonus issue of shares | May 27, 2008 | – | 107,348,354 | 43 | 1,117 |
| | Split 4:1 | June 10, 2008 | 322,045,062 | 429,393,416 | – | 1,117 |
| 2009 | Cancellation of repurchased shares | July 9, 2009 | -7,353,950 | 422,039,466 | -19 | |
| | Bonus issue of shares | July 9, 2009 | – | 422,039,466 | 19 | 1,117 |
| 2011 | Cancellation of repurchased shares | May 16, 2011 | -2,583,151 | 419,456,315 | -7 | |
| | Bonus issue of shares | May 16, 2011 | – | 419,456,315 | 7 | 1,117 |

# Comments on changes in consolidated equity

The articles of association of Alfa Laval AB (publ) state that the share capital should be between SEK 745,000,000 and 2,980,000,000 and that the number of shares should be between 298,000,000 and 1,192,000,000.

At January 1, 2017 the share capital of SEK 1,116,719,930 was divided into 419,456,315 shares. Since then no changes have been made.

The company has only issued one type of shares and all these have equal rights. There are no restrictions in law or in the articles of association in the negotiability of the shares.

The only shareholder holding more than 10 percent of the shares is Tetra Laval B.V., the Netherlands who owns 29.1 (29.1) percent. The employees of the company do not own any shares in the company through company pension trusts.

No restrictions exist in how many votes that each shareholder can represent at a general meeting of shareholders.

The company has no knowledge of any agreements between shareholders that would limit the negotiability of their shares.

The articles of association stipulate that members of the Board are elected at the Annual General Meeting. Election or discharge of members of the Board is otherwise regulated by the provisions in the Swedish Companies Act and the Swedish Corporate Governance Code. According to the Companies Act changes in the articles of association are decided at general meetings of shareholders.

The senior credit facility with the banking syndicate, the corporate bonds and the bilateral term loans with Swedish Export Credit and the European Investment Bank contain conditions that give the lenders the opportunity to terminate the loans and declare them due and payable if there is a change of control of the company through an acquisition of more than 30 percent of the total number of shares.

The possibilities to distribute unappropriated profits from foreign subsidiaries are limited in certain countries due to local legislation. These limitations are not material. The limitations relate to:

- the existence of general restrictions concerning restricted equity in many countries,
- that subsidiaries in for instance China and India cannot take up loans to pay dividends, which limits the size of the dividends and
- rules on interest deduction limitations and thin capitalisation in many countries, for instance the U.S., Denmark and Norway limit the possibilities for these countries to increase debt to pay dividends.

# Parent company cash flows and income

## Parent company cash flows

| SEK millions | 2017 | 2016 |
|---|---|---|
| **Cash flow from operating activities** | | |
| Operating income | -21 | -18 |
| Taxes paid | -377 | -61 |
| | -398 | -79 |
| Changes in working capital: | | |
| Increase(-)/decrease(+) of receivables | -917 | 1,717 |
| Increase(+)/decrease(-) of liabilities | 2 | 9 |
| **Increase(-)/decrease(+) in working capital** | **-915** | **1,726** |
| | **-1,313** | **1,647** |
| **Cash flow from investing activities** | | |
| Investment in subsidiaries | – | – |
| | **–** | **–** |
| **Cash flow from financing activities** | | |
| Received interests | 0 | 1 |
| Received dividends from subsidiaries | 1,094 | 76 |
| Paid dividends | -1,783 | -1,783 |
| Received group contribution | 2,035 | 1,348 |
| Paid group contribution | -33 | -1,289 |
| | **1,313** | **-1,647** |
| **Cash flow for the year** | **–** | **–** |
| Cash and cash equivalents at the beginning of the year | – | – |
| **Cash and cash equivalents at the end of the year** | **–** | **–** |

## Parent company income *

| SEK millions | *Note* | 2017 | 2016 |
|---|---|---|---|
| Administration costs | | -14 | -13 |
| Other operating income | | 0 | 0 |
| Other operating costs | | -7 | -5 |
| Operating income | | -21 | -18 |
| Dividends from subsidiaries | | 1,094 | 76 |
| Interest income and similar result items | *11* | 2 | 10 |
| Interest expenses and similar result items | *11* | -2 | -2 |
| Result after financial items | | 1,073 | 66 |
| Change of tax allocation reserve | | -251 | -264 |
| Group contributions | | 1,439 | 2,002 |
| Result before tax | | 2,261 | 1,804 |
| Tax on this year's result | | -258 | -381 |
| **Net income for the year** | | **2,003** | **1,423** |

* The parent company income statement also constitutes its comprehensive income statement.

# Parent company financial position

## Parent company financial position

| SEK millions | Note | 2017 | 2016 |
|---|---|---|---|
| **ASSETS** | | | |
| **Non-current assets** | | | |
| ***Financial non-current assets*** | | | |
| Shares in group companies | *19* | 4,669 | 4,669 |
| | | | |
| **Current assets** | | | |
| ***Current receivables*** | | | |
| Receivables on group companies | | 8,891 | 8,548 |
| Other receivables | | 3 | 6 |
| | | 8,894 | 8,554 |
| | | | |
| ***Cash and cash equivalents*** | | **–** | **–** |
| **Total current assets** | | **8,894** | **8,554** |
| | | | |
| **TOTAL ASSETS** | | **13,563** | **13,223** |
| | | | |
| **EQUITY AND LIABILITIES** | | | |
| **Equity** | | | |
| ***Restricted equity*** | | | |
| Share capital | | 1,117 | 1,117 |
| Statutory reserve | | 1,270 | 1,270 |
| | | 2,387 | 2,387 |
| ***Unrestricted equity*** | | | |
| Profit brought forward | | 7,414 | 7,774 |
| Net income for the year | | 2,003 | 1,423 |
| | | 9,417 | 9,197 |
| | | | |
| **Total equity** | | **11,804** | **11,584** |
| | | | |
| **Untaxed reserves** | | | |
| Tax allocation reserve, taxation 2012 | | – | 140 |
| Tax allocation reserve, taxation 2014 | | 320 | 320 |
| Tax allocation reserve, taxation 2015 | | 304 | 304 |
| Tax allocation reserve, taxation 2016 | | 68 | 68 |
| Tax allocation reserve, taxation 2017 | | 577 | 577 |
| Tax allocation reserve, taxation 2018 | | 391 | – |
| | | 1,660 | 1,409 |
| **Current liabilities** | | | |
| Liabilities to group companies | | 38 | 50 |
| Accounts payable | | 0 | 0 |
| Current tax liabilities | | 61 | 180 |
| | | 99 | 230 |
| | | | |
| **TOTAL EQUITY AND LIABILITIES** | | **13,563** | **13,223** |

# Changes in parent company equity

## Changes in parent company equity

| SEK millions | Share capital | Statutory reserve | Unrestricted equity | Total |
|---|---|---|---|---|
| **As of December 31, 2015** | **1,117** | **1,270** | **9,557** | **11,944** |
| **2016** | | | | |
| **Comprehensive income** | | | | |
| Net income | – | – | 1,423 | 1,423 |
| | – | – | 1,423 | 1,423 |
| **Transactions with shareholders** | | | | |
| Dividends | – | – | -1,783 | -1,783 |
| **As of December 31, 2016** | **1,117** | **1,270** | **9,197** | **11,584** |
| **2017** | | | | |
| **Comprehensive income** | | | | |
| Net income | – | – | 2,003 | 2,003 |
| | – | – | 2,003 | 2,003 |
| **Transactions with shareholders** | | | | |
| Dividends | – | – | -1,783 | -1,783 |
| **As of December 31, 2017** | **1,117** | **1,270** | **9,417** | **11,804** |

The share capital of SEK 1,116,719,930 (1,116,719,930) is divided among 419,456,315 (419,456,315) shares.

# Notes to the financial statements

## Accounting principles

The accounting principles mentioned below are only the ones that are relevant for the parent company and the consolidated group.

### Basis of preparation

The consolidated financial statements have been prepared on a historical cost basis, except for certain financial instruments including derivatives that are valued at fair value. The statements are presented in SEK millions, unless otherwise stated.

### Statement of compliance

Alfa Laval applies International Financial Reporting Standards (IFRS) as adopted by the European Union. Furthermore, recommendation RFR 1 "Supplementary accounting principles for consolidated groups" from the Council for Financial Reporting in Sweden is applied. Alfa Laval follows the Guidelines on Alternative Performance Measures issued by ESMA (European Securities and Markets Authority).

The accounting and valuation principles of the parent company comply with the Swedish Annual Accounts Act and the recommendation RFR 2 "Accounting for legal entities" issued by the Council for Financial Reporting in Sweden.

### Changed/implemented accounting principles

The company has chosen to only comment the changed accounting principles that are relevant for the company's financial reporting.

During 2017 the amendments to IAS 7 "Statement of Cash Flows" have been implemented. The amendments mean that changes in loans that are part of the financing activities in the cash flow statement must be specified both on changes that have a cash flow effect and changes that do not. The disclosures can be made via a movement schedule of the changes between the opening balance and the closing balance of the loans, split on increase in loans, amortisation of loans, changes due to sale/acquisition of subsidiaries, currency translation effects and other changes.

During 2016 the Guidelines on Alternative Performance Measures issued by ESMA (European Securities and Markets Authority) were implemented.

During 2016 the changes in the Swedish Annual Accounts Act were also implemented. These meant that:

- contingent liabilities are no longer reported both as memorandum items and in the notes but only in the notes,
- events after the closing date are no longer presented in the Board of Directors' Report but instead in the notes and
- the proposed disposition of earnings is presented both in the Board of Directors' Report and in the notes.

### Critical accounting principles

IFRS 3 "Business Combinations" means that goodwill and intangible assets with indefinite useful life are not amortised. They are instead tested for impairment both annually and when there is an indication. The effect of IFRS 3 can be considerable for the Group if the profitability within the Group or parts of the Group goes down in the future, since this could trigger a substantial impairment write down of the goodwill according to IAS 36 "Impairment of Assets". Such a write down will affect net income and thereby the financial position of the Group. The reported goodwill is SEK 19,775 (20,436) million at the end of the year. No intangible assets with indefinite useful life other than goodwill exist.

The Group has defined benefit plans, which are reported according to IAS 19 "Employee Benefits". This means that the plan assets are valued at fair value and that the present value of the benefit obligations in the defined benefit plans is decided through yearly actuarial calculations made by independent actuaries. If the value of the plan assets starts to decrease at the same time as the actuarial assumptions increase the benefit obligations the combined effect could result in a substantial deficit. The monetary magnitude comes from the fact that the deficit is the difference between two large numbers. The effect on profit and loss however only affects other comprehensive income and not net income. The risk has been limited since many of these defined benefit schemes are closed for new participants and replaced by defined contribution schemes.

The Group's reporting of provisions according to IAS 37 means that SEK 2,685 (2,964) million is reported as other provisions. This constitutes 5.1 (5.6) percent of the Group's assets and is important for the assessment of the Group's financial position, not the least since provisions normally are based on judgements of probability and estimates of costs and risks. If the accounting principles for provision would be changed sometime in the future, this could have a substantial impact on the Group's financial position.

IAS 39 "Financial Instruments: Recognition and Measurement" has a considerable effect on the Groups comprehensive income and equity and may have a substantial effect on net income if the used derivatives turns out not to be effective.

### Key sources of estimation uncertainty

The key source of estimation uncertainty is related to the impairment test of goodwill, since the testing is based on certain assumptions concerning future cash flows. See the section on critical accounting principles above for further details.

### Judgements

In applying the accounting policies Management has made various judgements, apart from those involving estimations, that can significantly affect the amounts recognised in the financial statements. These judgements mainly relate to:

- classification of financial instruments;
- probability in connection with business risks;
- determination of percentage of completion in work in progress;
- recoverability of accounts receivable;
- obsolescence in inventory; and
- whether a lease entered into with an external lessor is a financial lease or an operational lease.

### Associates

The Group does not own shares in any material companies that fulfil the definition of an associate in IAS 28 "Investments in Associates", that is where the ownership is between 20 and 50 percent.

### Borrowing costs

Borrowing costs are accounted for according to IAS 23 "Borrowing Costs", which means that the borrowing costs are charged to the profit and loss in the period to which they relate.

Transaction costs that arise in connection with raising a loan are capitalised and amortised over the maturity of the loan according to IAS 39 "Financial Instruments: Recognition and Measurement". The capitalised amount is reported net against the raised loan.

**Business combinations – consolidation principles**
The consolidated financial statements have been prepared according to IFRS 3 “Business Combinations” and IFRS 10 “Consolidated financial statements”.

An entity shall be consolidated if a decisive influence is present. Control (decisive influence) is present when Alfa Laval has:

- power over the investee, which is described as having rights to direct the activities that significantly affect the investee’s returns;
- exposure or rights to variable returns from the involvement in the investee; and
- the ability to use its power over the investee to affect the amount of the investor’s returns.

A decisive influence does not need to arise purely through ownership of shares (voting rights). An investor can have a decisive influence over another entity without holding the majority of the shares. An entity must be consolidated until the day the control ceases, even if the control is present only during a limited period.

The consolidated financial statements include the parent company Alfa Laval AB (publ) and the subsidiaries in which it has a decisive influence.

The statement on consolidated financial position has been prepared in accordance with the purchase method, which means that the book value of shares in the subsidiaries is eliminated from the reported equity in the subsidiaries at the time of their acquisition. This means that the equity in the subsidiaries at the time of acquisition is not included in the consolidated equity.

The difference between the purchase price paid and the net assets of the acquired companies is allocated to the step-up values related to each type of asset, with any remainder accounted for as goodwill.

During the first 12 months after the acquisition the value of the goodwill is often preliminary. The reason to this is that experience has shown that there is some uncertainty linked to the different components of the purchase price allocation concerning:

- primarily the calculation of the allocation to different intangible step-up values, that are dependent on different judgemental questions and estimations;
- the calculation of tangible step-up values, that are dependent on external market valuations, which can extend in time before they can be finalised;
- adjustments of the purchase price contingent on contractual terms, that are dependent on the final size of the operating capital at the acquisition date, once this has been audited and the outcome has been approved by the parties; and
- the final value of the acquired equity, which is also dependent on the audit of the acquired closing balance sheet.

Since the goodwill is a residual that emerges once all other parameters in the purchase price allocation have been established, it will be preliminary and open for changes until all other values are final.

At acquisitions where there is a goodwill it should be stated what the goodwill is relating to. Since goodwill by definition is a residual this is not always that easy. Generally speaking the goodwill is usually relating to estimated synergies in procurement, logistics and corporate overheads. It can also be claimed that the goodwill is relating to the acquired entity’s ability to over time recreate its intangible assets. Since the value of the intangible assets at the time of acquisition only can be calculated on the assets that exist then, no value can be attached to the patents etc. that the operations manage to create in the future partially as a replacement for the current ones and these are therefore referred to goodwill.

Goodwill and intangible assets with indefinite useful life are not amortised. These assets are instead tested for impairment both annually and when there is an indication. The impairment test is made according to IAS 36 “Impairment on assets”.

Transaction costs are reported in net income. If the value of an additional purchase price is changed the change is reported in net income. In business combinations achieved in stages the goodwill is calculated and valued when the acquirer obtains control over a business. If the acquirer previously has reported an equity interest in the company the accumulated change in value of the holding is recognised in net income at the acquisition date. Changes in holdings in subsidiaries, where the majority owner does not lose its decisive influence, are reported in equity. This means that these transactions no longer will generate goodwill or lead to any gains or losses. In addition, the transaction will result in a transfer between owners of the parent and non-controlling interests in equity. If the non-controlling interest’s share of reported losses is higher than its reported share of the equity, a negative non-controlling interest is reported.

**Comparison distortion items**
Items that do not have any link to the normal operations of the Group or that are of a non-recurring nature are classified as comparison distortion items. In the consolidated comprehensive income statement these are reported gross as a part of the most concerned lines, but are specified separately in Note 8. To report these together with other items in the consolidated comprehensive income statement without this separate reporting in a note would have given a comparison distortion effect that would have made it difficult to judge the development of the ordinary operations for an outside viewer. Comparison distortion items affecting operating income are reported as a part of operating income, while comparison distortion items affecting the result after financial items are reported as a part of the financial net.

**Comprehensive income**
Alfa Laval has chosen to report the items in other comprehensive income as a part of one statement over comprehensive income instead of reporting the result down to net income for the year in one statement and the result below this down to comprehensive income in a separate statement.

Other comprehensive income is referring to items that are not transactions with shareholders and relates to for instance cash flow hedges, market valuation of external shares, translation differences and revaluations and deferred tax related to these.

**Disclosures of interest in other entities**
Information about interests in subsidiaries, associates, joint arrangements and unconsolidated structured entities must be disclosed in accordance with IFRS 12 “Disclosures of interest in other entities”. The purpose with these disclosures is to enable the users of the financial reports to understand:

- the composition of the group;
- the effect of the interests on the financial statements; and
- any risks with the current interests.

Substantial qualitative and quantitative disclosures must be made of each interest. The disclosure requirements include the following:

- Financial information regarding subsidiaries with a considerable part of non-controlling interests.
- Disclosures on the judgments and estimation that have been made in judging whether an entity shall be consolidated or not and if an associate shall be accounted for or whether a joint arrangement is considered to be joint operation or a joint venture.
- Financial disclosures on interests in material associates and joint arrangements.

**Disclosures relating to the company's shares**
Paragraph 2a in chapter 6 of the Swedish Annual Accounts Act requires listed companies to disclose certain information relating to the company's shares in the Board of Directors' Report. This information is found at the end of the Board of Directors' Report, in the "Changes in consolidated equity" and in Note 6.

**Employee benefits**
Employee benefits are reported according to IAS 19 "Employee Benefits".

The present value of the benefit obligations in the defined benefit plans is decided through yearly actuarial calculations made by independent actuaries. The plan assets are valued at fair value. The net plan asset or liability is arrived at in the following way.

| | |
|---|---|
| + | the present value of the defined benefit obligation at December 31 |
| - | the fair value of the plan assets at December 31 |
| = | a net liability if positive / a net asset if negative |

If the calculation per plan gives a negative amount, thus resulting in an asset, the amount to be recognised as an asset for this particular plan is the lower of the two following figures:

– The above net negative amount.

– The present value of any economic benefits available in the form of refunds from the plan or reductions in future contributions to the plan. This is referred to as the asset ceiling.

The items that relate to the vesting of defined benefit pensions and gains and losses that arise when settling a pension liability and the financial net concerning the defined benefit plan are reported in the income statement above net income. Past service costs are recognised in the income statement already when the plan is amended or curtailed.

Actuarial gains and losses are accounted for currently in other comprehensive income. Changes in the obligations that relate to changes in actuarial assumptions are accounted for in other comprehensive income. None of these actuarial items will ever be reported in operating income, but will instead remain in other comprehensive income.

The return on plan assets is calculated with the same interest rate as the discount rate. The difference between the actual return on plan assets and the interest income in the previous sentence is reported in other comprehensive income.

The plan assets are specified on different types of assets.

Sensitivity analysis must be made concerning reasonable changes in all assumptions made when calculating the pension liability.

The difference between short and long-term remunerations focuses on when the commitment is expected to be settled rather than the link to the employee's vesting of the commitment.

Termination benefits are accounted for at the earliest of the following – the time when the benefit offer cannot be withdrawn, alternatively in accordance with IAS 37 as a part of for instance restructuring the operations.

For Swedish entities the actuarial calculations also include future payments of special salary tax. The Swedish tax on returns from pension funds is reported currently as a cost in the profit and loss and are not included in the actuarial calculation for defined benefit pension plans.

The discount rate used to calculate the obligations is determined based on the market yields in each country at the closing date on high quality corporate bonds with a term that is consistent with the estimated term of the obligations. In countries that lack a deep market in such bonds the country's government bonds are used instead.

The costs for defined contribution plans are reported in Note 6.

The Swedish ITP plan is a multi-employer plan insured by Alecta. It is a defined benefit plan, but since the plan assets and liabilities cannot be allocated on each employer it is reported as a defined contribution plan according to item 30 in IAS 19. The construction of the plan does not enable Alecta to provide each employer with its share of the assets and liabilities or the information to be disclosed. The cost for the plan is reported together with the costs for other defined contribution plans in Note 6. Alecta reported a collective consolidation level at December 31, 2017 of 154 (149) percent. The collective consolidation level is defined as the fair value of Alecta's plan assets in percent of the insured pension commitments calculated according to Alecta's actuarial assumptions, which are not in accordance with IAS 19. Such a surplus can be distributed among the employers or the beneficiaries, but there is no agreement concerning this that enables the company to report a receivable on Alecta.

**Events after the closing date**
Events after the closing date are reported according to IAS 10 and the Swedish Annual Accounts Act in the notes.

**Fair value measurement**
IFRS 13 "Fair Value Measurement" describes how a fair value is established when such value is to be or may be used in accordance with each IFRS standard. In accordance with IFRS a fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (i.e. an exit price).

The standard presents elucidations on the fair value concept including the following areas:

– Concepts such as "highest and best use" and "valuation premise" are described. These are only applicable on non-financial assets.

– Market participants are assumed to act in a way that maximizes the value for all involved parties in situations where there is no guidance concerning the calculation of fair value in individual IFRS standards.

– The effect of so called block discounts (large position in relation to the market) may never be included in the calculation of fair value.

– Deciding fair value when the market activity is falling.

Disclosures must be made to explain what valuation models that are used and what information that is used in these models and which effects the valuation has caused in the result.

**Financial instruments**
The reporting of financial instruments is governed by the following four accounting and financial reporting standards:

– IAS 39 "Financial Instruments: Recognition and Measurement";

– IAS 32 "Financial Instruments: Presentation";

– IFRS 7 "Financial Instruments: Disclosures"; and

– IFRS 13 "Fair Value Measurement".

IAS 39 means that financial derivatives, holdings of bonds and external shares are adjusted to fair value. IFRS 7 contains expanded disclosure requirements related to the significance of financial instruments for the company's financial position and performance and the nature and extent of risks arising from financial instruments.

IFRS 13 describes how a fair value is established when such value is to be or may be used in accordance with each IFRS standard. Disclosures must be made to explain what valuation models that are used and what information that is used in these models and which effects the valuation has caused in the result.

Both IAS 39 and IFRS 7 formally contain a considerable amount of information that should be presented. According to IFRS 7.B3 the company however should decide how much detail it provides in order not to overburden the financial statements with excessive details.

Financial assets are classified into four different portfolios:

– Financial assets at fair value through profit or loss;
– Held to maturity investments;
– Loans and receivables; and
– Available for sale financial assets.

The Financial assets at fair value through profit or loss are split on:

– Designated upon initial recognition;
– Held for trading; and
– Derivatives used for hedging.

Financial liabilities are classified into two portfolios:

– Financial liabilities at fair value through profit or loss; and
– Loans.

The Financial liabilities at fair value through profit or loss are split on:

– Designated upon initial recognition;
– Held for trading; and
– Derivatives used for hedging.

The classification into different portfolios has a direct impact on the valuation of the instruments, i.e. if the instrument is valued at fair value or amortised cost. “Loans and receivables”, “Held to maturity investments” and “Loans” are valued at amortised cost, whereas “Financial assets and Financial liabilities at fair value through profit or loss” and “Available for sale financial assets” are valued at fair value. Derivatives are always classified in the portfolios “Financial assets and Financial liabilities at fair value through profit or loss”.

The amortised cost is normally equal to the amount recognised upon initial recognition, less any principal repayments and plus or minus any effective interest adjustments.

Prepaid costs, prepaid income and advances from customers are not defined as financial instruments since they will not result in future cash flows.

Disclosures must be made on the methods and, when a valuation technique is used, the assumptions applied in determining the fair value of each class of financial assets and liabilities. The methods are to be classified in a hierarchy of three levels:

1. Quoted prices in active markets;
2. Other inputs than quoted prices that are directly observable (prices) or indirectly observable (derived from prices); and
3. Unobservable market data.

The fair values of holdings of bonds are arrived at using market prices according to level 1. The effect of the measurement at fair value is reported in net income. The fair value adjustment of these instruments is reflected directly on the item bonds in the statement of financial position.

The fair values of shares in external companies are arrived at using market prices according to level 1 or other inputs according to level 2. The effect of the measurement at fair value is reported in other comprehensive income. The fair value adjustment of these instruments is reflected directly on the item other long-term securities in the statement of financial position.

The fair values of the Group’s currency forward contracts, currency options, interest-rate swaps, metal forward contracts and electricity futures are arrived at using market prices according to level 1. The fair value changes are arrived at by comparing the conditions of the derivative entered into with the market price for the same instrument at the closing date and with the same maturity date. The effect of the measurement at fair value is reported in other comprehensive income if the derivative constitutes an effective cash flow hedge and otherwise on the concerned line above net income. The fair value adjustment of these instruments is reported as derivative assets or derivative liabilities in the statement of financial position.

For each class of financial instruments disclosures shall be made on credit risk and an analysis of financial assets that are past due or impaired. Within Alfa Laval credit risk is in reality only related to accounts receivable. The disclosures just mentioned are therefore to be found in Note 21. The factors to be taken into account when providing for bad debts are:

– If the customer despite reminders does not pay, in spite of the fact that the customer has not raised any objections against the invoice or part of the invoice;
– For how long the invoice has been past due;
– If the customer has cancelled their payments;
– If the customer has asked for composition; and
– If the customer has filed for bankruptcy.

Based on this the best estimate based on past experience is made on which amount that is probable to be received and the difference is provided for as unsecure.

Only at a final loss the receivable is written off.

**Group contributions to and from the parent company**

The parent company is accounting for group contributions according to the alternative rule in RFR 2 issued by the Council for Financial Reporting in Sweden. This means that both received and given group contributions are reported as appropriations in the income statement.

**Hedge accounting**

Alfa Laval only applies two types of hedge accounting: cash flow hedges and hedges of net investments in foreign operations.

*Cash flow hedges*

Alfa Laval has implemented documentation requirements to qualify for hedge accounting on derivative financial instruments.

The effect of the fair value adjustment of derivatives is reported as a part of other comprehensive income for the derivatives where hedge accounting is made (according to the cash flow hedging method) and above net income only when the underlying transaction has been realised. Hedge accounting requires the derivative to be effective within an 80 – 125 percent range. For the part of an effective derivative that exceeds 100 percent effectiveness the fair value adjustment is reported above net income. For the derivatives where hedge accounting is not made the fair value valuation is reported above net income. The fair value adjustment of derivatives is reported separately from the underlying instrument as a separate item called derivative assets/derivative liabilities in the statement of financial position.

*Hedges of net investments in foreign operations*

In order to finance acquisitions of foreign operations loans are raised, if possible, in the same currency as the net investment. The loans thereby constitute a hedge of the net investment in each currency. Exchange rate differences relating to these loans are therefore booked to other comprehensive income.

### Income Taxes
Income taxes are reported in accordance with IAS 12 ”Income Taxes”.

Current tax is the amount of income taxes payable (recoverable) in respect of the taxable profit (tax loss) for a period. Current tax liabilities (receivables) for the current and prior periods are measured at the amount expected to be paid to (recovered from) the tax authorities, using the tax rates (and tax laws) that have been enacted or substantively enacted by the closing date. In essence, this means that current tax is calculated according to the rules that apply in the countries where the profit was generated.

Deferred tax liabilities are the amounts of income taxes payable in future periods in respect of taxable temporary differences. Deferred tax liabilities are recognised for all taxable temporary differences, except for goodwill.

Deferred tax assets are the amounts of income taxes recoverable in future periods in respect of: (a) deductible temporary differences; (b) the carry-forward of unused tax losses; and (c) the carry-forward of unused tax credits. Deferred tax assets are recognised for all deductible temporary differences to the extent that it is probable (>50 percent) that taxable profit will be available against which the deductible temporary difference can be utilised. Deferred tax assets are recognised for the carry-forward of unused tax losses and unused tax credits to the extent that it is probable (>50 percent) that future taxable profit will be available against which the unused tax losses and unused tax credits can be utilised.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted by the closing date.

If it is not any longer probable that sufficient taxable profits will be available against which a deferred tax asset can be utilised, then the deferred tax asset is reduced accordingly.

### Inventories
The Group’s inventory has been accounted for after elimination of inter-company gains. The inventory has been valued according to the “First-In-First-Out” (FIFO) method at the lowest of cost or net realisable value, taking into account obsolescence.

This means that raw material and purchased components normally are valued at the acquisition cost, unless the market price has fallen. Work in progress is valued at the sum of direct material and direct labour costs with a mark-up for the product’s share in capital costs in the manufacturing and other indirect manufacturing costs based on a forecasted assumption on the capacity utilisation in the factory. Finished goods are normally valued at the delivery value (i.e. at cost) from the factory if the delivery is forthcoming. Spare parts that can be in the inventory during longer periods of time are normally valued at net realisable value.

### Joint ventures
Joint ventures are consolidated according to IFRS 11 “Joint arrangements”. Joint arrangements are defined as a contractual arrangement where two or more parties have a joint decisive influence.

It is crucial to be able to judge whether a party has control over another party, that is decisive influence or if it rather is a substantial or common influence. If it is the latter, then it is a so called joint arrangement, which could be either:

- a joint operation; or
- a joint venture.

Jointly owned assets and joint activities are called joint operations. Each owner or party accounts for his share of assets, liabilities, revenues and costs.

Joint ventures are consolidated according to the equity method. This means that the interest is accounted for on one line in the consolidated statement of financial position and that the share of the result is accounted for on one line in the consolidated statement of comprehensive income. It is the net income in the joint ventures that is booked into one line in the operating income. The counter entry is an increase or decrease of the value of shares in joint ventures. Received dividends reduce the value of the shares in joint ventures. The sales volume and other result items and the balance items in the joint ventures will no longer be reported in the statements over consolidated comprehensive income and consolidated financial position in any of the two owner companies.

### Leasing
Leasing is accounted for in accordance with IAS 17 “Leases”.

When Alfa Laval is the lessor, leased assets that are classified as financial leases are accounted for as a financial receivable from the lessee in the statement on financial position. The leasing fee received from the lessee is accounted for as financial income calculated as interest on the outstanding receivable and as amortisation of the receivable.

When Alfa Laval is the lessee, leased assets that are classified as financial leases are accounted for as capitalised assets and a corresponding financial payable to the lessor in the statement on financial position. The leasing fee to the lessor is accounted for as financial cost calculated as interest on the outstanding payable and as amortisation of the payable. Depreciation according to plan is done in the same manner as purchased assets.

Leased assets classified as operational leases are not capitalised. The leasing fees are expensed as incurred.

### Levies
Levies relate to levies/taxes that governmental or corresponding bodies are charging companies in accordance with laws or regulations with exception of income taxes, penalties and fines. IFRIC 21 “Levies” is an interpretation that clarifies when a liability for levies is to be accounted for. The obligating event that gives rise to the reporting of a liability is the activity that triggers the payment of the levy. IFRIC 21 only treats the accounting for the liability side and not whether the debit side is a cost or an asset. One example of a levy is the Swedish real estate tax, which is levied on the owner of a property at January 1. At inception of the year the liability is booked and a corresponding prepaid cost, which is then phased as a cost over the year.

### Long-term construction projects
Revenue for projects is recognised using the percentage of completion method in IAS 11 “Construction Contracts”. This means that when the outcome of a construction project can be calculated reliably, the revenue and the costs related to the project are recognised in relation of the percentage of completion at the closing date. An estimated loss is recognised immediately. The percentage of completion for a construction project is normally established through the relationship between incurred project costs for work performed at the closing date and the estimated total project costs.

Disclosures shall be made for:

- the amount of recognised project sales revenue;
- the aggregated amount of costs incurred and recognised profits less recognised losses;
- retentions;
- the gross amount due from customers for work in progress;
- advances; and
- the gross amount due to customers for work in progress.

The amount of recognised project sales revenue is the amount recognised in consolidated comprehensive income as a reflection of the percentage of completion of the projects. It has nothing to do with the volume of progress billing in the period. This figure shows how much of the net invoicing of the Group that originates from project sales.

The aggregated amount of costs incurred and recognised profits less recognised losses shows the total volume of work performed on ongoing projects at the closing date. It has nothing to do with the recognised costs in the consolidated comprehensive income statement.

Retentions are amounts of progress billing that are not paid according to the contract until conditions specified in the contract have been satisfied or until defects have been rectified. This has a negative effect on the profitability of the project. Progress billing is amounts billed for work performed on a project whether or not they have been paid by the customer.

The gross amount due from customers for work in progress on plant projects is the net amount of:

1. + costs incurred
2. + recognised profits
3. - recognised losses
4. - progress billing

for each project in progress where the net of the first three items is higher than item 4. The figure shows how much progress billing is lacking behind the work performed.

Advances are amounts received from the customer before the related work is performed and are usually very important for the overall profitability of the project.

The gross amount due to customers for work in progress on plant projects is the net amount of:

1. + costs incurred
2. + recognised profits
3. - recognised losses
4. - progress billing

for each project in progress where the net of the first three items is smaller than item 4. The figure shows how much progress billing is ahead of the work performed.

### Non-current assets (tangible and intangible)

Assets have been accounted for at cost, net after deduction of accumulated depreciation according to plan. Depreciation according to plan is based on the assets' acquisition values and is calculated according to the estimated useful life of the assets.

**The following useful lives have been used:**

| | |
|---|---|
| *Tangible:* | |
| Computer programs, computers | 3.3 years |
| Office equipment | 4 years |
| Vehicles | 5 years |
| Machinery and equipment | 7–14 years |
| Land improvements | 20 years |
| Buildings | 25–33 years |
| *Intangible:* | |
| Patents and unpatented know-how | 10–20 years |
| Trademarks | 10–20 years |
| Licenses, renting rights and similar rights | 10–20 years |

The depreciation is made according to the straight-line method.

Any additions to the purchase price in connection with investments in non-current assets or acquisitions of businesses are amortised over the same period as the original purchase price. This means that the time when the asset is fully depreciated is identical regardless of when payments are made. This is a reflection of the fact that the estimated useful life of the asset is the same.

Upon sale or scrapping of assets, the results are calculated in relation to the net book value after depreciation according to plan. The result on sales is included in operating income.

*Impairment of assets*

When there are indications that the value of a tangible asset or an intangible asset with a definite useful life has decreased, there is a valuation made if it must be written down according to IAS 36 "Impairment of Assets". If the reported value is higher than the recoverable amount, a write down is made that burdens net income. When assets are up for sale, for instance items of real estate, a clear indication of the recoverable amount is received that can trigger a write down.

Goodwill and intangible assets with indefinite useful life are not amortised. These assets are instead tested for impairment both annually and when there is an indication. The impairment test is made according to IAS 36 "Impairment on assets".

The recoverable amount for goodwill and intangible assets with indefinite useful life is determined from the value in use based on discounted future cash flows. For other assets the recoverable amount is normally determined from the fair value less costs to sell based on an observable market price.

For the impairment testing of goodwill, four of Alfa Laval's operating segments, the four business divisions "Energy", "Food & Water", "Marine" and "Greenhouse" have been identified as the cash-generating units within Alfa Laval. Technically a recently acquired business activity could be followed independently during an initial period, but acquired businesses are normally integrated into the divisions at a fast rate. This means that the independent traceability is lost fairly soon and then any independent measurement and testing becomes impracticable. The net present value is based on the projected EBITDA figures for the next twenty years, less projected investments and changes in operating capital during the same period. The used discount rate is the pre-tax weighted average cost of capital (WACC). The growth rate for the divisions during the period is the perceived expected average industry growth rate. No terminal value has been calculated since this would render a very large and uncertain value, which could give an erroneous impression that no impairment exists.

### Non-current assets held for sale and discontinued operations

The Group is applying IFRS 5 "Non-current Assets Held for Sale and Discontinued Operations". IFRS 5 specifies the accounting for assets held for sale and the disclosures to be made for discontinued operations.

Assets held for sale are to be measured at the lower of the carrying amount and fair value, less sales costs. No depreciation of such assets is made. An asset held for sale is an asset whose carrying amount will be recovered basically through a sale rather than through continuing use. It must be available for immediate sale in its current condition. The sale must be highly probable, that is a decision must have been made and an active sales effort must have been initiated. The sale must be expected to be finalised within one year. Non-current assets are reclassified to current assets and presented separately in the statement on financial position.

### Objectives, policies and processes for managing capital

IAS 1 "Presentation of Financial Statements" paragraphs 134 and 135 contain disclosure requirements on the company's objectives, policies and processes for managing capital. This information is disclosed in a separate section after the description of the accounting principles.

### Other operating income and other operating costs

Other operating income relates to for instance commission, royalty and license income.

Other operating costs refer mainly to restructuring costs and to royalty costs.

Comparison distortion items that affect the operating income are reported in other operating income and other operating costs.

**Provisions**

The Group is applying IAS 37 "Provisions, Contingent Liabilities and Contingent Assets" for the reporting of provisions, contingent liabilities and contingent assets.

A provision is recognised when and only when:

- there is a present legal or constructive obligation as a result of past events;
- it is probable that a cost will be incurred in settling the obligation; and
- a reliable estimate can be made of the amount of the obligation.

The amount recognised as a provision is the best estimate of the cost required to settle the present obligation at the closing date.

In measuring the provision:

- risks and uncertainties are taken into account;
- the provisions are discounted, where the effect of the time value of money is material. When discounting is used, the increase of the provision over time is recognised as an interest cost;
- future events, such as changes in law and technology, are taken into account where there is sufficient objective evidence that they will occur; and
- gains from the expected disposal of assets are not taken into account, even if the expected disposal is closely linked to the event giving rise to the provision.

If a reimbursement of some or all of the costs to settle a provision is expected (e.g. through insurance contracts, indemnity clauses or supplier's warranties), the reimbursement is recognised:

- when and only when, it is virtually certain that the reimbursement will be received if the obligation is settled. The amount recognised for the reimbursement must not exceed the amount of the provision; and
- as a separate asset (gross). In the consolidated comprehensive income statement, however, the income related to the reimbursement is netted against the cost for the provision.

Provisions are reviewed at each closing date and adjusted to reflect the current best estimate. If it is no longer probable that a payment to settle the obligation will be incurred, the provision is reversed.

A provision must only be used for the purpose it was originally recognised for. Provisions are not recognised for future operating losses. An expectation of future operating losses is though an indication that certain assets of the operation may be impaired. If a contract is onerous, the present obligation under the contract is recognised and measured as a provision, once the assets used in order to finalize the contract have been tested for impairment.

A provision for restructuring costs is recognised only when the general recognition criteria are met. A constructive obligation to restructure arises only when there is:

- a detailed formal plan for the restructuring, identifying at least:
  - a) the business or part of a business concerned;
  - b) the principal locations affected;
  - c) the location, function and approximate number of employees who will be compensated for terminating their services;
  - d) the costs that will be undertaken; and
  - e) when the plan will be implemented; and
- a valid expectation in those affected that the restructuring will be carried out.

A management or board decision to restructure does not give rise to a constructive obligation at the closing date unless the company has, before the closing date:

- started to implement the restructuring plan; or
- communicated the restructuring plan to those affected by it in a sufficiently specific manner to raise a valid expectation in them that the restructuring will happen.

When a restructuring involves the sale of an operation, no obligation arises for the sale until the company is committed to the sale, i.e. through a binding sales agreement.

A restructuring provision only includes the direct costs arising from the restructuring, which are those that are both:

- necessarily entailed by the restructuring; and
- not associated with the ongoing activities of the company.

**Research and development**

Research costs are charged to the result in the year in which they are incurred. Development costs are charged to the result in the year in which they are incurred provided that they do not fulfil the conditions for instead being capitalised according to IAS 38 "Intangible Assets".

**Revenue recognition**

Revenue recognition is made according to IAS 18 "Revenue" and IAS 11 "Construction Contracts".

Revenues from sale of goods, services and projects are reported as "Net sales" in the statement of consolidated comprehensive income.

*Sale of goods*

Revenue from sale of goods is recognised when all of the following conditions have been fulfilled:

- the seller has transferred the significant risks and rewards of ownership of the goods to the buyer;
- the seller retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold;
- the amount of revenue can be measured reliably;
- it is probable that the seller will get paid; and
- the costs incurred or to be incurred related to the transaction can be measured reliably.

The revenue recognition is usually governed by the delivery terms used in the sale. Net sales are referring to sales value less sales taxes, cancellations and discounts.

*Sale of services*

To the extent that Alfa Laval also delivers services the three last conditions above apply together with:

- the stage of completion at the closing date can be measured reliably.

*Project sales*

Revenue for projects is recognised using the percentage of completion method in IAS 11 "Construction Contracts", see above under "Long-term construction projects".

**Operating segments**

IFRS 8 means that the reporting of operating segments must be made according to how the chief operating decision maker monitors the operations, which may deviate from IFRS. Furthermore information according to IFRS for the company as a whole must be given about products and services as well as geographical areas and information about major customers.

The difference between the operating income for the operating segments and the operating income according to IFRS for the company as a whole is explained by two reconciliation items.

Alfa Laval's operating segments are the divisions. The chief operating decision maker within Alfa Laval is its Board of Directors.

**Transactions in foreign currencies**

Receivables and liabilities denominated in foreign currencies have been valued at year-end rates of exchange.

Within the Group, exchange gains and losses on loans denominated in foreign currencies that finance acquisitions of foreign subsidiaries are transferred to other comprehensive income as foreign currency translation adjustments if the loans act as a hedge to the acquired net assets. There they offset the translation adjustments resulting from the consolidation of the foreign subsidiaries. In the parent company, these exchange differences are reported above net income.

IAS 21 "The Effects of Changes in Foreign Exchange Rates" covers among other things the existence of functional currencies. Almost all of Alfa Laval's subsidiaries are affected by changes in foreign exchange rates for their procurement within the Group. They do however usually sell in their local currency and they have more or less all of their non-product related costs and their personnel related costs in their local currency. This means that none of Alfa Laval's subsidiaries qualify for the use of another functional currency than the local currency, with the following exception. Subsidiaries in highly inflationary countries report their closings in the functional hard currency that is valid in each country, which in all cases is USD. During 2017 Venezuela is regarded as a highly inflationary country.

In the consolidation, the foreign subsidiaries have been translated using the current method. This means that assets and liabilities are translated at closing exchange rates and income and expenses are translated at the year's average exchange rate. The translation difference that arises is a result of the fact that net assets in foreign companies are translated at one rate at the beginning of the year and another at year-end and that the result is translated at average rate. The translation differences are part of other comprehensive income.

**Recently issued accounting pronouncements**

International Accounting Standards Board (IASB) has issued the following new or revised accounting pronouncements, which may be applicable on Alfa Laval and are effective for fiscal years beginning on or after January 1, 2018. Alfa Laval has chosen not to make any early adoption of any of these pronouncements.

**IFRS 9**

IFRS 9 "Financial Instruments" replaces the current standard IAS 39 "Financial Instruments: Recognition and Measurement". The changes mainly relate to three areas: classification and measurement, impairments and hedge accounting.

The standard means that the company's business model and the characteristics of the asset influence the classification and measurement of financial assets. The standard means a reduction of the number of valuation categories for financial assets and contains the main categories reported at cost (amortised cost) and fair value through profit or loss.

IAS 39 only considered incurred losses, while IFRS 9 instead has a model for expected credit losses.

The requirement that the efficiency should be between 80-125 percent has been removed in the standard. The possibilities to hedge different types of risk for raw materials have also increased.

IFRS 9 has been adopted by the European Union and becomes effective for financial years beginning on or after January 1, 2018.

IFRS 9 will mean:

- a reallocation of the financial assets on fewer categories than today,
- that the possibilities for hedge accounting and to achieve efficiency will increase and
- that the efficiency test in itself will become easier.

IFRS 9 offers the opportunity to continue with the rules for hedge accounting under IAS 39 even if the company in all other respects implements IFRS 9. Alfa Laval has chosen to apply IFRS 9 in full and not continue with IAS 39 concerning the hedge accounting. IFRS 9, however, means that it is no longer possible to voluntarily stop using hedge accounting.

Alfa Laval will apply IFRS 9 retrospectively with the cumulative effect of initially applying it recognised as an adjustment to the opening balance of unrestricted equity at January 1, 2018. The retrospective application only applies to financial instruments and risks for credit losses existing at January 1, 2018. The adjustment to the opening balance of unrestricted equity at January 1, 2018 will be less than SEK 1 million.

**IFRS 15**

IFRS 15 "Revenue from Contracts with Customers" covers how revenue recognition on contracts with customers shall be made. IFRS 15 supersedes mainly IAS 11 "Construction Contracts" and IAS 18 "Revenue". Revenue recognition is based on five steps:

1. Identify the contract with a customer.
2. Identify the performance obligations in the contract.
3. Determine the transaction price.
4. Allocate the transaction price to the performance obligations in the contract.
5. Recognise revenue when the entity satisfies a performance obligation.

Two or more contracts entered into at or near the same time with the same customer are accounted for as a single contract if:

- the contracts are negotiated as a package; and/or
- the amount of consideration to be paid in the contracts are linked to each other; and/or
- the goods or services in the contracts are a single performance obligation.

A contract modification is treated as a separate contract if added products or services:

- are distinct; and
- have a stand-alone selling price.

An entity shall recognise the revenue when it has satisfied the performance obligation by transferring control over a promised good or service to the customer.

Performance obligations can be satisfied either over time or at a point in time.

An entity transfers control of a good or service over time and therefore satisfies a performance obligation over time and recognises revenue over time if:

- the customer simultaneously receives and consumes the benefits at the same time as the entity performs; or
- the customer controls the asset while the entity creates or enhances the asset; or
- the entity's performance does not create an asset with an alternative use for the entity and there is an enforceable right to payment for the performance completed.

In order to establish the performance over time the entity can use a method based on output (survey/investigation, achieved milestones or delivered units) or a method based on input (incurred costs, worked hours or machine hours).

If a performance obligation is not satisfied over time it is satisfied at a point in time.

To establish the point in time when the customer obtains control of a promised asset and the entity satisfies a performance obligation, the following control criteria must be considered:

- The entity has a present right to payment for the asset.
- The customer has legal title to the asset.
- The customer has physical possession of the asset.
- The customer has the significant risks and rewards of ownership of the asset.
- The customer has accepted the asset.

IFRS 15 has been adopted by the European Union and becomes effective for financial years beginning on or after January 1, 2018. There are three alternatives for the transition with varying degrees of retroactivity.

Alfa Laval will apply IFRS 15 retrospectively with the cumulative effect of initially applying it recognised as an adjustment to the opening balance of unrestricted equity at January 1, 2018. The opening backlog will also be adjusted as per January 1, 2018. The retrospective application only applies to contracts with customers that are not completed contracts at January 1, 2018. The transition effect at January 1, 2018 on the opening balance of unrestricted equity and the opening backlog will be as follows:

IFRS 15 means that the amount of disclosures concerning the revenue recognition will increase.

**IFRS 16**

IFRS 16 “Leases” covers the recognition, measurement, presentation and disclosure of leases by both lessors and lessees. IFRS 16 replaces IAS 17 “Leases”.

For lessees the current classification in operational and financial leases disappears and is replaced by a model where assets and liabilities for all leasing contracts must be recognised in the balance sheet. For leasing contracts where the contract period is maximum 12 months or the leased asset is of low value (USD 5 thousand), there is an option to apply a practical expedient.

For lessors the rules in IAS 17 are basically kept why a classification into operational and financial leases like the current should be done also going forward.

Current operational lease contracts can include both a leasing part and a service part. According to IFRS 16, the company in these cases can choose to separate them from each other and thus only recognise the leasing part in the balance sheet or capitalise the entire contract. The choice impacts by which amount the balance sheet will increase in the end.

IFRS 16 has been adopted by the European Union and becomes effective for financial years beginning on or after January 1, 2019. For lessees the transition to IFRS 16 can be reported either retrospectively according to IAS 8 or the effect of the transition is reported in equity at the date of the transition to IFRS 16. In connection with the transition a practical expedient can be applied that means that the new leasing definition is only applied on new lease contracts instead of on all leasing contracts. Early application is allowed if also IFRS 15 is applied.

Alfa Laval’s assessment is that IFRS 16 will mean that mainly the operational leases concerning properties that Alfa Laval has as lessee will end up in the balance sheet, why the balance sheet total will increase and that the disclosure requirements concerning leases will become more burdening.

International Accounting Standards Board (IASB) has issued the following financial reporting interpretation developed by the International Financial Reporting Interpretations Committee (IFRIC), which may be applicable on Alfa Laval and are effective for fiscal years beginning on or after January 1, 2019. Early application is allowed.

**IFRIC 23**

IFRIC 23 “Uncertainty over Income Tax Treatments” clarifies how to treat uncertain tax positions. A judgement is to be made whether the deciding instance will accept for instance claimed tax deductions or not and that will impact what tax cost and tax liability that will be reported. Alfa Laval cannot see that the company’s current treatment of this deviates from IFRIC 23.

Otherwise Alfa Laval will further evaluate the effects of the application of the new or revised accounting standards or interpretations before each time of application.

**Effect on 2017 if IFRS 15 had been applied**

Consolidated

| SEK millions | Mainly relating to: | Net invoicing 2017 |
|---|---|---|
| Revenue recognised in 2017, but where some performance obligations are satisfied first in 2018 | Installation and commissioning. | -146 |
| Revenue that under IAS 11 and IAS 18 would be recognised in 2018, but where some performance obligations are satisfied already in 2017 | Revenue recognised over time. | 72 |
| **Net effect on net invoicing** | | -74 |
| **Effect 2017 of the changed net invoicing on:** | | |
| Gross margin | | -21 |
| Net income | | -14 |
| **Adjustment to:** | | |
| Opening equity 2018 | | -14 |
| Opening backlog 2018 | | 74 |

# Objectives, policies and processes for managing capital

Alfa Laval defines its managed capital as the sum of consolidated net debt and equity including the part that is attributable to non-controlling interests. At the end of 2017 the managed capital was SEK 28,700 (29,895) million.

The Group's objective when managing capital is to safeguard the Group's ability to continue as a going concern and provide an adequate return for shareholders and benefits for other stakeholders.

When managing the capital, the Group monitors several measures including:

| Measure | | Target | Target | Outcome | | Average over last | | |
|---|---|---|---|---|---|---|---|---|
| | Goal | standard | not set | 2017 | 2016 | 3 years | 5 years | 8 years |
| Invoicing growth per year | ≥5% * | | | -0.9% | -10.3% | 0.2% | 3.7% | 4.5% |
| Adjusted EBITA margin ** | 15% * | | | 15.9% | 15.6% | 16.2% | 16.4% | 17.0% |
| Return on capital employed ** | ≥20% | | | 17.7% | 15.3% | 18.2% | 20.3% | 24.7% |
| Net debt to EBITDA ** | | ≤2.0 | | 1.31 | 1.81 | 1.56 | 1.53 | 1.11 |
| Cash flow from operating activities including investments in fixed assets *** | | 10% | | 10.7% | 12.2% | 12.0% | 12.3% | 12.1% |
| Investments *** | | 2.0% | | 1.9% | 1.7% | 1.8% | 1.7% | 1.8% |
| Return on equity | | | X | 13.9% | 11.8% | 15.8% | 16.6% | 19.1% |
| Solidity | | | X | 39.0% | 38.0% | 37.5% | 37.9% | 40.6% |
| Debt ratio ** | | | X | 0.40 | 0.47 | 0.50 | 0.51 | 0.38 |
| Interest coverage ratio ** | | | X | 28.4 | 24.5 | 25.1 | 23.1 | 25.4 |
| Credit rating | | | X | BBB+ | BBB+ | | | |

* Average over a business cycle. ** Alternative performance measures, defined on page 138. *** in % of sales

These measures are connected to each other as communicating vessels. This means that if actions are taken that primarily aim at a certain measure they will also have an impact on other measures to a varying degree. It is therefore important to consider the whole picture.

In order to maintain a good capital structure, the Group may for instance raise new loans or amortise on existing loans, adjust the amount of dividends paid to shareholders, return capital to shareholders, repurchase own shares, issue new shares or sell assets.

As examples on the Group's active work with managing its capital the following can be mentioned:

– Two tranches of corporate bonds totalling EUR 800 million were issued in September 2014.
– A commercial paper programme of nominally SEK 2,000 million with a duration of 3–5 months was started in the spring 2014.
– The bilateral term loans with Swedish Export Credit from June 2011 and June 2014.
– The senior credit facility with a new banking syndicate from June 2014.
– The finance contracts with the European Investment Bank from September 2009 and December 2013, where bilateral term loans were called for in March 2011 and in June 2014 respectively.
– The repurchases of shares made during 2007, 2008 and 2010.

The repurchases of shares should be viewed in light of that the consolidated cash flows from operations are large enough to finance the build-up of working capital and the mid-size acquisitions of businesses that have been made as well as the dividend to the shareholders.

# Financial risks

Financial risks are referring to financial instruments.

**Financial instruments**
Alfa Laval has the following financial instruments: cash and cash equivalents, deposits, trade receivables, bank loans, trade payables and a limited number of derivative instruments to hedge primarily currency rates or interests, but also the price of metals and electricity. These include currency forward contracts, currency options, interest-rate swaps, metal forward contracts and electricity futures. See Notes 13 and 14 for more information on these financial instruments.

**Financial policy**
In order to control and limit the financial risks, the Board of the Group has established a financial policy. The Group has an aversive attitude toward financial risks. This is expressed in the policy. It establishes the distribution of responsibility between the local companies and the central finance function in Alfa Laval Treasury International, what financial risks the Group can accept and how the risks should be limited.

**Price risk**
There are three different types of price risks: currency risk, interest risk and market risk. See below.

**Currency risk**
Due to the Alfa Laval Group's international business activities and geographical spread the Group is exposed to currency risks. The exchange rate movements in the major currencies for the Group during the last years are presented below (SEK/foreign currency):

Currency risk is divided into transaction exposure that relates to exchange rate fluctuations that affects the currency flows that arise due to the business activities and translation exposure that relates to the translation of the subsidiaries' statements on financial position from local currency to SEK.

*Transaction exposure*
During 2017 Alfa Laval's sales to countries outside Sweden amounted to 97.5 (97.8) percent of total sales.

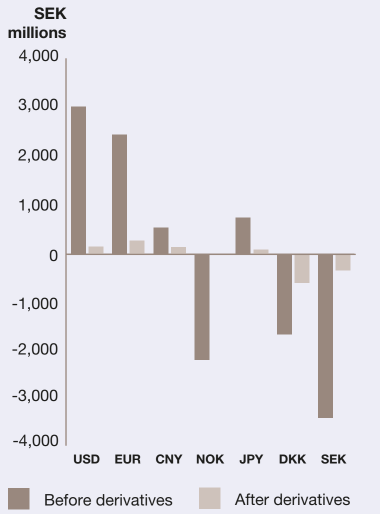
Alfa Laval's local sales companies normally sell in domestic currency to local end customers and have their local cost base in local currency. Exports from production and logistical centres to other Group companies are invoiced in the exporting companies' domestic currencies, except for Sweden, Denmark and UK where the exports are denominated in EUR.

The Group is principally exposed to currency risk from potential changes in contracted and projected flows of payments and receipts. The objective of foreign exchange risk management is to reduce the impact of foreign exchange movements on the Group's income and financial position.

The Group normally has natural risk coverage through sales as well as costs in local currencies. The financial policy states that the local companies are responsible for identifying and hedging exchange rate exposures on all commercial flows via Alfa Laval Treasury International. Contract based exposures must be fully hedged. In addition, the balance of projected flows the next 12 months must be hedged to at least 50 percent. The remaining part of the projected flows can be partially hedged after conferring with the Group's central finance function. Alfa Laval Treasury International can add to or reduce the total hedging initiated by the local companies in the currencies that Alfa Laval has commercial exposure up to but not exceeding 100 percent of one year's commercial exposure for each currency.

The Group's net transaction exposure at December 31, 2017 in different currencies before and after derivatives for the coming 12 months amounts to:

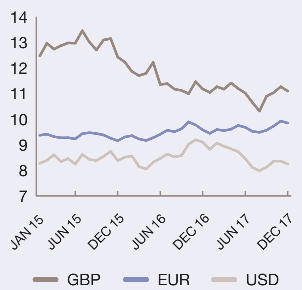
**Net transaction exposure per currency at December 31, 2017 for the coming 12 months**

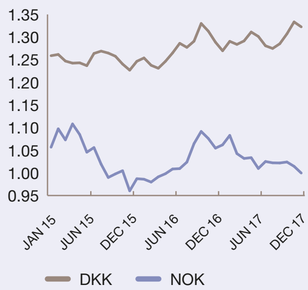


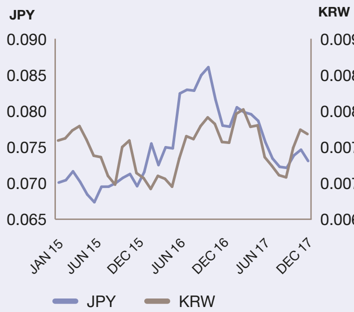

The bars for SEK, DKK and NOK are a reflection of the fact that a substantial part of the production within the Group is located in Sweden, Denmark and Norway with costs denominated in local currencies.

Currency contracts for projected flows are entered into continuously during the year with 12 months maximum duration. For contract based exposures the derivatives follow the duration of the underlying contract. This means that the company experiences the effects from the market currency rate movements with a varying degree of delay.

**Exchange rate fluctuations**



If the currency rates between SEK and the most important foreign currencies are changed by +/- 10 % it has the following effect on operating income, if no hedging measures are taken:

**Effect on operating income by exchange rate fluctuations excluding hedging measures**

| Consolidated | | | | |
|---|---|---|---|---|
| SEK millions | 2017 | | 2016 | |
| Exchange rate change against SEK | + 10% | - 10% | + 10% | - 10% |
| USD | 305 | -305 | 336 | -336 |
| EUR | 247 | -247 | 238 | -238 |
| CNY | 55 | -55 | 47 | -47 |
| NOK | -218 | 218 | -235 | 235 |
| DKK | -166 | 166 | -126 | 126 |
| JPY | 75 | -75 | 72 | -72 |
| Other | -73 | 73 | 57 | -57 |
| **Total** | **225** | **-225** | **389** | **-389** |

Outstanding currency forward contracts and currency options for the Group amounted to the following at the end of the year:

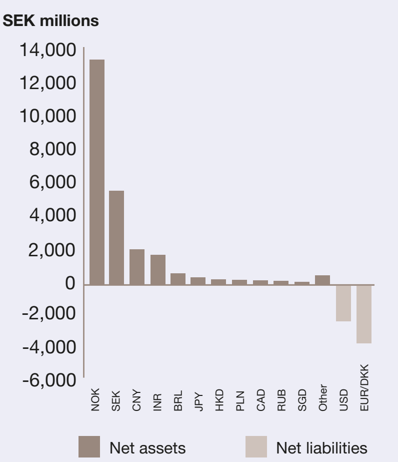
**Outstanding currency forward contracts and currency options**

| Consolidated | | | | |
|---|---|---|---|---|
| Millions | 2017 | | 2016 | |
| | Original currency | SEK | Original currency | SEK |
| **Outflows:** | | | | |
| USD | -493 | -4,065 | -258 | -2,343 |
| EUR | -278 | -2,736 | -250 | -2,391 |
| SEK | – | – | -81 | -81 |
| CAD | -4 | -24 | -13 | -90 |
| CZK | -14 | -6 | -6 | -2 |
| JPY | -11,889 | -869 | -11,990 | -935 |
| SGD | – | – | -1 | -8 |
| RUB | – | – | -26 | -4 |
| NZD | -2 | -9 | -2 | -10 |
| Other | | – | | -4 |
| **Total** | | **-7,709** | | **-5,868** |
| **Inflows:** | | | | |
| SEK | 1,616 | 1,616 | – | – |
| DKK | 241 | 318 | 18 | 24 |
| NOK | 5,162 | 5,160 | 5,120 | 5,400 |
| CNY | 570 | 721 | 386 | 505 |
| SGD | 7 | 44 | – | – |
| GBP | 8 | 87 | 2 | 20 |
| KRW | – | – | 1,049 | 8 |
| AUD | 10 | 67 | 15 | 99 |
| RUB | 314 | 45 | – | – |
| **Total** | | **8,058** | | **6,056** |

*Translation exposure*

When the subsidiaries' statements of financial position in local currency are translated into SEK a translation difference arises that is due to the current year being translated at a different closing rate than last year and that the comprehensive income statement is translated at the average rate during the year whereas the statement of financial position is translated at the closing rate at December 31. The translation differences are reported against other comprehensive income. The translation exposure consists of the risk that the translation difference represents in terms of impact on comprehensive income. The risk is largest for the currencies where the Group has the largest net assets and where the exchange rate movements against SEK are largest. The Group's net assets or liabilities for the major currencies are distributed as follows:

**Net assets and liabilities by currency**




The assets and liabilities in EUR and DKK are seen together since the rate for DKK is fixed against the EUR.

The translation differences are a central responsibility and are managed by distributing the loans on different currencies based on the net assets in each currency and through cross currency swaps. Loans taken in the same currency as there are net assets in the Group, decrease these net assets and thereby decrease the translation exposure.

These hedges of net investments in foreign operations work in the following way. Exchange gains and losses on loans denominated in foreign currencies that finance acquisitions of foreign subsidiaries are reported as a part of other comprehensive income if the loans act as a hedge to the acquired net assets. In other comprehensive income they offset the translation adjustments resulting from the consolidation of the foreign subsidiaries. In the Group, net exchange differences of SEK -207 (-643) million relating to debts in foreign currencies have been charged to other comprehensive income as hedges of net investments in foreign operations. The loans that hedge net investments in foreign operations are denominated in EUR and USD since these foreign currencies have the largest impact on the statement of financial position. Since the Group uses part of its cash flows to amortise the loans in order to improve the financial net, the extent of this hedge tends to decrease over time. A change in the net assets of the foreign subsidiary over time can have the same effect.

## Interest risk

By interest risk is meant how changes in the interest level affect the financial net of the Group and how the value of financial instruments vary due to changes in market interest rates. The Group attempts to manage interest rate risk by matching fixed interest periods of financial assets and liabilities and through the use of derivative financial instruments such as interest rate swaps.

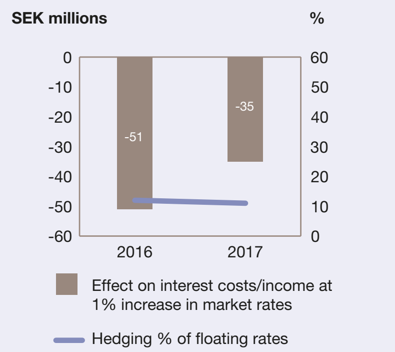
The financial policy states that the interest rate risk and duration are measured by each main currency. The minimum interest duration for the loans should be 10 months and the maximum interest duration should be 24-48 months depending on the currency the loan is raised in according to the policy.

The senior credit facility, the bilateral term loans, the commercial papers and the EUR 300 million tranche of the corporate bonds accrue interest at floating rate. The Group has chosen to hedge 11 (12) percent of the loans to fixed interest rate, with a duration of 13.6 (13.8) months.

The average interest and currency duration for all loans including derivatives is 25.1 (27.8) months at the end of 2017.

Calculated on an overall increase of market rates by 100 basis points (1 percentage unit), the interest net of the Group would change according to the bar chart below.

**Interest sensitivity analysis versus hedging % of floating rates**




### Market risk

Market risk is defined as the risk for changes in the value of a financial instrument due to changed market prices. This applies only to financial instruments that are listed or otherwise traded, which for Alfa Laval concern bonds and other securities and other long-term securities totalling SEK 546 (960) million. The market risk for these is perceived as low. For other financial instruments, the price risk only consists of currency risk and interest risk.

### Liquidity risk and refinancing risk

Liquidity risk is defined as the risk that the Group would incur increased costs due to lack of liquid funds.

Refinancing risk is defined as the risk that the refinancing of maturing loans becomes difficult or costly. The loans of the Group are mainly long term and only mature when the agreed loan period expires. Since the maturity of the loans is distributed over time the refinancing risk is reduced.

Alfa Laval has a senior credit facility of EUR 400 million and USD 544 million, corresponding to SEK 8,422 million with a banking syndicate. At December 31, 2017 the facility was not utilised. The facility matures in June 2019, with two one-year extension options.

During 2014 Alfa Laval issued EUR 800 million of corporate bonds, corresponding to SEK 7,837 million. The bonds are listed on the Irish stock exchange and consist of one tranche of EUR 300 million that matures in September 2019 and one tranche of EUR 500 million that matures in September 2022.

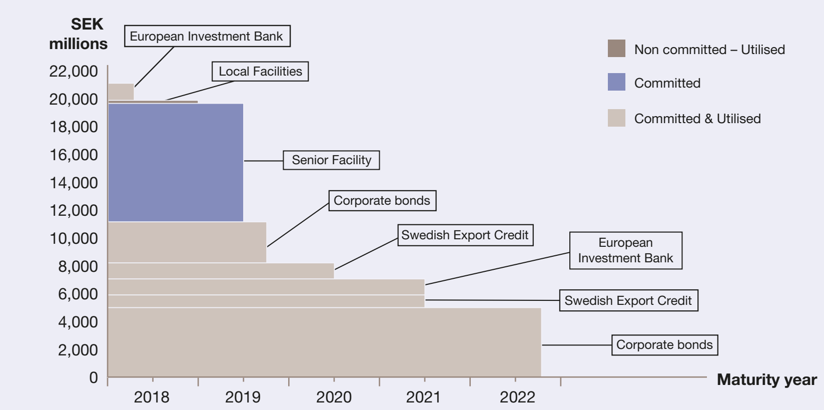
Alfa Laval has a bilateral term loan with Swedish Export Credit that is split on one loan of EUR 100 million that matures in June 2021 and loan of USD 136 million that matures in June 2020, corresponding to SEK 2,106 million in total. A loan of EUR 100 million that matured in June 2017 has been repaid.

Alfa Laval also has a bilateral term loan from the European Investment Bank split on one loan of EUR 130 million that matures in March 2018 and an additional loan of EUR 115 million that matures in June 2021, corresponding to SEK 2,411 million in total.

The commercial paper programme of SEK 2,000 million was not utilised at December 31, 2017.

In summary the maturity structure of the loans and the loan facilities is as follows:

**Maturity structure of Group funding**




### Cash flow risk

Cash flow risk is defined as the risk that the size of future cash flows linked to financial instruments is fluctuating. This risk is mostly linked to changed interest and currency rates. To the extent that this is perceived as a problem, different derivative instruments are used to fix rates. See description of exposure and hedging measures under interest risk. Maturity analyses of the contractual undiscounted cash flows for loans (including interests), currency derivatives, interest derivatives, metal futures and electricity futures are shown on the next page.

### Counterpart risks

Financial instruments that potentially subject the Group to significant concentrations of credit risk consist principally of cash and cash equivalents, deposits and derivatives.

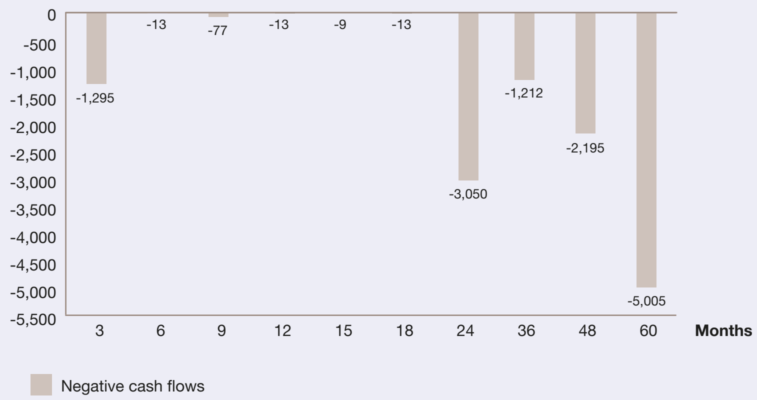
The Group maintains cash and cash equivalents and current and non-current investments with various financial institutions approved by the Group. These financial institutions are located in major countries throughout the world and the Group's policy is designed to limit exposures to any one institution. The risk for a counterpart not fulfilling its commitments is limited through the selection of financially solid counterparts and by limiting the engagement per counterpart. The Group performs periodic evaluations of the relative credit standing of those financial institutions that are considered in its investment strategy. The Group does not require collateral on these financial instruments.

The Group is exposed to credit risk in the event of non-performance by counterparts to derivative instruments. The Group limits this exposure by diversifying among counterparts with high credit ratings and by limiting the volume of transactions with each counter party. Furthermore, the Group has entered into ISDA agreements (International Swaps and Derivatives Association) with the counter parts in order to be able to offset assets and liabilities in case of a counter party default. Alfa Laval has never encountered a counter party default, which means that such an offset never has been made.

In total it is the Group's opinion that the counterpart risks are limited and that there is no concentration of risk in these financial instruments.

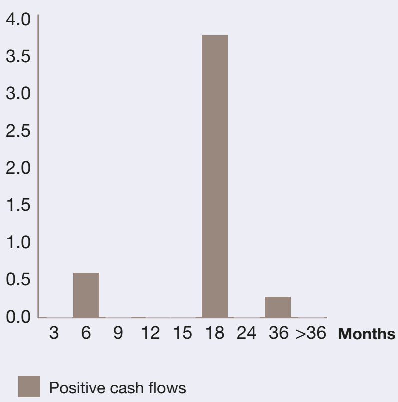
## Maturity analysis for loans

**SEK millions**



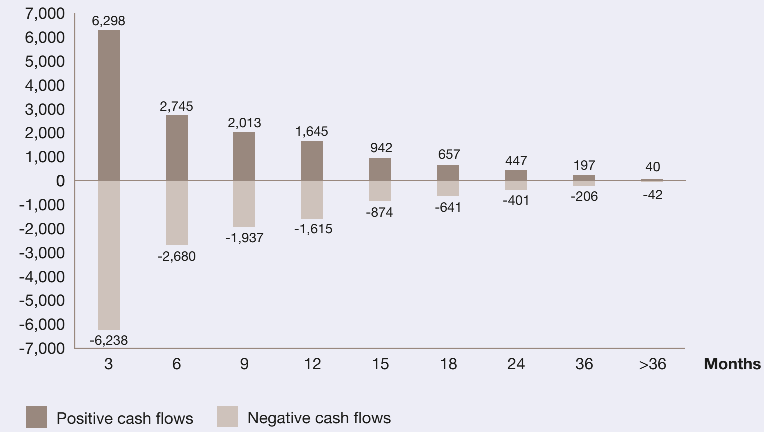

## Maturity analysis for interest derivatives

**SEK millions**



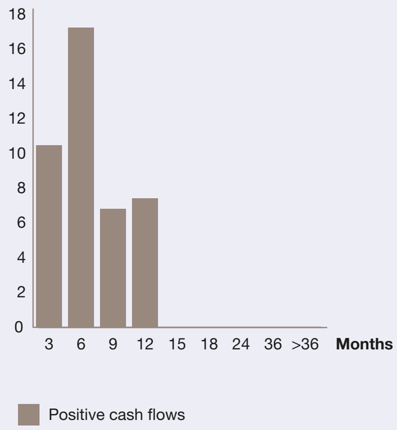

## Maturity analysis for currency derivatives

**SEK millions**



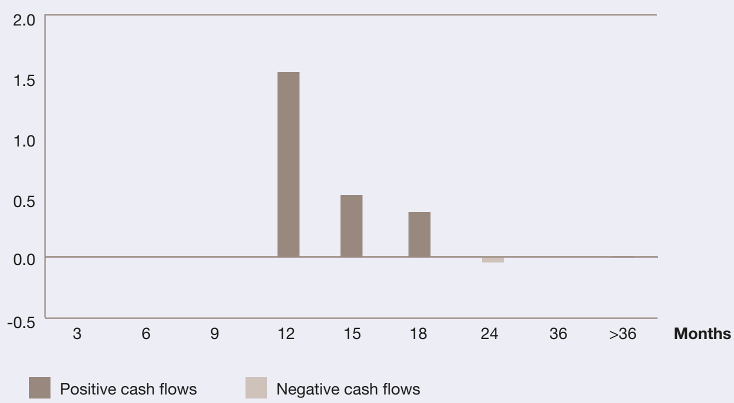

## Maturity analysis for metal derivatives

**SEK millions**




## Maturity analysis for electricity futures

**SEK millions**



# Operational risks

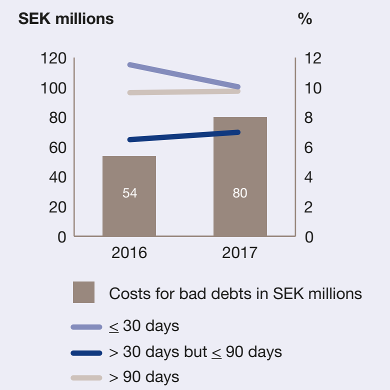
### Risk for bad debts

The risk for bad debts is referring to the risk that the customer cannot pay for delivered goods due to financial difficulties. The Group sells to a large number of customers in countries all over the world. That some of these customers from time to time face payment problems or go bankrupt is unfortunately part of reality in an operation of Alfa Laval's magnitude. All customers except Tetra Laval represent less than 1 percent of net sales and thereby represent a limited risk. Alfa Laval regularly collects credit information on new customers and, if needed, on old customers. Earlier payment habits have an impact on the acceptance of new orders. On markets with political or financial risks, the Group strives to attain credit insurance solutions. Accounts receivable constitutes the single largest financial asset according to Note 13. With reference to the above description it is management's opinion that there is no material concentration of risk in this financial asset.

The amount of accounts receivable being overdue is an indication of the risk the company runs for ending up in a bad debt situation.

The Group's costs for bad debts and the overdues in percent of accounts receivable are presented in the following graph:

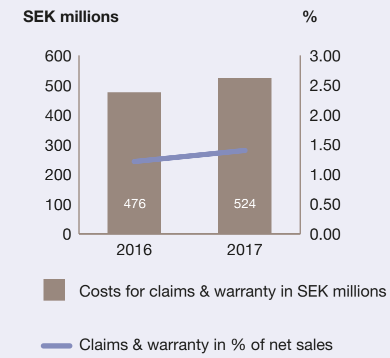
**Costs for bad debts / overdues in % of accounts receivable**




### Risk for claims

The risk for claims refers to the costs Alfa Laval would incur to rectify faults in products or systems and possible costs for penalties. Alfa Laval strives to minimize these costs through an ISO certified quality assurance. The major risks for claim costs appear in connection with new technical solutions and new applications. The risks are limited through extensive tests at the manufacturing site and at the customer site. The Group's net claim costs and their relation to net sales are found in the following graph:

**Claim costs in SEK millions and in % of net sales**




### Risk connected to technical development

This risk refers to the risk that some competitor develops a new technical solution that makes Alfa Laval's products technically obsolete and therefore difficult to sell. Alfa Laval addresses this risk by a deliberate investment in research and development aiming at being in the absolute frontline of technical development.

### Economic risk

*Competition*

The Group operates in competitive markets. In order to address this competition, the Group has for instance:

– organized the operations into divisions based on business units in order to get a customer focused market penetration;

– a strategy for acquisition of businesses in order to for instance reinforce the presence on certain markets or widen the Group's product offering;

– worked with creating a competitive cost level based on its international presence; and

– worked with securing the availability of strategic metals and components in order to maintain the ability to deliver.

*Business climate*

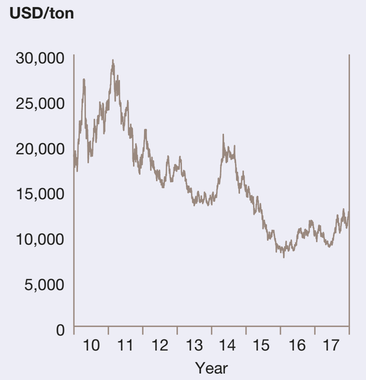
In an overall economic downturn, the Group tends to be affected with a delay of six to twelve months depending on business division. The same applies with an economic upturn. The fact that the Group is operating on a large number of geographical markets and within a wide range of business units means a diversification that limits the effects of fluctuations in the business climate. Historically, fluctuations in the business climate have not generated decreases in orders received by more than approximately 10-15 percent. The downturn in the business climate in 2009 and 2010 however meant a considerably larger decline in order intake. This was partly due to the fact that the decline happened abruptly from a very high level of demand that was the culmination of a long-lasting boom and that the price level in connection with this peak was inflated by substantial increases in raw material prices.

*Prices of raw material*

The Group depends on deliveries of stainless steel, carbon steel, copper and titanium etc. for the manufacture of products. The prices in some of these markets are volatile and the supply of titanium has occasionally been limited. There are a limited number of possible suppliers of titanium. The risk for severely increased prices or limited supply constitutes serious risks for the operations. The possibilities to pass on higher input prices to an end customer vary from time to time and between different markets depending on the competition. The Group is addressing this risk by securing long-term supply commitments and through fixed prices from the suppliers during six to twelve months. During periods of large price increases the customer price on titanium products has been linked to Alfa Laval's procurement costs for titanium. Primarily in the period 2007 to 2011 the Group experienced large price fluctuations for many raw materials, but in particular for stainless steel, carbon steel, copper and titanium.

The price volatility for the most important metals is presented below:

**Nickel**

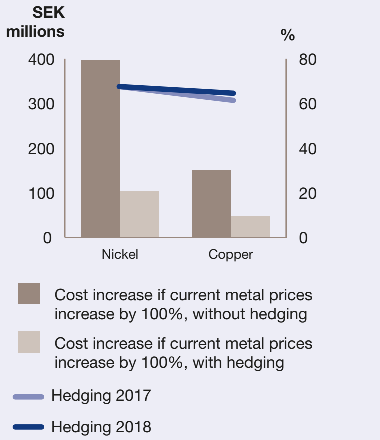



**Copper**


**Aluminium**


The Group uses metal futures to secure the price on strategic metals. The graph below shows how much of the purchases of nickel and copper that have been hedged during 2017 and how much of the expected purchases during 2018 that were hedged at the end of 2017. The graph also presents to what extent the Group's costs for these purchases during 2018 would be affected if the prices would double from the level at December 31, 2017.

### Sensitivity analysis and metal price hedging




### Environmental risks

This risk relates to the costs that the Group may incur to reduce emissions according to new or stricter environmental legislation, to restore land at previously or currently owned industrial sites, to arrange more effective waste disposal, to obtain prolonged or new concessions etc. The Group has an ambition to be well within the boundaries that local legislation sets, which should reduce the risks. The operations of the Group are not considered to have a significant environmental impact. For more information on Alfa Laval's environmental impact, see the section on "Sustainability" on page 40.

### Political risk

Political risk is the risk that the authorities, in the countries where the Group is operating, by political decisions or administration make continued operations difficult, expensive or impossible for the Group. The Group is mainly operating in countries where the political risk is considered to be negligible or minor. The operations that are performed in countries where the political risk is deemed to be higher are not material.

### Risk for and in connection with litigations

This risk pertains to the costs the Group may incur in managing litigations, costs in connection with settlements and costs for imposed penalties. The Group is involved in a few litigations, mainly with customers. Any estimated loss risks are provided for.

*Asbestos-related lawsuits*

The Alfa Laval Group was as of December 31, 2017, named as a co-defendant in a total of 902 asbestos-related lawsuits with a total of approximately 902 plaintiffs. Alfa Laval strongly believes the claims against the Group are without merit and intends to vigorously contest each lawsuit.

Based on current information and Alfa Laval's understanding of these lawsuits, Alfa Laval continues to believe that these lawsuits will not have a material adverse effect on the Group's financial condition or results of operation.

### Risk for technically related damages

This risk refers to the costs Alfa Laval may incur in connection with a product delivered by the Group breaking down and causing damages to life and property. The main risk in this context concerns high-speed separators, due to the large forces that are involved when the bowl in the separator spins with a very high number of revolutions. In a breakdown the damages can be extensive. Alfa Laval addresses these risks through extensive testing and an ISO certified quality assurance. The Group has product liability insurance. The number of damages is low and few damages have occurred historically.

**Business interruption risks**
These risks refer to the risk that single units or functions within the Group can be hit by business interruption due to:

– strikes and other labour market conflicts;
– fires, natural catastrophes etc.;
– computer access violations, lack of backups etc.; and
– corresponding problems at major sub-suppliers.

Alfa Laval has a well-developed dialog with the local unions, which reduces the risk for conflicts and strikes where Alfa Laval is directly involved. It is however more difficult to protect the company against conflicts in other parts of the labour market, for instance within transportation.

Alfa Laval is minimizing the following two risks through an active preventive work at each site in line with the developed global policies in each area under supervision of manufacturing management, the Group's Risk Management function, Real Estate Management, IT and HR.

Problems at major sub-suppliers are minimized by Alfa Laval trying to use several suppliers of input goods that when needed can cover up for a drop in production somewhere else. The wish for long term and competitive delivery agreements however puts restrictions on the level of flexibility that can be achieved. When there is a shortage the total supply may be too limited to allow exchangeability.

HPR stands for "Highly Protected Risk" and is the insurance industry's highest rating for risk quality. This rating is reserved for those commercial properties where the exposure for physical damages is reduced to a minimum considering building construction, operations and local conditions. HPR means that all physical risks in and around the facility are documented and that these are kept within certain limits. Alfa Laval's production facility in Lund in Sweden, which is the Group's largest and most important facility is HPR classified, as well as the production facilities in Chesapeake, Sarasota and Newburyport in the U.S. A number of other key production facilities are being evaluated and may eventually become HPR classified.

A HPR classification means that the facility has state of the art fire and machinery protection systems and that the responsible personnel has adequate security routines to make sure that these protection systems are maintained and in function. In addition, known possible sources of ignition are under strict control to prevent a fire from starting. For an HPR facility the risk for a physical damage is brought to a minimum, which minimises the risk for business interruption that could have extensive consequences for Alfa Laval and its customers. For other production facilities, not HPR-classified, the aim is also to reduce the risk for damage and business interruption to a minimum by keeping, among other things, ignition sources under strict control. Loss prevention visits are conducted according to a schedule based on size and importance for Alfa Laval.

**Insurance risks**
These risks refer to the costs that Alfa Laval may incur due to an inadequate insurance coverage for property, business interruption, liability, transport, life and pensions. The Group strives to maintain an insurance coverage that keeps the risk level at an acceptable level for a Group of Alfa Laval's size and still is cost efficient. As a part in this Alfa Laval has an own captive. At the same time a continuous work is going on to minimise the risks in the operations through proactive measures.

**Risks connected to credit terms**
This risk is referring to the limited freedom of action that can be imposed on the Group through restrictions connected to credit terms in loan agreements.

# Notes

## Note 1. Operating segments

Alfa Laval's business is divided into four Business Divisions "Energy", "Food & Water", "Marine" and "Greenhouse" that sell to external customers and one division "Operations & Other" covering procurement, production and logistics as well as corporate overhead and non-core businesses. These five divisions constitute Alfa Laval's five operating segments.

The customers to the Energy Division purchase products and systems for energy applications, whereas the customers to the Food & Water Division purchase products and systems for food and water applications. The customers to the Marine Division purchase products and systems for marine and offshore applications.

The three first Business Divisions are in turn split into a number of Business Units. The Energy Division consists of four Business Units: Brazed & Fusion Bonded Heat Exchangers, Energy Separation, Gasketed Plate Heat Exchangers and Welded Heat Exchangers. The Food & Water Division consists of five Business Units: Decanters, Food Heat Transfer, Food Systems, Hygienic Fluid Handling and High Speed Separators. The Marine Division consists of three Business Units: Boiler & Gas Systems, Marine Separation & Heat Transfer Equipment and Pumping Systems.

The operating segments are only responsible for the result down to and including operating income excluding comparison distortion items and for the operating capital they are managing. This means that financial assets and liabilities, pension assets, provisions for pensions and similar commitments and current and deferred tax assets and liabilities are a Corporate responsibility and not an operating segment responsibility. This also means that the financial net and income taxes are a Corporate responsibility and not an operating segment responsibility.

The operating segments are only measured based on their transactions with external parties.

### Orders received

| Consolidated | | |
|---|---|---|
| SEK millions | 2017 | 2016 |
| Energy | 11,175 | 10,208 |
| Food & Water | 12,388 | 11,327 |
| Marine | 11,456 | 8,760 |
| Greenhouse | 1,609 | 1,765 |
| Operations & Other | 0 | 0 |
| **Total** | **36,628** | **32,060** |

### Order backlog

| Consolidated | | |
|---|---|---|
| SEK millions | 2017 | 2016 |
| Energy | 4,471 | 4,230 |
| Food & Water | 4,317 | 3,741 |
| Marine | 9,027 | 8,285 |
| Greenhouse | 474 | 614 |
| Operations & Other | 0 | 0 |
| **Total** | **18,289** | **16,870** |

### Net sales

| Consolidated | | |
|---|---|---|
| SEK millions | 2017 | 2016 |
| Energy | 11,001 | 10,641 |
| Food & Water | 11,824 | 11,364 |
| Marine | 10,809 | 12,125 |
| Greenhouse | 1,680 | 1,504 |
| Operations & Other | 0 | 0 |
| **Total** | **35,314** | **35,634** |

### Operating income in management accounts

| Consolidated | | |
|---|---|---|
| SEK millions | 2017 | 2016 |
| Energy | 1,525 | 1,423 |
| Food & Water | 1,780 | 1,596 |
| Marine | 1,771 | 2,051 |
| Greenhouse | -12 | -143 |
| Operations & Other | -533 | -471 |
| Total | 4,531 | 4,456 |
| Reconciliation with Group total: | | |
| Comparison distortion items | – | -1,500 |
| Consolidation adjustments * | 58 | 33 |
| Total operating income | 4,589 | 2,989 |
| Financial net | -218 | 336 |
| **Result after financial items** | **4,371** | **3,325** |

* Difference between management accounts and IFRS

Operating income in management accounts is very close to operating income under IFRS. There are only two differences. Operating income in management accounts does not include comparison distortion items nor all the consolidation adjustments that are made in the official accounts.

### Assets / Liabilities

| Consolidated | Assets | | Liabilities | |
|---|---|---|---|---|
| SEK millions | 2017 | 2016 | 2017 | 2016 |
| Energy | 9,555 | 8,797 | 3,743 | 2,608 |
| Food & Water | 8,124 | 7,525 | 3,652 | 2,785 |
| Marine | 23,861 | 23,380 | 5,963 | 5,126 |
| Greenhouse | 806 | 1,162 | 593 | 572 |
| Operations & Other | 5,372 | 5,826 | 2,591 | 1,996 |
| Subtotal | 47,718 | 46,690 | 16,542 | 13,087 |
| Corporate | 4,831 | 6,688 | 15,507 | 20,015 |
| **Total** | **52,549** | **53,378** | **32,049** | **33,102** |

Corporate refers to items in the statement on financial position that are interest bearing or are related to taxes.

### Investments

| Consolidated | | |
|---|---|---|
| SEK millions | 2017 | 2016 |
| Energy | 84 | 76 |
| Food & Water | 73 | 82 |
| Marine | 59 | 77 |
| Greenhouse | 17 | 21 |
| Operations & Other | 442 | 361 |
| **Total** | **675** | **617** |

### Depreciation

| Consolidated | | |
|---|---|---|
| SEK millions | 2017 | 2016 |
| Energy | 317 | 302 |
| Food & Water | 142 | 165 |
| Marine | 772 | 765 |
| Greenhouse | 26 | 77 |
| Operations & Other | 393 | 398 |
| **Total** | **1,650** | **1,707** |

# Note 2. Information about geographical areas

Countries with more than 10 percent of either net sales, non-current assets or investments are reported separately.

### Net sales

Consolidated

| | 2017 SEK millions | 2017 % | 2016 SEK millions | 2016 % |
|---|---|---|---|---|
| To customers in: | | | | |
| Sweden | 888 | 2.5 | 784 | 2.2 |
| Other EU | 9,627 | 27.2 | 8,959 | 25.1 |
| Other Europe | 2,726 | 7.7 | 2,597 | 7.3 |
| USA | 5,712 | 16.2 | 6,013 | 16.9 |
| Other North America | 816 | 2.3 | 716 | 2.0 |
| Latin America | 1,614 | 4.6 | 1,788 | 5.0 |
| Africa | 396 | 1.1 | 307 | 0.9 |
| China | 4,309 | 12.2 | 4,705 | 13.2 |
| South Korea | 2,952 | 8.4 | 3,594 | 10.1 |
| Other Asia | 5,754 | 16.3 | 5,731 | 16.1 |
| Oceania | 520 | 1.5 | 440 | 1.2 |
| **Total** | **35,314** | **100.0** | **35,634** | **100.0** |

Net sales are reported by country on the basis of invoicing address, which is normally the same as the delivery address.

### Non-current assets

Consolidated

| | 2017 SEK millions | 2017 % | 2016 SEK millions | 2016 % |
|---|---|---|---|---|
| Sweden | 1,326 | 4.3 | 1,321 | 4.0 |
| Denmark | 4,654 | 15.0 | 4,572 | 13.7 |
| Other EU | 3,581 | 11.6 | 3,639 | 10.9 |
| Norway | 12,495 | 40.4 | 13,717 | 41.0 |
| Other Europe | 148 | 0.5 | 169 | 0.5 |
| USA | 3,707 | 12.0 | 4,359 | 13.0 |
| Other North America | 129 | 0.4 | 136 | 0.4 |
| Latin America | 284 | 0.9 | 329 | 1.0 |
| Africa | 9 | 0.0 | 9 | 0.0 |
| Asia | 2,919 | 9.4 | 2,993 | 9.0 |
| Oceania | 90 | 0.3 | 94 | 0.3 |
| Subtotal | 29,342 | 94.8 | 31,338 | 93.8 |
| Other long-term securities | 35 | 0.1 | 25 | 0.1 |
| Pension assets | 6 | 0.0 | 3 | 0.0 |
| Deferred tax asset | 1,589 | 5.1 | 2,056 | 6.1 |
| **Total** | **30,972** | **100.0** | **33,422** | **100.0** |

### Investments

Consolidated

| | 2017 SEK millions | 2017 % | 2016 SEK millions | 2016 % |
|---|---|---|---|---|
| Sweden | 66 | 9.8 | 65 | 10.4 |
| Denmark | 122 | 18.0 | 161 | 26.0 |
| Other EU | 135 | 20.0 | 129 | 20.8 |
| Other Europe | 28 | 4.1 | 33 | 5.4 |
| USA | 82 | 12.2 | 82 | 13.3 |
| Other North America | 2 | 0.3 | 4 | 0.7 |
| Latin America | 6 | 0.8 | 10 | 1.7 |
| Africa | 6 | 1.0 | 0 | 0.1 |
| China | 192 | 28.5 | 90 | 14.7 |
| Other Asia | 32 | 4.7 | 39 | 6.3 |
| Oceania | 4 | 0.6 | 4 | 0.6 |
| **Total** | **675** | **100.0** | **617** | **100.0** |

# Note 3. Information about products and services

### Net sales by product/service

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| Own products within: | | |
| Separation | 6,471 | 6,588 |
| Heat transfer | 16,726 | 16,374 |
| Fluid handling | 7,678 | 8,498 |
| Other | 1,180 | 1,022 |
| Associated products | 1,448 | 1,389 |
| Services | 1,811 | 1,763 |
| **Total** | **35,314** | **35,634** |

The split of own products within separation, heat transfer and fluid handling is a reflection of the current three main technologies. Other is own products outside these main technologies. Associated products are mainly purchased products that compliment Alfa Laval's product offering. Services cover all sorts of service, service agreements etc.

# Note 4. Information about major customers

Alfa Laval does not have any customer that accounts for 10 percent or more of net sales. Tetra Pak within the Tetra Laval Group is Alfa Laval's single largest customer with a volume representing 5.3 (5.0) percent of net sales. See Note 32 for more information.

# Note 5. Employees

### Average number of employees - total

Consolidated

| | Number of female employees | | Total number of employees | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Parent company | – | – | – | – |
| Subsidiaries in Sweden (8) | 509 | 503 | 2,081 | 2,138 |
| Total in Sweden (8) | 509 | 503 | 2,081 | 2,138 |
| Total abroad (133) | 2,821 | 2,949 | 14,440 | 15,167 |
| **Total (141)** | **3,330** | **3,452** | **16,521** | **17,305** |

The figures in brackets in the text column state how many companies had employees as well as salaries and remunerations in 2017.

### Average number of employees – in Sweden by municipality

Consolidated

| | 2017 | 2016 |
|---|---|---|
| Botkyrka | 460 | 470 |
| Eskilstuna | 189 | 204 |
| Lund | 1,047 | 1,049 |
| Ronneby | 237 | 246 |
| Vänersborg | 93 | 110 |
| Other * | 55 | 59 |
| **Total** | **2,081** | **2,138** |

* "Other" refers to municipalities with less than 10 employees and also includes employees at branch offices abroad.

## Average number of employees - by country

Consolidated

| | Number of female employees | | Total number of employees | |
|---|---|---|---|---|
| | 2017 | 2016 | 2017 | 2016 |
| Argentina | 9 | 10 | 30 | 35 |
| Australia | 14 | 20 | 94 | 103 |
| Belgium | 1 | 2 | 25 | 24 |
| Brazil | 50 | 56 | 366 | 411 |
| Bulgaria | 6 | 7 | 21 | 22 |
| Chile | 7 | 6 | 26 | 29 |
| Colombia | 13 | 9 | 25 | 25 |
| Denmark | 415 | 435 | 1,655 | 1,758 |
| Philippines | 4 | 4 | 13 | 14 |
| Finland | 45 | 39 | 217 | 224 |
| France | 154 | 156 | 829 | 848 |
| United Arab Emirates | 20 | 25 | 114 | 147 |
| Greece | 8 | 8 | 22 | 23 |
| Hong Kong | 4 | 5 | 14 | 19 |
| India | 68 | 69 | 1,379 | 1,416 |
| Indonesia | 20 | 22 | 83 | 93 |
| Iran | 1 | 2 | 9 | 8 |
| Italy | 181 | 174 | 919 | 917 |
| Japan | 54 | 57 | 239 | 263 |
| Canada | 21 | 22 | 90 | 96 |
| China | 624 | 636 | 2,858 | 2,892 |
| Korea | 55 | 57 | 299 | 318 |
| Latvia | 5 | 5 | 10 | 11 |
| Malaysia | 38 | 41 | 114 | 124 |
| Mexico | 8 | 8 | 43 | 48 |
| Netherlands | 69 | 76 | 337 | 349 |
| Norway | 177 | 211 | 1,004 | 1,092 |
| New Zeeland | 3 | 3 | 17 | 18 |
| Panama | 6 | 5 | 15 | 16 |
| Peru | 6 | 8 | 22 | 24 |
| Poland | 45 | 45 | 252 | 270 |
| Portugal | 8 | 6 | 17 | 28 |
| Qatar | – | – | 6 | 8 |
| Romania | 2 | 2 | 9 | 10 |
| Russia | 124 | 138 | 292 | 325 |
| Saudi Arabia | – | – | 36 | 36 |
| Switzerland | 5 | 5 | 13 | 14 |
| Singapore | 56 | 59 | 221 | 237 |
| Slovakia | 1 | 2 | 9 | 10 |
| Spain | 23 | 24 | 94 | 92 |
| UK | 48 | 53 | 311 | 330 |
| Sweden | 509 | 503 | 2,081 | 2,138 |
| South Africa | 12 | 12 | 43 | 45 |
| Taiwan | 15 | 9 | 37 | 40 |
| Thailand | 15 | 15 | 52 | 55 |
| Czech Republic | 9 | 8 | 40 | 40 |
| Turkey | 8 | 8 | 46 | 48 |
| Germany | 62 | 73 | 299 | 328 |
| Ukraine | 4 | 4 | 12 | 13 |
| Hungary | 3 | 4 | 13 | 14 |
| USA | 292 | 301 | 1,729 | 1,835 |
| Venezuela | – | 0 | – | 1 |
| Vietnam | – | – | 2 | 2 |
| Austria | 3 | 3 | 18 | 19 |
| **Total** | **3,330** | **3,452** | **16,521** | **17,305** |

## Gender distribution

Consolidated

| | 2017 | | | 2016 | | |
|---|---|---|---|---|---|---|
| | Total number | Male % | Female % | Total number | Male % | Female % |
| Board members (excluding deputies) | 11 | 63.6 | 36.4 | 11 | 63.6 | 36.4 |
| President and other executive officers | 9 | 88.9 | 11.1 | 10 | 90.0 | 10.0 |
| Managers in Sweden | 277 | 78.0 | 22.0 | 291 | 79.0 | 21.0 |
| Managers outside Sweden | 1,860 | 80.4 | 19.6 | 1,996 | 83.2 | 16.8 |
| Managers total | 2,137 | 80.1 | 19.9 | 2,287 | 82.7 | 17.3 |
| Employees in Sweden | 2,081 | 75.5 | 24.5 | 2,138 | 76.5 | 23.5 |
| Employees outside Sweden | 14,440 | 80.5 | 19.5 | 15,167 | 80.6 | 19.4 |
| Employees total | 16,521 | 79.8 | 20.2 | 17,305 | 80.1 | 19.9 |

# Note 6. Salaries and remunerations

### Salaries and remunerations - total

| Consolidated | | |
|---|---|---|
| SEK millions | 2017 | 2016 |
| Board of Directors, Presidents and Vice Presidents | 255 | 260 |
| – out of which, variable | 46 | 39 |
| Other | 7,297 | 7,337 |
| Total salaries and remunerations | 7,552 | 7,597 |
| Social security costs | 1,272 | 1,237 |
| Pension costs, defined benefit plans | 142 | 142 |
| Pension costs, defined contribution plans | 577 | 586 |
| **Total personnel costs** | **9,543** | **9,562** |

The Group's pension costs and pension liabilities relating to the Board of Directors, presidents and vice presidents amounts to SEK 32 (62) million and SEK 289 (281) million respectively. SEK 110 (114) million of the pension liabilities is covered by the Alfa Laval Pension Fund.

**Equity compensation benefits**
During the period 2016 to 2017 no equity related benefits existed within Alfa Laval.

**Variable remunerations**
All employees have either a fixed salary or a fixed base salary. For certain personnel categories the remuneration package also includes a variable element. This relates to personnel categorises where it is customary or part of a market offer to pay a variable part. Variable remunerations are most common in sales related jobs and on higher managerial positions. Normally the variable part constitutes a minor part of the total remuneration package.

**Cash-based long-term incentive programme**
The Annual General Meetings 2014 to 2017 decided to implement step four to seven of a cash-based long-term incentive programme. The long-term incentive programme is targeting maximum 85 senior managers in the Group including the Chief Executive Officer and the persons defined as executive officers.

Each of the steps runs over three years and with an individual award for each year. The award for each year is set independently from the other two years. Since each step runs over three years, three steps of the programme will always run in parallel. In 2017 step five, six and seven of the programme were running in parallel.

The final award for each step is calculated on the employee's yearly base salary at the end of the three-year period. The maximum award is linked to the employee's annual maximum variable remuneration and is set to a percentage of the base salary according to the following:

### Maximum long-term incentive

| | Maximum long-term incentive in percent of base salary | |
|---|---|---|
| Maximum variable remuneration per year in percent of base salary | Per annum per step | In total per step over the three-year period |
| 60% | 15% | 45% |
| 40% | 10% | 30% |
| 30% | 8.3% | 25% |
| 25% | 6.7% | 20% |
| 15% | 4% | 12% |

The column "Per annum per step" shows the maximum award per step and year. Since three steps are running in parallel during each year the maximum award in percent during a certain year can be as large as the maximum award in percent for a certain step during the whole three-year period.

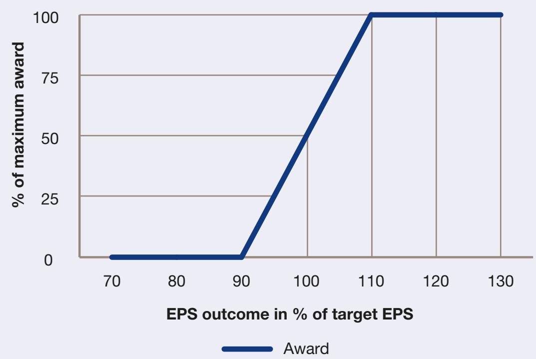
The outcome of the programme is linked to the development of earnings per share (EPS) for Alfa Laval. The EPS targets for the individual years within each step are set by the Board of Directors at the inception of the three-year period and are presented in the below table for the steps that were paid out during 2017 (four) or are running (five-seven). In the table the EPS outcome for each year is also presented.

### Earnings per share

| Consolidated | | | | |
|---|---|---|---|---|
| | Target and outcome | | | |
| SEK | 2017 | 2016 | 2015 | 2014 |
| Target EPS for step: | | | | |
| Four | N/A | 8.66 | 7.94 | 7.22 |
| Five | 10.14 | 9.30 | 8.45 | N/A |
| Six | 8.64 | 7.85 | N/A | N/A |
| Seven | 6.25 | N/A | N/A | N/A |
| **EPS outcome** | **7.09** | **8.43*** | **9.15** | **7.39**** |

* Adjusted for comparison distortion items of SEK -1,500 million.
** Adjusted for Frank Mohn acquisition.

The award is calculated in the following way. When the EPS outcome is within the range of 90 percent to 110 percent of the target EPS, the employee gets the share of the maximum award that is shown in the below graph. An EPS outcome of 90 percent or less of the EPS target gives no award and an EPS outcome of 110 or more gives the maximum award.




To be eligible for payout the employees must be in service on the award date and the vesting date (except in case of termination of employment due to retirement, death or disability). If the employee resigns or is dismissed before the end of the three-year period, the awards will lapse and the employee will not be entitled to any payout. If the employee moves to a position that is not eligible for this programme the tranches that already have been earned are paid out upon the change of position. Paid remunerations from the long-term incentive programme do not affect the pensionable income or the holiday pay.

Based on the reported EPS during the period 2014 to 2017, the different steps have resulted in the following awards:

**Cash-based long-term incentive plan**

Consolidated

| SEK millions, unless otherwise stated | | | | | Per year | | | | Accumulated | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Decided by Annual General | Covering period | | Payable | Actual outcome in % of maximum outcome | | | | | Payable in percent of base salary based on 15% in variable | Awards | |
| Step | Meeting | January 1 | – December 31 | in April | 2017 | 2016 | 2015 | 2014 | To date | remuneration | Paid | Estimated |
| Four | 2014 | 2014 | 2016 | 2017 | N/A | 36.72% | 100.00% | 61.77% | 66.16% | 7.94% | 22 | N/A |
| Five | 2015 | 2015 | 2017 | 2018 | 0.00% | 3.23% | 91.42% | N/A | 31.55% | 3.79% | N/A | 10 |
| Six | 2016 | 2016 | 2018 | 2019 | 0.00% | 86.94% | N/A | N/A | 43.47% | 3.48% | N/A | 9 |
| Seven | 2017 | 2017 | 2019 | 2020 | 100.00% | N/A | N/A | N/A | 100.00% | 4.00% | N/A | 11 |
| Awards per year | | | | | 11 | 14 | 20 | 7 | Total | | 22 | 30 |

The costs for the awards per step and per year are based on estimated base salaries at the future time of payment.

**Guidelines for remunerations to executive officers**

The remunerations to the Chief Executive Officer/Managing Director are decided by the Board of Directors based on proposals from the Remuneration Committee according to the guidelines established by the Annual General Meeting. The remunerations to the other members of Group Management are decided by the Remuneration Committee according to the same guidelines. The principle used when deciding the remunerations to executive officers is to offer a competitive remuneration where the remuneration package is mainly based on a fixed monthly salary, with an option for a company car and in addition to that a variable remuneration of up to 40 percent of the salary (managing director up to 60 percent of the salary). The outcome of the variable remuneration depends on the level of fulfilment of the established mainly financial targets and to limited extent also qualitative objectives. The guidelines for pension, termination and severance pay differ between the Chief Executive Officer/Managing Director and the other executive officers, see the below table.

The Annual General Meetings 2014 to 2017 decided to implement step four to seven of a cash-based long-term incentive programme for maximum 85 senior managers in the Group including the Chief Executive Officer and the persons defined as executive officers. The Board of Directors will propose the Annual General Meeting 2018 to implement a modified cash-based long-term incentive programme for the period January 1, 2018 – December 31, 2020 for maximum 95 senior managers in the Group including the Chief Executive Officer and the persons defined as executive officers. The difference is that the outcome of the new programme depends on how EBITA and the growth in net invoicing have developed during the three-year period, with a 50/50 weight between the targets. This means that there will be no award during the first two years since it is first in year three that it can be determined to what extent the targets have been achieved. Maximum outcome is awarded when the targets are exceeded. The remuneration from the modified long-term incentive programme can constitute between maximum 20 and 50 percent of the fixed remuneration depending on position. Payment to the participants in the programme is made after year three and only provided that they are still employed at the date of payment. No other changes of these guidelines are proposed by the Board of Directors.

**Salaries and remunerations to Group Management**

| Consolidated | Group Management | | | | |
|---|---|---|---|---|---|
| | Chief Executive Officer/ President | | | Other executive officers | |
| | Current: Tom Erixon | | Former: Lars Renström | | |
| SEK thousands | 2017 | 2016 | 2016 | 2017 | 2016 |
| **Salary and remunerations** | | | | | |
| Base salary | 9,250 | 8,250 | 4,506 | 27,068 | 31,175 |
| Variable salary [1] | 3,003 | – | 6,911 | 6,849 | 8,866 |
| Cash-based long-term incentive programme [1] | 2,859 | – | 8,436 | 7,180 | 8,033 |
| Other benefits [2] | 249 | 84 | 4,560 | 2,738 | 4,448 |
| Total salary and remuneration | 15,361 | 8,334 | 24,413 | 43,835 | 52,522 |
| **Pension costs** | | | | | |
| Retirement and survivors' pension | 4,649 | 4,147 | 3,129 | 16,971 | 22,694 |
| Life, disability and health care insurance | 69 | 64 | 6 | 287 | 308 |
| Total pension costs | 4,718 | 4,211 | 3,135 | 17,258 | 23,002 |
| **Sum including pensions** | **20,079** | **12,545** | **27,548** | **61,093** | **75,524** |
| Number of other executive officers at year end | | | | 8 | 9 |
| **Variable salary** | | | | | |
| Included | Yes | Yes [3] | Yes | Yes | Yes |
| Un-guaranteed target of base salary | 30% | 30% | 30% | Not set | Not set |
| Maximum of base salary | 60% | 60% | 60% | 40% | 40% |
| **Cash-based long-term incentive programme** | | | | | |
| Included | Yes [4] | Yes [4] | Yes | Yes | Yes |
| Current year award (SEK thousand) [5] | 1,472 | 1,785 | 270 | 2,399 | 3,799 |
| Vested unpaid awards at December 31 (SEK thousand) | 4,027 | 5,241 | 270 | 6,312 | 11,903 |
| **Commitment for early retirement [6]** | No | No | No | Yes | Yes |
| **Commitment for severance pay** | Yes [7] | Yes [7] | Yes [8] | Yes [9] | Yes [9] |
| **Commitment for retirement and survivors' pension** | [10] | | [11] | [12] | |

1) Refers to what was paid during the year.
2) Value of company car, taxable daily allowances, holiday pay, payment for vacation taken in cash and house/flat during - (6) months supplied to - (1) other executive officer.
3) For 2016 he had a transitional provision that meant that he was guaranteed at least 30 percent variable salary.
4) He also participates retroactively in the plans that started in 2014 and 2015, where he is guaranteed an outcome of at least 7.5 percent per annum.
5) Based on estimated base salaries at the future time of payment.
6) From the age of 62. A defined contribution solution for early retirement with a premium of 15 percent of the pensionable salary.
7) If Alfa Laval terminates his employment before the age of 61 he will receive 24 months' remuneration, between 61 and 62 he will receive 12 months' remuneration and from 62 he will receive 6 months' remuneration.
8) 24 months' remuneration reduced with the number of months that has passed since his 63rd birthday.
9) Maximum 2 years' salary. The commitments define the conditions that must be fulfilled in order for them to become valid.
10) Is not included in the ITP plan. He has a defined contribution benefit comprising 50 percent of the base salary. In addition, he may exchange salary and variable remunerations for a temporary old age and family pension.
11) The ordinary ITP up to a salary of 30 base amounts was funded in order to achieve full ITP benefits at the age of 65. On top of the ordinary ITP he had a defined contribution benefit comprising 50 percent of the base salary. In addition, he could exchange salary and variable remunerations for a temporary old age and family pension.
12) For salaries above 30 base amounts there is a defined contribution pension solution with a premium of 30 percent of the pensionable salary above 30 base amounts. Until May 1, 2012 the executive officers also had a special family pension that represented a supplement between the old age pension and the family pension according to ITP. For the persons that were executive officers on May 1, 2012 the special family pension has been converted to a premium based supplementary retirement pension based on the premium level in December 2011. In addition, they may exchange salary and variable remunerations for a temporary old age and family pension.

Tom Erixon replaced Lars Renström as President and Chief Executive Officer of Alfa Laval AB (publ) as per March 1, 2016. The remunerations during 2016 were relating to eleven months for Tom Erixon and five months for Lars Renström.

In connection with Lars Renström leaving his employment, the tranches of the cash-based long-term incentive programme that already were vested per December 31, 2015 were paid out, which constituted SEK 4,277 thousand of the reported amount under salaries and remunerations for 2016. The award for 2016 of SEK 270 thousand was paid in May 2017. The variable salary for the first five months 2016 amounted to SEK 1,352 thousand and was paid already in 2016. The amount under other benefits 2016 was to SEK 4,506 thousand relating to paid available vacation days.

During 2017 and 2016 three of the other executive officers in Group Management has retired, Svante Karlsson as per April 1, 2017, Göran Matthiasson as per January 1, 2017 and Ray Field as per July 1, 2016. Their costs during each year are included in the above table. The vested unpaid awards at December 31, 2016 for Ray Field in the cash-based long-term incentive programme constituted SEK 950 thousand of the reported amount for 2016 and was paid in May 2017.

**Board of Directors**

For 2017, the Board of Directors receive a total fixed remuneration of SEK 5,538 (5,605) thousand, which is distributed among the members elected at the Annual General Meeting that are not employed by the company. These Directors do not receive any variable remuneration.

### Remunerations to Board members *

Consolidated

| SEK thousands | | 2017 | 2016 |
|---|---|---|---|
| **Fees by function:** | | | |
| Chairman of the Board | | 1,575 | 1,500 |
| Other members of the Board | | 525 | 515 |
| Supplement to: | | | |
| Chairman of the Audit Committee | | 175 | 150 |
| Other members of the Audit Committee | | 125 | 100 |
| Chairman of the remuneration committee | | 50 | 50 |
| Other members of the remuneration committee | | 50 | 50 |
| **Fees by name:** | | | |
| Anders Narvinger | Chairman | 1,625 | 1,550 |
| Gunilla Berg | Member | – | 615 |
| Arne Frank ** | Member | 288 | 565 |
| Ulla Litzén | Member | 650 | 615 |
| Anna Ohlsson-Leijon | Member | 650 | – |
| Finn Rausing | Member | 700 | 665 |
| Jörn Rausing | Member | 575 | 565 |
| Ulf Wiinberg | Member | 525 | 515 |
| Margareth Øvrum | Member | 525 | 515 |
| **Total** | | **5,538** | **5,605** |

* Elected at the Annual General Meeting and not employed by the company.
** Deceased during the year.

The reported remunerations refer to the period between two Annual General Meetings.

The Chairman of the Board does not have any agreement on future retirement or severance pay with Alfa Laval.

The audit committee and the remuneration committee have had the following members during the last two years:

| | 2017 | 2016 |
|---|---|---|
| **Audit Committee:** | | |
| Chairman | Finn Rausing | Finn Rausing |
| Other member | Anna Ohlsson-Leijon | Gunilla Berg |
| Other member | Ulla Litzén | Ulla Litzén |
| **Remuneration committee:** | | |
| Chairman | Anders Narvinger | Anders Narvinger |
| Other member | Arne Frank | Arne Frank |
| Other member | Jörn Rausing | Jörn Rausing |

The members of the committees are appointed at the constituent meeting of the Board of Directors directly after the Annual General Meeting.

## Note 7. Information on auditors and auditors' fee

The line "Group auditors" in the below table is referring to the auditors elected at Annual General Meeting of Alfa Laval AB (publ). The Annual General Meeting 2017 and 2016 decided to elect KPMG as the Group's auditors for the coming year.

### Fees and expense compensation

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| Audit engagements | | |
| Group auditors | 34 | 34 |
| Other audit firms | 0 | 1 |
| **Total** | **34** | **35** |
| Audit related services | | |
| Group auditors | 2 | 3 |
| Other audit firms | 1 | 1 |
| **Total** | **3** | **4** |
| Tax services | | |
| Group auditors | 6 | 6 |
| Other audit firms | 7 | 8 |
| **Total** | **13** | **14** |
| Other services | | |
| Group auditors | 1 | 2 |
| Other audit firms | 8 | 3 |
| **Total** | **9** | **5** |
| Expenses | | |
| Group auditors | 1 | 0 |
| Other audit firms | 0 | 0 |
| **Total** | **1** | **0** |
| Group auditors | 44 | 45 |
| Other audit firms | 16 | 13 |
| **Total** | **60** | **58** |

An audit engagement includes examining the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. It also includes an examination in order to give an opinion on the Board's discharge from liability. Audit related services are audit services that are outside the audit engagement. Tax services refer to advices given in connection with various tax matters. All other assignments are defined as other services. Expenses refer to reimbursements of travel costs, secretarial services etc.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
Notes

## Note 8. Comparison distortion items

**Comparison distortion items**

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| **Operational** | | |
| Cost of goods sold | -23,379 | -23,954 |
| Comparison distortion costs 1) | – | -627 |
| **Total cost of goods sold** | **-23,379** | **-24,581** |
| | | |
| Other operating costs | -1,135 | -1,020 |
| Comparison distortion costs 2) | – | -873 |
| **Total other operating costs** | **-1,135** | **-1,893** |

1) Write down of allocated step-up values and goodwill.
2) Costs for lay-off of about 1,000 employees, write down of assets and provisions for lease agreements.

The operating income has been affected by comparison distortion items of SEK - (-1,500) million. In the consolidated comprehensive income statement these are reported gross as a part of each concerned line. The comparison distortion costs during 2016 related to three initiatives that Group Management started for cost adaptations and a new organisation, restructuring of the manufacturing structure and transformation of the activities within “Greenhouse”. During the full year 2017 savings of SEK 330 million were realised as a result of the initiatives.

## Note 9. Depreciation and amortisation

**Split by function**

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| Cost of goods sold | -1,416 | -1,466 |
| Sales | -36 | -41 |
| Administration | -109 | -81 |
| Research and development | -2 | -6 |
| Other income and costs | -87 | -113 |
| **Total** | **-1,650** | **-1,707** |

**Split by type of asset**

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| Patents and unpatented know-how, trademarks, etc. | -1,000 | -1,045 |
| Machinery and equipment | -462 | -471 |
| Financial leasing machinery and equipment | -3 | -4 |
| Buildings and ground installations | -178 | -180 |
| Financial leasing buildings | -7 | -7 |
| **Total** | **-1,650** | **-1,707** |

## Note 10. Dividends and other financial income

**Split by type**

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| Dividends from other | 0 | 0 |
| Gain on sale of marketable securities | 36 | – |
| Fair value changes in marketable securities | 11 | 47 |
| **Total** | **47** | **47** |

## Note 11. Interest income/expense and financial exchange rate gains/losses

**Split on type of income/expense or gain/loss**

| Consolidated SEK millions | 2017 | 2016 |
|---|---|---|
| **Interest income** | | |
| Financial leasing | 0 | 0 |
| Other interest | 119 | 118 |
| **Exchange rate gains** | | |
| Unrealised | 43 | 211 |
| Realised | 75 | 316 |
| **Total** | **237** | **645** |
| **Interest expenses** | | |
| Financial leasing | -1 | -1 |
| Other interest | -219 | -240 |
| **Exchange rate losses** | | |
| Unrealised | -113 | -27 |
| Realised | -169 | -88 |
| **Total** | **-502** | **-356** |

**Split on type of income/expense or gain/loss**

| Parent company SEK millions | 2017 | 2016 |
|---|---|---|
| **Interest income** | | |
| External companies | 0 | 1 |
| Subsidiaries | – | 0 |
| **Exchange rate gains** | | |
| Unrealised | 2 | 9 |
| **Total** | **2** | **10** |
| **Exchange rate losses** | | |
| Unrealised | -2 | -2 |
| **Total** | **-2** | **-2** |

In the Group, reported net exchange differences of SEK -207 (-643) million relating to debts in foreign currencies have been charged to other comprehensive income. These debts finance the acquisition of shares in foreign subsidiaries and act as a hedge to the acquired net assets. The amount is charged with tax resulting in a net after tax impact on other comprehensive income of SEK -161 (-502) million.

## Note 12. Non-controlling interests

Alfa Laval has the following subsidiaries with non-controlling interests. None of these non-controlling interests are material.

**Specification of subsidiaries with non-controlling interests**

| SEK millions, unless otherwise stated | | Non-controlling interest % | | Attributable to non-controlling interest: Net income | | Equity | |
|---|---|---|---|---|---|---|---|
| Company name | Country of domicile | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 |
| Framo Bombas Mexico SA de CV | Mexico | 0.002 | 0.002 | 0 | 0 | 0 | 0 |
| Alfa Laval Aalborg Indústria e Comércio Ltda | Brazil | 0.5 | 0.5 | 0 | 0 | 1 | 1 |
| Liyang Sifang Stainless Steel Products Co. Ltd. | China | 35 | 35 | 13 | 12 | 98 | 97 |
| Alfa Laval India Pvt Ltd * | India | – | – | – | 4 | – | – |
| Framo Korea Ltd ** | South Korea | – | 16.7 | 1 | 8 | – | 14 |
| Aalborg Industries Water Treatment Pte. Ltd. | Singapore | 40 | 40 | 0 | 0 | 0 | 0 |
| Ziepack SA | France | 49 | 49 | -2 | -1 | 3 | 5 |
| AO Alfa Laval Potok | Russia | 0.0007 | 0.0007 | 0 | 0 | 0 | 0 |
| **Total** | | | | **12** | **23** | **102** | **117** |

* The non-controlling interest has been eliminated through a selective share capital reduction.
** All of the non-controlling interest has been acquired.

# Note 13. Classification of financial assets and liabilities

## Financial assets

Consolidated

| | Valuation hierarchy level | Financial assets at fair value through profit or loss: Designated upon initial recognition | | Held for trading | | Derivatives used for hedging | | Loans and receivables | | Available for sale financial assets | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SEK millions | | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 |
| **Non-current assets** | | | | | | | | | | | |
| ***Other non-current assets*** | | | | | | | | | | | |
| Other long-term securities | 1 and 2 | – | – | – | – | – | – | – | – | 4 | 4 |
| Derivative assets | 2 | – | – | 2 | 1 | 22 | 15 | – | – | – | – |
| **Current assets** | | | | | | | | | | | |
| ***Current receivables*** | * | | | | | | | | | | |
| Accounts receivable | * | – | – | – | – | – | – | 5,941 | 5,830 | – | – |
| Notes receivable | * | – | – | – | – | – | – | 442 | 347 | – | – |
| Other receivables | * | – | – | – | – | – | – | 1,076 | 984 | – | – |
| Accrued income | * | – | – | – | – | – | – | 124 | 102 | – | – |
| Derivative assets | 2 | – | – | 31 | 79 | 134 | 74 | – | – | – | – |
| ***Current deposits*** | | | | | | | | | | | |
| Deposits with banks | * | – | – | – | – | – | – | 656 | 109 | – | – |
| Bonds and other securities | 1 | 542 | 956 | – | – | – | – | – | – | – | – |
| Other deposits | * | – | – | – | – | – | – | 10 | 10 | – | – |
| ***Cash and cash equivalents*** | * | – | – | – | – | – | – | 3,137 | 2,619 | – | – |
| **Total financial assets** | | **542** | **956** | **33** | **80** | **156** | **89** | **11,386** | **10,001** | **4** | **4** |

* Valued at amortised cost. The book value is the same as the fair value.
Valuation hierarchy level 1 is according to quoted prices in active markets for identical assets and liabilities.
Valuation hierarchy level 2 is out of directly or indirectly observable market data outside level 1.

The Group does not have any financial assets that represent held-to-maturity investments.

## Financial liabilities

Consolidated

| | Valuation hierarchy level | Financial liabilities at fair value through profit or loss: Held for trading | | Derivatives used for hedging | | Loans | |
|---|---|---|---|---|---|---|---|
| SEK millions | | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 |
| **Non-current liabilities** | | | | | | | |
| Liabilities to credit institutions etc | * | – | – | – | – | 11,092 | 12,169 |
| Derivative liabilities | 2 | – | 1 | 16 | 36 | – | – |
| **Current liabilities** | | | | | | | |
| Liabilities to credit institutions etc | * | – | – | – | – | 1,404 | 1,078 |
| Accounts payable | * | – | – | – | – | 2,802 | 2,490 |
| Notes payable | * | – | – | – | – | 162 | 178 |
| Other liabilities | * | – | – | – | – | 2,162 | 2,286 |
| Accrued costs | * | – | – | – | – | 2,524 | 2,407 |
| Derivative liabilities | 2 | 75 | 50 | 96 | 227 | – | – |
| **Total financial liabilities** | | **75** | **51** | **112** | **263** | **20,146** | **20,608** |

* Valued at amortised cost. The book value is the same as the fair value.
Valuation hierarchy level 1 is according to quoted prices in active markets for identical assets and liabilities.
Valuation hierarchy level 2 is out of directly or indirectly observable market data outside level 1.

The Group does not have any financial liabilities at fair value through profit and loss designated upon initial recognition.

Derivatives used for hedging in all cases only relate to cash flow hedges.

All of the financial instruments above sum up either to the corresponding item in the statement on financial position or to the item specified in the notes referred to in the statement on financial position. The risks linked to these financial instruments including any concentrations of risk are presented in the sections on risks on pages 93–99.

**Result of financial instruments**

The result of the financial assets designated upon recognition is found in Note 10 as fair value changes in securities.

The result of the financial assets held for trading of SEK 2 (31) million has affected cost of goods sold with SEK 2 (-) million and exchange gains in Note 11 with SEK - (31) million.

The result of the assets under loans and receivables is presented in Note 11 as other interest income for deposits with banks, other deposits and cash and cash equivalents. The other assets under loans and receivables do not generate a result but only a cash-in of the principal amount.

The result of the available for sale financial assets is reported as part of other comprehensive income in the consolidated comprehensive income statement.

The result of the financial liabilities held for trading of SEK -45 (-2) million has affected cost of goods sold with SEK -0 (-2) million and exchange losses in Note 11 with SEK -45 (-) million.

The result of the liabilities under loans is presented in Note 11 as other interest costs for the liabilities to credit institutions etc. The other liabilities under loans do not generate a result but only a cash-out of the principal amount.

The result of the derivative assets and liabilities used for hedging is reported as part of other comprehensive income in the consolidated comprehensive income statement.

## Note 14. Fair value of financial instruments

The fair value changes in shares in external companies are made under other comprehensive income and amounts to SEK 2 (0) million, see the consolidated comprehensive income statement.

The fair value changes in marketable securities are made on the line dividends and other financial income in the consolidated comprehensive income statement and amounts to SEK 11 (47) million, see Note 10.

### Fair value of derivatives

Consolidated

| SEK millions | Currency pairs | | Difference between contracted rate and current rate 2017 | 2016 |
|---|---|---|---|---|
| **Derivative assets/liabilities** | | | | |
| Foreign exchange forward contracts: | EUR | USD | 27 | -45 |
| | EUR | SEK | -47 | -17 |
| | EUR | AUD | 1 | -1 |
| | EUR | CAD | 0 | 0 |
| | EUR | CNY | 13 | 14 |
| | EUR | DKK | 0 | 0 |
| | EUR | JPY | 3 | 1 |
| | USD | CAD | -1 | 2 |
| | USD | DKK | 8 | -32 |
| | USD | GBP | – | 0 |
| | USD | SEK | -4 | 5 |
| | USD | JPY | 0 | -3 |
| | USD | SGD | – | -1 |
| | DKK | SEK | 0 | -1 |
| | NOK | EUR | -18 | -5 |
| | NOK | SEK | -33 | 22 |
| | NOK | USD | -10 | -54 |
| | CNY | SEK | 6 | 10 |
| | CNY | USD | 5 | -3 |
| | AUD | USD | 0 | -5 |
| | JPY | NOK | 3 | -48 |
| | JPY | SEK | 0 | -3 |
| | RUB | EUR | – | -1 |
| | Other | Other | 2 | -7 |
| Subtotal | | | -45 | -172 |
| Currency options | | | -2 | 0 |
| Interest Rate Swaps | | | 5 | 5 |
| Metal forward contacts | | | 42 | 23 |
| Electricity futures | | | 2 | -1 |
| **Total, corresponding to a net derivative asset (+) or liability (-)** | | | **2** | **-145** |

For currency options and electricity futures hedge accounting has not been applied. For foreign exchange forward contracts, interest rate swaps and metal forward contracts hedge accounting has been applied when the conditions for hedge accounting have been fulfilled.

The fair value adjustment of derivatives is made through other comprehensive income if hedge accounting can be applied and the derivatives are effective. In all other cases the fair value adjustment is made above net income. The corresponding entries are made on derivative assets and liabilities and not on the underlying financial instruments in the statement on financial position.

## Note 15. Current and deferred taxes

### Tax on this year's net income and other taxes

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| **Major components of the Group's tax costs** | | |
| Current tax cost | -1,108 | -1,253 |
| Adjustment for current taxes on prior periods | -114 | -4 |
| Deferred tax costs/income on changes in temporary differences | 78 | 235 |
| Deferred tax costs/income on changes in tax rates or new taxes | 32 | 128 |
| Previously unrecognised tax assets related to tax losses and tax credits | 0 | 0 |
| Previously unrecognised deferred tax assets related to tax losses, tax credits and temporary differences | 0 | 0 |
| Deferred tax cost from the write down or reversal of a previous write down of a deferred tax asset | 0 | -2 |
| Dividend distribution tax | -132 | -64 |
| Tax settlement with previous owner | -113 | – |
| Other taxes | -26 | -53 |
| **Total tax cost** | **-1,383** | **-1,013** |

Other taxes are mainly referring to wealth tax.

### Tax on this year's other comprehensive income

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| **Major components** | | |
| **Deferred tax on:** | | |
| Cash flow hedges | -56 | -54 |
| Market valuation of external shares | -1 | 0 |
| Translation difference | 209 | -89 |
| Revaluations of defined benefit obligations | 4 | 67 |
| **Total tax cost** | **156** | **-76** |

The difference between the tax costs of the group and the tax cost based upon applicable tax rates can be explained as follows:

**Tax cost reconciliation**

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| Result after financial items | 4,371 | 3,325 |
| Tax according to applicable tax rates | -1,040 | -924 |
| Tax effect of: | | |
| Non-deductible costs | -175 | -178 |
| Non-taxable income | 175 | 87 |
| Differences between reported official depreciation and depreciation according to tax rules | 4 | 0 |
| Differences between reported other official appropriations and other appropriations according to tax rules | 0 | -14 |
| Tax losses and tax credits | 6 | 9 |
| Adjustment for current tax on prior periods | -114 | -4 |
| Adjustment deferred tax | 32 | 128 |
| Dividend distribution tax | -132 | -64 |
| Tax settlement with previous owner | -113 | – |
| Other | -26 | -53 |
| **Total tax cost** | **-1 383** | **-1 013** |

Alfa Laval has provisions for uncertain tax positions and they are booked as a part of current tax liabilities when for instance a local tax audit or a taxation decision indicate an increased tax burden and the company makes the judgement that the tax authority wholly or partially can gain success in the future litigation.

Temporary differences exist when there is a difference between the book value and the tax base of assets and liabilities. The Group's temporary differences have resulted in a deferred tax asset or a deferred tax liability relating to the following assets and liabilities:

**Deferred tax assets and liabilities**

Consolidated

| | 2017 | | 2016 | |
|---|---|---|---|---|
| SEK millions | assets | liabilities | assets | liabilities |
| **Relating to:** | | | | |
| Intangible non-current assets | 2 | 1,068 | 3 | 1,469 |
| Tangible non-current assets | 51 | 151 | 52 | 212 |
| Inventory | 136 | 39 | 193 | 45 |
| Other current assets | 21 | 2 | 11 | 4 |
| Financial assets | 17 | 23 | 27 | 0 |
| Short term liabilities | 1,406 | 38 | 1,824 | 81 |
| Tax losses and tax credits * | 39 | – | 56 | – |
| Other | 5 | 867 | 0 | 1,021 |
| Subtotal | 1,677 | 2,188 | 2,166 | 2,832 |
| Possible to net | -88 | -88 | -110 | -110 |
| **Total deferred taxes** | **1,589** | **2,100** | **2,056** | **2,722** |

* The Group has reported a deferred tax asset on unused tax losses and tax grants of SEK 170 (130) million. These unused tax losses and tax grants are essentially not restricted in time.

In the Group there are temporary differences and unused tax losses and tax credits of SEK 1,166 (1,115) million that have not resulted in corresponding deferred tax assets, since these are not likely to be used. The temporary differences are mainly relating to pensions, where the date of payment is so far into the future that considering discounting and uncertainty concerning future profit levels no asset is deemed to exist. The unused tax losses and tax grants are essentially not restricted in time, but the tax losses that can be utilised per year can be restricted to a certain proportion of the taxable result.

The nominal tax rate has changed in the following countries between 2016 and 2017 or will change during 2018.

**Tax rates by country**

Consolidated

| Percent | 2018 | 2017 | 2016 |
|---|---|---|---|
| Argentina | 25 | 35 | 35 |
| Chile | 25 | 25 | 24 |
| Colombia | 34 | 34 | 25 |
| Italy | 28 | 28 | 31 |
| Netherlands | 21 | 25 | 25 |
| Norway | 23 | 24 | 25 |
| Portugal | 21 | 21 | 23 |
| Slovakia | 21 | 21 | 22 |
| UK | 19 | 19 | 20 |
| Taiwan | 20 | 17 | 17 |
| Hungary | 9 | 9 | 10 |
| USA | 25 | 38 | 38 |

The tax rates for 2017 and 2016 have been used to calculate the actual tax each year, while the tax rates for 2018 and 2017 have been used to calculate the deferred tax for 2017 and 2016 respectively.

The Group's normal effective tax rate is approximately 26 (28) percent based on taxable result, and it is calculated as a weighted average based on each subsidiary's part of the result before tax. One-time items like the ones mentioned below can however increase the tax rate for an individual year.

### Tax cost per country

Consolidated

| SEK millions (unless otherwise stated) | 2017 Earnings before tax and received dividends | 2017 Tax cost | 2017 Tax percentage (%) | 2016 Earnings before tax and received dividends | 2016 Tax cost | 2016 Tax percentage (%) |
|---|---|---|---|---|---|---|
| **Top ten countries** | | | | | | |
| Norway | 907 | -333 | 36.7% | 1,498 | -388 | 25.9% |
| Sweden | 1,212 | -275 | 22.7% | 1,756 | -383 | 21.8% |
| India | 400 | -225 | 56.2% | 347 | -126 | 36.3% |
| China | 819 | -183 | 22.4% | 893 | -185 | 20.7% |
| Denmark | 297 | -108 | 36.3% | 136 | -100 | 73.7% |
| Japan | 147 | -51 | 34.5% | 161 | -60 | 37.0% |
| Brazil | 124 | -35 | 28.6% | 142 | -29 | 20.5% |
| Netherlands | 126 | -35 | 27.6% | 100 | -30 | 30.5% |
| Italy | 119 | -34 | 28.6% | -2 | -28 | -1,262.0% |
| South Korea | 30 | -27 | 89.6% | -140 | -21 | -14.5% |
| **Total top ten countries** | **4,181** | **-1,306** | **31.2%** | **4,891** | **-1,350** | **27.6%** |
| **Other countries** | | | | | | |
| With a positive result | 776 | -179 | 23.1% | 1,005 | -286 | 28.4% |
| With losses | -452 | 155 | -34.3% | -281 | 6 | -2.1% |
| **Total all countries** | **4,505** | **-1,330** | **29.5%** | **5,615** | **-1,630** | **29.0%** |
| **Consolidation entries** | | | | | | |
| Elimination of appropriations | -705 | 154 | 21.8% | 271 | -58 | 21.4% |
| Amortisation of step-up values | -1,021 | 293 | 28.7% | -1,064 | 384 | 36.1% |
| Write down of step-up values | – | – | – | -94 | 9 | 9.6% |
| Adjustment of deferred taxes relating to step-up values due to reduced company taxes | – | 29 | N/A | – | 132 | N/A |
| Write down of goodwill | – | – | – | -533 | – | N/A |
| Central provisions and consolidation adjustments | 1,592 | -529 | 33.2% | -870 | 150 | 17.2% |
| **Total** | **4,371** | **-1,383** | **31.6%** | **3,325** | **-1,013** | **30.5%** |

The above table presents the earnings before tax and received dividends, the tax cost and the tax percentage per country for the top ten countries separately and the others grouped under profit generating and loss-making respectively and the consolidation entries in order to arrive at the total. The local results include appropriations. The reason why the result is before received dividends is that these mostly are non-taxable. The top ten countries are defined as the ten countries with the highest tax cost in 2017. The comparison figures 2016 are for these ten countries, although they might not have been among the ten countries with highest tax cost also in 2016.

Observe that individual companies in the top ten countries and in the group with a positive result can report losses. The group with losses can contain individual companies with profits. Also observe that the presented result is without correction for any non-deductible costs and non-taxable revenues outside received tax free dividends. The tax percentage for South Korea in 2017 and Denmark in 2016 has been affected by one-time items in connection with tax disputes with another country. The tax percentage for India in 2017 has been affected by a dividend distribution tax of SEK -100 million. The tax percentage for Norway in 2017 has been affected by a non-recurring item of SEK -113 million concerning additional tax relating to prior years concerning acquired businesses according to a settlement with the former owners.

Companies with losses in countries without tax pooling might have unused tax losses that have not resulted in a corresponding deferred tax asset, since these are not likely to be used. The lack of such a deferred tax income in these cases has an impact on the tax percentage in the concerned countries.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37

Notes

## Note 16. Goodwill and step-up values – acquisition of businesses

The allocation of step-up values to tangible and intangible assets and the residual goodwill in effect means that all acquisitions are valued at market. In order to separate out this valuation effect Alfa Laval focuses on EBITA, where any amortisation of step-up values is excluded. The development of these step-up values and any goodwill is shown in the table below.

**Movement schedule**

Consolidated

| SEK millions | Opening balance 2017 | Planned depreciation/ amortisation | Translation difference | Closing balance 2017 |
|---|---|---|---|---|
| Buildings | 340 | -32 | -2 | 306 |
| Land and land improvements | -63 | – | 11 | -52 |
| Patents and unpatented know-how | 2,101 | -368 | -112 | 1,621 |
| Trademarks | 3,766 | -621 | -143 | 3,002 |
| Subtotal step-up values | 6,144 | -1,021 | -246 | 4,877 |
| Goodwill | 20,436 | – | -661 | 19,775 |
| **Total** | **26,580** | **-1,021** | **-907** | **24,652** |

During 2017 the Group has recorded impairment losses relating to patents and unpatented know-how with SEK - (-89) million, trademarks with SEK - (-5) million and goodwill with SEK - (-533) million. Otherwise the Group has not recorded any impairment losses related to other step-up values.

There is no deferred tax liability calculated on the goodwill. The deferred tax liability on the other step-up values is SEK 965 (1,294) million.

For assets sold, net gains or losses are recognised on the costs basis including any related step-up value.

The next table shows each acquisition separately. Any later adjustments to the allocations are referred to the original year of the acquisition. The figures for the allocations are based on the prevailing rates at the time the transactions took place and any change in exchange rates until December 31, 2017 is shown as a translation difference. The corresponding presentation by asset type is found in Notes 17 and 18.

## Acquisition of businesses since 2000

Consolidated

| SEK millions Year/Businesses | Buildings | Land and land improvements | Inventory | Patents and unpatented know-how | Trademarks | Other | Total step-up values | Goodwill | Total |
|---|---|---|---|---|---|---|---|---|---|
| **2000** | | | | | | | | | |
| Alfa Laval Holding | 1,058 | -228 | 340 | 1,280 | 461 | 1,112 | 4,023 | 3,683 | 7,706 |
| **2002** | | | | | | | | | |
| Danish Separation Systems | – | – | – | – | – | – | – | 118 | 118 |
| **2003** | | | | | | | | | |
| Toftejorg | 1 | – | – | – | – | – | 1 | 35 | 36 |
| **2005** | | | | | | | | | |
| Packinox | – | – | 6 | 99 | 183 | – | 288 | 253 | 541 |
| **2006** | | | | | | | | | |
| Tranter | 17 | – | 6 | 180 | 265 | – | 468 | 530 | 998 |
| **2007** | | | | | | | | | |
| AGC Engineering | – | – | – | – | 12 | – | 12 | 20 | 32 |
| Helpman | 9 | 8 | – | 36 | – | – | 53 | 4 | 57 |
| Public offer Alfa Laval (India) | – | – | – | – | – | – | – | 441 | 441 |
| DSO Fluid Handling | – | – | – | – | 39 | – | 39 | 42 | 81 |
| Fincoil | – | – | – | 233 | – | – | 233 | 241 | 474 |
| **2008** | | | | | | | | | |
| Høyer Promix A/S | – | – | – | – | – | – | – | 16 | 16 |
| Nitrile India Pvt Ltd | – | – | – | – | – | – | – | 6 | 6 |
| Standard Refrigeration | – | – | 5 | 166 | – | – | 171 | 152 | 323 |
| Pressko AG | – | – | 1 | – | – | – | 1 | 69 | 70 |
| Hutchison Hayes Separation | – | – | 1 | 95 | 49 | – | 145 | 46 | 191 |
| P&D's Plattvärmeväxlarservice | – | – | – | – | – | – | – | 10 | 10 |
| Ageratec | – | – | – | – | – | – | – | 44 | 44 |
| **2009** | | | | | | | | | |
| Two providers of parts & service | – | – | – | – | 291 | – | 291 | 210 | 501 |
| Onnuri Industrial Machinery | – | – | – | 40 | 39 | – | 79 | 48 | 127 |
| HES Heat Exchanger Systems | – | – | – | 83 | – | – | 83 | 59 | 142 |
| Public offer Alfa Laval (India) | – | – | – | – | – | – | – | 311 | 311 |
| Termatrans | – | – | – | – | 7 | – | 7 | 6 | 13 |
| Tranter acquisitions in Latin America | – | – | – | – | 20 | – | 20 | 16 | 36 |
| ISO Mix | – | – | – | 22 | – | – | 22 | – | 22 |
| LHE | – | – | – | 298 | 297 | – | 595 | 344 | 939 |
| **2010** | | | | | | | | | |
| Champ Products | – | – | – | 15 | 14 | – | 29 | 2 | 31 |
| A leading U.S. service provider | – | – | – | – | 134 | – | 134 | 82 | 216 |
| G.S Anderson | – | – | – | 35 | – | – | 35 | 23 | 58 |
| Astepo | – | – | – | 24 | 15 | – | 39 | 8 | 47 |
| Si Fang Stainless Steel Products | – | – | – | 27 | 16 | – | 43 | 42 | 85 |
| Definox | – | – | – | 4 | 5 | – | 9 | 2 | 11 |
| Olmi | – | – | 37 | 58 | 32 | – | 127 | – | 127 |
| **2011** | | | | | | | | | |
| Service company in the U.S. | – | – | – | – | 150 | – | 150 | 126 | 276 |
| Aalborg Industries | 248 | – | – | 430 | 860 | – | 1,538 | 3,630 | 5,168 |
| **2012** | | | | | | | | | |
| Vortex Systems | – | – | – | 148 | – | – | 148 | 225 | 373 |
| Ashbrook Simon-Hartley | – | – | – | 86 | – | – | 86 | 55 | 141 |
| Gamajet Cleaning Systems | – | – | – | 47 | – | – | 47 | 37 | 84 |
| Air Cooled Exchangers (ACE) | – | – | – | 585 | – | – | 585 | 346 | 931 |
| **2013** | | | | | | | | | |
| Niagara Blower Company | – | – | – | 202 | – | – | 202 | 203 | 405 |
| **2014** | | | | | | | | | |
| Frank Mohn AS | – | – | 38 | 1,160 | 3,793 | – | 4,991 | 9,831 | 14,822 |
| CorHex Corp | – | – | – | 15 | – | – | 15 | – | 15 |
| **2015** | | | | | | | | | |
| Aftermarket company (separation) | – | – | – | – | 32 | – | 32 | 24 | 56 |
| K-Bar Parts LLC | – | – | – | – | 16 | – | 16 | – | 16 |
| **Accumulated during the period** | | | | | | | | | |
| Realised | -542 | 122 | -435 | – | – | -123 | -978 | – | -978 |
| Write down | -6 | -9 | – | -89 | -5 | – | -109 | -581 | -690 |
| Planned depreciation/ amortisation | -471 | – | – | -3,884 | -3,508 | -993 | -8,856 | -612 | -9,468 |
| Translation difference | -8 | 55 | 1 | 226 | -215 | 4 | 63 | -372 | -309 |
| **Closing balance** | **306** | **-52** | **–** | **1,621** | **3,002** | **–** | **4,877** | **19,775** | **24,652** |

The acquisition of the Alfa Laval Holding AB group in connection with the acquisition by Industri Kapital of the Alfa Laval Group from Tetra Laval on August 24, 2000 is shown on the first row.

“Other” relates to step-up values from 2000 for “Machinery” of SEK 548 million and “Equipment” of SEK 452 million that have been fully depreciated or realised, for “Research and development” of SEK 54 million and “Capital gain (Industrial Flow)” of SEK 42 million that have been fully realised and for “Construction in process” of SEK 16 million that has been transferred to “Machinery”.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
Notes

**Acquisition of businesses**
***During 2017***
On May 19, 2017 Alfa Laval has acquired the remaining 16.67 percent of the shares in the subsidiary Chang San Engineering Co Ltd in South Korea for SEK 58 million, which made it a fully owned subsidiary. The shareholding in the company was part of the acquisition of Frank Mohn AS in 2014.

The remaining SEK 11 million is relating to payment of retained part of purchase price concerning prior acquisitions.

All acquired assets and liabilities were reported according to IFRS at the time of the acquisitions.

***During 2016***
On May 21, 2016 Alfa Laval acquired an additional 8.33 percent of the shares in the subsidiary Chang San Engineering Co Ltd in South Korea for SEK 33 million, which increased the holding from 75 percent to 83.33 percent. On July 15, 2016 Alfa Laval acquired the remaining 4.67 percent of the shares in Frank Mohn do Brasil Ltda for SEK 4 million, which made it a 100 percent owned subsidiary. The shareholding in these two companies was part of the acquisition of Frank Mohn AS in 2014.

On October 5, 2016 a selective reduction of the share capital in the Indian subsidiary Alfa Laval (India) Ltd was finalised, upon which the non-controlling interests corresponding to 1.8 percent of the shareholding were bought out for SEK 174 million. Thereafter the company is a fully owned subsidiary.

The remaining SEK 19 million related to adjustment of preliminary purchase price for the acquisition of an aftermarket company specialized in separation technology during 2015 and payment of withheld additional purchase price concerning the acquisition of Olmi SpA in Italy.

All acquired assets and liabilities were reported according to IFRS at the time of the acquisitions.

**Impairment testing**
An impairment test has been performed at the end of 2017 indicating that there is not any need to write down the goodwill.

Four of Alfa Laval's operating segments, the four business divisions “Energy”, “Food & Water”, ”Marine” and ”Greenhouse” have been identified as the cash-generating units within Alfa Laval. Technically a recently acquired business activity could be followed independently during an initial period, but acquired businesses are normally integrated into the divisions at a fast rate. This means that the independent traceability is lost fairly soon and then any independent measurement and testing becomes impracticable.

The recoverable amount of the cash-generating units is based on their value in use, which is established by calculating the net present value of future cash flows. The net present value is based on the projected EBITDA figures for the next twenty years, less projected investments and changes in operating capital during the same period. This projection for the coming 20 years is based on the following components:

– The projection for 2018 is based on the Groups normal 12 month revolving “Forecast” reporting. This is based on a very large number of rather detailed assumptions throughout the organisation concerning the business cycle, volume growth, market initiatives, product mix, currency rates, cost development, cost structure, R&D etc.

– The projection for the years 2019 and 2020 is based on Management's general assumptions concerning the business cycle, volume growth, market initiatives, product mix, currency rates, cost development, cost structure, R&D etc.

- The projection for the years 2021 to 2037 is based on the perceived expected average industry growth rate.

The reason why a longer period than 5 years has been used for the calculation of the net present value is that Management considers 5 years to be a too short period for an operation where applying the going concern concept can be justified.

The assumptions used for the projections reflect past experiences or information from external sources.

The used discount rate is the pre-tax weighted average cost of capital (WACC) of 8.81 (8.32) percent.

There exists no reasonably possible change in a key assumption in the impairment test that would cause the carrying amount to exceed the recoverable amount. The reason is that the recoverable amounts with a very good margin exceed the carrying amounts. Due to this a sensitivity analysis is not presented.

Alfa Laval does not have any intangible assets with indefinite useful lives other than goodwill.

Goodwill has been allocated to the following cash-generating units:

**Goodwill**

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| Energy | 3,273 | 3,422 |
| Food & Water | 2,454 | 2,549 |
| Marine | 14,048 | 14,465 |
| **Total** | **19,775** | **20,436** |

# Note 17. Intangible non-current assets

**Patents and unpatented know-how**

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| **Accumulated acquisition values** | | |
| Opening balance | 6,099 | 5,738 |
| Purchases | 0 | 2 |
| Sales/disposals | -5 | -11 |
| Reclassifications | -1 | 1 |
| Translation difference | -205 | 369 |
| **Closing balance** | **5,888** | **6,099** |
| | | |
| **Accumulated amortisation** | | |
| Opening balance | -3,957 | -3,271 |
| Sales/disposals | 2 | – |
| Reclassifications | 0 | 0 |
| Amortisation of step-up value | -368 | -414 |
| Amortisation for the year | -6 | -6 |
| Write down | – | -89 |
| Translation difference | 94 | -177 |
| **Closing balance** | **-4,235** | **-3,957** |
| | | |
| **Closing balance, net book value** | **1,653** | **2,142** |

**Trademarks**

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| **Accumulated acquisition values** | | |
| Opening balance | 6,915 | 6,392 |
| Step-up values | – | 13 |
| Translation difference | -240 | 510 |
| **Closing balance** | **6,675** | **6,915** |
| | | |
| **Accumulated amortisation** | | |
| Opening balance | -3,149 | -2,344 |
| Amortisation of step-up values | -621 | -619 |
| Write down | – | -5 |
| Translation difference | 97 | -181 |
| **Closing balance** | **-3,673** | **-3,149** |
| | | |
| **Closing balance, net book value** | **3,002** | **3,766** |

### Licenses, renting rights and similar rights

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| **Accumulated acquisition values** | | |
| Opening balance | 217 | 217 |
| Purchases | 1 | 3 |
| Sales/disposals | -1 | -13 |
| Reclassifications | 1 | -10 |
| Translation difference | -7 | 20 |
| **Closing balance** | **211** | **217** |
| | | |
| **Accumulated amortisation** | | |
| Opening balance | -179 | -176 |
| Sales/disposals | 1 | 12 |
| Reclassifications | 1 | 10 |
| Amortisation for the year | -5 | -6 |
| Translation difference | 8 | -19 |
| **Closing balance** | **-174** | **-179** |
| | | |
| **Closing balance, net book value** | **37** | **38** |

Alfa Laval does not have any internally generated intangible assets.

### Goodwill

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| **Accumulated acquisition values** | | |
| Opening balance | 21,586 | 20,067 |
| Goodwill in connection with acquisition of businesses | – | 5 |
| Translation difference | -688 | 1,514 |
| **Closing balance** | **20,898** | **21,586** |
| | | |
| **Accumulated amortisation** | | |
| Opening balance | -1,150 | -569 |
| Write down of goodwill | – | -533 |
| Translation difference | 27 | -48 |
| **Closing balance** | **-1,123** | **-1,150** |
| | | |
| **Closing balance, net book value** | **19,775** | **20,436** |

## Note 18. Property, plant and equipment

### Real estate

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| **Accumulated acquisition values** | | |
| Opening balance | 4,764 | 4,518 |
| Purchases | 172 | 44 |
| Sales/disposal | -69 | -85 |
| Reclassifications | 94 | 30 |
| Translation difference | -27 | 257 |
| **Closing balance** | **4,934** | **4,764** |
| | | |
| **Accumulated depreciation** | | |
| Opening balance | -2,444 | -2,201 |
| Sales/disposals | 51 | 53 |
| Reclassifications | 7 | -13 |
| Depreciation of step-up value | -32 | -31 |
| Depreciation for the year | -146 | -149 |
| Translation difference | -5 | -103 |
| **Closing balance** | **-2,569** | **-2,444** |
| | | |
| **Closing balance, net book value** | **2,365** | **2,320** |

**Non-current assets held for sale**
Within Alfa Laval these assets are normally relating to real estate.

The operations in Lykens in the U.S. will move to Broken Arrow during 2019 after new premises have been built in Broken Arrow during 2018. After the move the property in Lykens will be sold. The empty property in Spijkenisse in the Netherlands is to be sold and a small property in France is empty and has been for sale for several years. They are not expected to be sold within the next year.

A property in Lima in Peru is for sale and is expected to be sold within the next year and is therefore still classified as current assets held for sale with SEK 2 (2) million.

### Machinery and other technical installations

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| **Accumulated acquisition values** | | |
| Opening balance | 7,113 | 6,609 |
| Purchases | 183 | 214 |
| Sales/disposal | -231 | -152 |
| Reclassifications | 120 | 122 |
| Translation difference | -142 | 320 |
| **Closing balance** | **7,043** | **7,113** |
| | | |
| **Accumulated depreciation** | | |
| Opening balance | -5,490 | -5,039 |
| Sales/disposals | 165 | 135 |
| Reclassifications | -16 | -6 |
| Depreciation for the year | -327 | -319 |
| Write-down | -5 | – |
| Translation difference | 119 | -261 |
| **Closing balance** | **-5,554** | **-5,490** |
| | | |
| **Closing balance, net book value** | **1,489** | **1,623** |

### Equipment, tools and installations

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| **Accumulated acquisition values** | | |
| Opening balance | 2,722 | 2,602 |
| Purchases | 100 | 103 |
| Sales/disposal | -106 | -103 |
| Reclassifications | 31 | 3 |
| Translation difference | -45 | 117 |
| **Closing balance** | **2,702** | **2,722** |
| | | |
| **Accumulated depreciation** | | |
| Opening balance | -2,143 | -2,000 |
| Sales/disposals | 89 | 98 |
| Reclassifications | 15 | 2 |
| Depreciation for the year | -135 | -152 |
| Write-down | -1 | – |
| Translation difference | 40 | -91 |
| **Closing balance** | **-2,135** | **-2,143** |
| | | |
| **Closing balance, net book value** | **567** | **579** |

### Construction in progress and advances to suppliers concerning property, plant and equipment

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| **Accumulated acquisition values** | | |
| Opening balance | 281 | 144 |
| Purchases | 219 | 251 |
| Reclassifications | -192 | -128 |
| Translation difference | -8 | 14 |
| **Closing balance** | **300** | **281** |
| | | |
| **Closing balance, net book value** | **300** | **281** |

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 Notes

### Leased real estate

| Consolidated | | |
|---|---|---|
| SEK millions | 2017 | 2016 |
| **Accumulated acquisition values** | | |
| Opening balance | 180 | 172 |
| Purchases | – | 0 |
| Sales/disposal | – | 0 |
| Translation difference | 5 | 8 |
| **Closing balance** | **185** | **180** |
| | | |
| **Accumulated depreciation** | | |
| Opening balance | -50 | -42 |
| Depreciation for the year | -7 | -7 |
| Translation difference | -2 | -1 |
| **Closing balance** | **-59** | **-50** |
| | | |
| **Closing balance, net book value** | **126** | **130** |

### Leased machinery

| Consolidated | | |
|---|---|---|
| SEK millions | 2017 | 2016 |
| **Accumulated acquisition values** | | |
| Opening balance | 37 | 35 |
| Translation difference | 1 | 2 |
| **Closing balance** | **38** | **37** |
| | | |
| **Accumulated depreciation** | | |
| Opening balance | -31 | -27 |
| Reclassifications | 0 | – |
| Depreciation for the year | -3 | -3 |
| Translation difference | 0 | -1 |
| **Closing balance** | **-34** | **-31** |
| | | |
| **Closing balance, net book value** | **4** | **6** |

### Leased equipment, tools and installations

| Consolidated | | |
|---|---|---|
| SEK millions | 2017 | 2016 |
| **Accumulated acquisition values** | | |
| Opening balance | 4 | 4 |
| Purchases | – | 0 |
| Sales/disposal | 0 | 0 |
| Reclassifications | -1 | 0 |
| Translation difference | 0 | 0 |
| **Closing balance** | **3** | **4** |
| | | |
| **Accumulated depreciation** | | |
| Opening balance | -3 | -2 |
| Sales/disposals | 0 | 0 |
| Reclassifications | – | 0 |
| Depreciation for the year | 0 | -1 |
| Translation difference | 0 | 0 |
| **Closing balance** | **-3** | **-3** |
| | | |
| **Closing balance, net book value** | **0** | **1** |

Leased real estate, machinery and equipment relate to fixed assets which are leased and where the leasing agreement has been considered to be a financial lease. These financial leases are capitalised in the statement on financial position.

## Note 19. Other non-current assets

### Shares in subsidiaries, joint ventures and other companies

| | Consolidated | | Parent company | |
|---|---|---|---|---|
| SEK millions | 2017 | 2016 | 2017 | 2016 |
| Shares in subsidiaries | – | – | 4,669 | 4,669 |
| Shares in joint ventures | 31 | 21 | – | – |
| Shares in other companies | 4 | 4 | – | – |
| **Total** | **35** | **25** | **4,669** | **4,669** |

Alfa Laval does not hold any shares in unconsolidated structured entities.

The consolidated financial statements include the parent company Alfa Laval AB (publ) and the subsidiaries in which it has a decisive influence, which in all cases refer to companies where the parent company directly or indirectly had an ownership of more than 50 percent during the period. These are consolidated according to the purchase method and are referred to as subsidiaries. Most of the subsidiaries are owned to 100 percent and only 6 (7) companies have non-controlling interests, see note 12. The subsidiaries are displayed in the first table below. Since all consolidated companies are owned to more than 50 percent there is no risk that judgements if a decisive influence exists or not at ownerships below 50 percent means that companies from time to time are included or not included in the consolidation.

Alfa Laval also has interests in 3 (3) small joint ventures that are consolidated according to the equity method since no decisive influence exists. These are displayed in a separate table below. The risks associated with joint ventures are basically business oriented and are not materially different than the risks linked to subsidiaries, with one exception. The exception relates to the risk of disagreeing with the other joint venture partner concerning for instance larger investments, financing and future direction for market penetration and product development, which could result in a sub-optimal development of the operations. Since Alfa Laval's joint ventures are of marginal significance for the Group as a total this risk is judged to be small.

The share of capital in the below tables is in all cases the same as the share of voting rights.

The below specification of shares contains some simplifications, for instance in connection with ownership in multiple layers or when the ownership is split on several owners or at cross-holdings. This is in order not to unnecessarily burden the presentation. A complete specification of shares can be ordered by contacting Alfa Laval's head office in Lund or via the Swedish Companies Registration Office (Bolagsverket).

### Specification of shares in subsidiaries

| Company name | Registration number | Domicile | Number of shares | Share of capital % | Book value SEK millions |
|---|---|---|---|---|---|
| Alfa Laval Holding AB | 556587-8062 | Lund, Sweden | 8,191,000 | 100 | 4,461 |
| Alfa Laval NV | | Maarssen, Netherlands | 887,753 | 100 | – |
| Alfa Laval Inc. | | Newmarket, Canada | 1,000,000 | 67 | – |
| Alfa Laval S.A. DE C.V. | | Tlalnepantla, Mexico | 45,057,057 | 100 | – |
| Alfa Laval S.A. | | San Isidro, Argentina | 1,223,967 | 95 | – |
| Alfa Laval Ltda | | Sao Paulo, Brazil | 21,129,066 | 100 | – |
| Framo do Brasil Ltda. | | Rio de Janeiro, Brazil | 14,850 | 4,67 | – |
| Alfa Laval SpA | | Santiago, Chile | 2,735 | 100 | – |
| Ashbrook Chile S.A. | | Santiago, Chile | 579,999 | 100 | – |
| Alfa Laval S.A. | | Bogota, Colombia | 12,195 | 100 | – |
| Alfa Laval S.A. | | Lima, Peru | 4,346,832 | 100 | – |
| Inmobililaria Tanguis S.A.C. | | Lima, Peru | 1,499 | 100 | – |
| Alfa Laval Venezolana S.A. | | Caracas, Venezuela | 10,000 | 100 | – |
| Alfa Laval Oilfield C.A. | | Caracas, Venezuela | 203 | 81 | – |
| Alfa Laval Taiwan Ltd | | Taipei, Taiwan | 1,499,994 | 100 | – |
| Alfa Laval (China) Ltd | | Hong Kong, China | 79,999 | 100 | – |
| Alfa Laval (Jiangyin) Manufacturing Co Ltd | | Jiang Yin, China | | 100 | – |
| Alfa Laval Flow Equipment (Kunshan) Co Ltd | | Jiangsu, China | | 75 | – |
| Alfa Laval Flow Equipment (Kunshan) Co Ltd | | Jiangsu, China | | 25 | – |
| Alfa Laval (Shanghai) Technologies Co Ltd | | Shanghai, China | | 100 | – |
| Wuxi MCD Gasket Co Ltd | | Jiang Yin, China | | 100 | – |
| Tranter Heat Exchangers (Beijing) Co Ltd | | Beijing, China | | 100 | – |
| Liyang Sifang Stainless Steel Products Co., Ltd | | Liyang City, China | | 65 | – |
| Alfa Laval Iran Ltd | | Teheran, Iran | 32,983 | 100 | – |
| Framo Korea Ltd | | Busan, South Korea | 5,000 | 25 | – |
| Alfa Laval Industry (PVT) Ltd | | Lahore, Pakistan | 119,110 | 100 | – |
| Alfa Laval Philippines Inc. | | Makati, Philippines | 72,000 | 100 | – |
| Alfa Laval Singapore Pte Ltd | | Singapore | 5,000,000 | 100 | – |
| Alfa Laval (Thailand) Ltd | | Bangkok, Thailand | 1,199,999 | 100 | – |
| Alfa Laval Middle East Ltd | | Nicosia, Cyprus | 40,000 | 100 | – |
| Alfa Laval Service Operations Qatar LLC | | Doha, Qatar | 9,800 | 49 | – |
| Alfa Laval Benelux NV/SA | | Brussels, Belgium | 98,284 | 100 | – |
| Alfa Laval EOOD | | Sofia, Bulgaria | 100 | 100 | – |
| Alfa Laval Slovakia S.R.O. | | Bratislava, Slovakia | | 1 | – |
| Alfa Laval Spol S.R.O. | | Prague, Czech Republic | | 20 | – |
| Alfa Laval Nordic OY | | Espoo, Finland | 20,000 | 100 | – |
| Alfa Laval Vantaa OY | | Vantaa, Finland | 7,000 | 100 | – |
| Alfa Laval Nederland BV | | Maarssen, Netherlands | 10,000 | 100 | – |
| Alfa Laval Benelux BV | | Maarssen, Netherlands | 20,000 | 100 | – |
| Helpman Capital BV | | Breda, Netherlands | 35,578 | 100 | – |
| Helpman Holding BV | | Naarden, Netherlands | 80 | 100 | – |
| Alfa Laval Groningen BV | | Groningen, Netherlands | 15,885 | 100 | – |
| PHE Holding AB | 556306-2404 | Lund, Sweden | 2,500 | 100 | – |
| Tranter Heat Exchangers Canada Inc. | | Edmonton, Canada | 100 | 100 | – |
| Tranter Latin America S.A. de C.V. | | Queretaro, Mexico | 49,999 | 100 | – |
| Tranter Indùstria e Comércio de Equipamentos Ltda | | Sao Paulo, Brazil | 2,018,370 | 100 | – |
| Tranter India Pvt Ltd | | Pune, India | 3,009,999 | 100 | – |
| Alfa Laval India Pvt Ltd | | Pune, India | 1 | 0 | – |
| Alfa Laval Korea Ltd | | Seoul, South Korea | 36,400 | 10 | – |
| Alfa Laval Korea Holding Company Ltd | | Chungnam, South Korea | 13,318,600 | 100 | – |
| Alfa Laval Korea Ltd | | Seoul, South Korea | 327,600 | 90 | – |
| Alfa Laval Corhex Ltd | | Daejeon, South Korea | 50,000 | 100 | – |
| LHE Co. Ltd | | Gim Hae, South Korea | 4,560,000 | 100 | – |
| Tranter Heat Exchangers Middle East (Cyprus) Ltd | | Nicosia, Cyprus | 20,000 | 100 | – |
| Tranter International AB | 556559-1764 | Vänersborg, Sweden | 100,000 | 100 | – |
| Multbran AB | 556662-3988 | Lund, Sweden | 2,723 | 100 | – |
| Alfa Laval India Pvt Ltd | | Pune, India | 1 | 0 | |
| Breezewind AB | 556773-6532 | Lund, Sweden | 1,000 | 100 | – |
| Alfa Laval India Pvt Ltd | | Pune, India | 1 | 0 | |
| OOO Tranter CIS | | Moscow, Russia | | 100 | – |
| Alfa Laval Corporate AB | 556007-7785 | Lund, Sweden | 13,920,000 | 100 | – |
| Alfa Laval S.A. | | San Isidro, Argentina | 64,419 | 5 | – |
| Tranter Latin America S.A. de C.V. | | Queretaro, Mexico | 1 | 0 | – |
| Definox (Beijing) Stainless Steel Equipment Ltd | | Beijing, China | | 100 | – |
| Alfa Laval (Kunshan) Manufacturing Co Ltd | | Kunshan, China | | 100 | – |
| Alfa Laval India Pvt Ltd | | Pune, India | 17,832,712 | 100 | – |
| Alfa Laval Support Services Pvt Ltd | | Pune, India | 100,000 | 100 | – |
| Tranter India Pvt Ltd | | Pune, India | 1 | 0 | – |

## Specification of shares in subsidiaries, continued

| Company name | Registration number | Domicile | Number of shares | Share of capital % | Book value SEK millions |
|---|---|---|---|---|---|
| PT Alfa Laval Indonesia | | Jakarta, Indonesia | 1,249 | 100 | – |
| Alfa Laval Malaysia Sdn Bhd | | Shah Alam, Malaysia | 10,000 | 100 | – |
| Alfa Laval d.o.o. | | Trzin, Slovenia | | 100 | – |
| Alfa Laval Kolding A/S | | Kolding, Denmark | 40 | 100 | – |
| Alfa Laval Nordic A/S | | Rödovre, Denmark | 1 | 100 | – |
| Alfa Laval Copenhagen A/S | | Söborg, Denmark | 1 | 100 | – |
| Alfa Laval Nakskov A/S | | Nakskov, Denmark | 242,713 | 100 | – |
| Alfa Laval Aalborg A/S | | Aalborg, Denmark | 2,560,972 | 100 | – |
| Alfa Laval Aalborg Indústria e Comércio Ltda | | Petrópolis, Brazil | 5,969,400 | 99.5 | – |
| Aalborg Industries Ltda | | Itu, Brazil | 4,644,373 | 100 | – |
| Alfa Laval Aalborg Ltd | | Shanghai, China | | 100 | – |
| Alfa Laval Qingdao Ltd | | Jiaozhou City, China | | 100 | – |
| Alfa Laval Aalborg Ltd | | Hong Kong, China | 99 | 100 | – |
| Aalborg Industries Engineering Bhd | | Kuala Lumpur, Malaysia | | 100 | – |
| Aalborg Industries Water Treatment Pte Ltd | | Singapore | 4,800,000 | 60 | – |
| Alfa Laval HaiPhong Co. Ltd | | HaiPhong, Vietnam | | 100 | – |
| Alfa Laval Aalborg Oy | | Rauma, Finland | 3,000 | 100 | – |
| Alfa Laval Nijmegen BV | | Nijmegen, Netherlands | 182 | 100 | – |
| Alfa Laval Aalborg Holding Pty Ltd | | North Wyong, Australia | 2,875,010 | 100 | – |
| Alfa Laval Aalborg Pty Ltd | | North Wyong, Australia | 225,000 | 100 | – |
| Alfa Laval Olmi SpA | | Suisio, Italy | 500,000 | 100 | – |
| Alfa Laval Italy Srl | | Milan, Italy | | 33.3 | – |
| Alfa Laval Nordic AS | | Oslo, Norway | 100 | 100 | – |
| Framo AS | | Nesttun, Norway | 95,347,695 | 100 | – |
| Framo Bombas Mexico SA de CV | | Mexico City, Mexico | 49,999 | 99.998 | – |
| Framo do Brasil Ltda. | | Rio de Janeiro, Brazil | 303,002 | 95.33 | – |
| Framo Shanghai Ltd. | | Shanghai, China | 0 | 100 | – |
| Framo Korea Ltd | | Busan, South Korea | 15,000 | 75 | – |
| Framo Singapore PTE Ltd. | | Singapore | 1,000,000 | 100 | – |
| Framo Nederland BV | | Spijkenisse, Netherlands | 500 | 100 | – |
| Framo Nippon KK | | Tokyo, Japan | 600 | 100 | – |
| Framo Fusa AS | | Fusa, Norway | 86,236 | 100 | – |
| Framo Holsnøy AS | | Frekhaug, Norway | 25,000 | 100 | – |
| Framo Flatøy AS | | Frekhaug, Norway | 45,330 | 100 | – |
| Framo Services AS | | Nesttun, Norway | 10,000 | 100 | – |
| PHE Holding AS | | Nesttun, Norway | 45,000 | 100 | – |
| Framo Flatøy 2 AS | | Frekhaug, Norway | 30 | 100 | – |
| Alfa Laval Nordic AB | 556243-2061 | Tumba, Sweden | 1,000 | 100 | – |
| Alfa Laval Treasury International (publ) AB | 556432-2484 | Lund, Sweden | 50,000 | 100 | – |
| Alfa Laval India Pvt Ltd | | Pune, India | 1 | 0 | – |
| Alfa Laval Europe AB | 556128-7847 | Lund, Sweden | 500 | 100 | – |
| Alfa Laval Lund AB | 556016-8642 | Lund, Sweden | 100 | 100 | – |
| Alfa Laval India Pvt Ltd | | Pune, India | 1 | 0 | – |
| Alfa Laval International Engineering AB | 556039-8934 | Lund, Sweden | 4,500 | 100 | – |
| Alfa Laval Tumba AB | 556021-3893 | Tumba, Sweden | 1,000 | 100 | – |
| Alfa Laval Oilfield C.A. | | Caracas, Venezuela | 47 | 19 | – |
| Alfa Laval Makine Sanayii ve Ticaret Ltd Sti | | Istanbul, Turkey | 27,001,755 | 99 | – |
| Alfa Laval SIA | | Riga, Latvia | 125 | 100 | – |
| Alfa Laval Australia Pty Ltd | | Homebush, Australia | 2,088,076 | 100 | – |
| Alfa Laval New Zeeland Pty Ltd | | Hamilton, New Zeeland | 1,000 | 100 | – |
| Alfa Laval Holding BV | | Maarssen, Netherlands | 60,035,631 | 100 | – |
| Alfa Laval (Pty) Ltd | | Isando, South Africa | 2,000 | 100 | – |
| Alfa Laval SA (Pty) Ltd | | Isando, South Africa | 100 | 100 | – |
| Alfa Laval Slovakia S.R.O. | | Bratislava, Slovakia | | 99 | – |
| Alfa Laval Spol S.R.O. | | Prague, Czech Republic | | 80 | – |
| Alfa Laval France SAS | | Saint-Priest, France | 2,000,000 | 100 | – |
| Alfa Laval SAS | | Saint-Priest, France | 606,700 | 100 | – |
| Alfa Laval Moatti SAS | | Elancourt, France | 24,000 | 100 | – |
| Alfa Laval Spiral SAS | | Nevers, France | 79,999 | 100 | – |
| MCD SAS | | Guny, France | 71,300 | 100 | – |
| Alfa Laval Vicarb SAS | | Grenoble, France | 200,000 | 100 | – |
| Canada Inc. | | Newmarket, Canada | 480,000 | 100 | – |
| Alfa Laval Inc. | | Newmarket, Canada | 481,600 | 33 | – |
| SCI du Companil | | Grenoble, France | 32,165 | 100 | – |
| Alfa Laval HES SAS | | Pontcharra sur Turdine, France | 150,000 | 100 | – |
| Alfa Laval Packinox SAS | | Paris, France | 348,115 | 100 | – |
| Ziepack SA | | Paris, France | 37,701 | 51 | – |
| Tranter SAS | | Nanterre, France | | 100 | – |
| Definox SAS | | Clisson, France | 10,000 | 100 | – |
| Alfa Laval Holding GmbH | | Glinde, Germany | 1 | 100 | – |
| Alfa Laval Mid Europe GmbH | | Wiener Neudorf, Austria | 1 | 100 | – |

### Specification of shares in subsidiaries, continued

| Company name | Registration number | Domicile | Number of shares | Share of capital % | Book value SEK millions |
|---|---|---|---|---|---|
| Tranter Warmetauscher GmbH | | Guntramsdorf, Austria | | 100 | – |
| Alfa Laval Mid Europe GmbH | | Glinde, Germany | 1 | 100 | – |
| Alfa Laval Stormarn GmbH | | Glinde, Germany | 1 | 100 | – |
| Tranter GmbH | | Artern, Germany | 1 | 100 | – |
| Alfa Laval Mid Europe AG | | Dietlikon, Switzerland | 647 | 100 | – |
| Alfa Laval AEBE | | Holargos, Greece | 807,000 | 100 | – |
| Alfa Laval Kft | | Budapest, Hungary | 1 | 100 | – |
| Alfa Laval SpA | | Monza, Italy | 1,992,276 | 99 | – |
| Alfa Laval Italy Srl | | Milan, Italy | | 66.7 | – |
| Alfa Laval Polska Sp.z.o.o. | | Warsaw, Poland | 7,600 | 100 | – |
| Alfa Laval Kraków Sp.z.o.o. | | Krakow, Poland | 80,080 | 100 | – |
| Alfa Laval (Portugal) Ltd | | Linda-A-Velha, Portugal | | 1 | – |
| Alfa Laval SRL | | Bucharest, Romania | 38,566 | 100 | – |
| Alfa Laval Iberia SA | | Madrid, Spain | 99,999 | 99.999 | – |
| Alfa Laval (Portugal) Ltd | | Linda-A-Velha, Portugal | 1 | 99 | – |
| Alfa Laval Holdings Ltd | | Camberley, UK | 14,053,262 | 100 | – |
| Alfa Laval Ltd | | Camberley, UK | 11,700,000 | 100 | – |
| Tranter Ltd | | Doncaster, UK | 10,000 | 100 | – |
| Alfa Laval Eastbourne Ltd | | Eastbourne, UK | 10,000 | 100 | – |
| Ashbrook Simon-Hartley Ltd | | Newcastle-under-Lyme, UK | 2 | 100 | – |
| Alfa Laval Makine Sanayii ve Ticaret Ltd Sti | | Istanbul, Turkey | 1 | 1 | – |
| Alfa Laval USA Inc. | | Richmond, Virginia, USA | 1,000 | 100 | – |
| Alfa Laval US Holding Inc. | | Richmond, Virginia, USA | 180 | 100 | – |
| Alfa Laval Inc. | | Richmond, Virginia, USA | 44,000 | 100 | – |
| Champ Products LLC | | Richmond, Virginia, USA | | 100 | – |
| Standard Refrigeration LLC | | Richmond, Virginia, USA | | 100 | – |
| Niagara Blower Company Inc | | Buffalo, New York, USA | 4,000,200 | 100 | – |
| Framo Houston Inc. | | La Porte, Texas, USA | 5,000 | 100 | – |
| Alfa Laval US Treasury Inc. | | Richmond, Virginia, USA | 1,000 | 100 | – |
| DSO Fluid Handling Inc. | | Irvington, New Jersey, USA | 100 | 100 | – |
| AGC Heat Transfer Inc. | | Bristow, Virginia, USA | 1,000 | 100 | – |
| Tranter Inc. | | Wichita Falls, Texas, USA | 1,000 | 100 | – |
| MCD Gaskets Inc. | | Richmond, Virginia, USA | 1,000 | 100 | – |
| Hutchison Hayes Separation Inc. | | Houston, Texas, USA | 1,000 | 100 | – |
| Definox Inc. | | New Berlin, Wisconsin, USA | 1,000 | 100 | – |
| Alfa Laval Kathabar Inc. | | Elizabethtown, North Carolina, USA | 1,000 | 100 | – |
| Alfa Laval IC Disc Inc | | Richmond, Virginia, USA | 1,000 | 100 | – |
| AO Alfa Laval Potok | | Koroljov, Russia | 31,092,892 | 99.9993 | – |
| Alfa Laval Försäkrings AB | 516406-0682 | Lund, Sweden | 50,000 | 100 | – |
| Alfa Laval Ltda | | Sao Paulo, Brazil | 2 | 0 | – |
| Tranter Indùstria e Comércio de Equipamentos Ltda | | Sao Paulo, Brazil | 1 | 0 | – |
| Alfa Laval Benelux NV/SA | | Brussels, Belgium | 2 | 0 | – |
| Alfa Laval SpA | | Monza, Italy | 20,124 | 1 | – |
| Alfa Laval Iberia SA | | Madrid, Spain | 1 | 0.001 | – |
| Alfa Laval Ukraine | | Kiev, Ukraine | | 100 | – |
| Alfa Laval India Pvt Ltd | | Pune, India | 1 | 0 | – |
| Alfa Laval KK | | Tokyo, Japan | 1,200,000 | 100 | 208 |
| **Total** | | | | | **4,669** |

### Specification of shares in joint ventures

| Company name | Registration number | Domicile | Number of shares | Share of capital % | Book value SEK millions |
|---|---|---|---|---|---|
| Alfa Laval Holding AB | | | | | |
| Alfdex AB | 556647-7278 | Botkyrka, Sweden | 1,000 | 50 | 29 |
| Alfa Laval Corporate AB | | | | | |
| AlfaWall AB | 556723-6715 | Botkyrka, Sweden | 500 | 50 | 2 |
| Alfa Laval Ltd | | | | | |
| Rolls Laval Heat Exchangers Ltd | | Wolverhampton, UK | 5,000 | 50 | 0 |
| **Total** | | | | | **31** |

### Specification of shares in other companies

| Company name | Domicile | Number of shares | Share of capital % | Book value SEK thousands |
|---|---|---|---|---|
| Alfa Laval Aalborg Ltda | | | | |
| Tractebel | Brazil | 1,268 | | 107 |
| Elektrobras | Brazil | 7,107 | | 144 |
| Alfa Laval Philippines Inc. | | | | |
| Philippine Long Distance Telephone | Philippines | 820 | | 14 |
| Alfa Laval Nordic OY | | | | |
| As Oy Koivulantie 7A | Finland | 1 | | 305 |
| Helsinki Halli | Finland | 4 | | 138 |
| Alfa Laval Vantaa OY | | | | |
| Länsi-Vantaan Tenniskeskus | Finland | 4 | | 0 |
| Mikkelin Puhelin Oyj | Finland | 5 | | 20 |
| Alfa Laval Benelux BV | | | | |
| CV Scheepvaartonderneming Finterbaltica | Netherlands | 1 | | 167 |
| Helpman Holding BV | | | | |
| Helpman Sofia OOD | Bulgaria | 500 | 49 | 0 |
| Alfa Laval NV | | | | |
| Dalian Haven Automation Co Ltd | China | 102 | 43 | 876 |
| Framo Nederland BV | | | | |
| Triangle (Air) Freight Forwarders BV | Netherlands | 12 | 33 | 2,462 |
| Framo Flatøy AS | | | | |
| Nordhordaland handverk og industrilag AS | Norway | 50 | 4 | 25 |
| Meland arbeids- og kompetansesenter | Norway | 3 | 3 | 3 |
| Alfa Laval Tumba AB | | | | |
| Smedhälsan Ekonomisk Förening | Sweden | | | 22 |
| Alfa Laval Corporate AB | | | | |
| European Development Capital Corporation (EDCC) NV | Curacao | 36,129 | | 0 |
| Multiprogress | Hungary | 100 | 3 | 0 |
| Kurose Chemical Equipment Ltd | Japan | 180,000 | 11 | 0 |
| Poljopriveda | former Yugoslavia | | | 0 |
| Tecnica Argo-Industrial S.A. | Mexico | 490 | 49 | 0 |
| Adela Investment Co S.A. (preference) | Luxembourg | 1,911 | 0 | 0 |
| Adela Investment Co S.A. | Luxembourg | 1,911 | 0 | 0 |
| Mas Dairies Ltd | Pakistan | 125,000 | 5 | 0 |
| **Total** | | | | **4,283** |

None of these other companies with a share of capital of 20 percent or more are accounted for as associates since they are dormant and Alfa Laval does not have a significant influence according to IAS 28 item 6.

## Note 20. Inventories

### Type of inventory

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| Raw materials and consumables | 2,351 | 2,849 |
| Work in progress | 2,719 | 2,087 |
| Finished goods & goods for resale, new sales | 1,949 | 1,720 |
| Finished goods & goods for resale, spare parts | 1,190 | 1,039 |
| Advance payments to suppliers | 215 | 136 |
| **Total** | **8,424** | **7,831** |

A considerable part of the inventory for spare parts is carried at net realisable value.

Obsolescence related to inventories amounts to and has changed as follows:

### Obsolescence

Consolidated

| SEK millions | January 1 | Translation difference | Write-down | Reversal of previous write-down | December 31 |
|---|---|---|---|---|---|
| Year: | | | | | |
| 2016 | 1,176 | 61 | 318 | -292 | 1,263 |
| 2017 | 1,263 | -37 | 370 | -382 | 1,214 |

The Group's inventories have been accounted for after deduction for inter-company gains in inventory due to internal sales within the Group. The inter-company profit reserve at the end of 2017 amounts to SEK 535 (499) million.

## Note 21. Accounts receivable

Accounts receivable with a maturity exceeding one year of SEK 198 (152) million have not been accounted for as non-current assets as they are not intended for permanent use.

Accounts receivable are reported net of provisions for bad debts. The provision for bad debts amounts to and has changed as follows:

### Bad Debts

Consolidated

| SEK millions | January 1 | Translation difference | New provisions and increase of existing provisions | Amounts used | Unused amounts reversed | Change due to discounting | December 31 |
|---|---|---|---|---|---|---|---|
| Year: | | | | | | | |
| 2016 | 473 | 26 | 111 | -88 | -57 | 0 | 465 |
| 2017 | 465 | -14 | 144 | -97 | -64 | 0 | 434 |

The amount of accounts receivable being overdue is an indication of the risk the company runs for ending up in bad debts. The percentage is in relation to the total amount of accounts receivable.

### Accounts receivable - overdue

Consolidated

| SEK millions | 2017 | % | 2016 | % |
|---|---|---|---|---|
| **Overdue:** | | | | |
| Maximum 30 days | 592 | 10.0 | 672 | 11.5 |
| More than 30 days but maximum 90 days | 413 | 6.9 | 373 | 6.4 |
| More than 90 days | 576 | 9.7 | 557 | 9.6 |
| **Total** | **1,581** | **26.6** | **1,602** | **27.5** |

## Note 22. Other short-term receivables

### Split on type and maturity

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| Notes receivable | 442 | 347 |
| Financial leasing receivables | 7 | 8 |
| Other receivables | 1,076 | 984 |
| **Total** | **1,525** | **1,339** |
| Of which, not due within one year: | | |
| Notes receivable | 4 | 10 |
| Other receivables | 26 | 26 |
| **Total** | **30** | **36** |

Other receivables relate to a wide range of other receivables, including VAT receivables, receivables on governments for export incitements, receivables on personnel, rent receivables etc.

## Note 23. Prepaid expenses and accrued income

### Split on type

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| Prepaid expenses | 260 | 266 |
| Accrued income | 124 | 102 |
| **Total** | **384** | **368** |

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 Notes

## Note 24. Other current deposits

**Split on type and maturity**

| Consolidated | | |
|---|---|---|
| SEK millions | 2017 | 2016 |
| Deposits with banks | 656 | 109 |
| Bonds and other securities | 542 | 956 |
| Other deposits | 10 | 10 |
| **Total** | **1,208** | **1,075** |
| Of which, not due within one year: | | |
| Deposits with banks | 7 | 1 |
| Other deposits | 0 | 0 |
| **Total** | **7** | **1** |

## Note 25. Cash and cash equivalents

The item cash and cash equivalents in the statement on financial position and in the cash-flow statement is mainly relating to bank deposits and liquid deposits.

## Note 26. Defined benefit obligations

The Group has defined benefit commitments to employees and former employees and their survivors. The benefits are referring to old age pension, survivor's pension, disability pension, health care and severance pay.

The defined benefit plans are in place in Austria, Belgium, France, Germany, India, Indonesia, Italy, Japan, Mexico, the Netherlands, Norway, Philippines, South Africa, Sweden, Switzerland, Taiwan, the United Kingdom and the United States. Most plans have been closed for new participants and replaced by defined contribution plans for new employees.

During 2017, Canada has closed down its defined benefit pension plan through purchase of annuities.

***Risks***

The cost for defined benefit obligations are impacted by several factors that are outside the control of the company, such as the discount rate, the return on plan assets, future salary increases, the development of the average length of life and the claim rates under medical plans. The size of and the development of these costs are therefore difficult to predict. According to the IAS 19 all of these remeasurements are reported in other comprehensive income.

The following table presents how the net defined benefit liability is arrived at out of the present values of the different defined benefit plans, less the fair value of the plan assets.

**Net defined benefit liability**

| Consolidated | | |
|---|---|---|
| SEK millions | 2017 | 2016 |
| Present value of defined benefit obligation, unfunded | -1,224 | -1,264 |
| Present value of defined benefit obligation, funded | -5,515 | -5,664 |
| Present value of defined benefit obligation at year end | -6,739 | -6,928 |
| Fair value of plan assets | 4,448 | 4,506 |
| Defined benefit liability | -2,291 | -2,422 |
| Less disallowed assets due to asset ceiling | – | – |
| **(-) liability/(+) asset at December 31** | **-2,291** | **-2,422** |

The net plan cost for the defined benefit plans describes the different cost elements of the plans. The net plan cost is reported in the consolidated comprehensive income statement on the lines where personnel costs are reported. The interest cost/income is not part of the financial net, but instead just a way to categorize the components of the net plan cost. All remeasurements are reported in other comprehensive income and will never be reclassified to net income.

**Total plan cost**

| Consolidated | | |
|---|---|---|
| SEK millions | 2017 | 2016 |
| **Net plan cost** | | |
| Current service cost | -94 | -102 |
| Net interest cost/income | -69 | -66 |
| Past service cost/income from plan amendments and curtailments and gains and losses on settlements | 2 | -6 |
| **Net plan (-) cost/(+) income** | **-161** | **-174** |
| **Remeasurements** | | |
| Actuarial losses/gains arising from changes in demographic assumptions | 55 | -41 |
| Actuarial losses/gains arising from changes in financial assumptions | -75 | -692 |
| Actuarial losses/gains arising from changes in experience | -57 | 108 |
| Return on plan assets less interest on plan assets | 92 | 120 |
| Change in disallowed assets due to asset ceiling | – | – |
| **Other comprehensive income (OCI)** | **15** | **-505** |
| **Total plan cost** | **-146** | **-679** |

The following table presents how the present value of the defined benefit liability has changed during the year and lists the different components of the change.

### Present value of defined benefit liability

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| Present value of defined benefit liability at January 1 | -6,928 | -6,392 |
| Translation difference | 206 | -22 |
| Current service cost | -94 | -102 |
| Interest cost | -169 | -199 |
| Employee contributions | -5 | -5 |
| Actuarial losses/gains arising from changes in demographic assumptions | 55 | -41 |
| Actuarial losses/gains arising from changes in financial assumptions | -75 | -692 |
| Actuarial losses/gains arising from changes in experience | -57 | 108 |
| Past service cost/income from plan amendments and curtailments and gains and losses on settlements | 2 | -6 |
| Benefit payments | 304 | 268 |
| Settlement payments | 22 | 155 |
| **(-) liability at December 31** | **-6,739** | **-6,928** |

The liability has the following duration and maturity:

### Duration and maturity

Consolidated

| | 2017 | 2016 |
|---|---|---|
| Weighted average duration of the defined benefit obligation (years) | 13 | 12 |
| **Maturity analysis of benefit payments (non-discounted amounts) SEK millions** | | |
| maturity ≤ 1 year | 232 | 276 |
| maturity > 1 ≤ 5 years | 1,012 | 1,138 |
| maturity > 5 ≤ 10 years | 1,414 | 1,559 |
| maturity > 10 ≤ 20 years | 2,891 | 3,016 |
| maturity > 20 years | 4,878 | 4,510 |

The following table presents how the fair value of the plan assets has developed during the year and lists the components of the change.

### Fair value of plan assets

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| Fair value of plan assets at January 1 | 4,506 | 4,465 |
| Translation difference | -116 | -13 |
| Employer contributions | 141 | 175 |
| Employee contributions | 5 | 5 |
| Interest on plan assets | 100 | 133 |
| Return on plan assets less interest on plan assets | 92 | 120 |
| Benefit payments | -258 | -224 |
| Settlement payments | -22 | -155 |
| **(+) asset at December 31** | **4,448** | **4,506** |

The plan assets are split on the following types of assets:

### Split of plan assets

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| Cash and cash equivalents | 46 | 786 |
| Equity instruments | 1,195 | 1,148 |
| Debt instruments | 2,063 | 1,551 |
| Real estate | 219 | 254 |
| Investment funds | 925 | 767 |
| **Fair value at December 31** | **4,448** | **4,506** |

The plan assets are in all essentials valued at quoted market prices in active markets.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 Notes

The table below presents how the net defined benefit liability has changed and the factors affecting the change.

### Net defined benefit liability/asset

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| Defined benefit liability/asset at January 1 | -2,422 | -1,927 |
| Translation difference | 90 | -35 |
| Net plan cost | -161 | -174 |
| Employer contributions | 141 | 175 |
| Remeasurements (other comprehensive income) | 15 | -505 |
| Benefit payments, unfunded plans | 46 | 44 |
| Settlement payments, unfunded plans | 0 | 0 |
| **(-) liability/(+) asset at December 31** | **-2,291** | **-2,422** |

The gross plan assets and gross defined benefit liabilities of each plan are to be reported as a net amount. The following table shows how the net asset and the net liability are calculated.

### Gross defined benefit liability/asset

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| **Assets** | | |
| Fair value of plan assets | 4,448 | 4,506 |
| Less disallowed assets due to asset ceiling | – | – |
| | 4,448 | 4,506 |
| Netting | -4,442 | -4,503 |
| **Assets in statement on financial position** | **6** | **3** |
| **Liabilities** | | |
| Present value of defined benefit obligation at year end | -6,739 | -6,928 |
| Netting | 4,442 | 4,503 |
| **Provision in statement on financial position** | **-2,297** | **-2,425** |

The weighted averages for the more significant actuarial assumptions that have been used at the year-end are:

### Actuarial assumptions

Consolidated

| | 2017 | 2016 |
|---|---|---|
| Discount rate (%) | 2.6 | 2.8 |
| Expected average retirement age (years) | 63 | 63 |
| Life expectancy for a 45-year-old male (years) | 82 | 82 |
| Life expectancy for a 45-year-old female (years) | 85 | 85 |
| Claim rates under medical plans (%) | 5 | 5 |
| Expected rate of salary/wage increase (%) | 3 | 3 |
| Change in health care costs (%) | 5 | 5 |
| Index for future compensation increases (%) | 2 | 2 |

### Future contributions

Consolidated

| SEK millions | 2018 |
|---|---|
| Expected employer contributions to the plan for the next calendar year | -193 |
| Expected employer contributions for the next calendar year to multi-employer plans reported as defined contribution plans | -61 |

The following table presents how the defined benefit pension schemes are distributed on different countries.

## Regional split

Consolidated

| SEK millions, unless otherwise stated | United States | United Kingdom | Nether-lands | Germany | Norway | Italy | Belgium | Other | **Total** |
|---|---|---|---|---|---|---|---|---|---|
| **Net defined benefit liability** | | | | | | | | | |
| Present value of the defined benefit obligation, unfunded | -699 | – | – | -186 | -9 | -32 | – | -298 | **-1,224** |
| Present value of the defined benefit obligation, funded | -802 | -2,807 | -635 | – | -862 | – | -73 | -336 | **-5,515** |
| Present value of the defined benefit obligation at year end | -1,501 | -2,807 | -635 | -186 | -871 | -32 | -73 | -634 | **-6,739** |
| Fair value of plan assets | 720 | 1,992 | 595 | – | 790 | – | 45 | 306 | **4,448** |
| Defined benefit liability | -781 | -815 | -40 | -186 | -81 | -32 | -28 | -328 | **-2,291** |
| Less disallowed assets due to asset ceiling | – | – | – | – | – | – | – | – | **–** |
| (-) liability/(+) asset | -781 | -815 | -40 | -186 | -81 | -32 | -28 | -328 | **-2,291** |
| **Net plan cost** | **-48** | **-38** | **-14** | **-3** | **-32** | **-1** | **-3** | **-22** | **-161** |
| **Remeasurements (OCI)** | **32** | **-59** | **7** | **-3** | **35** | **–** | **1** | **2** | **15** |
| **Sensitivity analysis*** | | | | | | | | | |
| Discount rate decreased by 1% point | -159 | -565 | -97 | -21 | -147 | – | -5 | -41 | **-1,035** |
| Life expectancy increased by 1 year | -52 | -133 | -19 | -10 | -51 | – | 0 | -6 | **-271** |
| Expected average retirement age decreased by 1 year | -15 | – | – | 0 | 0 | – | -1 | -3 | **-19** |
| Claim rates under medical plans increased by 1 % point | -3 | – | – | – | – | – | – | – | **-3** |
| Expected rate of salary increases increased by 1% point | 0 | -56 | -22 | – | -45 | – | -12 | -19 | **-154** |
| Medical costs increased by 1% point | -35 | – | – | – | – | – | – | -1 | **-36** |
| Index for future compensation increases increased by 1% point | 0 | -77 | -42 | -20 | -73 | – | – | -16 | **-228** |
| **Cost for actuarial services** | **-2** | **-1** | **0** | **0** | **-1** | **0** | **0** | **0** | **-4** |
| **Number of participants in the plans at December 31** | | | | | | | | | |
| Current employees (active members) | 1,031 | 96 | 150 | 1 | 241 | – | 18 | 2,571 | **4,108** |
| Current employees (only vested value for closed plans) | 25 | – | – | 3 | – | 273 | – | 10 | **311** |
| Former employees that are not yet pensioners | 95 | 407 | 230 | 7 | – | – | 50 | – | **789** |
| Pensioners | 1,395 | 662 | 93 | 217 | 301 | – | – | 110 | **2,778** |
| **Total** | **2,546** | **1,165** | **473** | **228** | **542** | **273** | **68** | **2,691** | **7,986** |
| **Remaining service period** | | | | | | | | | |
| Average remaining service period for active members (years) | 10 | 9 | 16 | 5 | 6 | – | 11 | 8 | **9** |

* How much would the present value of the defined benefit obligation at December 31 increase if the (all other things being equal):

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
Notes

# Note 27. Other provisions

### Movement schedule

Consolidated

| SEK millions | January 1 | Translation difference | New provisions and increase of existing provisions | Amounts used | Unused amounts reversed | December 31 |
|---|---|---|---|---|---|---|
| **2016** | | | | | | |
| Claims & warranty | 1,125 | 32 | 596 | -416 | -120 | 1,217 |
| Deferred costs | 218 | 9 | 75 | -104 | -46 | 152 |
| Restructuring | 140 | -1 | 679 | -43 | -5 | 770 |
| Onerous contracts | 120 | 5 | 80 | -67 | -9 | 129 |
| Litigations | 254 | 4 | 91 | -27 | -2 | 320 |
| Other | 359 | 19 | 189 | -163 | -28 | 376 |
| **Total** | **2,216** | **68** | **1,710** | **-820** | **-210** | **2,964** |
| Of which: | | | | | | |
| current | 1,798 | | | | | 2,365 |
| non-current | 418 | | | | | 599 |
| **2017** | | | | | | |
| Claims & warranty | 1,217 | -8 | 698 | -415 | -174 | 1,318 |
| Deferred costs | 152 | 0 | 120 | -68 | -69 | 135 |
| Restructuring | 770 | 1 | 100 | -375 | -34 | 462 |
| Onerous contracts | 129 | 1 | 43 | -43 | -31 | 99 |
| Litigations | 320 | -1 | 4 | -41 | -1 | 281 |
| Other | 376 | -14 | 219 | -172 | -19 | 390 |
| **Total** | **2,964** | **-21** | **1,184** | **-1,114** | **-328** | **2,685** |
| Of which: | | | | | | |
| current | 2,365 | | | | | 2,024 |
| non-current | 599 | | | | | 661 |

Unused amounts reversed refer to, among other items, changed classifications and reversals of provisions made in prior years that have not been used.

Each type of provision entails everything from a few up to a large number of different items. It is therefore not practicable or particularly meaningful to specify the provisions item by item. As indicated above a clear majority of the provisions will result in disbursements within the next year.

Claims & warranty refers to claims from customers according to the conditions in issued warranties. The claims concern technical problems with the delivered goods or that promised performance has not been achieved.

Deferred costs are partly costs that are known but not yet debited at the time of invoicing, partly costs that are unknown but expected at the time of invoicing. The provision for deferred costs is charged to costs of goods sold in order to get a correct phasing of the gross margin.

Provisions for restructuring are usually relating to closure of plants or closure or move of production lines, businesses, functions etc. or reduction of the number of employees in connection with a downturn in the business climate. The provisions for restructuring are affecting approximately 285 (1,040) employees.

The provision for onerous contracts is relating to orders where a negative gross margin is expected. Provisions are made as soon as a final loss on the order can be expected. This can in exceptional cases happen already at the time when the order is taken. Normally this provision is relating to larger and complex orders where the final margin is more uncertain.

The provision for litigations refers to ongoing or expected legal disputes. The provision covers expected legal costs and expected amounts for damages or settlements.

Other refers to miscellaneous provisions that do not fall within any of the above categories.

# Note 28. Borrowings and net debt

### Net debt

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| Credit institutions | 142 | 137 |
| Swedish Export Credit | 2,106 | 3,153 |
| European Investment Bank | 2,411 | 2,345 |
| Corporate bonds | 7,837 | 7,612 |
| Capitalised financial leases | 49 | 66 |
| Interest-bearing pension liabilities | 0 | 0 |
| Total debt | 12,545 | 13,313 |
| Cash and cash equivalents and current deposits | -4,345 | -3,694 |
| **Net debt *** | **8,200** | **9,619** |

* Alternative performance measures, defined on page 138.

The changes in the loans during the year are explained by the following table:

### Loans

Consolidated

| SEK millions | January 1 | Cash flows | Exchange rate effects | December 31 |
|---|---|---|---|---|
| **Year:** | | | | |
| 2016 | 14,503 | -1,921 | 665 | 13,247 |
| 2017 | 13,247 | -961 | 210 | 12,496 |

The loans are distributed among currencies as follows:

### Maturity of loans by currency

Consolidated

| | Current | | Non-current | |
|---|---|---|---|---|
| SEK millions | 2017 | 2016 | 2017 | 2016 |
| **Currency:** | | | | |
| BRL | 10 | – | – | – |
| CAD | 3 | – | – | – |
| DKK | – | – | 2 | 3 |
| EUR | 1,344 | 1,025 | 9,969 | 10,929 |
| INR | 14 | 17 | – | – |
| USD | 33 | 36 | 1,121 | 1,237 |
| Other | 0 | 0 | – | – |
| **Total** | **1,404** | **1,078** | **11,092** | **12,169** |
| Of which, not due within five years: | | | – | 4,746 |

The maturity structure of the loans is presented in the bar chart in the section “Liquidity risk and refinancing risk” under Financial risks.

**Loans with floating interest rate**

*Loan from credit institutions*

Alfa Laval has a senior credit facility of EUR 400 million and USD 544 million, corresponding to SEK 8,422 million with a banking syndicate. At December 31, 2017 the facility was not utilised. The facility matures in June 2019, with two one-year extension options.

The interest is based on applicable IBOR plus a mark-up based on the relation between net debt and EBITDA and how much of the facility that is utilised.

At year end the mark up is 40 (40) basis points.

*Bilateral term loans with other lenders*

Alfa Laval has a bilateral term loan with Swedish Export Credit that is split on one loan of EUR 100 million that matures in June 2021 and one loan of USD 136 million that matures in June 2020, corresponding to SEK 2,106 million in total. The loans accrue interest at floating rate based on applicable IBOR plus a mark-up of 95 and 80 basis points respectively. One loan of EUR 100 million that matured in June 2017 has been repaid.

Alfa Laval also has a bilateral term loan from the European Investment Bank split on one loan of EUR 130 million that matures in March 2018 and an additional loan of EUR 115 million that matures in June 2021, corresponding to SEK 2,411 million in total. The loans accrue interest at floating rate based on EURIBOR plus a mark-up of 70 and 45 basis points respectively.

*Corporate bonds*

Alfa Laval has issued EUR 300 million of corporate bonds corresponding to SEK 2,955 million, with floating interest rate and that matures in September 2019. The floating interest rate is based on EURIBOR plus a mark-up of 55 basis points.

*Interest level of loans with floating interest rate*

The senior credit facility, the bilateral term loans and the EUR 300 million tranche of the corporate bonds accrue interest at floating rate. At the end of 2017 the loans were accruing interest in the range of 0.18 % – 2.48 % (0.23 % – 1.80 %). The average interest rate at the end of 2017 was 0.64 (0.59) percent. The Group has chosen to hedge 11 (12) percent of the loans to fixed interest rate, with a duration of 13.6 (13.8) months.

**Loans with fixed rate**

*Corporate bonds and commercial papers*

Alfa Laval has issued EUR 500 million of corporate bonds corresponding to SEK 4,882 million, with a fixed interest rate of 1.495 percent and that matures in September 2022.

The commercial paper programme of SEK 2,000 million was not utilised at December 31, 2017. When utilised, the interest is fixed at inception and is based on STIBOR flat.

**Transaction costs**

The transaction costs in connection with raising the loans or issuing the bonds have been capitalised and are being amortised over the maturity of the loans. At the end of the year the capitalised amount was SEK 25 (35) million. The current year's cost for the fee amortisation is SEK -10 (-14) million.

**Average interest and currency duration**

The average interest and currency duration for all loans including derivatives is 25.1 (27.8) months at the end of 2017.

**Financial covenants**

The syndicated loan and the bilateral term loans with Swedish Export Credit and the European Investment Bank are linked to one financial covenant that must be fulfilled throughout the life of the loans. The covenant refers to the relationship between net debt and EBITDA in combination with the current official Alfa Laval rating.

If the covenants are not fulfilled, the lenders are entitled to demand immediate repayment of the loans, provided that the breach is not temporary. Alfa Laval has fulfilled the covenants with a good margin ever since the loans were raised.

## Note 29. Other current liabilities

**Split by type**

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| Financial lessee payable | 49 | 66 |
| VAT liabilities, employee withholding taxes | 203 | 173 |
| Other non-interest bearing liabilities | 1,959 | 2,113 |
| **Total** | **2,211** | **2,352** |

## Note 30. Accrued costs and prepaid income

**Split by type and maturity**

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| Accruals for social security | 347 | 296 |
| Reserve for severance pay | 187 | 188 |
| Accrued interest expenses | 23 | 23 |
| Other accrued expenses | 1,967 | 1,900 |
| Prepaid income | 15 | 26 |
| **Total** | **2,539** | **2,433** |
| Of which, not due within one year: | | |
| Accruals for social security | 33 | 32 |
| Reserve for severance pay | 137 | 101 |
| Other accrued expenses | 118 | 116 |
| **Total** | **288** | **249** |

## Note 31. Pledged assets and contingent liabilities

**Split by type**

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| **Pledged assets** | | |
| Other pledges and similar commitments | 12 | 14 |
| **Total** | **12** | **14** |
| **Contingent liabilities** | | |
| Discounted bills | 21 | 31 |
| Performance guarantees | 1,538 | 1,530 |
| Other contingent liabilities | 770 | 673 |
| **Total** | **2,329** | **2,234** |

As of December 31, 2017, the Group had sold receivables with recourse totalling SEK 21 (31) million. These are disclosed as discounted bills above.

Other contingent liabilities are among other items referring to bid guarantees, payment guarantees to suppliers and retention money guarantees.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37

Notes

## Note 32. Transactions with related party

Tetra Pak within the Tetra Laval Group is Alfa Laval's single largest customer with 5.3 (5.0) percent of net sales. In June 1999, Tetra Pak entered into a purchasing agreement with Alfa Laval that governs the distribution, research and development, market and sales information, use of trademarks and intellectual property. The following areas shall be agreed upon from time to time between representatives of the parties: products that are subject to the agreement, prices and discounts of such products, geographical markets and product areas where Tetra Pak is Alfa Laval's preferred distributor, the right of Tetra Pak to affix its trademarks to Alfa Laval products, sales goals for Tetra Pak in defined geographical markets, products and technologies that are the focus of joint research and development and the ownership rights of the research and development result and use of market and sales information. The agreement aims at the applications within liquid food where Tetra Pak has a natural market presence through the deliveries of packaging equipment and packaging material.

The agreement was prolonged by two years from December 31, 2016. It has a 12-month period of notice. The prices Tetra Pak receives are not lower than the prices Alfa Laval would obtain when selling to a comparable third party. The prices are fixed on a calendar year basis.

Alfa Laval rents premises to DeLaval in Russia. The total rent income for this amounts to SEK 2 (1) million.

The Board of Directors for Alfa Laval AB (publ) has two representatives from Tetra Laval – Jörn Rausing and Finn Rausing.

At year-end, Alfa Laval has the following balance items against companies within the Tetra Laval group (Tetra Pak and DeLaval).

### Receivables on/payables to related parties

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| **Receivables:** | | |
| Accounts receivable | 176 | 144 |
| Other receivables | 3 | 0 |
| **Liabilities:** | | |
| Accounts payable | 0 | 0 |
| Other liabilities | 0 | – |

Alfa Laval has had the following transactions with companies within the Tetra Laval group (Tetra Pak and DeLaval).

### Revenues/expenses from related parties

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| Net sales | 1,860 | 1,769 |
| Other operating income | 2 | 1 |

## Note 33. Interests in joint ventures

Alfa Laval owns 50 percent in three different joint ventures: Rolls Laval Heat Exchangers Ltd with Rolls Royce as partner, Alfdex AB with Concentric as partner and AlfaWall AB with Wallenius as partner. None of these joint ventures are of material importance and for that reason no disclosures are made of each individual joint venture. Instead disclosures in aggregate are made on the carrying amount of Alfa Laval's interests in these individually immaterial joint ventures. See the below tables.

Since joint ventures as from 2014 are consolidated according to the equity method in IFRS 11 "Joint arrangements", the amounts in the following two tables are no longer part of Alfa Laval's statements over consolidated comprehensive income and consolidated financial position.

### Assets/liabilities

Joint ventures

| SEK millions | 2017 | 2016 |
|---|---|---|
| Current assets | 91 | 61 |
| Non-current assets | 10 | 6 |
| Current liabilities | 56 | 32 |
| Non-current liabilities | 13 | 12 |
| Contingent liabilities | 35 | 35 |

### Revenues/expenses

Joint ventures

| SEK millions | 2017 | 2016 |
|---|---|---|
| Net sales | 213 | 183 |
| Cost of goods sold | -138 | -110 |
| Other operating income | 45 | 38 |
| Other operating costs | -105 | -93 |
| Financial net | 0 | 0 |
| Result before tax | 15 | 18 |
| Taxes | -4 | -3 |
| Net income | 11 | 15 |
| Other comprehensive income | 0 | 0 |
| **Comprehensive income** | **11** | **15** |

Instead the application of the equity method means that the net income in the joint ventures is booked into one line in the operating income. The counter entry is an increase or decrease of the value of shares in joint ventures. Received dividends reduce the value of the shares in joint ventures.

### Interests in joint ventures

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| Operating income | 15 | 18 |
| Taxes | -4 | -3 |
| Net income | 11 | 15 |
| Received dividends | 1 | 12 |
| Shares in joint ventures | 31 | 21 |

The effect on comprehensive income is the same as the net income.

## Note 34. Work in progress on plant projects

**Impact of percentage of completion method**

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| **Result items** | | |
| Amount of recognised project sales revenue | 2,414 | 2,404 |
| **Work performed on ongoing projects** | | |
| Aggregate amount of costs incurred and recognised profits (less recognised losses) | 3,136 | 3,137 |
| **Assets** | | |
| Retentions | 27 | 58 |
| Gross amount due from customers for work in progress | 566 | 618 |
| **Liabilities** | | |
| Advances received | 878 | 903 |
| Gross amount due to customers for work in progress | 221 | 263 |

## Note 35. Leasing

Alfa Laval has entered into non-cancellable operating leases mainly relating to premises and finance lease agreements regarding machinery and equipment with leasing periods of 1–20 years. The leasing fees for non-cancellable operating leases for premises were SEK 464 (468) million. During the year, the Group has entered into finance leases with a capitalised value of SEK 0 (0) million. See Note 18 for information on the capitalised value of finance leases.

The future minimum leasing fees concerning non-cancellable operating leases, distributed on maturity dates, amount to:

**Future minimum leasing fees for operating leases**

Consolidated

| SEK millions | 2017 | 2016 |
|---|---|---|
| **Maturity in year:** | | |
| 2017 | N/A | 451 |
| 2018 | 455 | 395 |
| 2019 | 386 | 327 |
| 2020 | 304 | 243 |
| 2021 | 259 | 188 |
| 2022 | 191 | N/A |
| Later | 680 | 764 |
| **Total** | **2,275** | **2,368** |

The future minimum leasing fees concerning financial leasing agreements and their net present value, distributed on maturity dates, amount to:

**Financial leases**

Consolidated

| | Future minimum leasing fees for financial leases | | Present value of financial leases | |
|---|---|---|---|---|
| SEK millions | 2017 | 2016 | 2017 | 2016 |
| **Maturity in year:** | | | | |
| 2017 | N/A | 18 | N/A | 18 |
| 2018 | 18 | 17 | 18 | 17 |
| 2019 | 17 | 17 | 17 | 16 |
| 2020 | 14 | 14 | 14 | 13 |
| 2021 | 0 | 0 | 0 | 0 |
| 2022 | 0 | N/A | 0 | N/A |
| Later | 0 | 0 | 0 | 0 |
| **Total** | **49** | **66** | **49** | **64** |

## Note 36. Events after the closing date

The statements on financial position and the comprehensive income statements will be adopted at the Annual General Meeting of shareholders on April 23, 2018.

# Note 37. Proposed disposition of earnings

| The unrestricted equity in Alfa Laval AB (publ) is SEK: | |
|---|---|
| Profit brought forward | 7,414,425,270 |
| Repaid dividend | 12,123 |
| Net income 2017 | 2,002,910,777 |
| | 9,417,348,170 |

The Board of Directors propose a dividend of SEK 4.25 (4.25) per share corresponding to SEK 1,782,689,339 (1,782,689,339) and that the remaining income of SEK 7,634,658,831 (7,414,425,270) be carried forward.

The Board of Directors are of the opinion that the proposed dividend is in line with the requirements that the type and size of operations, the associated risks, the capital needs, liquidity and financial position put on the company.

**True and fair view**

The undersigned certify that the annual report for the Group and the Parent company has been prepared in accordance with International Financial Reporting Standards (IFRS), as adopted for use in the European Union, and generally accepted accounting principles respectively, and gives a true and fair view of the financial positions and results of the Group and the Parent company, and that the Board of Directors' report gives a fair review of the development of the operations, financial positions and results of the Group and the Parent company and describes substantial risks and uncertainties that the Group companies face.

Lund, February 28, 2018

Anders Narvinger
*Chairman*

Susanne Jonsson
*Employee representative*

Bror García Lantz
*Employee representative*

Anna Ohlsson-Leijon
*Director*

Ulla Litzén
*Director*

Henrik Nielsen
*Employee representative*

Finn Rausing
*Director*

Jörn Rausing
*Director*

Ulf Wiinberg
*Director*

Margareth Øvrum
*Director*

Tom Erixon
*President and CEO*

Our Auditors' Report concerning this Annual Report has been issued on March 8, 2018.

Håkan Olsson Reising
*Authorised Public Accountant*

Joakim Thilstedt
*Authorised Public Accountant*

# Auditor's Report

To the general meeting of the shareholders of Alfa Laval AB (publ), corp. id 556587-8054

## Report on the annual accounts and consolidated accounts

**Opinions**

We have audited the annual accounts and consolidated accounts of Alfa Laval AB (publ) for the year 2017. The annual accounts and consolidated accounts of the company are included on pages 57–130 and 135–138 in this document.

In our opinion, the annual accounts have been prepared in accordance with the Annual Accounts Act, and present fairly, in all material respects, the financial position of the parent company as of 31 December 2017 and its financial performance and cash flow for the year then ended in accordance with the Annual Accounts Act. The consolidated accounts have been prepared in accordance with the Annual Accounts Act and present fairly, in all material respects, the financial position of the group as of 31 December 2017 and their financial performance and cash flow for the year then ended in accordance with International Financial Reporting Standards (IFRS), as adopted by the EU, and the Annual Accounts Act. The statutory administration report is consistent with the other parts of the annual accounts and consolidated accounts.

We therefore recommend that the general meeting of shareholders adopts the income statement and balance sheet for the parent company and the statement of comprehensive income and statement of financial position for the group.

Our opinions in this report on the the annual accounts and consolidated accounts are consistent with the content of the additional report that has been submitted to the parent company's audit committee in accordance with the Audit Regulation (537/2014) Article 11.

**Basis for Opinions**

We conducted our audit in accordance with International Standards on Auditing (ISA) and generally accepted auditing standards in Sweden. Our responsibilities under those standards are further described in the Auditor's Responsibilities section. We are independent of the parent company and the group in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements. This includes that, based on the best of our knowledge and belief, no prohibited services referred to in the Audit Regulation (537/2014) Article 5.1 have been provided to the audited company or, where applicable, its parent company or its controlled companies within the EU.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions.

**Key Audit Matters**

Key audit matters of the audit are those matters that, in our professional judgment, were of most significance in our audit of the annual accounts and consolidated accounts of the current period. These matters were addressed in the context of our audit of, and in forming our opinion thereon, the annual accounts and consolidated accounts as a whole, but we do not provide a separate opinion on these matters.

**Valuation of intangible assets and the parent company's shares in group companies**
See Notes 16, 17 and 19 and accounting principles on page 88 in the annual account and consolidated accounts for detailed information and description of the matter.

*Description of key audit matter*
The carrying value of intangible assets, mainly goodwill, patents and unpatented know-how amounts to SEK 24,467 million as at 31 December 2017, which represents approximately 47% of total assets. Annually, or if certain indicators of impairment exist, goodwill is subject to an impairment test which is complex and contains significant elements of judgment.

The impairment test as required by IFRS is to be performed taking into account both forecasted internal and external assumptions and plans. Examples of such judgments are future cash flows and the discount rate to be used considering that estimated future payments are subject to risk.

In connection with the Group's strategy review in 2016, the impairment tests performed resulted in impairments of SEK 627 million in total. The impairment tests performed 2017 do not indicate any impairments and no impairments have been recognized.

The parent company holds shares in group companies of SEK 4,669 million as at 31 December 2017. If the book value of the shares exceeds the equity in a given group company, a similar type of impairment test is performed using the same methodology and assumptions as is done in respect of goodwill in the Group.

*Response in the audit*
We have obtained and assessed the Group's impairment tests to ascertain whether they are carried out in accordance with the techniques prescribed by IFRS.

In addition, we have assessed the reasonableness of future cash flows and discount rate by obtaining and evaluating the Group's written documentation and plans. We have also had discussions with group management and performed retrospective review over prior period estimates.

We have involved our internal valuation specialists in the audit team to ensure that appropriate experience and expertise have been applied in the assessment of methodology and discount rates used. An important part of our work has been to obtain and assess the Group's sensitivity analysis to evaluate how changes in assumptions may affect the valuation.

We have reviewed the Annual Report disclosures for completeness, assessed whether the disclosures are in line with the assumptions used by management in their valuation and that they are, in all material respects, in accordance with disclosures required by IFRS.

**Other provisions**
See Note 27 and accounting principles on page 89 in the annual account and consolidated accounts for detailed information and description of the matter.

*Description of key audit matter*
The carrying value of the Group's provisions amounts to SEK 2,685 million per 31 December 2017. These relate among others to claims & warranty, litigations, restructuring and onerous contracts.

Included in the provisions is SEK 462 million for restructuring, mainly related to the restructuring programme that was launched during the autumn 2016 as a result of the strategy review.

Provisions involve significant judgment regarding uncertain future outcomes, in particular relating to the amount and timing of the final assessments. Changes to the underlying assumptions used to make these provisions could significantly affect the reported result.

*Response in the audit*
We have examined the Group's documentation of its provisions. We have assessed the estimates made and have held discussions with Group management regarding their assumptions in each area to ensure that the provisions are in line with the Group's accounting principles.

**Other information than the annual accounts and consolidated accounts**

This document also contains other information than the annual accounts and consolidated accounts and is found on pages 1–40. The Board of Directors and the Managing Director are responsible for this other information.

Our opinion on the annual accounts and consolidated accounts does not cover this other information and we do not express any form of assurance conclusion regarding this other information.

In connection with our audit of the annual accounts and consolidated accounts, our responsibility is to read the information identified above and consider whether the information is materially inconsistent with the annual accounts and consolidated accounts. In this procedure we also take into account our knowledge otherwise obtained in the audit and assess whether the information otherwise appears to be materially misstated.

If we, based on the work performed concerning this information, conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

**Responsibilities of the Board of Directors and the Managing Director**

The Board of Directors and the Managing Director are responsible for the preparation of the annual accounts and consolidated accounts and that they give a fair presentation in accordance with the Annual Accounts Act and, concerning the consolidated accounts, in accordance with IFRS as adopted by the EU. The Board of Directors and the Managing Director are also responsible for such internal control as they determine is necessary to enable the preparation of annual accounts and consolidated accounts that are free from material misstatement, whether due to fraud or error.

In preparing the annual accounts and consolidated accounts The Board of Directors and the Managing Director are responsible for the assessment of the company's and the group's ability to continue as a going concern. They disclose, as applicable, matters related to going concern and using the going concern basis of accounting. The going concern basis of accounting is however not applied if the Board of Directors and the Managing Director intend to liquidate the company, to cease operations, or has no realistic alternative but to do so.

The Audit Committee shall, without prejudice to the Board of Director's responsibilities and tasks in general, among other things oversee the company's financial reporting process.

**Auditor's responsibility**

Our objectives are to obtain reasonable assurance about whether the annual accounts and consolidated accounts as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs and generally accepted auditing standards in Sweden will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these annual accounts and consolidated accounts.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the annual accounts and consolidated accounts, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of the company's internal control relevant to our audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Directors and the Managing Director.
- Conclude on the appropriateness of the Board of Directors' and the Managing Director's, use of the going concern basis of accounting in preparing the annual accounts and consolidated accounts. We also draw a conclusion, based on the audit evidence obtained, as to whether any material uncertainty exists related to events or conditions that may cast significant doubt on the company's and the group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the annual accounts and consolidated accounts or, if such disclosures are inadequate, to modify our opinion about the annual accounts and consolidated accounts. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause a company and a group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the annual accounts and consolidated accounts, including the disclosures, and whether the annual accounts and consolidated accounts represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient and appropriate audit evidence regarding the financial information of the entities or business activities within the group to express an opinion on the consolidated accounts. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our opinions.

We must inform the Board of Directors of, among other matters, the planned scope and timing of the audit. We must also inform of significant audit findings during our audit, including any significant deficiencies in internal control that we identified.

We must also provide the Board of Directors with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Board of Directors, we determine those matters that were of most significance in the audit of the annual accounts and consolidated accounts, including the most important assessed risks for material misstatement, and are therefore the key audit matters. We describe these matters in the auditor's report unless law or regulation precludes disclosure about the matter.

## Report on other legal and regulatory requirements

**Opinions**

In addition to our audit of the annual accounts and consolidated accounts, we have also audited the administration of the Board of Directors and the Managing Director of Alfa Laval AB (publ) for the year 2017 and the proposed appropriations of the company's profit or loss.

We recommend to the general meeting of shareholders that the profit be appropriated in accordance with the proposal in the statutory administration report and that the members of the Board of Directors and the Managing Director be discharged from liability for the financial year.

**Basis for Opinions**

We conducted the audit in accordance with generally accepted auditing standards in Sweden. Our responsibilities under those standards are further described in the Auditor's Responsibilities section. We are independent of the parent company and the group in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions.

**Responsibilities of the Board of Directors and the Managing Director**

The Board of Directors is responsible for the proposal for appropriations of the company's profit or loss. At the proposal of a dividend, this includes an assessment of whether the dividend is justifiable considering the requirements which the company's and the group's type of operations, size and risks place on the size of the parent company's and the group's equity, consolidation requirements, liquidity and position in general.

The Board of Directors is responsible for the company's organization and the administration of the company's affairs. This includes among other things continuous assessment of the company's and the group's financial situation and ensuring that the company's organization is designed so that the accounting, management of assets and the company's financial affairs otherwise are controlled in a reassuring manner.

The Managing Director shall manage the ongoing administration according to the Board of Directors' guidelines and instructions and among other matters take measures that are necessary to fulfill the company's accounting in accordance with law and handle the management of assets in a reassuring manner.

**Auditor's responsibility**

Our objective concerning the audit of the administration, and thereby our opinion about discharge from liability, is to obtain audit evidence to assess with a reasonable degree of assurance whether any member of the Board of Directors or the Managing Director in any material respect:

– has undertaken any action or been guilty of any omission which can give rise to liability to the company, or

– in any other way has acted in contravention of the Companies Act, the Annual Accounts Act or the Articles of Association.

Our objective concerning the audit of the proposed appropriations of the company's profit or loss, and thereby our opinion about this, is to assess with reasonable degree of assurance whether the proposal is in accordance with the Companies Act.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with generally accepted auditing standards in Sweden will always detect actions or omissions that can give rise to liability to the company, or that the proposed appropriations of the company's profit or loss are not in accordance with the Companies Act.

As part of an audit in accordance with generally accepted auditing standards in Sweden, we exercise professional judgment and maintain professional scepticism throughout the audit. The examination of the administration and the proposed appropriations of the company's profit or loss is based primarily on the audit of the accounts. Additional audit procedures performed are based on our professional judgment with starting point in risk and materiality. This means that we focus the examination on such actions, areas and relationships that are material for the operations and where deviations and violations would have particular importance for the company's situation. We examine and test decisions undertaken, support for decisions, actions taken and other circumstances that are relevant to our opinion concerning discharge from liability. As a basis for our opinion on the Board of Directors' proposed appropriations of the company's profit or loss we examined the Board of Directors' reasoned statement and a selection of supporting evidence in order to be able to assess whether the proposal is in accordance with the Companies Act.

Håkan Olsson Reising, Box 382, 101 27, Stockholm, was appointed auditor of Alfa Laval AB (publ) by the general meeting of the shareholders on the 26 April 2017. Auditors operating at KPMG AB have been the company's auditor since 2014.

Joakim Thilstedt, Box 382, 101 27, Stockholm, was appointed auditor of Alfa Laval AB (publ) by the general meeting of the shareholders on the 26 April 2017. Auditors operating at KPMG AB have been the company's auditor since 2014.

Stockholm, March 8, 2018

Håkan Olsson Reising
*Authorized Public Accountant*

Joakim Thilstedt
*Authorized Public Accountant*

# Ten-year overview

**Ten-year overview**

Consolidated

| SEK millions, unless otherwise stated | 2017 | 2016 | 2015 | 2014 | 2013 * | 2012 ** | 2011 | 2010 | 2009 | 2008 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Profit and loss** | | | | | | | | | | |
| Net sales | 35,314 | 35,634 | 39,746 | 35,067 | 29,801 | 29,813 | 28,652 | 24,720 | 26,039 | 27,850 |
| Comparison distortion items | – | -1,500 | – | -320 | – | -51 | -170 | 90 | -225 | -168 |
| Operating income | 4,589 | 2,989 | 5,717 | 4,667 | 4,353 | 4,396 | 4,691 | 4,401 | 4,030 | 5,736 |
| Financial net | -218 | 336 | -273 | -550 | -181 | 133 | -15 | -37 | -270 | -395 |
| Result after financial items | 4,371 | 3,325 | 5,444 | 4,117 | 4,172 | 4,529 | 4,676 | 4,364 | 3,760 | 5,341 |
| Taxes | -1,383 | -1,013 | -1,583 | -1,149 | -1,132 | -1,306 | -1,425 | -1,248 | -1,023 | -1,534 |
| **Net income for the year** | **2,988** | **2,312** | **3,861** | **2,968** | **3,040** | **3,223** | **3,251** | **3,116** | **2,737** | **3,807** |
| | | | | | | | | | | |
| **Financial position** | | | | | | | | | | |
| Goodwill | 19,775 | 20,436 | 19,498 | 20,408 | 10,061 | 9,792 | 9,543 | 5,952 | 6,143 | 5,383 |
| Other intangible assets | 4,692 | 5,946 | 6,556 | 7,898 | 3,582 | 3,807 | 3,502 | 2,581 | 2,490 | 1,890 |
| Property, plant and equipment | 4,851 | 4,940 | 4,773 | 5,004 | 3,785 | 3,823 | 3,936 | 3,512 | 3,548 | 3,546 |
| Other non-current assets | 1,654 | 2,100 | 1,804 | 2,092 | 1,447 | 1,509 | 1,664 | 1,568 | 1,542 | 1,376 |
| Inventories | 8,424 | 7,831 | 7,405 | 7,883 | 6,312 | 6,176 | 6,148 | 4,769 | 4,485 | 5,972 |
| Current receivables | 8,808 | 8,431 | 8,964 | 9,791 | 7,671 | 8,050 | 7,663 | 6,884 | 6,584 | 9,238 |
| Current deposits | 1,208 | 1,075 | 1,021 | 697 | 605 | 427 | 483 | 575 | 302 | 544 |
| Cash and cash equivalents | 3,137 | 2,619 | 1,876 | 2,013 | 1,446 | 1,404 | 1,564 | 1,328 | 1,112 | 1,083 |
| **TOTAL ASSETS** | **52,549** | **53,378** | **51,897** | **55,786** | **34,909** | **34,988** | **34,503** | **27,169** | **26,206** | **29,032** |
| | | | | | | | | | | |
| Equity | 20,500 | 20,276 | 18,423 | 17,202 | 16,162 | 14,453 | 15,144 | 13,582 | 12,229 | 10,493 |
| Provisions for pensions etc. | 2,297 | 2,425 | 1,931 | 2,221 | 1,494 | 1,727 | 852 | 847 | 920 | 990 |
| Provisions for taxes | 2,100 | 2,722 | 2,925 | 3,074 | 1,758 | 1,932 | 1,930 | 1,617 | 1,390 | 1,161 |
| Other non-current liabilities | 677 | 636 | 521 | 660 | 423 | 473 | 520 | 632 | 439 | 403 |
| Non-current loans | 11,092 | 12,169 | 12,484 | 16,454 | 3,529 | 5,393 | 5,060 | 1,041 | 1,626 | 3,394 |
| Current liabilities | 15,883 | 15,150 | 15,613 | 16,175 | 11,543 | 11,010 | 10,997 | 9,450 | 9,602 | 12,591 |
| **TOTAL EQUITY & LIABILITIES** | **52,549** | **53,378** | **51,897** | **55,786** | **34,909** | **34,988** | **34,503** | **27,169** | **26,206** | **29,032** |

* Restated to IFRS 11. ** Restated to the new IAS 19.

**Changes in accounting standards**

A reader of the ten-year overview should observe that accounting standards have changed repeatedly over this period of time. The major changes are the following.

In 2014 IFRS 11 “Joint arrangements” has been implemented as per January 1, 2013, which has meant a restatement of the comparison figures for 2013.

In 2013 the revised IAS 19 ”Employee Benefits” has been implemented as per January 1, 2012, which has meant a restatement of the comparison figures for 2012.

## Ten-year overview

Consolidated

| SEK millions, unless otherwise stated | 2017 | 2016 | 2015 | 2014 | 2013 * | 2012 ** | 2011 | 2010 | 2009 | 2008 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Key ratios** | | | | | | | | | | |
| Orders received | 36,628 | 32,060 | 37,098 | 36,660 | 30,202 | 30,339 | 28,671 | 23,869 | 21,539 | 27,464 |
| Order backlog at year end | 18,289 | 16,870 | 20,578 | 22,293 | 14,568 | 14,468 | 13,736 | 11,552 | 11,906 | 14,310 |
| EBITA | 5,610 | 4,680 | 6,811 | 5,571 | 4,914 | 4,883 | 5,117 | 4,772 | 4,360 | 5,992 |
| EBITDA | 6,239 | 5,323 | 7,478 | 6,136 | 5,360 | 5,330 | 5,566 | 5,197 | 4,751 | 6,296 |
| EBITA-margin % | 15.9% | 13.1% | 17.1% | 15.9% | 16.5% | 16.4% | 17.9% | 19.3% | 16.7% | 21.5% |
| EBITDA-margin % | 17.7% | 14.9% | 18.8% | 17.5% | 18.0% | 17.9% | 19.4% | 21.0% | 18.2% | 22.6% |
| Adjusted EBITA | 5,610 | 5,553 | 6,811 | 5,891 | 4,914 | 4,934 | 5,287 | 4,682 | 4,585 | 6,160 |
| Adjusted EBITDA | 6,239 | 6,196 | 7,478 | 6,456 | 5,360 | 5,381 | 5,736 | 5,107 | 4,976 | 6,464 |
| Adjusted EBITA-margin % | 15.9% | 15.6% | 17.1% | 16.8% | 16.5% | 16.5% | 18.5% | 18.9% | 17.6% | 22.1% |
| Adjusted EBITDA-margin % | 17.7% | 17.4% | 18.8% | 18.4% | 18.0% | 18.0% | 20.0% | 20.7% | 19.1% | 23.2% |
| Profit margin % | 12.4% | 9.3% | 13.7% | 11.7% | 14.0% | 15.2% | 16.3% | 17.7% | 14.4% | 19.2% |
| *Excl. goodwill and step-up values:* | | | | | | | | | | |
| Capital turnover rate, times | 5.7 | 8.6 | 10.6 | 7.9 | 6.4 | 6.7 | 6.3 | 5.6 | 5.2 | 5.6 |
| Capital employed | 6,201 | 4,146 | 3,734 | 4,447 | 4,657 | 4,430 | 4,560 | 4,399 | 5,052 | 4,973 |
| Return on capital employed % | 90.5% | 112.9% | 182.4% | 125.3% | 105.5% | 110.2% | 112.2% | 108.5% | 86.3% | 120.5% |
| *Incl. goodwill and step-up values:* | | | | | | | | | | |
| Capital turnover rate, times | 1.1 | 1.2 | 1.3 | 1.3 | 1.6 | 1.7 | 1.8 | 1.9 | 2.0 | 2.5 |
| Capital employed | 31,698 | 30,663 | 31,512 | 27,259 | 18,598 | 17,833 | 16,324 | 12,752 | 12,976 | 11,144 |
| Return on capital employed % | 17.7% | 15.3% | 21.6% | 20.4% | 26.4% | 27.4% | 31.3% | 37.4% | 33.6% | 53.8% |
| Return on equity % | 13.9% | 11.8% | 21.7% | 17.6% | 17.9% | 22.9% | 22.9% | 24.4% | 24.5% | 42.8% |
| Solidity % | 39.0% | 38.0% | 35.5% | 30.8% | 46.3% | 41.3% | 43.9% | 50.0% | 46.7% | 36.1% |
| Net debt | 8,200 | 9,619 | 11,688 | 15,068 | 2,611 | 4,270 | 3,264 | -551 | 533 | 2,074 |
| Net debt to EBITDA, times | 1.31 | 1.81 | 1.56 | 2.46 | 0.49 | 0.80 | 0.59 | -0.11 | 0.11 | 0.33 |
| Debt ratio, times | 0.40 | 0.47 | 0.63 | 0.88 | 0.16 | 0.30 | 0.22 | -0.04 | 0.04 | 0.20 |
| Interest coverage ratio, times | 28.4 | 24.5 | 22.3 | 18.2 | 22.1 | 23.2 | 28.6 | 35.9 | 15.2 | 26.2 |
| Cash flow from: | | | | | | | | | | |
| operating activities | 4,463 | 4,979 | 5,850 | 5,123 | 4,233 | 3,586 | 3,429 | 4,098 | 5,347 | 4,062 |
| investing activities | -721 | -795 | -710 | -14,970 | -951 | -3,260 | -5,497 | -1,417 | -2,620 | -1,333 |
| financing activities | -3,159 | -3,566 | -5,229 | 10,250 | -3,191 | -407 | 2,317 | -2,431 | -2,667 | -2,599 |
| Investments | 675 | 617 | 674 | 603 | 492 | 531 | 555 | 429 | 451 | 747 |
| Average number of employees | 16,521 | 17,305 | 17,486 | 17,109 | 16,238 | 16,060 | 14,667 | 12,078 | 11,773 | 11,821 |
| Earnings per share, SEK *** | 7.09 | 5.46 | 9.15 | 7.02 | 7.22 | 7.64 | 7.68 | 7.34 | 6.42 | 8.83 |
| Free cash flow per share, SEK *** | 8.92 | 9.97 | 12.25 | -23.48 | 7.82 | 0.78 | -4.93 | 6.38 | 6.46 | 6.38 |

* Restated to IFRS 11. ** Restated to the new IAS 19. *** The figures for 2008 have been recalculated due to the 4:1 split.

Observe that certain financial measures above constitute alternative performance measures according to the definition on page 138.

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# Alternative performance measures and definitions

## Alternative performance measures

An alternative performance measure is a financial measure of historical financial performance, financial position or cash flows, other than a financial measure defined or specified in the financial reporting framework.

In the annual report, the following alternative performance measures have been used (all of these alternative performance measures relate to actual historical figures and never to expected performance in future periods):

## Measures to achieve full comparability over time

All of these concern the comparison distorting impact from above all amortisation of step-up values both over time and compared to external companies. For the same reasons adjustments are also made for comparison distortion items. How they are calculated is exhibited in the Income analysis table on page 73, except for the last one.

- **EBITA** or Earnings Before Interests, Taxes and Amortisation is defined as operating income before amortisation of step-up values. This measure of result is fully comparable over time independent of the financing costs and the amortisation of step-up values that from time to time burden the Group.
- **EBITA margin (%)** is defined as EBITA in relation to net sales and expressed in percent.
- **EBITDA** or Earnings Before Interest, Taxes, Depreciation and Amortisation is defined as operating income before depreciation and amortisation of step-up values. This measure of result is fully comparable over time independent of the financing costs, the depreciation and the amortisation of step-up values that from time to time burden the Group.
- **EBITDA margin (%)** is defined as EBITDA in relation to net sales and expressed in percent.
- **Adjusted EBITA** or Adjusted Earnings Before Interests, Taxes and Amortisation is defined as operating income before amortisation of step-up values, adjusted for comparison distortion items. This measure of result is fully comparable over time independent of the comparison distortion items, the financing costs and the amortisation of step-up values that from time to time burden the Group.
- **Adjusted EBITA margin (%)** is defined as Adjusted EBITA in relation to net sales and expressed in percent.
- **Adjusted EBITDA** or Adjusted Earnings Before Interest, Taxes, Depreciation and Amortisation is defined as operating income before depreciation and amortisation of step-up values, adjusted for comparison distortion items. This measure of result is fully comparable over time independent of the comparison distortion items, the financing costs, the depreciation and the amortisation of step-up values that from time to time burden the Group.
- **Adjusted EBITDA margin (%)** is defined as Adjusted EBITDA in relation to net sales and expressed in percent.
- **Adjusted gross profit** is defined as gross profit excluding amortisation of step-up values. This measure of result is fully comparable over time independent of the amortisation of step-up values that from time to time burden the Group.
- **Adjusted gross margin (%)** is defined as Adjusted gross profit in relation to net sales and expressed in percent.
- **Earnings per share, excluding amortisation of step-up values and the corresponding tax** is defined as net income attributable to the owners of the parent, excluding amortisation of step-up values and the corresponding tax divided by the average number of shares. The net income attributable to the owners of the parent is presented in the consolidated comprehensive income statement and the amortisation of step-up values is exhibited in the Income analysis table on page 73, while the corresponding tax is SEK 283 (422) million. This key figure is fully comparable over time independent of the amortisation of step-up values that from time to time burden the Group.

## Measures to show how the Group is funded and manages its capital:

- **Return on capital employed (%)** is defined as EBITA in relation to average capital employed, calculated on 12 months' revolving basis and expressed in percent. Capital employed is defined as total assets less liquid funds, other long-term securities, accrued interest income, operating liabilities and other non-interest-bearing liabilities, including tax and deferred tax, but excluding accrued interest costs. The measure shows how well the capital that is used in the operations is managed.
- **Net debt** is defined as interest-bearing liabilities including interest-bearing pension liabilities and capitalised financial leases less liquid funds. The calculation of net debt is exhibited in the Net debt table in Note 28. The measure shows the net financial indebtedness.
- **Net debt to EBITDA, times** is defined as Net debt in relation to EBITDA, calculated on 12 months' revolving basis and expressed as a multiple of EBITDA. This is one of the covenants of Alfa Laval's loans and an important key figure when reviewing the proposed dividend. EBITDA or Earnings Before Interest, Taxes, Depreciation and Amortisation is defined as operating income before depreciation and amortisation of step-up values.
- **Debt ratio, times** is defined as Net debt in relation to equity at the end of the period and expressed as a multiple of the equity. This is another measure of how the Group is funded.
- **Interest coverage ratio, times** is defined as EBITDA plus financial net increased by interest costs in relation to interest costs. Expressed as a multiple of interest costs. Gives an expression for the Group's ability to pay interest. The reason EBITDA is used as the starting point is that this forms the starting point for a cash flow perspective on the ability to pay interest. Financial items classified as comparison distorting are excluded from the calculation.

## Definitions of other performance measures

**Net sales**
Revenues from goods sold and services performed that are part of the ordinary operations of the Group, after deduction for given discounts, value added tax and other tax directly linked to the sales.

**Comparison distortion items**
Items that do not have any link to the normal operations of the Group or that are of a non-recurring nature, where a reporting together with other items in the consolidated comprehensive income statement would have given a comparison distortion effect that would have made it difficult to judge the development of the ordinary operations for an outside viewer.

**Orders received**
Incoming orders during the year, calculated in the same way as net sales. The orders received give an indication of the current demand for the Group's products and services, that with a varying delay appear in net sales.

**Order backlog at year-end**
Incoming orders that not yet have been invoiced. The order backlog at the end of the year is equal to the sum of the order backlog at the beginning of the year plus the orders received during the year less the net sales for the year. It gives an indication of how the net sales can be expected to develop in the future.

**Profit margin %**
Result after financial items in relation to net sales, expressed in percent.

**Capital turnover rate, times**
Net sales in relation to average capital employed, expressed as a multiple of capital employed. Shown excluding and including goodwill, step-up values and the corresponding deferred tax liability.

**Capital employed**
Average total assets less liquid funds, other long-term securities, accrued interest income, operating liabilities and other non-interest-bearing liabilities, including tax and deferred tax, but excluding accrued interest costs. Shown excluding and including goodwill and step-up values and the corresponding deferred tax liability. Shows the capital that is used in the operations. The capital employed for the Group differs from the net capital for the operating segments concerning taxes, deferred taxes and pensions.

**Return on equity %**
Net income for the year in relation to average equity, expressed in percent.

**Solidity %**
Equity in relation to total assets, expressed in percent.

**Cash flow from operating activities**
Shows the Group's cash flow from operating activities, that is the cash flow generated in the daily operational activities.

**Cash flow from investing activities**
Shows the Group's cash flow from investing activities, i.e. the cash flow generated by mainly the Group's divestments and acquisitions of businesses and divestments of real estate.

**Cash flow from financing activities**
Shows the Group's cash flow from financing activities, that is mainly the cash flow impact of the Group's loans in terms of interest payments and amortisation.

**Investments**
Investments represent an important component in the cash flow for the Group. The level of investments during a couple of years gives a picture of the capacity build up in the Group.

**Average number of employees**
The costs that are related to the number of employees represent a large part of the total costs for the Group. The development of the average number of employees over time in relation to the development of the net sales therefore gives an indication of the cost rationalisation that is taking place.

**Earnings per share**
Net income for the year attributable to the equity holders of the parent divided by the average number of shares.

**Free cash flow per share**
The sum of cash flows from operating and investing activities for the year divided by the average number of shares. This represents the cash flow available for interest payments, amortisation and dividends to investors.

# Financial information

Alfa Laval uses a number of channels to provide information about the company's operations and financial development. The website – **www.alfalaval.com/investors** – is updated continuously with annual reports, quarterly reports, press releases and presentations. Annual reports are also sent to those shareholders who have notified the company that they wish to receive a copy. Conference calls with analysts, investors and the media are arranged by Alfa Laval in conjunction with the publication of the company's quarterly reports. A capital markets day is organized each year, during which representatives from the financial market are offered more in-depth information regarding the company's operations.

In addition, representatives of Group management meet with analysts, investors and journalists on an ongoing basis to ensure that they have correct and current information. Pursuant to the company's agreement with Nasdaq Stockholm, information that could have an effect on the share price and that is not yet publicly known is never disclosed in conjunction with these types of meetings or contacts. Alfa Laval employs a so-called silent period of three weeks prior to the publication of a quarterly report. The President and Chief Financial Officer do not meet or speak to representatives from the financial market during this period.

**Financial information during 2018**

Alfa Laval publishes quarterly reports on the following dates in 2018:

| | |
|---|---|
| Year-end report 2017 | January 30 |
| First-quarter report | April 23 |
| Second-quarter report | July 17 |
| Third-quarter report | October 25 |

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## Annual General Meeting 2018

The Annual General Meeting of Alfa Laval AB (publ) will be held on Monday, April 23, 2018, at 4:00 p.m. at Sparbanken Skåne Arena, Klostergården's sports area, Stattenavägen, in Lund. Light refreshments will be served after the Meeting. In accordance with the company's Articles of Association, notice of the Annual General Meeting will be inserted as an announcement in the Swedish Official Gazette and on the company's website not more than six and not less than four weeks prior to the Meeting. An announcement that notification has been issued will be placed in Dagens Nyheter. As a service to existing shareholders, information about the Annual General Meeting can also be sent to them by mail. The following information concerning the Meeting does not constitute legal notice.

**Notification of participation**
Shareholders who wish to participate in the Meeting and be entitled to vote must be entered in the share register maintained by Euroclear AB not later than Tuesday, April 17, 2018, and register their intention to participate, along with any assistants, not later than Tuesday, April 17, preferably before 12:00 noon. Shareholders whose shares are held in trust must temporarily re-register their shares in their own names not later than April 17. Shareholders must request such registration from the trustee a few working days prior to the deadline.

**Notification of participation shall be made to:**

– Alfa Laval AB, Group Staff Legal, Box 73, SE-221 00 Lund, Sweden

– E-mail: arsstamma.lund@alfalaval.com

– Website: www.alfalaval.com

– Tel: +46 46 36 74 00 or +46 46 36 65 00.

Shareholders must state their name, personal identity number and telephone number on the notice of participation. If participation is by proxy, a power of attorney or authorization must be submitted to the company prior to the Meeting.

**Meeting program**

| | |
|---|---|
| 1:30 p.m. | Bus departs from Sparbanken Skåne Arena for Alfa Laval's production unit for heat exchangers in Lund |
| 3:30 p.m. | Registration starts |
| 4:00 p.m. | Start of Meeting |

**Tour of production facility in Lund**
Prior to the Annual General Meeting, participants will have an opportunity to view the production of plate heat exchangers at the plant in Lund. The tour will begin with assembly at Sparbanken Skåne Arena, Klostergården's sports area, Stattenavägen in Lund not later than 1:30 p.m. Buses will be provided for transportation to the plant and back to the Meeting venue. Registration for the tour must be made in conjunction with registration for participation in the Annual General Meeting. Please note that the number of participants is limited.

**Dividend**
The Board of Directors and the President propose to the Annual General Meeting that a dividend of SEK 4.25 per share be paid. The proposed record date for this dividend is Wednesday, April 25, 2018. If the Meeting approves the proposal, the dividend is expected to be distributed on Monday, April 30, 2018. The record date and dividend payment date may be postponed due to the technical procedures required for executing the payment.

**Alfa Laval in brief**

Alfa Laval is a leading global provider of specialized products and engineered solutions.

The company's equipment, systems and services are dedicated to helping customers optimize the performance of their processes. Time and time again.

Alfa Laval helps customers to heat, cool, separate and transport products such as oil, water, chemicals, beverages, foodstuffs, starch and pharmaceuticals.

Alfa Laval's worldwide organization works closely with customers in 100 countries to help optimize their processes.

**More information on the Internet**

Alfa Laval's website is continuously updated with new information, including contact details for all countries.

Read more at www.alfalaval.com and www.alfalaval.com/investors

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