A world of safer vehicles

2019 Annual report



Innovative brake specialist

Haldex is a leading manufacturer of reliable and innovative brake systems and air suspension solutions that enhance the safety, dynamics and durability of heavy vehicles. Haldex's customers are mainly large manufacturers of trucks, buses and trailers in North America, Europe and Asia. On the aftermarket Haldex offers spare parts and servicing to distributors, workshops and large logistics companies. Haldex was founded in Landskrona in 1887 and has since been notable for innovative research and development work that has created groundbreaking technological vehicle solutions. Development today is focused on safety and the future of electrified, autonomous and connected heavy vehicles. Haldex's operations are global, with more than 2,200 employees spread across 19 countries.



Asia and

Middle East 11%

Europe

South America 4%

Safety

Products for safer traffic environment and vehicles

Innovation Service

Innovative technology that drives change

High level of service and good availability



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The year in brief

2019 began positively with a high level of new production of trucks and trailers. In the middle of the year, demand slowed and global production kets, Europe and North America, were negatively impacted.

Significant events

- Helene Svahn took over as new CEO in June 2019
- Haldex completed development of the disc brake ModulT for trucks and buses, which was adapted for serial production for Mercedes-Benz Unimog in collaboration with Daimler.
- Breakthrough for Haldex Electromechanical Brake System (EMB) which achieved compliance with the requirements of the Chinese braking regulations, paving the way for use of the system in heavy vehicles on the Chinese market.
- Haldex took several important steps in the development of customised solutions for customers on the Chinese and European markets. Test installations of the electromechanical braking system have been set up in China on customers' vehicles. In addition, Haldex delivered a first prototype of the system to one of Europe's largest vehicle manufacturers.
- Haldex renewed exclusive agreements with two large truck manufacturers regarding automatic brake adjusters. The agreements, which have an estimated business value of SEK 260m, are valid until 2023.

HILLING

• Decision on the relocation of automatic brake adjuster assembly (United States) and production of EBS and air suspension products (Germany) to existing facilities in Mexico and Hungary. Taken together, this is expected to contribute to annual savings of approximately SEK 75m.



SALES Per regior



52% North America 33% Europe 11% Asia and the Middle Eas 4% South America **2,172** Employees

SALES Per product line



58% Foundation Brake 42% Air Controls

6.1% Adjusted operating margin

SALES Per customer category



47% Aftermarket 29% Trailers 24% Heavy trucks

1

KEY RATIOS IN 2019	2019	2018	Change
Net sales, SEKm	5,151	5,119	1%
Operating profit, SEKm	105	255	-59%
Adjusted operating profit, SEKm	317	305	4%
Operating margin, %	2.0	5.0	-3.0
Adjusted operating margin, %	6.1	6.0	0.1
Profit after tax, SEKm	5	153	-97%
Earnings per share, SEK	0.12	3.46	-97%
Dividend, SEK ¹⁾	0	1.15	-100%
Return on capital employed, % 2)	3.1	9.8	-6.7
Return on capital employed, excluding non-recurring items, $\%$ ²⁾	9.4	11.8	-2.4
Equity/assets ratio, %	35	44	_ <u>C</u> _
Cash flow, operating activities, SEKm	328	274	54
Employees	2,172	2,309	-6%

¹⁾ Proposed divided which has to be approved at the AGM.

²⁾ Rolling twelve months, and the effect of IFRS16 - finance leases has been excluded.

Sustainable brake systems

Over 120 years of innovation have provided Haldex with competitive expertise in brake and air suspension systems for heavy trucks, trailers and buses.





The market for the production of heavy trucks in North America and Europe is relatively concentrated and consists of about 15 major manufacturers. Haldex delivers to all of these to varying degrees. In Asia, the market is more fragmented with several local manufacturers. The lead times for introducing new products into the major manufacturers' development programmes are long, about 5 years. The trailer market is concentrated and is held by around 10 manufacturers in North America and Europe. These markets dominate trailer manufacturing in the world. This segment is important for Haldex as the customer group acts as a springboard towards the more demanding truck customers.



Foundation Brakes



Automatic brake adjusters are an integral part of a drum brake and automatically control the distance between the brake lining and the brake drum.



Actuators are used on both drum brakes and disc brakes. Haldex offers several versions, both with and without parking brake.



Disc brakes

have better braking performance than drum brakes. Haldex manufactures complete disc brake systems for both trucks and trailers.

Air Controls



Electronic EBS controls the braking

system electronically. EBS distributes brake pressure so that, in contrast to ABS, there is always optimal braking power in the vehicle.



Raising and lowering of the trailer for adjustment to the loading bay when loading and unloading goods is achieved by manual control of the air suspension system.



Parking brake con-

trol for trailers ensures that the trailer cannot roll away and cause accidents when it is parked without a truck.

New Technology

Scalable Brake System

Haldex development project to meet future demands for safe braking systems on connected, electric and autonomous heavy vehicles.



EMB (Electromechanical

brake systems) brake systems control and activate electronically without using compressed air. This product has been developed in Haldex VIE in China, and will initially be manufactured in China for the Chinese bus market. The system improves energy consumption, sound and vehicle driving regulations as well as shortening the stopping distance.

FABV (Fast Acting Brake Valve)

are the main modules in a brake control system that improves the vehicle's driving characteristics and reduces the stopping distance. The systems' scalable configuration is suitable for truck platforms where automation will be partially or fully included.

Aftermarket

The aftermarket consists of both truck and trailer manufacturers' own distributors and independent distributors. Haldex delivers to both categories. Distributors, in turn, sell on to logistics companies and workshops. Demand from these drives sales at distributors.





Focus on efficiency and innovation¹

In the summer of 2019, I took over as CEO of Haldex. I realised early on that Haldex has a unique position and potential. Our commitment to developing from a component supplier to a system supplier is made possible by Haldex – for over 120 years – having combined pioneering innovation with a high-quality industrial core business where there are established customer relationships with world-leading OEMs, a global sales organisation, a strong service network, and a stable aftermarket.

We stand on the cusp of very exciting technical and industrial development in which our societies will change fundamentally. Sustainability, digitisation, electrification and the expansion of 5G are accelerating the trend towards autonomous and electrified vehicles.

Haldex holds a unique position as a strong innovator and global brake specialist. In 2019 we continued to invest in the development of an open and integrable brake system adapted to the electrified and autonomous heavy vehicles of the future. This includes a high-precision pneumatic brake system (Fast Acting Brake Valves), electromechanical brake (EMB) systems and an open architecture for integration of the vehicle's dynamic control system. The benefits of the new systems include lower energy requirements, higher performance, open communication of data and cost-effective system integration. Our development strategy is based on developing our scalable systems in close cooperation with our partners.

However, the large sales volumes from new technology are a few years away, and while this business matures we are fully focused on increasing value creation in existing operations. We began a margin improvement programme in 2019 with the target of attaining an adjusted operating margin of 10 percent in 2022. At the end of 2019, we saw early effects of the programme when selling and administrative expenses fell by around SEK 27 million, an effect that will continue to be noticed going forward. We have also made the necessary decisions to close down production in Blue Springs in the United States and in Heidelberg in Germany. These measures will generate annual cost savings of around SEK 75 million from 2021. In addition to these initial measures, a number of additional activities are planned to lower production costs, improve cost control and streamline sales. We simply have to accelerate and become even better at doing what we already do well, while still being innovative.

Our profitability has to improve from the current 6.1 percent to 10 percent in 2022. To get there, we are focusing on the following strategic priorities.

- Increased focus on attractive product and market segments. We need to be better at choosing the right customers, offering the right products and selling at the right price. The current product offering must become more uniform at the same time as we continue to drive technological development.
- More efficient internal processes and flows. We have launched an action programme that focuses in particular on improving logistics flows and reducing the number of suppliers.
- Ensuring economies of scale in production through an optimal network of production sites. Larger production units lower administrative expenses and reduce the complexity of the supply chain.

Promising markets

The potential in Asia is huge, and Asian operations will be of key importance in the future as China, in particular, has come a long way in electric operation of heavier vehicles, becoming the first market in which Haldex is introducing the newly developed electromechanical brake systems in heavy vehicles. In 2019 we carried out vehicle tests for type approval of our EMB system in China and passed and we are well positioned in electric buses, with several test installations at various bus manufacturers. We plan to **Helene Svahn** Board member, President and CEO

45 years

Born in Hudiksvall

Experience

Former Head of Research and Development at Permobil. KTH Royal Institute of Technology professor of nanobiotechnology and creator of the world's first microchip for DNA analysis.

¹It should be noted that the CEO's statements was finalised before the COVID-19 pandemic and should be read in light of this. Haldex, like all companies, must adapt its operations and evaluate or re-prioritise ongoing projects according to prevailing conditions. However, at the time when this annual report is printed, it is still difficult to comment on the financial impact of the outbreak on Haldex's operations as the situation changes daily. Note 36 (Group notes) describes events after the balance sheet date and in more detail what measures Haldex has taken at that time in connection with the COVID-19 outbreak.



By being quick, innovative, curious and determined, we will be at the forefront and take a leading position in the automotive industry of the future.

introduce the EMB system onto the market towards the beginning of 2021. In North America, which is our largest market, the shift from drum brakes to disc brakes is ongoing. We are in negotiations with a number of customers, logistics companies and OEMs on our disc brake ModulT, which combines low weight with high braking performance as well as lower servicing and maintenance costs. In the autumn, serial production was ready to start for Daimler regarding their Unimog truck. This agreement was a very important milestone and acknowledgement of the quality of the product. The agreement has strengthened our ability to win more disc brake contracts with OEMs. In addition to developing the OEM business, we see further potential to increase our sales to the aftermarket, partly by ensuring that our share of the spare parts market is equivalent to our sales to the vehicle manufacturers, i.e. the installed base.

In Europe, the disc brake accounted for more than 30 percent of sales in 2019. We are particularly strong in the trailer segment, and are actively working to develop a system solution that suits both trucks and trailers. The technological development we have pursued in EBS is nearing launch, and our fully upgraded solution EB+4.0 introduces a whole new generation of EBS to the trailer segment in Europe. We also see that our new generation of EBS can be attractive to the North American market. EB+4.0 is a modular system that can be configured as ABS-based and include all features up to EBS. In a technological shift, which is now in progress in North America, the new platform is a perfect support as we can fulfill the needs of the customers due to the modular configuration.

Partnership and new technology

We see that collaborations and partnerships pay off for everyone involved, and we are in continuous dialogue with the largest manufacturers of trucks and trailers. Together we can take the technology to the next level, which lowers both costs and risks.

In our commitment to new technology, we made sev-

eral advances in 2019. During the quarter, we extended our framework agreement with one of the world's largest truck manufacturers for the development of brake systems adapted to autonomous and electric vehicles. The collaboration concerns a concept phase for the Fast Acting Brake Valve (FABV). We also passed some important milestones in the development of the electromechanical disc brake system and we expect the electromechanical braking system to be approved in other markets within a few years.

To sum up, Haldex's new technology is well positioned for the future and we anticipate it already entering production in 2021.

Sustainability - success and challenges

Haldex works continuously on sustainability. This work is developing constantly and is prioritised by our major customers. For example, we have introduced a whistleblower hotline to ensure that employees highlight shortcomings in the business and encourage them to do so. Sustainability efforts cannot be prioritised highly enough, and we are seeing a move towards increased awareness among our employees, which is very positive. In 2020, we intend to increase the efficiency of the supply chain and consequently also review the sustainability efforts of our many suppliers.

The automotive industry will experience major changes in the next few years, and previous positions can no longer be taken for granted. By being quick, innovative, curious and determined, we will be at the forefront and take a leading position in the automotive industry of the future. I look forward to leading Haldex and unleashing our great potential so that we will succeed in this, in both the short and long terms.

Helene Svahn President and CEO Haldex

Global transport flows dictate demand

Size and growth

The market for brake and air suspension products is global, and total demand is dictated by global transport flows, which in turn are affected by global growth. Haldex operates and monitors business in four regions: Europe, North America, South America and Asia. The market trend for each region depends on economic development in the region, and the four regions differ significantly in terms of vehicle fleet design and technology content. Europe has the most advanced vehicle fleet, with a high technology content per vehicle. Generally, Asia is at a lower maturity level. However, Asia is progressing fast and is, in some cases, world-leading.

Market channels

Haldex sells its products to manufacturers of trucks and trailers (OEMs) and to distributors. Distributors are divided into vehicle manufacturers' own distributors (OESs) and independent distributors.

The distributors, in turn, sell the products on to workshops and logistics companies. The OES distributors usually have customers who are early owners of the vehicle, while the independent distributors often work with later owners.

An important success factor for suppliers to the automotive industry is that the OE companies select their products for future vehicle models. By installing the products in new production, conditions are created for achieving large volumes over a long period in the more profitable aftermarket.

End users have different needs and make different demands on distributors' ranges. Haldex endeavours to influence demand at all stages in order to persuade end-customers, i.e. logistics companies and workshops, to demand Haldex products from the distributors. In North America, for example, logistics companies can specify different components to the manufacturer of a truck or trailer, making them an important indirect customer.

Competitive situation

Haldex operates in a global market with two strong players, Knorr-Bremse and Wabco, both offering a wide range of products and systems used in heavy vehicles.

The German company Knorr-Bremse is listed on the stock exchange and has sales of SEK 65 billion, of which about half is made up of sales for heavy vehicles and half for the rail sector. Wabco is based in Belgium but listed on the stock exchange in the United States, with sales of SEK 34 billion. The company is to be acquired by ZF.

Haldex is the third-largest player and has a more niched offering focusing on selected products for brake solutions and air suspension systems adapted to heavy vehicles. Due to its focus and smaller size, Haldex can offer a high degree of specialisation, fast decisionmaking processes, a high level of customer service and flexible solutions. Haldex has addressed the upcoming technological shift by investing in open, modular systems that challenge existing technology and ways of building brake solutions.

NEW PRODUCTION

Although newly produced trucks and trailers are a good indicator of Haldex's market, most sales and profit come from the significantly less volatile aftermarket. The degree to which Haldex is affected depends on how large a share of the company's sales there is in each category and geographical region. The production statistics are a forecast based on external sources. Historical figures also reflect estimated production rather than the industry's actual outcomes. The information relating to trucks is based on statistics from LMC Automotive, unless otherwise stated. The information on the trailer market concerning Europe is based on statistics from CLEAR International Consulting Ltd.

HALDEX REVENUE MODEL



NEW PRODUCTION, TRAILERS *Number of trailers*



NEW PRODUCTION, HEAVY TRUCKS Number of trucks

South America

Asia



Trends and drivers

We are seeing an accelerating development towards more advanced technology in vehicles to meet future challenges arising from increased population, urbanisation and climate threats.

Transport needs are increasing with urbanisation and improved infrastructure

More and more goods are being transported in a world with a growing population. The United Nations Population Fund anticipates an increase in world population from 7 billion people today to 8 billion in 2025 and 9 billion by 2050. Another important factor is increased prosperity. Between now and 2030, the world's middle class is expected to double, while absolute poverty is expected to decrease.

More than 50 percent of the world's population are already living in cities today, and according to the UN, the proportion is projected to increase to 66 percent by 2050. Increased urbanisation combined with a larger population and greater prosperity require better road networks and more technically advanced vehicles to meet the social and environmental challenges.

In countries with poor road network quality, trucks without a trailer are most common. Increased quality of the road network leads to more trailers being produced, this being the customer category where Haldex holds its strongest market position. Demand for more technically advanced vehicles also benefits Haldex. With increased demands for sustainable and efficient vehicle solutions, Haldex solutions are becoming more attractive.

Increased safety and environmental requirements

Every year, 1.2 million people die on the roads and 50 million are injured according to the World Health Organization. 91 percent of these accidents happen in low or middle-income countries, although these countries have only about half of the world's vehicles. It is clear, however, that safety requirements are increasing in all parts of the world. In 2015, it became mandatory for all newly manufactured buses and trucks in India to have ABS installed. Similar legislation has existed for about a year in Brazil. In Europe, stricter requirements for braking distance for heavy vehicles led to a breakthrough for disc brakes.

Burning fossil fuels, such as oil and diesel, is a major source of greenhouse gas emissions that cause climate change. A sustainable transport sector must improve fuel efficiency and find alternatives with lower carbon dioxide emissions. An important area that affects emissions in this regard is the weight of the vehicle. By optimising the products' design and selection of materials, many kilograms are saved, which is important in increasing the range of electric vehicles.

Industry-specific trends

The global automotive industry is on the cusp of a far-reaching transformation driven by digitalisation, electrification and autonomous vehicles. This development will bring major social and environmental benefits while also paving the way towards new potential markets for Haldex. Electrification is driving the trend towards completely new types of energy-efficient braking systems. Electrification also results in a higher technological content per braking system. The opportunities digitalisation brings are in turn driving the development of autonomous vehicles, load optimisation, increased resource efficiency and enhanced safety. Digitalisation is also expected to change the market structure and various roles in the industry. Digital logistics platforms will probably challenge current operators and take over a greater proportion of sales, booking and load optimisation while freight transport will be handled by different vehicles optimised for the task. Autonomous truck convoys for long-distance transport combined with rapid pods for the final kilometre. The environmental benefits will be significant when capacity utilisation of both the road network and vehicles is optimised.

STRONG DEVELOPMENT TRENDS IN THE AUTOMOTIVE INDUSTRY



The automotive industry is undergoing substantial change driven by electrification, digitalisation and greater sustainability requirements. The entire automotive industry faces a major transformation that will affect all operators on the market. Haldex has identified intelligent and data-driven logistics systems and booking platforms as well as autonomous and electric vehicles as offering attractive opportunities.

VISION AND STRATEGY

A world of safer vehicles

Haldex should strengthen its competitiveness by having a clear focus that leads to good cash flows and profitable growth in the short and long terms. The ongoing technological shift makes new demands on product development and investments in Research and Development.

Vision

Haldex should contribute to a world with a better traffic environment and safer vehicles.

Mission

Haldex should make commercial vehicles safer and more environmentally friendly by offering innovative and open systems and components to truck and trailer manufacturers and logistics companies. We should achieve our mission through technological leadership in selected areas, close partnerships with customers and suppliers, and through continuous product development and efficiency.

Strategic goals

Haldex should be the leading global supplier of innovative braking systems and components to selected truck and trailer manufacturers.

Financial goals



Haldex's goal is to grow faster than the market through organic growth.

Adjusted operating margin

should be 10 percent at the

end of 2022.

Organic growth In currency-adjusted terms, sales fell by 5% in 2019.

ADJUSTED OPERATING MARGIN, %



NET DEBT/EQUITY RATIO



Target 1.0 (max)

The net debt/equity ratio should be less than 1.0.

Adjusted operating margin Operating margin excluding adjustments was 2.0 percent in 2019.

Net debt Net debt increased by 104 percent in 2019, of which interest-bearing debt accounted for 32 percent.

Sustainability

SAFE HALDEX Number of accidents, per million hours



GREEN HALDEX Carbon dioxide emissions, tonnes



HUMANE HALDEX Satisfaction index



ETHICAL HALDEX Employees trained in the Code of Conduct



Strategy

Product leadership

Haldex will focus its development on products and solutions with the potential to be market leading in a clear niche. In product development areas such as safety, performance, environmental impact, total cost of ownership (TCO), product service life and aftermarket potential are taken into account. To achieve and maintain product leadership, a continuous review of the product portfolio is required in order to phase out unprofitable products and provide space for attractive new products.

Haldex balances the development of the current product portfolio with the development of groundbreaking systems for the vehicles of tomorrow. For example, Haldex's electromechanical braking system (EMB), and the pneumatic high-precision braking system (FABV), as well as parts of our electronic brake control system (EBS), will be commercialised within the next few years and will eventually become part of technology for autonomous vehicles.

Attractive aftermarket offering

Haldex is to offer a best-quality aftermarket service that meets the needs of customers and minimises the total cost for logistics companies, where planned downtimes are material to the calculation. Customers' needs change over the life of the vehicle, and Haldex's offering regarding servicing and spare parts must be adapted to the remaining life of the vehicle.

E-commerce provides increased accessibility and makes life easier for customers. Haldex introduced e-commerce solutions in Europe and North America in 2018, and we are currently evaluating how we can further improve the level of service.

Activities in 2019

- Further development of Haldex electromechanical brake systems with the Chinese manufacturer VIE in order to form the basis for a joint venture.
- Further development of Haldex high-precision compressed air brake systems with a major truck manufacturer.
- Development of disc brake for Unimog together with Daimler. The brake is now in serial production.

Priorities in 2020

- Increase technology development discussions and projects with leading truck, bus and trailer manufacturers.
- Further develop disc brake systems for trucks.
- Develop and launch the new EBS generation, EB+4.0, to the trailer segment, with initial introduction in Europe. It is a global and modular platform, suitable for both EBS and ABS.

Activities in 2019

- Focus on customer programmes and customer-oriented activities.
- Growth in aftermarket for disc brakes.
- Launch of recycling programmes (remanufacturing) for all brands in the United States.

Priorities in 2020

- Strengthen the proximity to customers in the aftermarket and deliver customer value.
- Deepen relationships with logistics companies.
- Further develop e-commerce solutions and other digital solutions.



Customer focus

It should be easy to do business with Haldex. Haldex has always endeavoured to create the greatest possible customer benefit by offering innovative solutions that respond to customers' technical challenges and performance requirements. The approach is helping to build healthy and long-lasting relationships with a large number of OEM customers and logistics companies around the world.

Together with our major OEM customers, we often carry out joint development projects where we test new concepts and solutions in the hope that our solution will become part of future serial production.

For the aftermarket customers, the challenge is different. It is about maintaining a high level of service and spare parts being available. TCO is a very important factor for those who own the vehicles where we can work on minimising the occurrence of unplanned downtime due to defective parts and long delivery times.

Operational excellence

Haldex works actively to create more flexible processes that free up time and energy to develop existing and new products as well as build customer relationships and provide good service. Safety, precision and quality create the conditions for achieving product leadership and customer focus. The Haldex Way framework helps us drive results through continuous improvements and achieve operational excellence. Through Haldex Way, we are constantly improving our quality and efficiency in processes, tools and evaluation methods.

Operational excellence also means that in order to be competitive, we must constantly innovate through efficiency improvements and cost savings, and ensure that the products we choose to produce and sell have sufficient potential to be profitable in the long term.

Bridge-building culture

Haldex should be an attractive workplace that offers professional development and a high level of job satisfaction, where employees feel committed to customers and the business.

We have been engaged in structured work for some years, with the aim of building a healthy culture based on clear values and an enhanced leadership. We strive for a culture that inspires, challenges and motivates. Our values: Customer First, Respect for the Individual and Passion for Excellence should permeate everything we do.

To drive this work on culture, we work with a behavioural model that in everyday language we call 5C. This model means that Haldex strives for the organisation to strengthen the following five desirable behaviours in its day-to-day operations. 5C gives us a daily reminder to build bridges internally in order to solve problems, understand the big picture and strengthen the sense of belonging.

Activities in 2019

- Increased activity on customer and partner meetings including truck manufacturers at management team level and in R&D.
- Development of customer-oriented and user-oriented model.
- Development of KAM model.

Priorities in 2020

- Build relationships at all levels with manufacturers, distributors, workshops and logistics companies.
- Develop the KAM model, mainly towards manufacturers.
- Enhance the sales network and sales force.
- Activities in 2019
- Launch of efficiency improvement programme.
- Start of product portfolio optimisation project.
- Optimisation of production structure and decision to close two production units.

Priorities in 2020

- Continue portfolio optimisation work.
- Continue optimising the production structure.
- Improve control and follow-up.
- Activities in 2019
- Continue driving 5C training for both office-based staff and production staff. All in order to strengthen a common way of working and culture.

Priorities in 2020

- Continued focus on implementation of regular training in 5C for all employees, both office-based staff and production staff.
- Strengthen leadership and develop a stimulating feedback culture. Feedback on both what employees do well and what is in line with 5C, but also actions that need to be reinforced to support our 5C culture.

HALDEX 5C

CONNECT to understand the whole and establish contact COMMUNICATE communicate **COLLABORATE** collaborate

COACH lead yourself and others **CREATE** create opportunities

Technology that drives change

As a specialist in brake and suspension systems, Haldex is part of the automotive industry. In the long term, this sector is characterised by extensive technological changes such as smarter and connected vehicles and electrification.

The automotive industry is facing a technological revolution in the long term, but the development of current technology is continuing in parallel with a focus on constantly minimising energy losses and vehicle weight and optimising performance.

Smart vehicles on the rise

The trend towards smarter vehicles has accelerated. They are already here to a certain extent, although the major development lies ahead. The dominant trends in the automotive industry are the development of autonomous vehicles, connected and smart vehicles with subsystems that communicate with each other and the outside world, and the transition to fossil-free fuels and, in particular, electric operation.

Haldex anticipates that development will take place in stages and in parallel workflows. The vision is that these development projects will be adapted to each other and linked together in the future.

Autonomy, vehicle capacity for autonomy is indicated on a five-degree scale. The trucks that are sold commercially today generally have level 2, which includes, for example, automatic parking or the vehicle correcting the vehicle's location between the road lines. Vehicles with level 4 autonomous characteristics are primarily tested in closed areas such as mines and logistics centres.

The illustration below gives an overview of the different development levels for autonomous vehicles. The time axis is an estimate. The timing of implementation is dependent among other things on legislation. **Connected and smart vehicles**, where different subsystems within the vehicle communicate with each other as well as with other vehicles and other external units, already exist today, and are a growing area. If connected vehicles are to function on a large scale in society, however, open standards must be applied on a broad scale and all vehicles must communicate with one another to create a safer traffic environment.

Electrification, electric buses have been on the market for over 10 years, and in recent years several OEMs have presented electrically powered heavy trucks for distribution, regional and construction transport. The introduction of electric power for this type of traffic would have a very positive climate impact through lower CO₂ emissions and reduced noise in the urban and construction environment. The range for heavy vehicles in regional use is between 200 and 300 kilometres. The development of heavy electric trucks for long-haul transport is still in the development phase. The industry is working hard to solve challenges regarding battery range, truck loading capacity, charging and finding cost-effetive solutions. These are four questions that must all be addressed if we are to see electric-powered long-haul transport on the roads. There are several pilot projects evaluating the possibility of creating electric roads, which would respond to the challenges of loading capacity and charging for long-haul transport. There are currently three alternative technologies that are in the research and demonstration phase: overhead lines, electric rails in the road and inductive technology.



The role of the braking system in future vehicles

The braking system has been continuously developed and, thanks to advanced technical systems, is becoming increasingly safe and efficient. Modern braking systems, by regulating the braking power between different wheels, are now helping to improve safety through reduced braking distance and increased stability through braking performance in safety-critical situations.

Autonomous vehicles

For autonomous vehicles, stability and predictability, for example when cornering or on slippery roads, are crucial.

A vehicle's driving characteristics are largely determined by the characteristics of the wheel when friction is transmitted to the road surface. By measuring and analysing speed and braking capacity, for example, the braking system can act preventively to stabilise the vehicle.

In the autonomous vehicle, the braking system becomes an important safety system that is to monitor and check the status of each wheel based on real-time analysis of the self-generated data from sensors and the current status of other vehicle systems.

The future braking system will be integrated with the vehicle's other technical systems, which is crucial to the driving experience and safety and to enabling the total system integration cost to be optimised. Today, the driver clearly senses, for example, adaptive cruise control, lane change warning, auto brake or collision warning. In the future, these systems will operate in the background and respond quickly when the vehicle's other systems warn of a collision risk. In addition, it must respond correctly. For example, whether the road surface is wet or dry affects how the braking effect is to be distributed. The braking system can also steer clear by distributing the braking action between the wheels or adjusting the behaviour of the wheels while driving to make the journey safer and more comfortable.

Connection to the outside world is also a very important safety aspect; for example, data on road conditions, rapid deceleration or accidents can be communicated to following vehicles which can consequently adjust their speed. This vision of the future requires the development of open standards that will result in significantly safer road traffic.

Electric vehicles

One challenge with electric heavy vehicles is the battery capacity and the limited range offered by the technological solutions of today, especially in fully loaded trucks with trailers. The focus for battery-operated heavy electric vehicles is therefore currently on the segment serving local traffic (city buses, distribution vehicles and refuse collection vehicles) and where there is a better developed charging infrastructure.

Haldex electromechanical systems fit in well here. They rely entirely on electronic actuators, sensors and control systems to operate and regulate the brakes. The electromechanical braking system does not require a compressor and is therefore virtually silent, unlike the current pneumatic systems. This brings major benefits, particularly with the lower energy consumption and reduction in environmental impact, while the system offers better braking capacity and precision. Additional advantages are easier assembly and less maintenance. The challenges mainly concern operational safety.



The electromechanical disc brake system is a virtually silent brake system, primarily intended for electric vehicles. The system provides a 15 percent shorter braking distance than existing pneumatic systems. In addition to improved performance, the system is energy efficient, because it uses internal energy recovery when braking, and it is easy to assembly and integrate for vehicle manufacturers.

Open brake solutions in collaboration with customer

The boundaries between driving, braking and steering are about to be redefined, and Haldex has increased its investment in R&D by 38 percent since 2015 in developing new braking solutions and consolidating its competitiveness in the long term.

It is always a challenge to navigate correctly in technological development so that investments are made in the right area of technology. In addition, there are specific technical challenges, such as combining stricter restrictions on carbon dioxide emissions, especially in urban areas, with requirements for vehicles to be able to drive long distances.

Principles of Haldex's new technology

Haldex firmly believes that the crucial functionality of future vehicles will be in the software, which then controls the hardware. The same software will control how an electromechanical brake, a disc brake or a drum brake reacts. The type of hardware is chosen based on the function the customer wants to achieve.

Based on the perception of the future central function of the software, Haldex bases its systems on scalable software and hardware that can handle many different areas of technology. In this context, scalable means that the starting point is a technical platform to which various modules can be connected. This solution means, among other things, that different prototype projects can be developed in parallel workstreams together with different partners. Haldex's future commitment is based on the new technology having to adhere to principles of flexibility and transparency. This enables the vehicle manufacturer to choose how much of the new technology to use. New and old technology can also be used side by side. Development costs decrease and flexibility increases. Another important principle in Haldex's development work is open standards. In order to create a world of safer vehicles, all vehicles must collaborate. Haldex has therefore chosen the longterm sustainable solution of open standards and scalable systems that gives vehicle manufacturers and system integrators control over vehicle characteristics instead of linking software and data to Haldex and Haldex products. Because all the vehicle's systems are able to work together via data sharing and analysis, optimum safety can be achieved. Since the vehicle manufacturer or system integrator determines what is important in the vehicle, no misunderstandings or collisions occur in the systems. However, open systems are still in their infancy in heavy vehicles.

Strategic technology collaborations

Our development strategy is based on developing our scalable systems in close cooperation with our partners. This also means that the development cost can be shared.

The cooperation with the Chinese company VIE on the electromechanical braking system is an example of how we are jointly developing a safe and efficient braking system primarily for electric commercial vehicles. At the end of 2019, we achieved significant milestones by our compliance with all the requirements of the Chinese braking regulations and by also successfully testing the system on several Chinese customers' vehicles.

At the end of 2019 we also completed a first prototype installation together with one of the largest vehicle manufacturers in Europe, which is a key major step towards progress in the development of customised solutions for the European market.



Haldex's future investments

Scalable Brake System is Haldex's development project to meet the new demands placed on braking systems in connected, electric and autonomous trucks and trailers. Haldex expects to continue to invest 4–5 percent of sales in research and development costs for further development of the Scalable Brake System. The brake system is groundbreaking and stands out from other solutions on the market through:

- advanced vehicle dynamics, where Haldex uses sensors and algorithms to cause the truck and trailer to brake and follow the desired direction of travel in an optimal way
- an open and integrable interface with the vehicle manufacturer's overall control system, where the vehicle manufacturer retains control over the control system while having access to all vehicle data
- a system that works with both compressed air and electrified braking systems, which is made possible by Haldex developing an architecture that is modular and scalable. Examples of products already presented as part of the Scalable Brake System are described below:

Fast Acting Brake Valve (FABV) is a valve solution installed at the wheel that is adapted to the pneumatic braking systems of today and provides a 15 percent shorter stopping distance than established systems. With FABV, the vehicle also adheres to its intended path, with stability and predictability that only EMB can meet. The predictability of the vehicle's travel is very important in all traffic situations, but especially for autonomous vehicles, for example when cornering or in slippery road conditions.

The Electromechanical Brake System (EMB), is primarily intended for electric vehicles and also provides a 15 percent shorter braking distance than existing systems. The almost silent brake, an important feature for the traffic environment in urban environments, has the same enhanced ability to predict and control the vehicle's path as FABV. In addition to improved performance compared with the pneumatic disc brakes of today, EMB also offers lower energy consumption, when the pneumatic braking system is replaced with a fully electric braking system. EMB is installed on test vehicles in China and as a first prototype installation at one of the largest vehicle manufacturers in Europe.

The new generation of EBS for trailers, EB+4.0, is another important product development project. EB+4.0 controls the braking system electronically and is the central hub of the braking system to which various functions are connected. EBS ensures that there is always optimal braking power on all wheels, which shortens the braking distance in relation to systems that only have ABS.



Fast Acting Brake Valve (FABV)

provides a 15 percent shorter braking distance and stability and predictability that no other available technology can provide. The technology is based on a valve solution, installed next to the wheel, that gives lightning-fast precision control.



Haldex products

Foundation Brakes



Automatic brake adjusters (ABA) are an integral part of a drum brake and automatically control the distance between the brake lining and the brake drum.



Disc brakes have better braking performance than drum brakes. Haldex manufactures complete disc brake systems for both trucks and trailers.



Actuators are used on both drum brakes and disc brakes. Haldex offers several versions, both with and without parking brake.

Key markets

North America, South America and Asia: Trucks and trailers

Phase in product life cycle A market-leading component used in drum brake systems. Gradually being replaced by disc brake in newly produced vehicles. Key markets Europe: Trailers

Phase in product life cycle Dominant technology in Europe and with increasing penetration rate in North America and Asia. Key markets North America: Trucks and trailers

Phase in product life cycle A transition from drum brake variants to disc brake variants but otherwise similar technology.

Air Controls



Electronic EBS controls the braking system electronically. EBS distributes compressed air so that, in contrast to ABS, there is always optimal braking power on all the brakes in the vehicle.

Key markets Europe: Trailers

Phase in product life cycle

Dominant technology in Europe and with increasing functionality and ancillary equipment.



ABS prevents the wheels from locking during sharp braking or in slippery road conditions.

Key markets North America and Asia: Trailers

Phase in product life cycle Global legal requirements and the dominant technology outside Europe.



Raising and lowering of the trailer for adjustment to the loading bay when loading and unloading goods is achieved by manual control of the air suspension system.

Key markets Europe: Trailers

Phase in product life cycle

Dominant technology in Europe. In some trailer applications, electronic control occurs.

New Technology



FABV Fast Acting Brake Valve is one of the main modules in a brake control system that improves the vehicle's driving characteristics and reduces the stopping distance. The system's scalable configuration is suitable for truck platforms which incorporate partial or full automation.

Key markets

A replacement system for EBS systems for trucks.

Phase in product life cycle

The product is in the development phase, which is taking place in collaboration with the customer.



EMB Electromechanical Brake System This product has been developed at Haldex Vie in China and will be initially manufactured in China for the Chinese bus market. The system improves energy consumption, noise and the vehicle's driving characteristics and reduces the stopping distance.

Key markets

Initially buses in China.

Phase in product life cycle

Early market phase with test installations. It is expected to be in serial production towards the beginning of 2021.



Haldex Consep separator separates out dirt, water and oil before the compressed air is passed into the air dryer, which provides better air quality in the braking system.

Key markets Europa och Asia: Trucks and buses

Phase in product life cycle Niche product for vehicles with high air consumption.



Air dryers are a key part of the braking system, since they both clean and dry air before it is used in the system.

Key markets Europe and North America: Trucks and buses

Phase in product life cycle Conventional technology, which in Europe has largely been replaced by electronic control.



Parking brake control for trailers ensures that the trailer cannot roll away and cause accidents when it is parked without a truck.

Key markets Europe: Trailers

Phase in product life cycle Standard in Europe with slightly different degree of integrated functions.



Lift shaft control automatically raises and lowers the axle lift on the trailer, depending on the size of the load.

Key markets Europe: Trailers

Phase in product life cycle Dominant technology in Europe. In some trailer applications, electronic control occurs. SUSTAINABILITY REPORT

Safe, ethical, green and humane

SAFE HALDEX	ETHICAL HALDEX	GREEN HALDEX	HUMANE HALDEX		
Haldex manufactures prod- ucts to create a safer traffic environment. Haldex works in several dimensions to ensure the safety of both customers and end users, as well as a safe working environment for Haldex employees.	Haldex has a high aspiration to run an ethically sustainable business and has zero tolerance of bribery, corruption, child labour and discrimination.	The environmental area is a major and important part of Haldex's sustainability efforts. Haldex makes active efforts to reduce its environmental impact, which includes reducing environmentally hazardous emissions, and a sustainable use of resources.	Haldex strives for strong leadership, with all employees being committed and using their full potential, which helps the company achieve its overall business goals.		
Major areas					
• Safety first	 Business ethics 	• Efficiency	 Motivated employees 		
 Product quality 	 Supply chain management 	 Production 	• Equality		
 Working environment 		• Transport	Gender distribution		
		Product lifecycle	• Leadership		
Key ratios and outcomes					
• Work-related accidents per million hours worked. Outcome 2.4 (target: max 4)	• Number of employees trained in the Code of Conduct Outcome 100%, (target:	 Material use efficiency. Outcome 94% (target: over 93%) 	 Percentage of female managers. Outcome 26% (target: at least 30%) 		
 Number of incidents per million hours worked. 	100%) • Number of investigations	• Carbon dioxide emissions. Outcome 34,400 tonnes CO ₂	 Healthy attendance. Outcome 98% (target: at least 98%) 		
Outcome 259 (target: shall be at least 10 times higher than the number of acci-	regarding breaches of the Code of Conduct that are completed. Target: 100%	(target: less than 39,000 tonnes).	 Employee satisfaction index Outcome 73 % (target: at least 70%) 		
dents).	 (measurement starts in 2020) All new suppliers must be reviewed by NQC before being approved as suppliers. 		 Proportion of vacancies filled with internal candidates. Proportion measured with effect from 2020. Target: at least 30% of all vacancies must be filled internally 		
			 Development plans for all employees. Outcome 88 %, (target: 100%) 		
			• Employee turnover Outcome 11%, (target: 4%).		
Priorities in 2020					
Train employees to identify	Reduce unethical and	• Further reduce CO ₂	• Leadership		
risks and provide feedback to avoid risky behaviour.	unlawful behaviour. Encourage greater reporting when they do occur.	emissions	 Ensure future skills supply, i.e. making sure that employees have the right skills and recruiting for future skills needs. 		
Selected UN goals					
3 GOOD HEALTH AND WELL-BEING 11 AND COMMUNITIES	5 GENDER 16 PEACE, JUSTICE EQUALITY 16 AND STRONG	7 AFFORDABLE AND 9 INDUSTRY, ININOVATION CLEAN ENERGY 9 AND INFRASTRUCTURE	3 GOOD HEALTH 4 QUALITY AND WELL-BEING 4 EDUCATION		
		12 RESPONSIBLE 13 CLIMATE	5 GENDER B DECENT WORK AND ECONOMIC GROWTH		
		12 RESPONSIBLE CONSUMPTION AND PRODUCTION			

Four pillars of sustainability

Sustainability is an integral part of Haldex's operations, which makes various aspects of sustainability relevant in all parts of the value chain. Sustainability is noted and managed within the scope of the concepts Safe, Ethical, Green and Humane Haldex.

STAKEHOLDERS

The following five stakeholder groups have been identified: customers, suppliers, employees, shareholders, and the surrounding community.

Customers demand accountability and transparency, and Haldex is constantly working towards more sustainable production methods. The customer expectations include specific material requirements, certificates, external assessments and screening of Haldex's work on sustainability.

Suppliers' operations, including transport, are essential to Haldex's overall impact on the environment and society. Relevant efforts include a Code of Conduct adapted for suppliers, prioritisation of local suppliers, sustainability screening and certification requirements to ISO 14001. Haldex's selection criteria for suppliers include clear requirements for sustainability in the supply chain and requirements for compliance with the Code of Conduct.

Employees demand a well-developed safety approach at the workplace, work on values, Code of Conduct, a whistleblower hotline, skills development, etc.

For **shareholders**, Haldex's integrated view of sustainability is of overarching significance for the company's long-term development. Increasing sustainability requirements drive technological development and resource efficiency and make demands on risk management.

Related to **the surrounding community** are the relevant focus areas of road safety, environmental issues, human rights and local involvement. In its sustainability work, Haldex has analysed the value chain and the effects of the company's activities in society and on various stakeholders in the course of the process. Direct control is exercised over the company's own operations. Other links in the chain are affected by agreements, Code of Conduct, dialogues, training, opinion shaping and follow-up.

Haldex has identified significant sustainability issues by selecting a number of significant areas in which the company's operations have a major impact on society and which stakeholders also consider to be significant.





Four focus areas

In a materiality analysis, Haldex, in dialogue with customers and other stakeholders, has identified opportunities and challenges in safety, ethics, the environment and HR, which form the basis for specific goals and activities for all groups. Risks related to sustainability are continuously analysed.

SAFETY

Safety comprises both the quality of the products, which is crucial for people's security in traffic, and the working environment, where there is a zero tolerance vision for accidents. Innovations contribute greatly to improved road safety, while the company's major improvements to workplace safety are the result of solid and methodical efforts, not least in terms of leadership and behaviour in the workplace.

EMPLOYEES

Employees should be offered a safe and stimulating working environment at Haldex.

ENVIRONMENT

In relation to the environment, the focus is on carbon dioxide emissions and material efficiency. Here too, the importance of developing new products contributes to a more environmentally friendly vehicle fleet.

ETHICS

Work towards sound ethics is largely based on the company's Code of Conduct, which is fundamental to all operations.

Framework provides guidance

At an overarching level, international frameworks form the basis for Haldex's sustainability work. These include the UN Sustainable Development Goals, the UN Universal Declaration of Human Rights, the UN Global Compact, the International Labour Organisation Declaration on Fundamental Principles and Rights at Work, the EU's sustainability areas and the OECD Guidelines for Multinational Enterprises

SIGNIFICANT IMPROVEMENT IN NQC

Haldex is evaluated as a supplier with the assistance of the independent third party NQC in sustainability surveys. NQC is a global insight company that is engaged worldwide by both governments and businesses.

In the latest NQC survey from 2019, an index for Haldex of over 70 was recorded in all categories, which is a high international level. A significant improvement was recorded for 2019 compared to 2018, with Haldex going from having two out of five 'green' areas to having four out of five. The approved level applies to management issues, working conditions and human rights, ethics and the environment. In supplier management, Haldex received a yellow rating, which means that there are opportunities for development. A number of measures are behind the improvements:

- production sites added sustainability requirements for indirect suppliers
- increased use of audits to ensure compliance with supplier sustainability requirements
- training in environmental policy for employees
- safety procedures were further developed and communicated
- more production sites carried out audits of energy efficiency
- training in the Code of Conduct was carried out at all production sites
- deeper insights on NQC as a tool make it easier for some production sites to complete the self-assessment form



Safe Haldex

We should have no accidents at Haldex at all

KELLY ZHANG / CONTINUOUS IMPROVEMENT & EHS MANAGER / SUZHOU, CHINA

Safety is always a priority. We should not have any accidents at all among the employees. In Suzhou, for example, we apply all Haldex principles and tools for safety – Safety #1. It is a global approach that also contributes to efficiency.

Our local safety committees are important. Working groups are trained together in these committees in identifying and reporting risks. All employees have a say. They exchange experience and learn from each other. We can also make comparisons between different teams, clarify what is unclear and establish common objectives. Policies and principles must be converted into behaviours and attitudes.

Other examples of safety measures are safety audits every month, security maps showing places that have been included in the statistics and special training places for security reviews.

Safety efforts produce results. The number of accidents and incidents is decreasing, while the number of observations is increasing. The fact that we are seeing more observations is positive, as they make it possible to prevent undesirable events.

Picture: Haldex production Landskrona

We care about people, putting safety first. It should be safe to work at Haldex, and it should be safe to drive or encounter a vehicle that uses Haldex products. The principle guiding our internal safety work, Safety #1, is that if you can't do it safely, don't do it!

Safety in society

The safety of customers, end-users and other road users guides Haldex's actions as a major supplier of brake systems for broad use in the world's fleet of heavy vehicles.

In the company's internal processes, the focus is on the products being of high quality and meeting Haldex's strict functional requirements. Its own production is guided by extensive processes for how products are to be manufactured and tested. The Haldex Way framework has gradually expanded from being a system for Lean Production to a framework for result driven improvements in the strategic direction.. It is applied in production, distribution, purchasing, HR and other functions in the company. Part of the Haldex Way is a standardised way of working, which is fundamental to creating safe workplaces.

The quality of the products is ensured by adopting established performance requirements in the affected markets as well as following up on the proportion of products subject to complaints and the number of warranty claims issued.

Quality, measured as the number of returned products per million delivered (ppm), has shown a positive trend, moving from 150 ppm in 2013 to 9 ppm in 2019.

There is an interplay between technological development, efficiency measures and digitalisation, and the development of autonomous vehicles and logistics, making Haldex's operations and products increasingly safe. Innovations contribute, for example, to increased stability and road safety.

Employee safety – Safety First

The Group-wide effort on safety is called Safety First (Safety#1). Haldex has a zero tolerance vision for workplace accidents. There has long been a sharp focus on employee safety and established procedures to ensure this. However, this work has been considerably stepped up in recent years, with a focus on leadership and on changing behaviour from reactive to active and reciprocal. Employees are trained to take responsibility not just for themselves, but also for each other. This includes training to discover and act on safety risks.

Processes and procedures for how each task can be performed safely and according to regulations are continuously developed in each work element. The same applies to guidelines for instance regarding alcohol and drugs, violence and social problems.

Follow-up measurements are made of accidents as well as incidents and observations. An accident is defined as an injury that has resulted in more than two hours of absence, which is a stricter definition than is commonly used. An incident is defined as a situation that could result in an accident. In addition, observations of potential safety risks are also recorded.

Haldex has far-reaching criteria for reporting safety deficiencies. Increasing propensity to report is considered to be the decisive factor in the increase in the number of reported incidents, and the trend is therefore judged to be positive. In 2019, work-related accidents decreased significantly in comparison with 2018, from 8.4 accidents per million hours worked to 2.4.

Attitudes and behaviours decide

In addition to measures relating to the physical environment, safety measures also include training and influencing attitudes. Safety in the workplace improves significantly as work and responsibility for safety are integrated into the line organisation and employees take greater individual responsibility for themselves and their colleagues.

Measures to improve safety:

- All staff have been trained in Safety #1, which also covers visitors. The Group has developed common guidelines and information material.
- Accidents are reported on the intranet together with preventive measures, which means that other parts of the organisation with similar risks can prevent the same types of accidents from occurring. A special safety committee with representatives from all production sites contributes to and ensures the transfer of skills within the Group.
- Following the example of other manufacturing companies prominent in safety, safety observations are carried out in which employees in a group teach each other how to identify risky behaviour.

IDENTIFIED RISKS/OBJECTIVES

Identified risks in safety are damage to health and safety, which are managed by the policies and working methods devised in the Safety #1 programme. The objective for employee safety is to reduce the number of accidents each year. The objective for incidents is that the number of reported incidents should be in line with the number of actual incidents so that it can serve as a warning system for preventing accidents. There is therefore no stated target for the incident rate, other than that it should be 10–100 times higher than the accident rate. However, it is difficult to know when this target has been achieved.

KEY RATIO SAFETY

Per million hours worked	2019	2018	2017	2016
Number of incidents	259	306	242	156
Number of accidents	2.4	8.4	7.1	8.8

Ethical Haldex

Anna 1201



HALDEX CODE OF CONDUCT

Haldex's Code of Conduct deals with safe working conditions, responsibility for the environment, ethics in relationships with customers and suppliers, and a positive interaction with the community in which we operate.

Importance of acting quickly and effectively against anything unethical

AGNALDO COLUCCI / COUNTRY MANAGER / SÃO PAULO, BRAZIL

Haldex has a clear ethical profile. One example is when we once had to wait a long time for a permit from local authorities. It caused us problems, not least financially. However, the Group management was very clear that only formally correct solutions were relevant, so we waited out the process.

We recently had a sensitive case internally, when one person was accused by colleagues of bad conduct. We conducted an impartial investigation which showed that there was a factual basis to the claim. Action was subsequently taken, as the person's conduct was unacceptable. The fact that Haldex responded quickly and effectively while offering the person an opportunity for development sent an important signal to employees.

Haldex's 'whistleblower hotline' is central to the possibility of acting ethically. Through it, employees can directly reach a contact within the company other than their immediate manager. Without it, I do not know whether events like this one would be reported.

Picture: Haldex production Landskrona

Haldex's ethical work must be permeated by our basic values: Customer First, Respect for the Individual and Passion for Excellence. The values are put into practical form and reinforced within the 5C concept, which aims to promote increased cooperation within the Group and relationship building with employees in different parts of the company. 5C stands for Connect, Communicate, Collaborate, Coach and Create.

Code of Conduct

Haldex's Code of Conduct is fundamental to all operations. Each employee is trained and signs it to confirm that they have understood and intend to follow the code.

In the 'Customer First' area, the Code of Conduct addresses areas such as bribery, corruption, gifts, conflicts of interest, competitive situations, business-critical information and business entertainment. There is zero tolerance of bribery, corruption, child labour and discrimination.

In the 'Respect for the Individual' area, the Code is about creating a good workplace with 1) respect for employees' private lives, 2) only reasonable working conditions, 3) zero tolerance of discrimination and harassment, 4) equal opportunities regardless of gender, religion, sexual orientation, ethnicity, age or disability. The company also strives for diversity among its employees.

For example, the Code of Conduct contains descriptions of where employees should turn if they discover irregularities or feel harassed or discriminated against.

In addition to the Code of Conduct, there are more detailed policies, for example for procurement and finance, the purpose of which is to ensure proper management when approving investments and purchasing materials and when certifying costs.

In 2019, a digital platform for training in the Code of Conduct was introduced. Its purpose is to strengthen the code and ensure a greater level of dissemination and compliance with it in all units at the company.

Measures against harassment

Employee surveys revealed several cases of various types of harassment within the company in 2019. This is unacceptable according to Haldex's values, its Code of Conduct and 5C. It was also problematic that employees to a great extent had not dared to report the harassment to their local management. Haldex has taken the situation very seriously. High priority is given to strengthening and following up the code internally. As an immediate measure, individuals have been transferred to a different workplace. Special avenues for reporting have been introduced - a 'whistleblower hotline'. Some improvement has been noted, but work must continue.

Suspected corporate espionage

As announced in a press release in September 2019, Haldex filed a police report on suspected corporate espionage and data breaches. This was after discovering that the company's former CEO had downloaded large amounts of digital information, including trade secrets, from Haldex's server during his employment and that confidential information was subsequently externally disclosed. The Swedish Prosecution Authority decided in November 2019 to initiate a preliminary investigation of the case, which is still ongoing.

Evaluation of suppliers

Haldex's large number of suppliers poses an ethical risk and challenge, as they operate in many cases in countries where there are problems with the working environment, business ethics, safety and the environment.

Haldex has initiated efforts to reduce the number of suppliers from the current 900. This is expected to lead to efficiency improvements as well as better conditions for analysing the supply chain from a sustainability point of view.

A special version of the Code of Conduct has been introduced for suppliers that clarifies the requirements Haldex places on its partners. Existing suppliers are evaluated through planned audits and these also include questions relating to the Code of Conduct. Haldex has also started applying screening and rating according to NQC of its largest suppliers, of existing suppliers ahead of new partnerships, and of all potential suppliers to cover the entire supply chain in a consistent manner.

Community involvement

Haldex endeavours to contribute to the local community in its markets. Giving back to the areas where the company operates is important.

In India we offer scholarships to persuade girls to choose engineering as a profession and arrange study visits.

In Sweden, Haldex has initiated a network for women managers in the technology sector. Here, Haldex has also been involved in road safety for school students and in the project Smart Maths to raise the level of interest in technology among high school students.

IDENTIFIED RISKS/OBJECTIVES

Identified risks in ethics are deficiencies in working or supplier relationships, unethical behaviour in our own or customers' operations, and breaches of trading rules. Haldex's Code of Conduct covers these areas and both policies and follow-up mechanisms have been implemented. **The objective** is for 100 percent of staff to be trained in the Code of Conduct, but for practical reasons a key ratio of over 99.5 percent is good. Training in the Code is an indicator that preventive measures in these areas is being implemented.

KEY RATIOS ETHICS	2019	2018	2017
Employees trained in the Code of Conduct, %	99.8	99.6	99.5
Terminated supplier partnerships due to breach of the Code of Conduct	-	2	2
Investigation of employee breaches of the Code, ended after full investigation, %	97.5	N/A	N/A

For supplier partnerships, the objective is to discover all breaches of the Code of Conduct. A key ratio is the number of supplier partnerships terminated due to breaches of the Code of Conduct with regard to human rights and social conditions.

Green Haldex

Carbon dioxide is a priority in relation to environmental impact

ANDERS PÅLSSON / LOGISTICS MANAGER / LANDSKRONA, SWEDEN

In terms of the environmental impact of our production here in Landskrona, our focus is on the climate issue, that is to say carbon dioxide. Transport to and from our production sites is what accounts for most carbon dioxide emissions.

Previously, castings were transported from Germany to Sweden by truck. In 2019 we switched to rail, and 1,718 tonnes of goods changed modes of transport. Carbon dioxide emissions decreased by 105 tonnes per year. With regard to energy consumption in production, we have virtually no carbon dioxide

An important tool for us in our environmental work is the Green Performance Map (GPM). It clearly shows which parts of the business generate the most carbon dioxide. Through this survey we have been able to identify the need for measures and implement them.

Picture: Haldex production Landskrona

emissions at all.

Demands from the world at large for reduced emission levels are increasing every year, and the entire automotive sector is under great pressure to adjust in order to reduce emissions, principally of carbon dioxide, during transport. Haldex can influence its environmental footprint by reducing its own emissions in connection with production, transport and deliveries. Haldex can also influence emission levels by developing new braking solutions that weigh less, take up less space and work in conjunction with electric power.

Direct environmental impact

Haldex's production sites, distribution centres, remanufacturing sites and friction centres have a major environmental impact, and the management of environmental issues has notable effects. Transport, together with electricity consumption, are the parts of Haldex's process that have the greatest carbon footprint.

All production sites are controlled according to environmental management systems that are certified to the international standard ISO 14001. Systematic programmes and environmental policies also contribute towards utilising resources effectively.

Haldex's analyses show that carbon dioxide emissions and material efficiency are the factors in the company's operations that have the greatest impact on the environment. These key ratios are measured and followed up.

The environmental impact of all units is analysed quarterly, resulting in a Green Performance Map per site. This is a survey of the volumes of material, energy and other resources are supplied to the production site, and the volumes of emissions and waste the production site generates. The survey includes results for two key ratios: total material efficiency and carbon dioxide emissions.

Since 2018, there has been an environmental committee with respresentatives of all production sites who jointly follow up targets and discuss improvements.

Coordination between different units and projects meant that carbon dioxide emissions could be reduced in 2019. Haldex's focus on seeking more environmentally friendly energy sources will lead to a continued decline in levels. Material efficiency increases through continued efforts to streamline and improve the quality of internal processes and reduce the volume of waste material.

Environmental impact through product quality and use

An important part of Haldex's environmental work is product development, in which sustainability is an integrated parameter. An environmental assessment – Green Product Assessment – is included early on in the project as a mandatory input when products are changed or developed from scratch.

Historically, compressed air has been used in braking systems for heavy vehicles, but Haldex was early in exploring electromechanical brakes, which are lighter than present-day brakes and use less energy than a compressed air-based system.

Another benefit of both electromechanical brakes and the Haldex Fast Acting Brake Valve (FABV) solution is that they provide increased control over the vehicle. This makes these products well adapted to autonomous vehicles, which in combination with an increasing number of electric vehicles will make the traffic environment safer and the use of resources more efficient. Autonomous vehicles will also improve logistics and efficient utilisation of the road network. The braking systems of tomorrow contribute to a more sustainable society.

IDENTIFIED RISKS/OBJECTIVES

Identified risks within the environmental area are incorrect or inefficient management of materials and processes that lead to environmental impact. Haldex's environmental policy and the comprehensive follow-up in the Green Performance Map provide the tools needed to manage the environmental area. The objective is to reduce carbon dioxide emissions annually and maintain or improve material efficiency. Carbon dioxide emissions for 2019 totalled 37,502 tonnes, including production sites, distribution centres, restoration units and friction centres. This represents a reduction from the 2018 level, 40,364 tonnes. However, the table below shows only production sites, so that the figures to achieve comparability between years, but all units will be followed up from 2019 to chart Haldex's overall impact. For suppliers, the objective is for the proportion with certification to the environmental management standard ISO 14001 to increase. In 2019 the proportion remained at 39 percent.

KEY RATIOS ENVIRONMENT	2019	2018	2017
Material efficiency, %	94.1	92.8	93.5
Carbon dioxide emissions from production sites, tonnes	25,381	27,651	27,491
Proportion of suppliers who conform to ISO 14001, %	39	39	42

Humane Haldex

The Code of Conduct and 5C are easy to apply

CAMILLA ANDERSSON HULT / PRODUCTION LEADER, MACHINING / LANDSKRONA, SWEDEN

I have always highlighted our keywords for collaboration, the 5Cs, within my teams. When things are going well, it can be noted that – entirely in accordance with 5C – we have collaborated, hatched new ideas, talked to each other and helped each other forward. In the event of a setback, similar solutions can be created to move forward. I myself have benefited from 5C in my leadership.

In order to facilitate the work with 5C, we have worked extensively to clarify what 5C means in our team in particular, by using simple exercises. This has helped to make 5C a reality in our day-to-day work. Much of the content is common sense, but it is useful to have a reminder.

to have a reminder. We all go through the Code of Conduct individually and sign to confirm that we have read and understood it.

I am proud that everyone at Haldex, no matter where in the world we are, has the same ethical values. It strengthens us within the company and creates a good reputation.

I find that both the Code of Conduct and 5C are very easy to apply in our daily activities. Haldex is characterised by a strong engineering culture, passion for the product and the vision to help make the roads safer. Its employees offer a wide range of skills. They work on sales, strategy, product development, supply of goods, production/ assembly, marketing and customer support.

Haldex has its own staff in 19 countries and a total of 2,172 employees, around 28 percent of whom are women. Approximately 60 percent of the employees work in production, while the remaining 40 percent are office-based staff. In a small global group like Haldex, work based on common values, a clear Code of Conduct and a joint concept for how we should act within the company is a definite success factor.

5C - how Haldex acts

Haldex's 5C concept, that is, Connect, Communicate, Collaborate, Coach and Create, has been developed as a guideline for desired conduct and of how we should work to make Haldex a better, more efficient and more pleasant place to work.

Training courses are regularly arranged to develop employee skills in 5C. Leaders spend one day per C to improve their knowledge, develop better methods and learn from each other about how they, their team and the company can improve. In the annual employee interview, 5C forms the basis for the dialogue.

Leadership development

Leadership is important for employees to thrive and for the business to achieve its goals. Haldex should have leaders who inspire, challenge and motivate. At the same time, leaders must be given the necessary conditions to achieve their potential.

The Haldex Executive Leadership Programme is conducted every two years for around 20 participants with key positions around the company. The purpose is, among other things, to strengthen the participants' business skills, organisational knowledge and leadership.

The programme was implemented in 2019 in four modules in collaboration with renowned educational institutions such as Chalmers University of Technology, Harvard Business School and RWTH Aachen University.

Within the scope of the programme, participants have initiated strategic business projects in their respective regions. Haldex's own business development is thus integrated into the training effort.

The Haldex Way framework is also one of our tools for creating a common way of working and consequently forms part of leadership development. Procedures and results are monitored at each facility by 'assessors' from other production sites. They propose improvement measures while deepening and broadening their own skills by evaluating the activities of others.

Employee surveys

In 2018, the company initiated a three-year employee project to strengthen employee engagement. The project includes annual employee surveys as well as regular pulse service of the various units. The key ratio Employer Satisfaction Index was measured here at 71. Based on the results of the survey, workshops were held around the world to capture more detailed views from employees. Based on this information, management teams decided upon global and local efforts.

The investigation revealed problems with harassment within the company, which led to action being taken by the company (see Ethical Haldex).

A follow-up employee survey was con-

ducted at the end of 2019, producing an index of 73, that is an improvement over the previous measurement. However, the results are not entirely comparable between years.

New health indicator

As of 2019, Haldex uses healthy attendance as an indicator of employee well-being.

Brand can benefit recruitment

A strong brand is important in the labour market in order to recruit qualified employees that take Haldex forward, for example through innovation initiatives. Strategic brand efforts were initiated in late 2019.

HALDEX VALUES

Haldex's three values form the basis for behaviour towards colleagues, customers and suppliers.

Customer first

We understand our customers' requirements. Customer success is our success.

► Passion for excellence We are determined to constantly

improve.

Respect for the individual

Our success depends on responsible individuals working together effectively.

IDENTIFIED RISKS/OBJECTIVES

Identified risks The fact that Haldex's values or the 5C concept are not embedded or complied with in the organisation. The fact that a lack of leadership undermines our common values and the strong commitment of our employees, which are important for job satisfaction, motivation and the success of the company. The objective is for us all to share and live according to Haldex's common culture and values and to have strong leadership with a clear strategy. If this is clear, it will enhance the commitment of our employees and ensure that we are all working towards common objectives.

KEY RATIO EMPLOYEES	2019	2018	2017
Employee satisfaction index	73	71	N/A
Healthy attendance	97.9%	N/A	N/A

EMPLOYEE/FUNCTION *Percentage, %*



Great potential for disc brakes in North America

Important events in 2019

During the fourth quarter, evaluation of Haldex disc brakes began for the US market. First out was an axle manufacturer using Haldex disc brakes in Europe.

The restructuring of Friction Centres.

Decision on the relocation and closure of the Blue Springs factory. The production of automatic brake adjusters was moved to Mexico, where Haldex has its largest production facility. Annual savings are estimated at SEK 25m.

Position and products

North America is Haldex's largest market and accounts for about half of the company's sales. The focus is on solutions with high quality, optimised weight, long service life and generous warranties. Profitability is generally higher in North America than in Europe. Haldex has a market-leading position in new sales of drum brakes for both trucks and trailers and is greatly affected by changes in production volumes. The aftermarket is significantly less cyclically sensitive, and its share of sales was around 57 percent in 2019.

Technology development

Drum brakes and ABS remain the dominant technologies in North America. However, the trend towards more advanced technology is clear, and the shift from drum brake to disc brake has started, but because the disc brake is a more expensive technology, there is some resistance on the part of the logistics companies to replacing the drum brake technology. Haldex has relaunched the air disc brake for the trailer market and will be launching the truck air disc brake in 2020. The air disc brake launch increases the possibility of agreements with OEM suppliers on serial production of disc brakes.

Market in 2019

At the start of 2019, the number of newly produced vehicles was at a record high and demand remained good during the first half of the year, before turning sharply downwards in the fourth quarter of 2019. The decline in the market is principally explained by an economic downturn. Sales to the aftermarket resisted the decline and increased by 2 percent.

Haldex development in 2019

With the support of a continued stable aftermarket, Haldex succeeded in resisting the decline, and sales for 2019 rose by 1 percent. Currency-adjusted sales in the fourth quarter fell by 12 percent, largely due to lower production of new vehicles. A number of truck manufacturers announced decreases in their production volumes and introduced planned closures of factories around public holidays. The aftermarket, in currency-adjusted terms, decreased by 7 percent, outperforming the market. The market as a whole decreased by 11 percent linked to delays in maintenance programmes among a number of major logistic companies and the weaker economic climate. Profitability for the full year of 2019 was negatively impacted by higher material costs and customs duties.

Future outlook

Haldex aspires to also take a leading position in the disc brake market. The total market production volume for 2020 is expected to decrease by 44 percent and then return to growth. NORTH AMERICA

PROPORTION OF SALES *Per product line*



SALES, SEKm Per customer category

2,500 2,000 1,500 1,000 500 0 2018 2019 Trucks – Heavy trucks Trailers – Trailers

NEWLY PRODUCED VEHICLES AND TOTAL VEHICLE FLEET



Market shares and Position in 2019	Haldex	Other	Total	Rank
ABA	48%	52%	100%	1
Actuators	41%	59%	100%	2
Air suspension	28%	72%	100%	3



NORTH AMERICA

Proximity to the end customer is key

North America is characterised by huge trading and logistics companies that own their own fleets of vehicles. Almost 60 percent of these have specifically chosen Haldex products for their trucks and trailers. Haldex works closely with the customer, fleet, OEM and distribution based customers, focusing on simplicity and low total cost. Unplanned stoppages due to defective product quality or indifferent service must be avoided at all costs, and reliability often justifies a premium price, as the product value is relatively low in relation to the total cost.

Haldex's strong market position so

far is based on the fact that the drum brake still has a significant market share, but the technological shift towards disc brakes is accelerating and Haldex is working hard to persuade both OEMs and its existing customer base to select a Haldex ModulT specifically adapted to the North American market. ModulT is the lightest disc brake in the market and offers better strength and durability. The functional design of Haldex's ModulT also simplifies the replacement of brake linings considerably and reduces the total cost for logistics companies through reduced service times, thus resulting in



lower operating costs and more uptime. Sales efforts continue to focus mainly on ensuring that existing customers require OEM suppliers to offer Haldex ModulT equipment in new vehicles.

Europe the most advanced market

Important events in 2019

● In October, a decision was made to close down the factory in Heidelberg in Germany. The production of EBS and air suspension products is being moved to Haldex's factory in Hungary. It is estimated that the saving made will be SEK 50m when the transfer has been fully implemented, which is expected to be in the fourth quarter of 2020.

In September, serial production of the disc brake ModulT for trucks was initiated for Daimler, the world's largest truck manufacturer.

Position and products

The European market is Haldex's second largest, after North America. In Europe, Haldex holds a strong position in disc brakes for trailers. Haldex is working on developing a complete offering for both trucks and trailers. Trailers accounted for 47 percent of sales in Europe. Aftermarket also accounts for a significant portion of Haldex's sales, 42 percent.

Technology development

Europe is the most advanced of the four regions in which Haldex operates. This is where customer requirements are strictest. The European market has the most technologically advanced vehicles in global terms. Disc brakes dominate, and only a small number of players use drum brakes. EBS. electronic braking systems, are common. The customers' focus is on solutions with high-quality, optimised weight and low maintenance frequency. The high level of technology is partly due to stringent safety regulations and high environmental reguirements. Within EBS braking technology, our development project is approaching launch. This brings with it a new generation of EBS in Europe. We expect European truck manufacturers to continue to lead and drive technological development for technologically advanced vehicles such as autonomous trucks.

Market in 2019

The market for Haldex in Europe, as well as in North America, was hit hard by the global downturn that began in the third quarter of 2019. At the end of the fourth quarter of 2019, the production of trucks had fallen by 12 percent, while the production of trailers was down 7 percent. For the full year 2019, the production of trucks and trailers decreased by 2 percent and 7 percent respectively.

Haldex development in 2019

Europe was notable for a deteriorating market climate, with our sales declining by 8 percent in 2019. Sales for the year were initially affected by a weaker market for the Trailer segment, in which Haldex is the leader in Europe. The uncertainty that prevailed ahead of Brexit in the first half of the year led to a decline in demand in the United Kingdom in the aftermarket. However, demand normalised when the political process was to some extent concluded. However, compared to the industry average during the fourth quarter, a decrease of 7 percent, the trend was relatively stable. Total currency-adjusted sales in Europe were 8 percent lower in 2019 than in the previous year.

Future outlook

Haldex will continue to focus on increased sales and profitability in Europe. These efforts involve launching more cost-effective products and making the organisation more efficient. Historically, Haldex has been able to maintain sales in the aftermarket in situations in which there is a reduction in newly manufactured vehicles such as trucks. Haldex plans to introduce a new EBS solution with expanded functionality to further bolster its market position.

Market shares and Position in 2019	Haldex	Other	Total	Rank
ABA	54%	46%	100%	1
Disc brake	23%	77%	100%	3
Air suspension	41%	59%	100%	1



PROPORTION OF SALES *Per product line*



SALES, SEKm Per customer category



NEWLY PRODUCED VEHICLES AND TOTAL VEHICLE FLEET


EUROPA

Close cooperation behind disc brakes for Daimler

Autumn 2019 saw the start of serial production of the disc brake ModulT, specially adapted for the off-road truck and the implement carrier Mercedes-Benz Unimog. A long-awaited milestone after several years of development in close collaboration with Daimler.

The German Daimler Group, the world's largest truck manufacturer, produces the high-profile truck and implement carrier Mercedes-Benz Unimog. It is built to withstand tough environments such as forests and mines, and is used by the military and the fire service, among others.

In the mid-2010s, it was clear to Daimler that its Unimog needed a new braking solution. It was time to develop a new generation of disc brakes that could be mass produced for the vehicle.

Haldex already had a relationship with Daimler, but for this project new relations where created and Haldex was quick to sketch out a solution that could meet Daimler's challenges.

Strict and specific requirements

The customer's requirements were special, and it was necessary to develop a unique product. Unimog has four wheeldrive, and space is extremely limited. Large brake discs would have to fit into a tight space. Haldex's R&D unit came up with a solution that involved adaptation of the disc brake ModulT to meet the customer's requirements. Daimler became interested and visited Haldex in Landskrona to evaluate the company's technical expertise. Daimler also evaluated the solutions of other suppliers.

Multi-year interaction

However, Haldex gained the confidence to continue and shortly afterwards, the parties launched a joint development project that would last for several years. There was an interaction between Daimler and Haldex in which development took place in stages and in continuous dialogue, with monthly checks and separate meetings in between. On Daimler's side, a deadline was specified when production would start. Complex challenges had to be resolved within the time limits.

After Haldex had developed production tools, produced prototypes, made



adjustments and all necessary validations, it was time for Daimler to install a ModulT prototype in Unimog. The prototype was tested, evaluated and followed up. Then Haldex prepared serial production in Landskrona. In preparation, an on-site assessment was carried out to ensure delivery reliability and product quality. During such an assessment, all units involved are scrutinised: production, logistics, purchasing, research and development, quality, SQA (Supplier Quality Assurance) and project processes. Haldex received the highest rating based on the customer's criteria.

The start of serial production of ModulT for Unimog means that Haldex and Daimler have successfully completed a joint development project and have consequently also laid a solid foundation for continued collaboration.

Asia the most dynamic market

Important events in 2019

Haldex's electromechanical brake system complied with the Chinese braking regulations, thus opening up the Chinese market.

• Contracts were signed with several different Chinese bus manufacturers for the test installation of electromechanical brake systems.

Position and products

Haldex automatic brake adjusters are the market leader in Asia and are the largest product in the region in terms of sales and accounted for 54 percent of sales in 2019. Asia and the Middle East are Haldex's third largest market and account for about 11 percent of the company's sales. China – the world's largest producer of heavy vehicles – is still dominated by vehicles with simple braking system technology, which is not offered by Haldex.

Technology development

In Asia, trucks without a trailer are still the most common type of vehicle, and Haldex sales are mainly aimed at the truck segment. The aftermarket accounts for a minor part of the business. The technology content per vehicle is low, but increased demand for advanced technology has been observed. Disc brakes are mandatory for certain vehicle types, and the demand for air suspension is rising, for example in the trailer segment. China is the world's largest market for electric buses, with around 100,000 vehicles sold per year. Problems with urban air pollution are driving development. In the past three years, the state has subsidised electric buses. These subsidies are now gone but have been replaced by state directives for city buses to be exhaust-free. Fewer than ten vehicle manufacturers hold 90 percent of the electric bus market in China, and four companies hold a dominant position.

Electromechanical braking systems are expected to become a rapidly growing part of the market. This technology offers customers a simplified and cost-effective design of the braking system, independent of pneumatic energy, quieter systems, faster response capability, shorter braking distance and better passenger and driver comfort. This also leads to lower energy consumption and consequently a reduction in CO, emissions.

. . . .

Market in 2019

The market for heavy vehicles remained strong in 2019. New legislation was introduced in China in 2018 that required newly manufactured heavy vehicles to have automatic, not manual, brake adjusters. As a result. Haldex's sales of automatic brake adjusters grew sharply in 2018, but fell slightly in 2019 as a result of increased local competition. New production of trucks fell by 5 percent in 2019 in the Asian region as a whole, while new production of trailers fell by 10 percent. In the trailer segment, some manufacturers reverted to manual brake adjusters despite legal requirements, which also contributed to a reduction in the available market.

A deterioration in the economic climate in Korea and India resulted in a reduced market for heavy vehicles. Haldex consequently reduced its sales but defended its market share. The aftermarket is notable for local suppliers providing low-price products that Haldex has difficulty competing with. The share of the aftermarket was about 13 percent, a reduction of about 5 percentage points over the previous year.

Haldex development in 2019

Haldex's development strategy is based on cooperation with partners. Our joint venture with Chinese VIE related to the electromechanical braking system is an excellent example of a fruitful partnership, in which we are developing a safe and effective braking system for primarily electric commercial vehicles. In 2019, the collaboration with VIE entered a more active phase. Significant milestones were achieved during the fourth quarter, when we successfully completed test installation of the system in the vehicles of several customers after having complied with all the requirements of the Chinese brake regulations. We expect to have our electromechanical braking system installed in a large number of electric buses in China within a few years. Sales of disc brakes increased towards the end of 2019 driven by changes in legislation. In 2019, Haldex's new generation of disc brakes, ModulT, was adapted for trucks, buses and trailers. Sales start in 2020.

Sales for Trailer and Truck declined by 27 percent and 14 percent respectively compared with the previous year.

Market shares and				
Position in 2019	Haldex	Other	Total	Rank
ABA	27%	73%	100%	2
Air suspension	10%	90%	100%	3
Disc brakes	4%	96%	100%	4

ASIA

Future outlook

The market outlook for 2020 looks fairly stable for heavy vehicles in China. The trend in India and South Korea continues to be weak, with potential improvement towards the end of 2020. Technological development of vehicles and braking systems is expected to be positive for Haldex.

PROPORTION OF SALES *Per product line*



SALES, SEKm Per customer category



NEWLY PRODUCED VEHICLES AND TOTAL VEHICLE FLEET





China's electric buses poised to receive Haldex brake systems

Since 2016, Haldex has been involved in a joint venture in China with Zhejiang VIE Science and Technology. The joint venture works to develop, produce and sell electromechanical braking systems, primarily for electric buses.

Electric buses in China are the natural platform on which to launch Haldex electromechanical braking technology. The market is large, and some of the buses use steel suspension instead of compressed air suspension. This creates good technical conditions, as the entire compressed air system can be eliminated. Electromechanical brake systems also offer advantages in compressed air suspension vehicles, as the compressed air system can be significantly simplified.

Several vehicles from leading bus manufacturers are now running tests with the electromechanical braking system in China. In 2019, important step were taken towards commercial launch, as the solution was approved under statutory requirements for safety and performance. Work is now continuing on developing functionality to meet more advanced customer requirements



regarding software optimisation in the system. Each wheel brake is controlled individually, which makes it possible to distribute the braking force just in time to where it is needed. This provides stability and high performance in braking situations.

Haldex VIE Shanghai Electro Mechanical Brake Systems is located in Shanghai. Production premises are in preparation for production to begin in 2021.

Brazil dominates in South America

Important events in 2019

• The economy in South America has recovered, and the number of newly produced trucks increased between 2018 and 2019. This has led to increased sales, resulting in economies of scale.

Position and products

South America is our smallest region, and Brazil is the single most important country. The European truck and trailer manufacturers have a strong presence in South America, which means that the vehicle technology follows the same standard as in Europe, but the technological content per vehicle remains lower. Haldex is the market leader in South America in automatic brake adjusters, which is also the best-selling product.

Technology development

Here, like Asia, there are more trucks than trailers, but the technological content per vehicle is higher than in Asia. Brazilian legislation has helped drive technology development forward, including emission standards and requirements for ABS and automatic brake adjusters.

Market in 2019

The number of newly produced vehicles has been very low in South America for a number of years, but the trend turned upward in 2019. Many of the European vehicle manufacturers have a presence in Brazil, which makes the product range more like that of Europe than that of Asia.

Market shares and Position in 2019 Other Total Haldex Rank 100% ABA 38% 62% 1 Valves 9% 91% 100% 2 14% 100% 3 Air suspension 86%

Haldex development in 2019

In South America, sales of trucks are more important than sales of trailers and the aftermarket. Sales increased by 25 percent compared with the previous year, while trailers and aftermarket increased by 17 percent and 23 percent respectively. Total sales increased by 23 percent compared with 2018.

Profitability in South America has steadily improved. Sales have been favourably affected by an improved market situation and increased demand, which combined with implemented cost-saving programmes have boosted profitability.

Future outlook

Due to Covid-19 market effects, production is expected to decrease by 40 percent in 2020 for newly produced trucks and trailers. Haldex will be negatively affected by this drop in demand.



PROPORTION OF SALES *Per product line*



SALES, SEKm Per customer category



NEWLY PRODUCED VEHICLES AND TOTAL VEHICLE FLEET





SOUTH AMERICA

Investments bring success for South American aftermarket

After a tough decade in the important aftermarket in South America, Haldex is poised to regain its former strong position.

Haldex has undertaken a number of measures which have contributed to an improvement in market position. Logistics in relation to the aftermarket were improved by the introduction of a special internal distribution centre for this segment. Haldex customer service has clearer communication with aftermarket customers to meet their needs and prioritise correctly. Collaboration between purchasing, planning, production and logistics has been improved, and includes more frequent checks and follow-ups of deliveries.

All sales to the aftermarket take place through distributors, while technical sales teams work with the end-customers. In Brazil there is one main partner and a large number of small ones. In the rest of South America, Haldex collaborates with DiGilio, which maintains warehouses and has specialist sales personnel in Argentina and Chile.

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The year in summary

The favourable economic climate experienced in 2018 was followed by a downturn in 2019, and sales fell during the second half, ending 5 per cent down on 2018 for the full year in currency-adjusted terms. During the fourth quarter, which was the weakest quarter of the year, earnings were negatively affected, mainly due to a sharp decline in demand in both North America and Europe. The aftermarket bucked the trend, however, and to some extent offset the loss of revenue. The focus during the year was on improving efficiency internally, and Haldex implemented a number of streamlining measures which, despite a downturn in the market, led to an improvement in adjusted operating margin. In addition, two major production closures were announced during the year, with savings of approximately SEK 75m per year taking full effect in 2021. The restructuring resulted in non-recurring expenses of SEK 162m during the year. Cash flow in 2019 was negative, mainly due to investing activities in both product development and production equipment.

Operations

Haldex offers proprietary and innovative solutions to the global automotive industry, focusing on brake products and brake components for heavy trucks, trailers and buses. Haldex AB (publ) is the parent company of the Haldex Group. 'Haldex' refers to the Haldex Group, which consists of Haldex AB (publ) and its subsidiaries.

Sales

Sales for the full year totalled SEK 5,151m (5,119), an increase of 1 percent compared with the previous year. After currency adjustments, net sales decreased by 5 percent.

Currency-adjusted sales in North America increased by 1 percent compared with the previous year, while in Europe they decreased by 8 percent. Sales in Asia also declined, falling 20 percent, mainly explained by unusually high sales in 2018 as a result of new legislation, with requirements for automatic brake adjusters on newly manufactured heavy vehicles, implemented in 2018. In South America, sales increased by 23 percent compared with the previous year, continuing the positive trend from 2018.

Haldex operates in the market through the three customer categories of Truck, Trailer and Aftermarket. Sales in the customer category Truck totalled SEK 1,252m (1,295) for the full year, which after currency adjustments represents a 9 percent decrease compared with previous year. The decrease mainly stems from Asia, where India showed a weak sales trend in 2019, as well as China, which returned to a more normal level of sales than in the previous year.

Sales in the customer category Trailer totalled SEK 1,502m (1,593) for the full year, which after currency adjustment is 9 percent down on the previous year. The decrease in sales is mainly explained by reduced demand for trailers in Europe.

Sales in the customer category Aftermarket totalled SEK 2,397m (2,231) for the full year, which after current adjustment is equivalent to an increase of 1 percent. Sales to the aftermarket are less cyclically sensitive than the Truck and Trailer business areas and accounted for 47 percent of total sales in 2019.

Sales in the Foundation Brake product line totalled SEK 2,966m (3,008) in 2019, which after currency adjustment is 6 percent down on the equivalent period of the previous year. Sales in the Air Controls product line totalled SEK 2,185m (2,111) in 2019, which after currency adjustment is 2 percent down on the previous year. Foundation Brake accounted for 58 percent of total sales and Air Controls for 42 percent.

Profit

Adjusted operating profit, i.e. reported profit excluding non-recurring items, was SEK 317m (305) for the full year. This is equivalent to an adjusted operating margin of 6.1 percent (6.0).

Operating profit for the full year was positively affected by the product mix, as the Aftermarket business area is the business area that has developed most favourably and Haldex has higher margins there than in the Truck and Trailer business areas. Haldex implemented price increases during the year, mainly in the aftermarket to offset increased raw material costs and customs duties. Despite this, increased raw material costs and customs duties had a negative impact on operating profit for the year. For the second half of the year, however, material prices had a positive effect compared with 2018. In 2019, Haldex worked intensively to streamline operations and implemented large cost savings that had an impact towards the end of the year but were not fully reflected in profit for the full year of 2019.

Haldex's investments in product development lead to higher expenditure that is not fully charged to earnings as they are regarded as investments for future product launches and are thus capitalised as intangible assets.

SEK 212m (50) was charged to operating profit in 2019 in the form of non-recurring items. Most of the non-recurring items are due to the decision to streamline production operations in Haldex and consequently close down two factories, Blue Springs in the United States and Heidelberg in Germany. Other non-recurring expenses are linked to reorganisations and legal expenses.

Operating profit was positively affected by SEK 10m from the divestment of Rotary Connectors, which is a small product group that Haldex decided to drop from its range.

Development expenses linked to the electromechanical brake system developed together with Zheijang VIE, in a joint venture in China, increased to SEK 21m (5).

Profit before tax was SEK 61m (219) for the full year.

Profit after tax was SEK 5m (153) for the full year, equivalent to earnings per share of SEK 0.12 (3.46).

Currency fluctuations, including gains or losses from currency hedging and currency translation effects, had a positive impact on consolidated operating income excluding non-recurring items of SEK 24m (39) for 2019. The currency effect in net financial items was SEK -2m (-17).

Streamlining of production

In October 2019 Haldex announced streamlining of the production of brake adjusters, EBS and air suspension products.

The production of brake adjusters for the North American market in Blue Springs, United States, will be transferred to the Haldex site in Monterrey, Mexico. The move, which is expected to be completed during the fourth quarter of 2020, is estimated to yield savings of the order of SEK 25m per year after it has been implemented. A total of around 150 employees in Blue Springs are affected by the move.

Production of EBS and air suspension products in Heidelberg, Germany, will be transferred to the Haldex factory in Hungary. The move is expected to be implemented during the first half of 2020 and is expected to produce positive effects on costs during the second half of 2020 and full cost effects from 2021 on. The cost savings are expected to total approximately SEK 75m when the change has been implemented. A total of around 100 employees in Heidelberg are affected by the move.

Deals and partnerships

In 2019, Haldex succeeded in securing a number of deals in both strategic partnerships and larger volume deals. The most important factor during the year was that Haldex completed the development phase of the disc brake ModulT in cooperation with Daimler during the third quarter and that the project then went into serial production for Mercedes-Benz Unimog. Haldex has adapted ModulT to Unimog's special vehicles during the project.

During the fourth quarter, Haldex renewed its contracts as exclusive subcontractor for automatic brake adjusters with two large truck manufacturers. The contract runs until the end of 2023. The agreement has an estimated transaction value of SEK 260m.

Development of new technology

Work on the development of new technology has progressed favourably during the year, and Haldex has signed a concept phase agreement including an associated framework agreement with one of the world's leading truck manufacturers for the development of brake systems adapted for autonomous and electric vehicles.

Work on the development of the electromechanical brake system also continued with favourable results in the Haldex joint venture with Zheijang VIE in China. Haldex VIE has signed contracts with several different Chinese bus manufacturers for the test installation of electromechanical brake systems on their vehicles.

Cash flow

Cash flow from operating activities totalled SEK 328m (274) for the full year. Cash flow from operating activities was positively affected by SEK 76m during the year by the new accounting standard IFRS16. Adjusted for IFRS16, cash flow is SEK 252m. The deterioration is mainly due to increased working capital tied up, which mainly consisted of lower accounts payable than at the end of 2018. Cash flow from operating activities was good during the fourth quarter of 2019 due to the release of working capital mainly in the form of reduced accounts receivable.

Investments, including capitalised development expenses, totalled SEK 381m (381) and cash flow after investments was SEK -53m (-107). Adjusted for IFRS16, cash flow after investments was SEK -129m. Total cash flow was SEK 6m (104) for the full year.

Financial position

At 31 December 2019, consolidated net debt totalled SEK 1,438m (732), and net debt adjusted for IFRS16 was SEK 1,015m, equivalent to an increase in net debt of SEK 283m compared with the previous year.

The change was mainly due to an increase in pension liability of SEK 107m, caused by recalculations due to lower interest rates. In addition, the increase in net debt consists of a continued high rate of investment in product development and investments in physical fixed assets.

Financial items totalled SEK -44m (-36) during the year, of which net interest income was SEK -23m (-15). Shareholders' equity totalled SEK 1,537m (1,611), resulting in an equity/asset ratio of 35 percent (44).

The loan financing for Haldex consists primarily of a syndicated credit facility of EUR 90m, which matures in 2021. EUR 45m of this facility had been used at the end of the year. In addition, there is a short-term loan of SEK 270m replacing the bond that expired on 20 January 2020.

Seasonal effects

Haldex does not have any significant seasonal variations. However, sales are affected by the production schedules of customers, resulting in lower sales during holiday periods and at times when customers are closed for public holidays, for example at the end of the year.

Employees

At the end of the year, there were 2,172 (2,309) employees, 137 fewer than at the end of 2018. The greatest decreases in workforce occurred in countries with production sites, such as Hungary, the United States, China and Mexico. The number of employees has increased in product development in China, the United Kingdom and Sweden.

Haldex shares

Haldex shares are listed on Nasdaq Stockholm. Share capital totals SEK 221m, divided into 44,215,970 shares, each individual share having a quotient value of SEK 5. There is only one class of shares in Haldex and all shares represent one vote. The single largest shareholding at 31 December 2019 was 10.2 percent and is held by Knorr-Bremse, a global brake and vehicle steering manufacturer in the railway and automotive industry, as well as being Haldex's largest competitor. Knorr-Bremse became a shareholder in Haldex in connection with the public acquisition offer that the company submitted in 2016. At 31 December 2019, Haldex held 11,705 treasury shares. No purchases or sales of treasury shares were made during the financial year. For more information, see the section on Shares on pages 99–100.

Sustainability report

Haldex's sustainability vision is to contribute to society by improving the safety and efficiency of vehicles with the performance of its products and optimisation of resources. Four areas have been identified as being key to making a real difference – Safe, Ethical, Green and Human Haldex.

Sustainability permeates the business, and the Group's sustainability work is commented on and described in several places in the annual report. Formally, Haldex's Sustainability Report comprises the description of the Safe, Ethical, Green and Humane Haldex on pages 22–33, as well as the description of sustainability risks on page 50, although sustainability content is also to be found in the CEO statement on pages 8–9, Market trends on pages 10–11, Strategies on pages 12–15 as well as in Technology development on pages 16–19.

Guidelines for remuneration of senior executives

Remuneration of senior executives is primarily dealt with by the Board's remuneration committee. Remuneration in 2019, in addition to fixed salary, consisted solely of short-term variable earnings-based remuneration. For more information on remuneration of senior executives, see Notes 9 and 10 on pages 64–65.

Parent company

Haldex AB (publ), corporate identity number 556010-1155, is a registered limited liability company with registered office in Landskrona, Sweden. Haldex AB is listed on Nasdaq Stockholm, Mid Cap and is the parent company of the Haldex Group. The parent company fulfils head office functions, including the central financial function. Net sales for the parent company totalled SEK 125m (96) for the full year, and profit after tax was SEK 50m (-43).

Changes in the management team, et cetera

A number of changes to the Haldex management team took place in 2019. The Board appointed Helene Svahn as the new Chief Executive Officer in June 2019 At the time of her appointment. Helene Svahn was a member of the Board of Directors of Haldex, a position which she has retained since being appointed as CEO. As Haldex disclosed in September 2019, Haldex filed a police report as Haldex discovered that the company's former CEO had downloaded large amounts of digital information, including trade secrets, from Haldex's server during his employment and that confidential information was subsequently externally disclosed. In November 2019, the Swedish Prosecution Authority decided to initiate a preliminary investigation of the case, which is still ongoing. For more information, please read Haldex's sustainability report. In addition, the organisation for market and quality was changed during the year, resulting in Richard Illingworth, Fredrik Fogelklou, Catharina Paulcén and Andreas Richter departing from the management team. Also, Vice President and EVP Operations & Supply Chain Staffan Olsson has resigned, the recruitment process for a replacement is in the final phase. The following joined the management team during the year: Therese Jönsson, EVP Legal, and Daniel Gustafsson, EVP Business Development and M&A. Stephan Kulle joined as new EVP EMEA in January 2020, replacing Göran Jarl in the management team. Göran Jarl has taken up a new position in Haldex's EMEA organisation. Read more about the Group Management at http://corporate.

haldex.com/en/omhaldex/organisation.

Future trends

In addition to the number of newly manufactured vehicles, Haldex's market is also affected by the requirements of customers and legislation. Technological development towards electrified and autonomous vehicles has accelerated. Other examples of technological trends are increased focus on safety and environmental awareness, combined with the increasing importance of vehicle dynamics and lighter vehicles to reduce fuel consumption. The technology shift from drum brake to disc brake in North America as well as legislation in China for automatic brake adjusters on newly manufactured vehicles will continue to have a positive impact on Haldex's business. In markets outside Europe and North America, there is a clear trend towards customers increasingly demanding solutions at a more advanced technical level. This is especially true in large markets such as India and China.

Long-term operating margin target of 10 percent

Alongside investments in future technology, an analysis has been made of the business to verify that the long-term adjusted operating margin target of 10 percent can be achieved. A stable and profitable core business that delivers high quality is crucial to our ability to invest in new technology. The business will be streamlined and optimised with the objective of achieving an adjusted operating margin of 10 percent by 2022, excluding investments in new technology.

Outlook for 2020

The official production forecasts provide insight into how the market is expected to develop. However, Haldex does not have an even distribution of revenue between the Truck and Trailer business areas and does not necessarily share the view of the future espoused by the forecasters. Haldex therefore provides its own combined view of how the company sees each market developing.

North America is expected to weaken during 2020, with demand for trucks (belonging to the Truck business area) in particular expected to fall sharply. The trailer segment (belonging to the Trailer business area) is also expected to decrease, albeit not as sharply. However, the aftermarket is expected to continue at the same level as 2019.

Europe is judged to be more stable than North America. For Haldex, the trailer segment is the most important as most sales take place in the Trailer business area. Sales in the trailer segment decreased in 2019 and are expected to continue to decline in the first half of 2020, before rising again and ending at a level slightly below the 2019 outcome. In Europe, the aftermarket is also expected to develop on a par with 2019.

China is expected to show some further weakening of the market in 2020. Haldex can partly withstand the downturn given that automatic brake adjusters are now required by law on heavy vehicles. In addition, Haldex anticipates that the level of compliance with the legislation will rise in 2020.

India is expected to have another weak year with reduced production levels, albeit not as weak as 2019.

However, Haldex continues to take an optimistic view of Brazilian market growth in 2020.

After the balance sheet date the global COVID-19 outbreak led to considerable uncertainty as to how the world economy would develop, which will in turn affect Haldex. For more information about this, refer to Note 36 "Events after the balance sheet date" on page 75.

Significant events

January	 Andreas Larsson joins Haldex as new CFO. Haldex is selected by the UN to feature in a film about companies that work in a good way on sustainability.
February	 Haldex initiates programmes to achieve an operating margin of 10 percent in 2022.
March	 Haldex receives an award from Hino Motors, a leading truck manufacturer in China, as an excellent supplier producing excellent quality.
April	 Haldex is named Sweden's ninth most attractive employer by Randstad.
May	 Bernd Gottschalk, Markus Gustafsson and Mikael Thunved are elected to the Board.
June	The Board appoints Helene Svahn as the new Chief Executive Officer of Haldex.
July	Haldex Blue Springs receives an award as best quality supplier to Paccar in North America.
September	 ZF sells its holding in Haldex, equivalent to 20.1 percent of the shares and voting rights. Haldex starts serial production of disc brakes for Mercedes-Benz Unimog. Daniel Gustafsson takes over as new EVP Business Development and M&A.
October	 Haldex provides information on efficiency improvements in production, which will include closure of the sites in Blue Springs in the United States and in Heidelberg in Germany in 2020. Production at these factories is being moved instead to Mexico and Hungary. Haldex extends concept development agreement with one of the world's largest truck manufacturers on products for future autonomous vehicles as well as in the present-day areas of brake and air suspension.
December	 Walter Frankiewicz, EVP North America, is elected to the Board of the American industry organisation the Heavy Duty Manufacturers Association (HDMA). Therese Jönsson takes over as new EVP Legal.

Risks and risk management

Uncertainty about future events is a natural feature of all business operations. The ability to identify, evaluate, manage and monitor risks plays a key role in the governance of Haldex. The objective is to implement the Group's strategy with a thought-through and well balanced risk level.





Intellectual property rights and patents

Sensitivity analysis

Haldex's earnings are affected by several factors. The table below shows the estimated effects on operating profit (SEKm) of changes in selected variables and the sensitivity for changes in these variables.

Type of risk	Change (+/-)	lmpact +/- in SEKm 2019	lmpact +/- in SEKm 2018	Sensitivity
Price adjustment	5%	250	250	High
Sales volume	5%	63	63	Medium
Raw material prices	5%	145	145	High
Euro rate	10%	12	31	Low

OPERATIONAL RISKS

Risk

Policy/Action

Economy

Demand for Haldex's products is dependent on demand for transport, which, in turn, is driven by global trade trends, infrastructure needs, increased awareness of traffic safety, environmental and safety legislation, as well as economic growth. The automotive industry usually follows a cyclical pattern. Haldex reduces economic impact by operating in a number of geographical markets that do not normally develop at the same pace. Haldex also balances demand, to a certain extent, by operating in both the OEM market (Truck and Trailer customer categories) and the Aftermarket. During an economic upturn, sales in Truck and Trailer usually increase. During a downturn, owners keep their vehicles longer and demand for spare parts grows in Aftermarket. Haldex monitors official production statistics closely to ensure early detection of fluctuations in demand and thus adapt production volumes.

SEKm	2017	2018	2019
Truck	1,029	1,295	1,252
Trailer	1,400	1,593	1,502
AM	2,033	2,231	2,397
Total	4,462	5,119	5,151
%	2017	2018	2019
Truck	23%	25%	24%
Trailer	31%	31%	29%
AM	46%	44%	47%
Total	100%	100%	100%

Competition

The automotive market is highly competitive, with tight margins. Haldex has significantly lower sales than the two largest players in the market.

The ownership situation with one of Haldex's main competitors holding 10.2 percent of the shares in Haldex is hindering Haldex's business opportunities. There are economies of scale in the industry in which Haldex operates. A large company may, for example, obtain better terms and conditions on sourced parts and components and consequently increase its competitiveness. Downward pressure on prices is a natural dynamic in a competitive market. Haldex works consistently to lower costs and increase the value of its customer offering. On the other hand, a small company has more opportunities for fast decision-making, flexibility towards customers and less bureaucracy. It has become evident that vehicle manufacturers are not satisfied with the current highly consolidated supplier base which leads to less options and reduced negotiating power, and many of them have clearly expressed the need for a third global brake system player. However, many vehicle manufacturers are hesitant to engage in business with Haldex due to the ownership structure with one of the main competitors owning a 10.2 percent stake in Haldex, and the potential business partners have expressly questioned whether Haldex is an independent third player in the market. Haldex has recently tried to mitigate this risk by filing an antitrust complaint to the European Commission, as communicated in February 2020.

Customers

There are only a few major truck and trailer manufacturers, and all of them are customers of Haldex.

Despite having large companies in the customer portfolio, no single customer accounts for more than 10 percent of sales. Haldex's 20 largest customers account for 44 percent of sales. While the loss of a customer, or the loss or delay of a major contract, has a limited impact on Haldex as a whole, it could have a major impact on an individual unit and/or product line.

Suppliers

Haldex is dependent on a large number of suppliers. The loss of a key supplier could lead to additional costs and problems in manufacturing. Suppliers may also cause problems if they do not comply with applicable laws or otherwise behave in an unethical manner. To reduce risk, every supplier is carefully assessed, and visits are made to the largest suppliers before agreements are signed. For selected components, more than one supplier can be used. Haldex continuously assesses all key suppliers to ensure that they meet the specified requirements. Defaulted or delayed deliveries cause production problems. The risk is reduced by balancing delivery time against the cost of stocking components and, where economically feasible, by purchasing components and raw materials from the geographic region in which the production facility is located. Haldex has approximately 850 suppliers worldwide.

Risk	Policy/Action
Production	
In Haldex's production and reman facili- ties, fires, breakdowns and other types of incidents can damage the facility and injure the employees who work there, thus causing delivery problems.	Since Haldex has production at several sites for most products in the same product line, the consequences of a disruption can be minimised by increasing production at other facilities. The insurance broker assesses each site at least every second year with regard to fire prevention. In addition, each site has a contingency plan which is regularly updated.
Quality	

Haldex is exposed to complaints in cases where the Group's products do not work as intended. In such cases, the Group is obliged to rectify or replace the defective products. Product recalls refer to cases where an entire production series or a major part thereof must be recalled from customers for rectification of deficiencies. This occurs occasionally in the automotive industry. The Group has no insurance cover for complete product recalls, only access and restoration insurance. The assessment is that the cost of such insurance is not proportionate to the insured risk. The Group regularly assesses its risk exposure relating to product, customer and warranty commitments and assesses cases on an ongoing basis, judging the need to implement provisions for outflows of resources based on the best possible estimates and assessments. Each incoming case is classified in one of the three categories: minor cases, moderate cases and product recalls.

Warranty expenses for 2019 totalled SEK 37m (83), equivalent to 0.7 percent (1.6) of sales. Of total warranty expenses, SEK 0m (54) is recognised as non-recurring expenses.

Should a product cause injury to a person or property, the Group may be held liable. Haldex is insured against such product liability. Over the past decade, no substantial product liability claims have been lodged. Haldex strives to minimise risks regarding complaints, product recalls and product liability through extensive long-term testing during the development process, and through quality checks and controls in the production process.

Raw materials

The Group is dependent on a number of raw materials and intermediate products.

Haldex has defined its exposure to raw materials in terms of both the Group's purchasing of raw materials, and Haldex's sub-contractors' purchasing of raw materials. Exposure to various types of metal is greatest.

Annual volumes	SEKm
Steel	700
Aluminium	160

To limit the risk of an adverse impact on earnings, certain customer contracts include price clauses relating to raw materials. In cases where price clauses are not included, Haldex renegotiates the agreements if the price trend for raw materials has significantly changed. To a large extent, the short-term impact of price increases for raw materials is limited by the fact that price agreements with the Group's raw materials suppliers have an average duration of six months.

Product development

Demands from users and regulators for increased safety and improved environmental and vehicle dynamic performance are leading to new demands for, and requests regarding, the products offered by Haldex. It is therefore essential that the Group continuously develops new products or improves existing products that meet these demands, to avoid losing market share to competitors. A key part of Haldex's strategy involves the development of new products in areas that the Group considers important for continued growth and/or to maintain market share. Every year, Haldex invests a considerable amount in research and development, which is expected to provide good opportunities for monitoring and also, in some areas, for leading development.

INVESTMENTS IN R&D



When developing new products, there is always a risk that a product launch will fail for some reason. Since the Group capitalises expenditure for major development programmes, a failed launch could give rise to an impairment requirement. The Group's total costs for product development (excluding depreciation) were SEK 240m (212) in 2019 and capitalised investments in development were SEK 107m (68) at 31 December 2019.

Risk Policy/Action	
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Information and IT

Effective information management, enabling the operations to share and process information, both internally and externally with customers and suppliers, is important. The primary risks are:

- Disrupted critical information systems.
 Disclosure of sensitive information to
- unauthorised parties. – Strategic or sensitive information
- being modified or tampered with.

Employees

The ability to attract talented employees and retain key individuals is highly significant for Haldex's continued success. Haldex has a central unit for global control of IT/IS that is responsible for information security and system stability. Haldex is currently working to upgrade existing ERP systems with the aim of enhancing service levels, improving opportunities for producing reports from these systems, ensuring operating time, and generally increasing data security within and between systems, which temporarily increases the risk of interruptions at a unit when the new system is deployed there. The geographical spread of the Group enables a diversification of risk, where potential disruption would have a limited impact. In order to further secure infrastructure availability and stability, Haldex has initiated an outsourcing project for servers to a professional service provider.

To create favourable conditions for attracting and retaining employees, Haldex's HR work focuses on three areas: knowledge development, leadership and corporate culture. For a number of years, Haldex has strengthened its work in leadership development to be an attractive employer. Opportunities to work in different geographic regions, a structured programme for further development, and flexible and competitive remuneration models have been designed to recruit and retain employees. The area in which recruitment is most challenging is software development.

With the recently communicated changes in the organisation (closing sites, restructuring and cost-saving initiatives) the risk in retaining and recruiting employees has increased as insecurity about the company's future organisation has increased. However, the reinforcements that were made to the Executive Management during 2019 should reduce this risk in the long term.

LEGAL RISKS

Legislation

The global nature of Haldex's operations means that we are subject to numerous laws, regulations, rules, agreements and guidelines, including those related to the environment, health and safety, trade restrictions, competition restraints and exchange control regulations. With a focus on the activities conducted at local and regional level, Haldex continuously monitors the rules and regulations in each market. The Group works to adapt its products and operations to identify future changes.

Regulatory changes could impact the Group's operations, both positively and negatively. One example of regulatory change with a positive impact on Haldex's business is the shift towards electromechanical brakes. Stricter environmental legislation, for example, could lead to increased demand for a certain product but may also require the development of new features that the product does not have. The ongoing discussions regarding international trade agreements are being monitored carefully to assess how they will affect Haldex.

Intellectual property rights and patents

Haldex is entitled to use patents and trademarks for the products that the company manufactures and sells. These have been accrued over a long period of time and are valuable for the Group. Haldex carefully and continuously monitors the status of patents and protects its own patent innovations to the greatest extent possible. Haldex also carefully monitors the operations of its competitors to avoid infringing patents currently owned by other parties. The risk of unlicensed copies of the Group's products has increased in recent years, particularly in the Asian markets.

SUSTAINABILITY-RELATED RISKS

Health and safety

Accidents and inadequate safety at Haldex's facilities could result in injury or death. Health risks also include mental ill health due to harassment, high stress levels and poor working conditions.

Environment	
Haldex's production sites consume large amounts of energy, and handle raw materials and, in certain cases, hazard- ous waste. Improper or ineffective han- dling poses a risk to the environment.	For many years, Haldex has applied a comprehensive environmental programme with strict policies and regula- tions. For a few years, these efforts at all production sites have been followed up within the 'green performance map' that charts the entire process, from the raw materials brought in to the amount of energy consumed and the resulting waste. Targets for reducing the various component processes are set at each site and measured both centrally and locally. Haldex has invested in several new systems to reduce environmental impact and has not had any incidents involving spills or improper handling of hazardous substances.
Working conditions	
With operations in 19 countries that differ considerably in terms of both leg- islation and attitudes regarding treat- ment of staff, there is a risk that em- ployees will suffer discrimination and that labour laws will not be followed.	Since 2015, all employees have been regularly trained in Haldex's global Code of Conduct and sign to confirm that they understand the Code and will comply with it. To ensure that employees also understand the contents of the Code of Conduct correctly, the company has recently launched an e-learning Code of Conduct training course in which employees have to answer questions correctly to pass. The training course will be held annually. Whistleblower procedures are in place to enable employees to sound the alarm when an irregularity is detected. Haldex has opted for a more ambitious level in its Code of Conduct than the legislation in some countries requires.
Supplier relationships	
Haldex has hundreds of suppliers, many of whom operate in countries with leg- islation that is less strict with regard to staff working conditions.	Haldex has developed a Code of Conduct for suppliers that they are required to sign. Although not all suppliers have yet signed the Code, work is progressing steadily and the suppliers have been informed that they may only deliver to Haldex if they comply with the Code. All major suppliers are paid visits on an ongoing basis, and to some extent so too are smaller suppliers. If anomalies are suspected, a visit is always immediately made and part-

level than local legislation in many of the countries where the suppliers are based.

particularly at the Haldex production sites where the risks are highest.

addressing its values, behaviour and leadership training.

Customer operations

Haldex's reputation could be affected if customers become engaged in dubious activities or do business in countries with human rights issues. Haldex's customers are typically companies with a good reputation who have established policies and processes with regard to ethical issues. In addition, the connection between Haldex and its customers is not always that visible, which means that the risk of negative impact on Haldex's reputation due to dealings with customers is considered quite low.

nerships have been discontinued merely on suspicion of anomalies. Haldex's Code of Conduct represents a higher

The physical safety of staff is a top priority and systematic efforts to prevent accidents are conducted daily,

For a number of years, Haldex has intensified its efforts in the area of favourable working environment by

With global operations and handling of raw materials in production, there is a risk that Haldex will violate international trade rules.

Compliance with trade rules

The regulatory framework for international trade is complex and Haldex has dedicated staff working full-time to monitor and follow up, ensuring that Haldex complies with current regulations.

Unethical behaviour

With more than 2,000 employees with different cultures and values, there is a risk that Haldex's employees will be involved in unethical behaviour in terms of bribery, corruption or fraud.

Haldex's Code of Conduct makes it clear that unethical behaviour is not acceptable. Checks are carried out continuously and procedures are well established so that the authorisation of costs and disbursements, choice of suppliers and approval of recruitments cannot be made by single individuals. Although fraud occasionally has been detected within the Group, this has been on a smaller scale, because control procedures have worked. All unethical behaviour in the form of bribery, corruption or fraud is reported to the police without exception, in accordance with Haldex's policy.

FINANCIAL RISKS

Currency

Haldex is exposed to currency risks due to its international operations. Currency fluctuations impact the Group's income statement and balance sheet in the form of both transaction risks and translation risks. In 2019, the net inflow of foreign currencies totalled approximately SEK 161m (288). The currency pairs with the greatest potential impact on earnings in flows are EUR/SEK, USD/CAD and EUR/GBP. A change in the exchange rate of 10 percent is estimated to impact net profit prospectively as follows:

SEKm	31 Dec. 2019	31 Dec. 2018
EUR/SEK	-/+ 12	-/+ 31
USD/CAD	+/- 7	+/- 11
EUR/GBP	-/+ 6	-/+ 14

The above figures are prior to taking account of Haldex's currency hedges in accordance with the Group's Treasury Policy. The net assets (i.e. equity) of foreign subsidiaries represent investments in foreign currencies which, when translated to SEK, give rise to a translation difference. The Treasury Policy has a framework for how the translation exposure that arises should be managed in order to control the effect of the translation differences on the Group's capital structure. At the end of 2019, the value of the Group's net assets, meaning the difference between capital employed and net indebtedness, was SEK 1,537m (1,611) and comprised the following currencies:

SEKm	31 Dec. 20	19	31 Dec. 2018
SEK	4	93	497
USD	4	16	365
EUR		25	166
GBP		-77	-40
INR		54	48
CNY	З	17	301
Others	3	09	275

In terms of sensitivity, the value of the Group's net assets in each currency would be affected as shown below, if the SEK were to fluctuate by 5 percentage points in relation to the following currencies:

SEKm	31 Dec. 2019	31 Dec. 2018
USD	+/- 21	+/- 18
EUR	+/- 1	+/- 8
GBP	-/+ 4	-/+ 2

The above is a summary of currency risks and does not provide a complete description of the transaction and translation risks. Refer to Note 4 on page 61 for a more detailed description.

Credit risk

Credit risk arises when a party fails to fulfil its financial obligations, in so doing causing a financial loss for the other party. The risk of customers defaulting on payments for delivered products is minimised by carefully monitoring new customers, by strict routines for following up the payment behaviour of existing customers and by taking out credit insurance, in accordance with the Treasury Policy. At 31 December 2019, the Group's net accounts receivable totalled SEK 648m (700) and are recognised at the amounts expected to be paid. The Group's bad debt losses usually represent less than 0.1 percent of sales.

All financial risks and a more detailed description of these as well as a presentation of the Group's use of financial instruments can be found in Note 4 on page 61.

Consolidated income statement

Amounts in SEKm	Note	2019	2018
Net sales	5	5,151	5,119
Cost of goods sold	13	-3,812	-3,813
Gross profit		1,339	1,306
Selling expenses	13	-539	-509
Administrative expenses	12, 13	-355	-355
Product development expenses	13	-158	-162
Share of profit from joint venture		-21	-5
Other operating income and operating expenses	6, 9	-161	-20
Operating profit	6, 7, 9, 10, 11, 18	105	255
Interest income	14	14	7
Interest expenses	14	-56	-22
Other financial items	14	-2	-21
Profit before tax		61	219
Тах	15	-56	-66
Net profit for the year		5	153
Net profit attributable to:			
Parent company shareholders		1	148
Non-controlling interests		4	5
Earnings per share, SEK (basic and diluted)		0.12	3.46
Average number of shares, thousands		44,204	44,204

Consolidated statement of comprehensive income

Amounts in SEKm	Note	2019	2018
Net profit for the year		5	153
Other comprehensive income			
Items not to be reclassified to the income statement			
Remeasurement of pension obligation, after tax	15	-47	6
Total		-47	6
Items that may be reclassified to the income statement			
Change in hedging reserve, after tax	15	-3	4
Translation of foreign currency		24	73
Total		21	77
Total other comprehensive income		-26	83
Total comprehensive income		-21	236
Total comprehensive income attributable to:			
Parent company shareholders		-25	231
Non-controlling interests		4	5

Consolidated balance sheet

Amounts in SEKm	Note	2019	2018
ASSETS			
Non-current assets			
Goodwill	16	436	419
Other intangible assets	16	364	245
Rights of use assets	17	412	-
Other property, plant and equipment	17	861	753
Financial assets	19, 22	23	23
Deferred tax assets	20	131	145
Total non-current assets	23	2,227	1,585
Current assets			
Inventories	26	815	709
Accounts receivable	4, 25	648	700
Other current receivables	27	361	368
Derivative instruments	21, 22, 25	47	22
Cash and cash equivalents	28	315	305
Total current assets	23	2,186	2,104
TOTAL ASSETS	5	4,413	3,689
EQUITY AND LIABILITIES			
Equity			
Share capital		221	221
Capital contributions		491	491
Reserves		64	44
Retained profits		730	827
Attributable to shareholders of the Parent Company		1,506	1,583
Attributable to non-controlling interests		31	
Total equity		1,537	1,611
Non-current liabilities			
Non-current interest-bearing liabilities	18, 25, 29	749	572
Pensions and similar obligations	30	562	455
Deferred tax liabilities	20	12	26
Other non-current liabilities		23	19
Total non-current liabilities	24	1,346	1,072
Current liabilities			
Current interest-bearing liabilities	18, 25	449	10
Accounts payable	25	518	595
Derivative instruments	21, 22, 25	34	15
Provisions	31	204	80
Other current liabilities	32	325	306
Total current liabilities	24	1,530	1,006

Changes in Group equity

		Group re	eport on ch	anges in equit	у	Total	Non-con- trolling interests	Total equity
Amounts in SEKm	Share capital	Capital contri- butions	Trans- lation reserve	Hedging and fair value reserve	Other retained profits			
Opening balance at 1 January 2018	221	491	-32	-1	691	1,370	25	1,395
Net profit for the year					148	148	5	153
Other comprehensive income						-		
Translation of foreign currency			73			73	0	73
Remeasurement of pension obligation, after tax					6	6	-	6
Change in hedging reserve, after tax			•	4		4		4
Total other comprehensive income	0	0	73	4	6	83	0	83
Total comprehensive income	0	0	73	4	154	231	5	236
Transactions with shareholders								
Cash dividend	•		•		-24	-24	-2	-26
Value of employee services/incentive programmes					6	6		6
Total transactions with shareholders	0	0	0	0	-18	-18	-2	-20
Closing balance at 31 December 2018	221	491	41	3	827	1,583	28	1,611
Opening balance at 1 January 2019	221	491	41	3	827	1,583	28	1,611
Net profit for the year					1	1	4	5
Other comprehensive income								
Translation of foreign currency			23			23	1	24
Remeasurement of pension obligation, after tax					-47	-47		-47
Change in hedging reserve, after tax				-3		-3		-3
Total other comprehensive income	0	0	23	-3	-47	-27	1	-26
Total comprehensive income	0	0	23	-3	-46	-26	5	-21
Transactions with shareholders						•••••		
Cash dividend					-51	-51	-2	-53
Total transactions with shareholders	0	0	0	0	-51	-51	-2	-53
Closing balance at 31 December 2019	221	491	64	0	730	1,506	31	1,537

Consolidated statement of cash flow

Amounts in SEKm	2019	2018
Cash flow from operating activities		
Operating profit	105	255
Reversal of non-cash items *	427	170
Interest paid	-42	-19
Tax paid	-41	-33
Cash flow from operating activities before changes in working capital	449	373
Change in working capital		
Current receivables	77	-105
Inventories	-84	-85
Current liabilities	-114	91
Change in working capital	-121	-99
Cash flow from operating activities	328	274
Cash flow from investing activities		
Investments in intangible assets	-135	-99
Investments in property, plant and equipment	-246	-282
Cash flow from investing activities	-381	-381
Cash flow from financing activities		
Dividend to Haldex shareholders	-51	-24
Dividend to non-controlling interests	-2	-2
Share swap incentive programme	-	6
Change in interest-bearing liabilities	112	231
Cash flow from financing activities	59	211
Changes in cash and cash equivalents and bank balances, excluding foreign currency translation	6	104
Cash and cash equivalents, opening balance	305	194
Translation of foreign currencies in cash and cash equivalents	4	7
Cash and cash equivalents, closing balance	315	305
* Reversal of non-cash items		
Depreciation and amortisation (2019 includes effect of IFRS16)	237	136
Share of profit from joint venture	21	5
Non-recurring items	169	29
Total	427	170

Cash and cash equivalents includes an amount of SEK 237m (222) which cannot be used by the Group without paying withholding tax.

Notes

Note 1. General information

Haldex AB (parent company) and its subsidiaries comprise the Haldex Group. Haldex provides proprietary and innovative brake and air suspension systems to the automotive industry worldwide. The main focus is on products linked to vehicle dynamics, safety and the environment. Haldex AB (publ), corp. ID no. 556010-1155, is a Swedish public limited company with registered office in Landskrona in Sweden. The address of the head office is Haldex AB, Box 507, 261 24 Landskrona. Haldex shares are listed on Nasdaq Stockholm, MidCap.

Note 2. Summary of significant accounting policies

The consolidated financial statements of Haldex have been prepared in accordance with International Financial Reporting Standards (IFRS) and IFRIC interpretations as adopted by the EU. In addition, the Swedish Annual Accounts Act and the Swedish Financial Accounting Standards Council RFR 1 'Supplementary accounting rules for Groups' are applied. This note contains a description of the most significant accounting policies applied in the preparation of the consolidated financial statements, and the policies have been applied consistently for presented years unless otherwise stated.

The Parent Company's functional currency is Swedish kronor (SEK), which is also the presentation currency of the Parent Company and the Group. This means that all amounts in the report are recognised in millions of SEK (SEKm) unless otherwise stated. Assets and liabilities are recognised at cost, with the exception of available-for-sale financial assets and certain financial assets and liabilities (including derivatives), which are recognised at fair value. The income statement follows a breakdown by function according to IAS 1, which reflects the internal reporting and presents a true and fair view of the Group's results.

Consolidated financial statements

Subsidiaries

The consolidated financial statements include the parent company and the companies over which the parent company exercises direct or indirect control. The definition of controlling influence includes an ability to directly or indirectly control activities with an impact on return in an owned/part-owned company and to be exposed to/be entitled to variable returns from the company based on its commitment. The current definition of control and controlling influence is based on IFRS 10, which came into force on 1 January 2014. Subsidiaries are included in the consolidated financial statements from the date when the controlling influence is transferred to the Group. Divested companies are removed from the consolidated financial statements from the date when the controlling influence ceases.

The acquisition method is used for reporting the Group's business acquisitions. The purchase price for the acquisition of subsidiaries consists of the fair value of transferred assets, liabilities and the shares the Group issues. The purchase price also includes the fair value of all assets/liabilities resulting from any agreed conditional purchase price. The identifiable assets and liabilities that are taken over in a business acquisition are initially measured at fair value at the acquisition date. For each acquisition, the Group determines whether any non-controlling interest in the acquired company should be reported at fair value or at the holding's proportionate share of the acquired company's identifiable net assets. Holdings without controlling influence are recognised as a separate item in equity.

Acquisition-related costs are expensed as incurred. If business combinations take place in several stages, the previously owned equity shares in the acquired company are remeasured to their fair value at the time of acquisition. Any gain or loss arising from the remeasurement is recognised in the income statement.

Goodwill is initially measured as the amount by which the total purchase price and fair value of non-controlling interests exceed the fair value of identifiable assets and liabilities assumed. In the event that the purchase price is lower than the fair value of the acquired company's net assets, the difference is recognised directly in the income statement.

Intra-Group transactions, balance sheet items, revenue and expenses on transactions between group companies are eliminated in the consolidated accounts. Gains and losses that result from intra-Group transactions and which are recognised in assets are also eliminated. The accounting polies for subsidiaries have been changed where necessary to ensure consistent application of the Group's policies.

Joint venture

Haldex has entered into a Chinese joint venture with VIE in which the parties each own 50 percent. This joint venture is recognised according to the equity method, which means that it is initially recognised in the consolidated balance sheet at acquisition cost. The carrying amount is then increased or reduced to take account of the Group's share of profit after the acquisition date. The joint development company has no revenue, and the development project has not progressed so far that capitalisation of development expenses can be justified. In 2017, the profit from this JV was recognised in net financial items, but with the recent positive trend in electromechanical brakes in China, a reclassification of the business was carried out during the fourth quarter of 2018 so that the profit is reported as part of ongoing operations. The value of the share of equity at the end of 2019 is 0 (0).

Transactions with non-controlling interests.

The Group treats transactions with non-controlling interests as transactions with the Group's shareholders. In the event of acquisitions from non-controlling interests, the difference between the purchase price paid and the actual acquired share of the recognised amount of the subsidiary's net assets is recognised in equity. Gains or losses on divestments to non-controlling interests are also recognised in equity.

Translation of foreign currency

Functional currency and presentation currency

Items included in the financial statements for the various units within Haldex are measured in the currency used in the economic environment in which the companies concerned are primarily active (functional currency). In the consolidated financial statements, Swedish kronor (SEK) is used, which is the Group's presentation currency.

Transactions and balance sheet items

Foreign currency transactions are translated into functional currency at the exchange rate prevailing on the transaction date. Exchange rate gains and losses as a result of these transactions as well as the translation of monetary assets and liabilities in foreign currencies at the balance sheet date are recognised in the consolidated income statement. The exception is when the transactions constitute hedges and fulfil the requirements for hedge accounting, where profits and losses are recognised under other comprehensive income after adjustment for deferred tax.

Subsidiaries

Financial position and earnings for subsidiaries which have a different functional currency than the Group's presentation currency are translated into Swedish kronor (SEK) in the consolidated financial statements. This is done by translating assets and liabilities at the closing date rate, while revenue and expenses are translated at the average exchange rate during the year. Translation differences that arise are recognised in a separate item under other comprehensive income. Exchange rate differences on loans and other currency instruments that are recognised as hedges of net investments in foreign currency are recognised directly in the translation reserve in other comprehensive income.

Segment reporting

Operating segments are recognised in a manner consistent with the internal reporting provided to the highest executive decision maker in the Group. The highest executive decision maker is the function responsible for allocating resources and assessing the performance of the operating segments. Within Haldex, this function has been identified as the CEO. For segment reporting, see also Note 5, page 63.

Revenue recognition

The Group applies IFRS 15 with effect from 1 January 2018. According to IFRS 15, revenue is recognised when the customer gains control of the goods or services. Determining the timing of transfer of control, i.e. at a particular time or over time, requires assessments. The transition to IFRS 15 has led to only a minor reclassification effect in the income statement. Revenue from the sale of goods and services is recognised when the goods/services are delivered in accordance with the terms of delivery and the customer has consequently gained control of the goods. Revenue is recognised at fair value excluding VAT and, where applicable, is reduced by the amount of discounts granted and returned goods. All of the Group's revenue is recognised on a single occasion, and no portion is recognised over time.

Taxes

Income tax is made up of current tax and deferred tax. Taxes are recognised in the income statement, except when the underlying transaction is recognised in other comprehensive income or directly in equity. In these cases, the attributable tax effect is also recognised in other comprehensive income and equity.

Current tax is tax to be paid or received for the current year, based on current tax rates. Adjustment of current tax attributable to previous periods is also included in this category. Deferred tax is recognised and calculated on the basis of temporary differences between Group-recognised and tax values of assets and liabilities. The measurement of deferred tax is based on how the carrying values of assets and liabilities are expected to be realised or adjusted. A measurement is performed based on tax rates and tax regulations that have been decided or announced at the end of the year. Deferred tax assets for tax loss carryforwards are recognised to the extent it is probable that they can be offset against future tax.

Intangible assets Goodwill

Goodwill refers to the amount by which the acquisition value of an asset exceeds the fair value of identifiable acquired net assets. Goodwill arising in connection with the acquisition of a subsidiary is recognised as an intangible asset. The value of goodwill is tested annually to determine where any impairment is needed, and the asset is recognised at cost less accumulated impairment. Any impairment of goodwill is not reversed. Gains or losses on the divestment of a unit include the remaining carrying amount of the goodwill relating to the divested unit.

The value of goodwill is tested on the lowest cash-generating unit. For Haldex, this means that impairment testing is performed for the entire Group, i.e. at segment level.

Trademarks, licences and patents

Trademarks, licences and patents are recognised at cost less accumulated amortisation and any impairment. Trademarks, licences and patents acquired in business acquisitions are recognised at fair value at the acquisition date. These intangible assets have a definable useful life over which straight-line amortisation is applied to allocate the expense in the income statement. The useful life of licences and patents is estimated to be 3-15 years, and the expected useful life of trademarks is estimated to be 20 years.

Customer relationships

Customer relationships acquired in connection with business combinations are recognised at fair value at the acquisition date, and thereafter at cost less accumulated amortisation and any impairment. Customer relationships have determinable useful lives that are estimated to be 11-17 years. Straight-line amortisation is applied over the estimated useful lives of customer relations.

Product development

Research and development expenses are expensed as they arise. To the extent that, and from the time when, a development project of a new product meets all the following criteria, the future-oriented acquisition cost is capitalised as an asset in the balance sheet:

- It is technically possible to complete the asset so that it can be used/ sold.
- The Group intends to complete it and use/sell it.
- The necessary conditions exist to use/sell the intangible asset.
- The Group can demonstrate how the asset will generate probable future economic benefits.
- There are adequate technical, financial and other resources to complete development and to use/sell the asset.
- The Group can reliably calculate the expenses attributable to the intangible asset during its development.

The basis for capitalising product development expenses may consist of business plans, budgets or the Group's forecasts of future revenue.

Capitalised product development assets are recognised at cost less accumulated depreciation taking into account any impairment. Amortisation begins when the asset can be used and takes place based on the estimated useful life and in relation to the expected economic benefits that product development is expected to generate. The useful life is normally not expected to exceed five years.

Software and IT systems

Acquired software licences and the costs of developing software that is expected to generate future financial benefits for the Group for over three years are capitalised and amortised on a straight-line basis over the expected useful life (3-5 years).

Note 2 cont. Summary of significant accounting policies

Property, plant and equipment

Property, plant and equipment consists of buildings (offices, factories, warehouses), land and land improvements, machinery, tools, fixtures and fittings and equipment. These assets are recognised at cost less accumulated depreciation and any impairment.

The cost of acquisition initially includes expenses that can be directly attributed to the acquisition of an asset. Subsequent expenses relating to property, plant and equipment increase its carrying amount or are recognised as a separate asset, depending on which is appropriate and only if it is probable that financial benefits associated with the asset will flow to the Group. The carrying amount of any replaced parts is derecognised from the balance sheet. All other forms of repairs and maintenance of property, plant and equipment are recognised as expenses in the income statement during the period in which they arise.

Depreciation according to plan is based on the cost of the assets and the estimated economic useful life. Straight-line depreciation is applied and the depreciation periods are as follows: Buildings are depreciated over 25-50 years, machinery and equipment are usually depreciated over 3-10 years, while heavier machinery has an economic life of up to 20 years. Land is not depreciated.

The residual values and useful lives of assets are estimated on each balance sheet date and adjusted if necessary. The carrying amount is immediately written down to the recoverable amount if the carrying value of the asset exceeds the estimated recoverable amount.

Leases

IFRS 16 Leases entered into force on 1 January 2019. With effect from 2019, IFRS 16 Leases supersedes existing IFRS standards relating to the accounting of leases, such as IAS 17 Leases and IFRIC 4 Determining Whether an Arrangement Contains a Lease, IFRS 16 primarily affects lessees, and the key effect is that all lease contracts that are currently recognised as operating leases are to be recognised in a manner similar to the current recognition of finance leases. This means that an asset and a liability are also recognised for operating leases, with associated recognition of depreciation and interest expenses, unlike in the previous year, when leased assets and related liability were not recognised, and when the lease payments were accrued on a straight-line basis as a lease expense. The standard primarily affects the recognition of the Group's operating leases. Haldex has implemented the standard in accordance with the simplified approach. Under this standard, all leases are recognised in the balance sheet, with the sum of the rights-of-use less depreciation and any other adjustments as asset and discounted cost less lease payments as liability.

The rights-of-use are measured at cost, which includes any initial expenses as well as expenses for restoring access to the condition prescribed in the terms of the lease. Lease payments include fixed and any variable index-linked charges. The Group has also taken account of any residual value guarantees, penalty charges payable in the event of termination and the exercise price for any purchase option, in those cases where it is reasonably certain that the Group will make use of such an option. Haldex has not included in its calculations leases that are shorter than 12 months and contracts where the underlying asset has a value of less than USD 5,000. The greater part of the value of leases in the Group pertains to lease contracts for property. Terms are negotiated separately for each lease and leased assets are not used as collateral for loans. In discounting, Haldex has used an implicit interest rate where this can be determined. In other cases, marginal loan interest rate is used taking into account the currency and country concerned and terms and length of each lease. The interest rate is fixed over the life of the lease

Commitments for leases at 31 December 2018 totalled SEK 274m in the Group. After individually analysing options to extend or terminate contracts, Haldex has adjusted these commitments by SEK 182m. Haldex used a weighted average borrowing rate of 3.19 percent when discounting, which reduces the commitment by SEK 43m. The increase in total assets, according to IFRS 16 Leases, therefore totals SEK 413m at 1 January 2019. An increase of SEK 426m was initially communicated, but this has been revised as a result of the changed calculation method.

Financial instruments

The Group applies IFRS 9, issued by IASB in July 2014, from 1 January 2018. This application has resulted in changes in accounting policies. The Group has not applied IFRS 9 early in previous periods. The Group has chosen to continue to apply the hedge accounting rules in IAS 39 in applying IFRS 9. As permitted by the rules on transition to IFRS 9, the Group has chosen not to recalculate comparatives.

Classification

The Group's new policies for classification and measurement of financial assets are based on an assessment of both (i) the company's business model for the management of financial assets, and (ii) the characteristics of the contractual cash flows from the financial asset.

Financial assets are initially measured at fair value plus, in the event that the asset is not recognised at fair value through profit or loss, transaction expenses directly attributable to the purchase. Transaction expenses attributable to financial assets that are recognised at fair value through profit or loss are expensed directly in the income statement.

Assets measured at amortised cost

The Group classifies its financial assets as assets that are recognised at amortised cost only when the following requirements are met:

- the asset is part of a business model where the goal is to collect contractual cash flows, and
- the contract terms give rise at specific times to cash flows consisting solely of capital amounts and interest on the outstanding principal.

The following financial assets are recognised at amortised cost: Financial assets, Other receivables, Accrued revenue, Accounts receivable and Cash and cash equivalents.

These assets were also recognised at amortised cost in accordance with previous policies.

Assets measured at fair value through profit or loss

Other than derivative instruments, the Group has no financial assets at fair value through profit or loss.

Assets measured at fair value through other comprehensive income

Other than hedge-accounted derivative instruments, the Group has no financial assets at fair value through other comprehensive income.

Financial liabilities measured at fair value through profit or loss Other than derivative instruments, the Group has no financial liabilities at fair value through profit or loss.

Other financial liabilities

Non-current and current interest-bearing liabilities, as well as other financial liabilities, e.g. Accounts payable and accrued expenses are included in this category. The liabilities are measured at amortised cost. Accounts payable are obligations to pay for goods or services that have been acquired in ongoing operations from suppliers. Accounts payable are classified as current liabilities if they fall due within one year. Non-current and current liabilities are recognised at amortised cost, and any difference between the amount received (net after transaction expenses) and the repayment amount is recognised in the income statement distributed over the loan period, using the effective interest method in cases where it is material.

Derivative instruments

Derivative instruments are recognised in the balance sheet as of the trade date and are measured at fair value, both at the initial recognition date and in subsequent measurements. The method used to recognise the gain or loss arising on each remeasurement depends on whether the derivative has been identified as a hedging instrument and, if so,

Note 2 cont. Summary of significant accounting policies

the nature of the hedged item. The Group identifies particular derivatives as either: Hedging of fair value of assets or liabilities; hedging of forecast cash flows or hedging of a net investment in a foreign operation. In order to fulfil the requirements for hedge accounting, particular documentation is required regarding the hedging instrument and the relationship to the hedged item. The Group also documents goals and strategies for risk management and hedging measures, as well as an assessment of the effectiveness of the hedging relationship with regard to offsetting changes in fair value or cash flow for hedged items, both at the beginning of the hedge and on an ongoing basis.

Hedging of cash flow

Cash flow hedging is used for future flows in operational activity. The proportion of changes in the fair value of derivatives that meet the conditions for hedge accounting is recognised in other comprehensive income. Any ineffective portion of profit or loss is recognised directly in the income statement, under financial items. The unrealised profit that accumulates in equity is reversed and recognised in profit when the hedged item affects the income statement (for example, when the forecast sales that have been hedged actually occur). If a derivative instrument no longer meets the requirements for hedge accounting, is sold or liquidated, what remains is any accumulated profit in equity, which is recognised in profit or loss at the same time as the forecast transaction is finally recognised in profit or loss. When a forecast transaction is no longer expected to occur, the profit or loss that has been recognised in equity is transferred directly to the income statement.

Hedging of net investment

Accumulated gain and loss from the remeasurement of hedges of net investments, which fulfil the conditions for hedge accounting, are recognised in other comprehensive income. When operations are divested, the accumulated effects are transferred to profit and affect the company's net profit from the divestment.

Impairment of receivables

As of 1 January 2018, the Group measures the future expected credit losses related to investments in debt instruments recognised at amortised cost or fair value with changes through other comprehensive income based on future-oriented information. The Group chooses a reservation method based on whether there has been a significant increase in credit risk or not. In accordance with the rules of IFRS 9, the Group applies a simplified method for impairment testing of accounts receivable. The simplification means that the reserve for expected credit losses is calculated based on the loss risk for the entire term of the receivable and is recognised when the receivable is recognised for the first time.

Calculation of fair value

The fair value of financial instruments traded on an active market (for example, derivative instruments that are listed publicly, financial assets held for trading and available-for-sale financial assets) is based on the quoted market price on the balance sheet date. The quoted market prices used for the Group's financial assets are the actual purchase prices, and the quoted market prices used for financial liabilities are the actual selling prices. The instruments held by the Group are traded on an active or observable market.

Derecognition of financial assets and liabilities

Financial instruments are derecognised from the balance sheet when all benefits and risks have been transferred to another party or when obligations have been fulfilled.

Inventories

Inventories are valued at the lower of cost according to the 'first in, first out' principle and net realisable value. Cost of finished goods and work in progress consists of raw materials, direct wages and salaries, other direct expenses and associated indirect manufacturing expenses (based on normal operating capacity). Net realisable value is the estimated sales price less applicable variable selling expenses.

Accounts receivable

Accounts receivable are initially recognised at fair value and subsequently at amortised cost using the effective interest method, less any provision for impairment.

Cash and cash equivalents

Cash and cash equivalents comprise cash, bank balances, current investment falling due within three months and bank overdraft facilities. Bank overdraft facilities are recognised in the balance sheet as current interest-bearing liabilities.

Accounts payable

Accounts payable are initially recognised at fair value and subsequently at amortised cost using the effective interest method.

Receivables and liabilities

Receivables and liabilities in foreign currency are measured at the closing day rate. Exchange rate gains and losses related to operating flows are recognised in operating profit, while currency effects on financial receivables and liabilities are recognised among financial items in the income statement. Current and non-current interest-bearing liabilities are recognised at nominal amounts in the balance sheet.

Provisions

Provisions are recognised in the balance sheet when the Group has a legal or informal future obligation as a result of an event which is likely to result in an outflow of resources and the amount can reasonably be estimated in a reliable manner. Provisions for restructuring expenses are recognised when the Group has presented a plan for the measures and the plan has been made widely known to all affected parties. For more information on provisions for guarantee reserves, see Note 3.

Employee benefits

Pension commitments

There are both defined-contribution and defined-benefit pension plans in the Group.

Defined-contribution plans mainly comprise retirement pensions, sickness pensions and family pensions and mean that a fixed contribution, usually expressed as a percentage of current salary, is paid to an external legal entity. The employee is responsible for the inherent risk in these plans and the Group has no further obligations if the external legal entity's assets decrease in value. No liability is recognised in the balance sheet. Defined-benefit pension plans indicate the amount an employee can expect to receive after retirement, calculated on the basis of factors such as age, length of service and future salary.

The Group's pension obligations for defined-benefit pensions are covered by pension funds, through an insurance solution or through provision in the balance sheet. The value of the defined-benefit obligation is calculated annually by independent actuaries according to what is known as the Projected Unit Credit Method. The assumptions made in the calculations are shown in the note Pensions and similar obligations. All changes in net pension provision are recognised when they occur, either as a cost of service and financing cost in the income statement or in other comprehensive income regarding the effects of actuarial revaluations of both pension obligations and plan assets.

Note 2 cont. Summary of significant accounting policies

Cash flow statement

The cash flow statement is prepared using the indirect method. This means that operating income is adjusted for transactions that have not resulted in incoming or outgoing payments during the period, and for any income and expenses attributable to cash flows for investing or financing activities.

Government support

Government support is reported at fair value when it is probable that the conditions associated with the grants are fulfilled and the grants will be received. Support in connection with the acquisition of non-current assets has reduced the cost of acquisition of those assets. Support where expenses are compensated for is recognised as far as possible over the same periods as the expenses that the grants compensate for.

Changes in accounting policies and disclosures

New and amended standards that have been applied by the Group

The new rules in IFRS 16 have affected the Group's recognition of leases. For more information, see Leases above.

The amendments in the Swedish Companies Act to guidelines for remuneration of senior executives have meant that the description of these guidelines has become more comprehensive in Note 9 Information on remuneration of senior executives.

New standards, amendments and interpretations of existing standards that have not been applied early by the Group None of the IFRS standards or IFRIC interpretations that have not yet come into force are expected to have a material impact on the Group.

Note 3. Important estimates and assumptions

The consolidated financial statements contain estimates and judgements about the future which are based on both historical experience and expectations about the future. These estimates and judgements affect the recognised values of assets and liabilities as well as revenue and expenses. Actual outcomes may deviate from these judgements if different estimates are made or if changed conditions arise. The areas where the risk of future adjustments of carrying amounts is greatest are included in this note.

Goodwill

The impairment requirement for the Group's total goodwill was tested in 2019, and totalled SEK 436m (419) at 31 December. Impairment testing is carried out by discounting expected future cash flows as determined in business plans and strategies, which gives a value. This value is compared with the carrying amount of the Group's goodwill. Haldex's sales and returns have historically been very closely linked to the number of vehicles manufactured. The official forecasts of vehicle production therefore form the actual basis of the business plans, which include Haldex's historical economic development, expected future benefits of current improvement programmes and selected strategic orientations.

The forecast period for testing goodwill consists of five years and, after the explicit forecast period, is assigned a residual value which is intended to correspond to the value of the business after the last year of the forecast period. The residual value has been calculated on the basis of an assumption of a sustainable level of free cash flow (after the forecast period) and its growth, which in Haldex's case is 2 percent (2). In this context, the residual value corresponds to all cash flows after the forecast period. When discounting expected future cash flows, a weighted average cost of capital (WACC) after tax has been used, currently 8.9 percent (8.1). WACC before tax is 11.3 percent (10.3). The average cost of capital has been based on the following assumptions:

- Risk-free interest rate corresponding to ten-year return on government bonds
- Market risk premium: 7.4 percent (7.2)
- Beta: Determined beta for Haldex
- Interest expense, calculated as a weighted interest rate based on the Group's financing structure in different currencies, taking into account a loan premium
- Tax rate: According to the prevailing tax rate in particular countries

The impairment testing of goodwill carried out in 2018 and 2019 did not indicate any need for impairment. A change in the discount rate of 1 percent or a decrease in cash flow of 10 percent would not change the outcome of the testing. The Group's recognised goodwill value is equivalent to approximately 28 percent (26) of equity at 31 December.

Product development projects

Haldex capitalises the expenses of product development projects, which is considered to be a natural part of the company's operations. Haldex has engaged in development over a long period and has a prepared procedure regarding this and when the costs of a project should start to be capitalised. In order for the expenses to be capitalised, they must be identifiable, Haldex must have control over the asset, it must probably provide economic benefits and it must be possible for the expenses to be predicted reliably. The need for impairment of these capitalised product development projects is tested each year or when there is an indication of a decrease in value.

The test is based on a forecast of future cash flows and equivalent manufacturing costs. In the event of a future strategy being changed or future volumes, prices and/or expenses deviating negatively from the forecasts, a need for impairment may arise. For product development projects that are considered to be a normal part of Haldex's day-to-day operations, testing for any impairment is usually based on the same assumptions (WACC) as when the need for impairment of goodwill is tested. However, given that individual risk assessments show different risks in different projects, the discount factor is adjusted based on the estimated risk in the different projects.

Product development projects that are considered to have a higher risk are tested with a higher discount factor than those considered to have a lower risk. In 2019, a WACC of 9.9 percent (9.1) after tax was used for all development projects.

The equivalent WACC before tax is 12.4 percent (11.5). The Group's carrying amount for capitalised product development projects is SEK 224m (125), which is equivalent to approximately 15 percent (8) of equity at 31 December. A change in discount rate of 1 percent or a decrease in cash flow of 10 percent would not imply any need for impairment in the Group.

Income taxes

The Group pays taxes in many different countries. Detailed calculations of future tax liabilities are performed for each tax subject within the Group. Haldex recognises liabilities for expected tax audit issues based on estimates of whether additional taxes are to be paid. When the outcome of these tax issues differs from the amounts originally recognised such differences will affect current and deferred tax assets/tax liabilities for the period in which the determination was made.

Regarding tax receivables, special assessments are made to estimate the Group's ability to realise these, in particular regarding deferred tax receivables and the possibility of these being used to offset future taxable profits. The fair value of these assets may deviate in the future if assumed earning capacity differs or changes in tax rules arise. As of the end of December, the Group has deferred tax assets totalling SEK 131m (145), i.e. approximately 9 percent (9) of the Group's equity. Note 3 cont. Important estimates and assumptions

Warranty reserves

Complaints and warranty cases arise as a natural part of the business. The Group continuously assesses its risk exposure regarding product, customer and guarantee commitments and continuously assesses cases and the need for provisions for outflow of resources based on best estimates and assessments.

Each case received is classified in one of the three categories of minor cases, medium cases and product recalls.

Product recall refers to those cases where an entire product series or a large part thereof must be recalled from the customers for rectification of the deficiencies.

The provision for guarantee commitments is partly based on historical outcomes, but also includes assumptions and estimates of future development, where the most significant assumptions are future trend in rate of return and costs of replacement of the product.

The provision in these cases is based on a weighting of various risk scenarios, which contains a high degree of uncertainty and where actual outcome may deviate from these assessments.

Total warranty provision at 31 December 2019 was SEK 36m (74). Total warranty expense for 2019 was SEK 37m (83), equivalent to 0.7 percent (1.6) of net sales. Of total warranty expense, SEK 0 (54) million

Note 4. Financial risks

The Group is exposed to financial risks such as market, credit, liquidity and financing risks. To reduce the impact of these risks, Haldex works in accordance with a policy that regulates their management.

This policy has been adopted by Haldex's Board of Directors. Follow-up and control take place continuously in each company and at Group level.

Exchange rate risk

Haldex is exposed to exchange rate risks through its international operations. Exchange rate changes have an impact on the consolidated income statement and balance sheet in the form of both transaction risks and translation risks.

Transaction risk

The Group's net flows of payments in foreign currencies give rise to transaction risks. Net inflow of foreign currencies in 2019 totalled approximately SEK 161m (288). The currency pairs with the largest potential impact on earnings are flows in EUR/SEK, USD/CAD and EUR/GBP. A change in exchange rate of 10 percent is estimated to have an impact on net profit going forward as shown below for these largest flows. All figures are before taking account of currency hedging done in accordance with Haldex's financial policy.

SEKm	31 Dec. 2019	31 Dec. 2018
EUR/SEK	-/+ 20	-/+ 31
USD/CAD	+/- 11	+/- 11
EUR/GBP	-/+ 16	-/+ 14

The translation effect on operating receivables and operating liabilities, as well as on financial assets and liabilities, to currencies other than each company's local functional currency, is SEK 7m (15) in the event of a weakening/strengthening of the underlying currency equivalent to 10 percent. Equity would be SEK 5m (18) higher/lower in the event of a strengthening/weakening of the underlying rates in cash flow hedges equivalent to 10 percent.

According to the current financial policy, 70 percent of expected net flows for estimated volumes is hedged during the coming sixmonth period and 30 percent in the next 7-12 months with a permitted deviation of +/- 10 percent. At 31 December 2019, 47 percent (46) was hedged with derivative instruments. The Group's financial policy dictates the types of derivative instruments that can be used for is recognised as a non-recurring expense, with the greater part in the previous year relating to a customer agreement concerning future warranty measures.

Pensions

The pension liabilities recognised in the balance sheet have been calculated by actuaries and are based on annual assumptions. These assumptions are described in more detail in Note 30 on pages 73-74. A 0.25 percent change in the discount rate for each particular country has an impact on the present value of the Group's pension liabilities of approximately SEK 39m (30).

Restructuring programmes

Two major restructuring programmes were initiated in the second half of 2019, with production being transferred from Germany to Hungary and from the United States to Mexico. At year-end, the transfer of production in Europe was under negotiation, while the transfer of production in North America had just begun and the provisions made at yearend were therefore based on information available at that time and various assumptions about the future. The provision for these two programmes totalled SEK 163m at year-end.

hedging and with which counterparties contracts can be concluded. Currency futures were used in 2019 to hedge invoiced and forecast currency flows. At 31 December, these contracts had a nominal value of SEK 76m (132) net and a market value of SEK -1m (3).

Translation risk

Net assets (i.e. equity) in foreign subsidiaries represent investments in foreign currencies that give rise to a translation difference when converted to SEK. In the financial policy, the Group has established a framework for how this translation exposure that arises should be managed to enable Haldex to control the effect of the translation differences on the Group's capital structure. According to the financial policy, the Group's net debt is to be distributed in proportion to capital employed per currency. Where required, this objective is achieved by taking loans in the various currencies that are functional currencies for the subsidiaries.

Gains or losses on loans that are considered effective hedges of translation differences are recognised directly in other comprehensive income, while gains or losses on loans that are not considered effective hedges are recognised in the income statement as a financial item.

At the end of 2019, the value of the Group's net assets, i.e. the difference between capital employed and net debt, was SEK 1,537m (1,611) and was made up of the following currencies:

SEKm	31 Dec. 2019	31 Dec. 2018
SEK	493	497
USD	416	365
EUR	25	166
GBP	-77	-40
INR	54	48
CNY	317	301
Other	309	275

Interest rate risk

Interest rate risk is the risk that changes in interest rates will have a negative impact on the Group's earnings. As the Group did not have any significant holdings in interest-bearing assets at 31 December 2019, cash flow from operating activities in all material respects is independent of changes in market interest rates. The Group's interest rate risk arises from its loans. According to the financial policy, the average fixed interest term is between 1 and 12 months. The risk must also be

Note 4 cont. Financial risks

spread over time so that the interest rate on only a small part of the total debt is renegotiated at the same time. The average fixed interest term was one month at the end of the year, which means that most of the Group's financial liabilities had a variable interest rate, i.e. a new interest rate is determined within one year. At 31 December 2019, SEK

841m (670) of the loan debt had an average variable interest rate of 1.66 percent (1.64). A change in the interest rate of one percentage point would have an impact on the cost of the Group's borrowing of approximately SEK 6m (5) after tax.

	31 Dec. 2019					31 C	Dec. 2018	3			
SEKm	USD	HUF	CAD	GBP	EUR		USD	HUF	CAD	GBP	EUR
Nominal amount	Net bought	Net bought	Net sold	Net sold	Net sold	Nominal amount	Net bought	Net bought	Net sold	Net sold	Net sold
Falling due in 2019	66	44	75	54	60	Falling due in 2018	94	54	64	28	188
Average exchange rate	9.63	0.0322	7.29	12.17	10.60	Average exchange rate	8.91	0.0315	6.87	11.46	10.29
Hedging of flows						Hedging of flows					
> 12 months	-	_	_	_	_	> 12 months	_	_	_	_	_
Average exchange rate	-	-	-	-	-	Average exchange rate	-	-	-	-	-

Credit risk

Credit risk arises when one party to the transaction is unable to fulfil its obligations and consequently causes a loss to the other party. The risk of customers defaulting on payment for delivered products is minimised by thorough checking of new customers and monitoring of payment practice among existing customers as well as any credit insurance.

The Group's accounts receivable totalled SEK 648m (700) at 31 December, and are recognised in the amounts expected to be paid. Haldex's customers consist primarily of vehicle manufacturers, other system and component manufacturers and aftermarket distributors in the automotive industry. The geographical distribution of accounts receivable largely corresponds to sales per region. In 2019, no individual customer accounted for more than 10 percent of sales. The Group's bad debt losses usually amount to less than 0.1 percent of sales.

Accounts receivable	31 Dec. 2019	31 Dec. 2018
Accounts receivable not overdue or impaired	579	584
Overdue 1-30 days and not impaired	71	103
Overdue 31-60 days and not impaired	12	12
Overdue > 60 days and not impaired	5	19
Accounts receivable subject to impairment	-18	-19
Accounts receivable	648	700

Provisions for bad debts have changed as follows:

Provision for bad debts	2019	2018
Provision at 1 January	-19	-17
Impairments for expected losses	_	-
Realisation of impairment against loss recorded	_	_
Reversed impairments	-	-
Translation of foreign currency	1	-2
Provision at 31 December	-18	-19

The credit risk associated with financial assets is managed in accordance with the financial policy. The risk is minimised by measures such as limiting investments to interest-bearing instruments with low risk and high liquidity, and by having a maximum limit for the amount invested with particular counterparties and checking credit ratings. In order to further reduce risk, framework agreements on offsetting rights are entered into with most counterparties. The credit risk for derivatives in foreign currencies and interest-rate derivatives corresponds to their positive market values, i.e. potential gains on these contracts. The credit risk for foreign exchange contracts, before taking into account netting agreements, was equivalent to SEK 35m (14) at 31 December. After taking into account netting agreements, the credit risk is SEK +8m (+7). The equivalent risk for investments in credit institutions was SEK 315m (305), without taking any offsetting opportunities into account.

Financing risk

The Group's financing risk is the risk that Haldex will not be able to raise new loans or finance existing loans. This risk is reduced by the fact that the financial policy specifies that raised loans must have long maturities. The total liability must have an average remaining maturity of at least one year. As of 31 December 2019, 76 percent (100) of the loans had a maturity of more than one year. The maturity structure was as follows: 24 percent in 2020, 76 percent in 2021. See Note 29, page 72.

Liquidity risk

Liquidity risk, that is to say the risk of the Group's immediate capital needs not being possible to meet, is limited by sufficient cash and cash equivalents and granted but unused credit facilities that can be used without conditions. The goal according to the financial policy is for cash and cash equivalents and available long-term credit facilities to total at least 5 percent of net sales. These funds totalled SEK 929m (1,072) at year-end, equivalent to 18 percent (21) of net sales.

Nominal value	31 Dec. 2019	31 Dec. 2018
Syndicated loan	EUR 90m	EUR 90m
Bond loan	SEK 270m	SEK 270m

The syndicated loan expires in April 2021, and the bond loan expired in January 2020. Work is consequently in progress to renew funding.

Haldex's ambition is to negotiate the new funding in an agreement with a syndication that includes both a fixed loan component and a credit facility that can be used if necessary. It is estimated that the total level of funding should be around SEK 1,500m given the investment needs that Haldex faces linked to the developments in electrification and autonomous vehicles taking place in the industry.

A first step has been to replace the bond loan with a bilateral loan from Svensk Exportkredit until the end of May 2020 in order to be coordinated with the completion of other long-term funding.

Discussions with both existing and new lenders are taking place on what the terms of the new funding should look like. Haldex anticipates that new funding will be in place well before the end of 2020.

Capital risk

The Group's goal in terms of capital structure is to secure Haldex's ability to continue to operate, enabling the company to generate return to shareholders and value for other stakeholders, and to maintain an optimal capital structure so that the cost of capital can be reduced. In order to manage the capital structure, the Group may change the dividend paid to the shareholders, repay capital to the shareholders, issue new shares or sell assets to reduce liabilities.

Note 5. Segment reporting

Haldex is a group organised by function. The functional structure provides more focused support for the business, and services are shared between the different product lines as well as sales and distribution channels.

Haldex's operations are a reporting segment, and the financial information is analysed and reviewed by the most senior executive decision makers as a segment in assessing the Group's results.

Air Controls and Foundation Brake are the Group's two major product lines. Air Controls develops and manufactures products to improve the safety and driving characteristics of brake systems, such as treatment and dehumidifying of compressed air, valves, and ABS and EBS. Foundation Brake develops and manufactures products for wheel ends, such as disc brakes, brake adjusters for drum brakes and actuators. However, since the two product lines have similar operations, customers and long-term operating margins, the two product lines are presented and evaluated as a single segment.

The ten largest customers account for around a third of sales, but no individual customer accounts for more than 10 percent. The location of customers is the basis for sales classified by geographical area. Information regarding the assets in the segment and investments for the period is based on geographical areas that are grouped according to where the assets are located.

Net sales per product line

	2019	2018	Change nominal	Change currency-adjusted
Air Controls	2,185	2,111	4%	-2%
Foundation Brake	2,966	3,008	-1%	-6%
Total	5,151	5,119	1%	-5%

Classification by geographical area

2019	North America ¹⁾	Europe ^{2,3)}	Asia and Middle East	South America	Total
Net sales	2,659	1,698	586	208	5,151
Assets	1,623	2,004	672	114	4,413
Investments	117	127	26	3	273

2018	North America ¹⁾	Europe ^{2,3)}	Asia and Middle East	South America	Total
Net sales	2,432	1,811	708	168	5,119
Assets	1,373	1,622	590	104	3,689
Investments	62	157	91	3	313

¹⁾ Largely made up of the United States.

²⁾ Of which net sales to Sweden total SEK 32m (35).

³⁾ Of which total assets in Sweden total SEK 1,305m (1,078).

Note 6. Non-recurring items

Operating profit includes non-recurring items presented below. All are recognised under the heading Other operating income and operating expenses in the income statement classified by function.

	2019	2018
Operating profit, including non-recurring		
items	105	255
Restructuring expenses	-204	
Expenses related to the acquisition process	-8	4
Product-related warranty (see Note 3)		-54
Operating profit, excl. non-recurring items	317	305

Note 7. Expenses by nature

	2019	2018
Direct material expenses incl. change in stocks	2,871	2,895
Employee benefit expenses	1,155	1,076
Depreciation and amortisation (see Notes 16 and 17)	237	136
Other operating income and operating expenses	783	757
Total	5,046	4,864

Note 8. Government support

	2019	2018
Compensation for development work	7	5
Compensation for exports from India	8	5
Total	15	10

Note 9. Information on remuneration of senior executives

		2019			2018	
Amounts in thousands of SEK	Basic salary incl. benefits/Board fees	Variable remunera- tion [*]	Pension benefits	Basic salary incl. benefits/Board fees	Variable remunera- tion [*]	Pension benefits
Board of Directors						
(6 members, of whom 2 women)	•					
Jörgen Durban (Chairman from May 2017)	800	_	-	750	_	-
Helene Svahn (until May 2019)	100	_	-	375	_	-
Bernd Gottschalk (from May 2019)	350	_	-	_	_	-
Markus Gustafsson (from May 2019)	300	_	_	_	_	-
Mikael Thunved (from May 2019)	350	_	-	_	_	-
Ulrika Hagdahl (until May 2019)	-	_	-	375	_	-
Ulf Ahlen (until May 2019)	_	_	-	350	_	-
Johan Gileus (until May 2019)	_	_	-	400	_	-
Total	1,900	-	-	2,250	-	-
Chief Executive Officer						
Helene Svahn (from July 2019)	1,895	200	972	-	_	-
Åke Bengtsson (until May 2019)	1,480	_	493	3,606	672	3,438
Total	3,375	200	1,465	3,606	672	3,438
Other senior executives (Group Management)						
9 (11) persons, of whom 2 (2) women as of 31 December	23,200	3,551	4,612	20,268	5,566	5,194
Total	26,575	3,751	6,077	23,874	6,238	8,632

* In the previous year there was a decrease of SEK 172 thousand pertaining to share-related remuneration.

Remuneration of the Board

The 2019 Annual General Meeting resolved that fees be paid to the Board in the sum of SEK 700 thousand for the Chairman and SEK 300 thousand for each of the other members who are not employees of the company. As remuneration for committee work, the Chair of the Audit Committee is to receive SEK 100 thousand and a member SEK 50 thousand. The Chair of the Remuneration Committee is to receive SEK 100 thousand and a member SEK 50 thousand.

Guidelines

Remuneration for senior positions at Haldex is based on two main portions. One part is fixed monthly salary and the other part is variable salary. The variable portion is divided into a one-year plan, Short Term Incentive (STI), and a three-year plan, Long Term Incentive (LTI). The decision-making process to establish, review and implement the guidelines is handled through the Remuneration Committee, which has been re-established with effect from October 2019. In order to manage and avoid conflicts of interest regarding remuneration, the CEO and EVP HR must approve all adjustments.

Fixed salary is based on what responsibility and impact the position has with regard to finance, decisions, strategy, global or local organisation. Salary level is compared with the external market median for equivalent positions to ensure that the salary is market-based. All employees follow the same pay-setting, i.e. through valuation of service and a market-based salary is then set.

The purpose of variable salary is to create motivation to achieve the set targets and fulfil the business strategy. The structure of the STI and LTI plans is decided by the Board and the Compensation Committee. The LTI plan also has to be approved at the AGM. Variable salary on a one-year basis (STI) is based on three targets that are set to support the company's strategy and goals. The maximum outcome is 50 percent of annual salary. The targets are:

- Sales growth
- EBITDA%
- ROCE improvement

Variable salary on a three-year basis (LTI) is based solely on ROCE. The maximum outcome for this portion is 50 percent of annual salary.

The LTI plan that ran during 2019 is LTI2018. In brief, LTI2018 means that if certain performance targets are achieved over a threeyear period, participants in LTI may be awarded variable remuneration at the beginning of 2021 that will be awarded in cash. No new active LTI plan was decided for 2019 during the 2019 AGM.

For members of Group Management, severance pay is paid in accordance with the guidelines for remuneration of senior executives that have been adopted by the Board of Directors. This means that in the event of termination by the company, the period of notice for the CEO and Group Management is 6 months. In addition, in the event of termination by the company, the CEO and Group Management is entitled to severance pay equivalent to 6 months' salary. Upon termination by the CEO, no severance payment is made.

Incentive programmes

The AGM decides on incentive programmes for senior executives and key personnel. The programme that ran in 2019 is LTI2018. In brief, LTI2018 means that if certain performance targets are achieved over a three-year period, participants in LTI may be awarded variable remuneration at the beginning of 2021 that will be awarded in cash. Deferred variable remuneration according to LTI is not pensionable. For information on accounting for share-related remuneration in the form of performance rights, see Note 10 on page 65.

Note 10. Share-related remuneration

The Annual General Meeting resolves on incentive programmes for senior executives and key personnel. The programme that is sharerelated and ran in 2018 is the incentive programme LTI2014. The 2018 AGM resolved on the incentive programme LTI2018 which is not, however, share-related. In brief, LTI2018 means that if certain performance targets are achieved over a three-year period, participants in LTI may be awarded variable remuneration at the beginning of 2021 that will be awarded in cash. The 2019 AGM did not adopt any resolution on a new active LTI plan for 2019.

Note 11. Employees and remuneration

	Women	Men	Total 2019	Women	Men	Total 2018
Sweden	52	193	245	60	171	231
					•	
United States	130	320	450	149	357	506
Mexico	117	255	372	122	275	397
Hungary	113	149	262	127	169	296
China	45	203	248	47	239	286
India	26	161	187	28	175	203
Germany	22	78	100	23	80	103
United Kingdom	14	78	92	13	62	75
Brazil	19	59	78	22	43	65
France	30	45	75	29	48	77
Canada	6	16	22	6	19	25
Poland	2	7	9	2	7	9
Italy	4	4	8	4	4	8
Spain	3	4	7	3	4	7
South Korea	2	5	7	1	6	7
Austria	0	3	3	2	3	5
Belgium	0	3	3	1	4	5
Russia	1	2	3	1	2	3
Australia	0	1	1	0	1	1
Total	586	1,586	2,172	640	1,669	2,309

		2019			2018	
	Salaries and benefits	Social security contribu- tions	Of which pension expenses	Salaries and benefits	Social security contribu- tions	Of which pension expenses
Haldex	859	249	43	783	241	36

For remuneration of senior executives, see Note 9 on page 64. Of Group pension expenses in operating profit, SEK 36m (30) is related to defined-contribution plans and SEK 7m (6) is related to defined-benefit plans. For more information on Haldex defined-benefit pension plans, see Note 30, page 73-74.

Note 12. Remuneration of auditors Note 15. Tax

	2019	2018
Öhrlings PricewaterhouseCoopers AB and network		
Auditing engagements	6	5
– of which Öhrlings PricewaterhouseCoopers AB	3	2
Auditing activities in addition to auditing engagements	0	0
Tax advice	1	1
– of which Öhrlings PricewaterhouseCoopers AB	0	0
Other services	0	0
Total	7	6

	2019	2018
Current tax	-41	-33
Deferred tax	-15	-33
Total	-56	-66

Tax on the Group's profit before tax differs from the theoretical amount that would result from a weighted average tax rate on profit for the Group companies, as follows:

Reconciliation of effective tax rate	2019	2018
Profit before tax	61	219
Tax according to current tax rate in Sweden	21%	21%
Differences in tax rates in different countries of operation	27%	9%
Non-deductible expenses	10%	7%
Non-taxable income	-7%	-8%
Tax attributable to previous years	26%	-3%
Use of previously unrecognised loss carry- forwards	0%	-5%
Remeasurement of deferred tax/unrecognised tax assets attributable to loss carry-forwards	0%	2%
Tax reform in the United States	-	6%
Restructuring in Germany	32%	-
Other taxes	-18%	1%
Effective tax rate	91%	30%

Note 13. Depreciation

2019	2018
141	95
25	3
41	20
30	18
237	136
	25 41

Note 14. Financial income and expenses

	2019	2018
Interest income	14	7
Interest expenses	-32	-10
Interest on pension liabilities (see Note 30)	-11	-12
Interest on lease liability (see Note 18)	-13	
Other financial income and expenses	-2	-21
Total	-44	-36

The Group's tax expense totalled SEK 56m (66). The underlying tax rate for the year is 91 percent, which is to be compared with a tax rate of 30 percent for the previous year.

The income tax that is recognised directly against other comprehensive income/equity during the year is as follows:

	2019	2018
Deferred tax		
Remeasurement of pension obligation	14	6
Change in hedging reserve	-3	-4
Exchange rate differences	2	5
Total	13	7

Note 16. Intangible assets

	Goodwill	Patents and other intangible assets	Capitalised development expenses	Total
1 January 2018				
Acquisition cost	398	71	403	872
Accumulated amortisation	_	-70	-253	-323
Carrying amount	398	1	150	549
1 January-31 December 2018				
Opening carrying amount	398	1	150	549
Translation of foreign currency	21	_	_	21
Investments	_	1	29	30
Capitalised expenses	_	_	69	69
Sales/disposals	_	_	_	-
Depreciation	_	_	-5	-5
Closing carrying amount	419	2	243	664
31 December 2018				
Acquisition cost	419	72	504	995
Accumulated amortisation	_	-70	-261	-331
Carrying amount	419	2	243	664
1 January-31 December 2019				
Opening carrying amount	419	2	243	664
Translation of foreign currency	17	_	-3	14
Investments	_	_	28	28
Capitalised expenses	_	_	107	107
Sales/disposals	-	-	-1	-
Reclassifications	-	_	_	-
Depreciation	-	_	-12	-12
Closing carrying amount	436	2	362	800
31 December 2019				
Acquisition cost	436	72	526	1,034
Accumulated amortisation	_	-70	-164	-234
Carrying amount	436	2	362*	800

Goodwill and intangible assets that are subject to amortisation are measured in accordance with the policies described in Notes 2 and 3. For a description of the breakdown of amortisation by function in the income statement, see Note 13.

*) Capitalised development expenses consist of product development at SEK 224m (125) and development of IT systems at SEK 138m (118).

Note 17. Property, plant and equipment

Buildings	Land and land improve- ments	and other	Equipment, tools, fixtures and fittings	Construction in progress and advance payments	Total excluding Rights of use assets	Rights of use assets	Total
191	15	1,233	775	175	2,389	•	2,389
-130	-6	-968	-696	-3	-1,803		-1,803
61	9	265	79	172	586		586
61	9	265	79	172	586		586
3	-	12	3	5	23		23
3	3	186	66	25	283		283
-	-	-	-	-	-	•	-
-	-	-1	-1	-6	-8		-8
-9	_	-83	-39	-	-131	•••••••	-131
-	_	-	-	-	_	•	_
58	12	379	108	196	753		753
208	18	1,433	845	199	2,703		2,703
-150	- 6	-1,054	-737	- 3	-1,950	•	-1,950
58	12	379	108	196	753		753
58	12	379	108	196	753	413	1,166
1	_	5	3	4	13	14	
9	_	80	48	108	245		322
_	-	-1	_	_	-1	-17	-18
_	-	79		-87	-	-	_
- 9	_	-86	-54	-	-149	-75	-224
-	_	-	-	-	_	_	-
59	12	456	113	221	861	412	1,273
223	18	1,621	801	225	2,888	483	3,371
164		1 1/25			2 0 2 7	74	2 000
					,		-2,098 1,273
	191 -130 61 3 3 3 - - - - - - - - - - - 58 - - - 58 - - - -	improvements 191 15 -130 -6 61 9 61 9 3 - 3 3 - -	Buildings improvements technical investments 191 15 1,233 -130 -6 -968 61 9 265 3 -1 12 3 3 186	Buildings improvements technical fixtures and fittings 191 15 1,233 775 -130 -6 -968 -696 61 9 265 79 3 - 12 3 3 3 186 666 - - - - 3 3 186 666 - - - - 9 - 83 -39 - - - - - 9 - 83 -39 - 9 - 83 -39 - 208 18 1,433 845 -150 -6 -1,054 -737 58 12 379 108 1 - 5 3 9 - 80 48 - - - - 9 - 80 48<	Buildings improvements fixtures and fittings and advance payments 191 15 1,233 775 175 -130 -6 -968 -696 -3 61 9 265 79 172 3 - 12 3 5 3 3 186 66 25 - - - - - 9 - 83 -39 - - - - - - 9 - 83 -39 - 9 - 83 -39 - 10 -1 -1 -6 - 9 - 83 -39 - 208 18 1,433 845 199 -150 -6 -1,054 -737 -3 58 12 379 108 196 1 - 5 3 4 </td <td>improvements technical investments fixtures and fittings and advance payments Rights of use assets 191 15 1,233 775 175 2,389 -130 -6 -968 -696 -3 -1,803 61 9 265 79 172 586 3 - 12 3 5 233 3 3 186 666 25 283 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -<td>improvements technical investments fixtures and fittings and advance payments Rights of use assets Rights of use assets 191 15 1,233 775 175 2,389 -130 -6 -968 -696 -3 -1,803 61 9 265 79 172 586 3 - 122 3 5 23 3 3 186 66 25 283 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -</td></td>	improvements technical investments fixtures and fittings and advance payments Rights of use assets 191 15 1,233 775 175 2,389 -130 -6 -968 -696 -3 -1,803 61 9 265 79 172 586 3 - 12 3 5 233 3 3 186 666 25 283 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - <td>improvements technical investments fixtures and fittings and advance payments Rights of use assets Rights of use assets 191 15 1,233 775 175 2,389 -130 -6 -968 -696 -3 -1,803 61 9 265 79 172 586 3 - 122 3 5 23 3 3 186 66 25 283 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -</td>	improvements technical investments fixtures and fittings and advance payments Rights of use assets Rights of use assets 191 15 1,233 775 175 2,389 -130 -6 -968 -696 -3 -1,803 61 9 265 79 172 586 3 - 122 3 5 23 3 3 186 66 25 283 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

Group property, plant and equipment is depreciated and measured in accordance with the policies described in Note 2. For information on the breakdown of depreciation by function, see Note 13.

Recognised amounts in the balance sheet

	2019	1 Jan. 2019
Assets with right of use		
Buildings	392	390
Vehicles	19	19
Other	1	4
Total assets with right of use	412	413
Lease liabilities		
Current lease liabilities (included in Current interest-bearing liabilities)	125	69
Non-current lease liabilities (included in Non-current interest-bearing liabilities)	298	344
Total lease liabilities	423	413
Additional rights of use in 2019 totalled	78	

Recognised amounts in the income statement

	2019
Amortisation of rights of use	
Buildings	-61
Vehicles	-13
Other	-1
Total Amortisation of rights of use	-75
Other expenses in the income statement	
Interest expenses (included in Interest expenses)	-13
Expenses attributable to short-term lease contracts and lease contracts for which the underlying asset is of low value (included in Selling expenses and Administrative expenses)	-1
Total other expenses in the income statement	-14
Total cash flow for lease contracts	-76

For adjustments recognised on transition to IFRS 16 at 1 January 2019, as well as information on the Group's accounting policies regarding leases, see Note 2 Summary of significant accounting policies.

Note 19. Financial assets

	31 Dec. 2019	31 Dec. 2018
Participating interests in associated companies	-	_
Other participating interests	-	-
Other non-current receivables	23	23
Total	23	23

Note 20. Deferred income tax

Deferred tax assets and tax liabilities are offset when there is a legal right of offset for current taxes and when these relate to taxes charged by a single tax authority and pertain to either the same or different tax-payers, where there is an intention to settle the balances through net payments.

Gross changes in deferred taxes are as follows:

	2019	2018
1 January	119	147
Recognition in the income statement (Note 15)	-14	-34
Tax recognised in equity (Note 15)	-3	-1
Tax recognised in other comprehensive income (Note 15)	14	0
Translation of foreign currency	3	7
31 December	119	119

Deferred tax assets and tax liabilities, without taking account of offsets made within the same tax jurisdiction, are shown below:

2010

	Ass	ets	Liabi	lities	Net	
	2019	2018	2019	2018	2019	2018
Loss carry-forwards	103	94	0	0	103	94
Provisions	19	12	0	0	19	12
Pensions and similar obligations	67	50	0	0	67	50
Acquisition-related surplus values	0	0	9	9	-9	-9
Leases	2	0	0	0	2	0
Other	-12	14	51	42	-63	-28
Deferred tax assets/tax liabilities, net	179	170	60	51	119	119
Offsetting of tax receivables/tax liabilities	-48	-25	-48	-25		
Total	131	145	12	26	119	119

Deferred tax assets are recognised only for tax loss carry-forwards to the extent that it is likely that they can be utilised through future taxable profits. On the balance sheet date, there are also tax loss carry-forwards, for which a deferred tax asset is not recognised. The potential of these loss carry-forwards is equivalent to a deferred tax asset of approximately SEK 20m (7). All recognised loss carry-forwards fall due after more than ten years.

Note 21. Derivative instruments

	31 Dec.	2019	31 Dec. 2018		
	Assets	Liabilities	Assets	Liabilities	
Currency futures – cash flow hedges	2	2	4	1	
Currency futures – at fair value through profit or loss	1	0	1	1	
Currency swaps – at fair value through profit or loss	44	32	17	13	
Total derivative instruments according to the balance sheet	47	34	22	15	
Financial instruments that are covered by a framework agreement on offset but are not recognised net	-29	-29	-13	-13	
Total, net	18	5	9	2	

Gains and losses in equity on current currency futures will be transferred to the income statement at various times during 2020. Gains and losses in equity on current currency forward contracts that are recognised in other comprehensive income during 2018 have been reversed to the income statement in 2019. Financial instruments that are recognised at fair value in the balance sheet belong to level 2 of the fair value hierarchy, which means that their fair value is determinable, directly or indirectly, from observable market prices. There are no inefficiencies in recognising cash flow hedges.

Note 22. Financial instruments at fair value

The Group holds both derivative instruments and financial assets that can be sold, which are measured at fair value. The financial instruments that are classified as available-for-sale financial assets are recognised at fair value according to level 1 of the fair value hierarchy, i.e. at prices quoted on an active market. Derivative instruments are recognised at fair value in the balance sheet based on level 2 of the fair value hierarchy, which means that their fair value is determined, directly or indirectly, from observable market inputs. No transfer occurred between levels in the measurement hierarchy during the year.

The table below shows the Group's assets and liabilities measured at fair value at the balance sheet date based on the principles described above:

		31 Dec. 2019		31 Dec. 2018			
	Measurement based on quoted prices on an active market (Level ¹)	Measurement based on observable market prices (Level ²)	Measurement based on non-observa- ble market prices (Level ³)	Measurement based on quoted prices on an active market (Level ¹)	Measurement based on observable market prices (Level ²)	Measurement based on non-observa- ble market prices (Level ³)	
Available-for-sale financial assets	_	_	_	-	_	-	
Derivative instruments	-	13	-	-	7	-	
Total	-	13	-	-	7	-	

With regard to the Group's other financial instruments, these are recognised as follows: Haldex currency credit agreements and bond loans are subject to a variable interest rate of 1–6 months, and fair value therefore corresponds to book value. With regard to other financial assets and liabilities, e.g. accounts receivable, other current receivables, cash and cash equivalents and accounts payable, fair value is considered to correspond to book value.

Note 23. Assets in the balance sheet

			31 D	ec. 2019			31 Dec. 2018					
	Non-fi- nancial assets	measured	through profit or	Deriva- tives used for hedging purposes	Assets measured at fair value through other comprehen- sive income	Total	Non-fi- nancial assets	measured at	through profit or		Assets measured at fair value through other comprehen- sive income	Total
Fixed assets												
Intangible assets and Property, plant and equipment	2,073					2,073	1,417					1,417
Financial assets						0		•		-		0
Deferred tax assets	131			-		131	145					145
Other financial assets		23				23		23				23
Current assets	•	•		•								
Inventories	815					815	709					709
Current receivables											•	
Accounts receivable		648		•		648		699		-		699
Other current receivables	149	212		-		361	114	255				369
Derivative instruments			45			45		•	18	-		18
Derivative instruments - hedge accounting				2		2				4		4
Cash and cash equivalents		315				315		305				305
Total	3,168	1,198	45	2		4,413	2,385	1,282	18	4		3,689

Haldex's accounts receivable and other current receivables run at variable interest rates with a maturity of 1-6 months, which means that book values correspond essentially to fair values. The book value of non-current receivables is in agreement with fair value.

Note 24. Liabilities in the balance sheet

	31 Dec. 2019						31 Dec. 2018			
	Non-fi- nancial liabili- ties	Liabilities measured at amortised cost	Liabilities measured at fair value through profit or loss	Derivatives used for hedging purposes	Total	Non-fi- nancial liabili- ties	Liabilities measured at amortised cost	Liabilities measured at fair value through profit or loss	Derivatives used for hedging purposes	Total
Non-current liabilities										
Deferred tax liabilities	12				12	16				16
Pensions and similar obligations	562				562	455				455
Interest-bearing liabilities		749			749		572			572
Other non-current liabilities		23			23		19			19
Current liabilities							•			
Interest-bearing liabilities		449			449		10			10
Accounts payable		518	•		518		595		•	595
Derivative instruments		-	31		31		•	14		14
Derivative instruments - hedge accounting				3	3				1	1
Other provisions	204		•		204	67	•	•	•	67
Other current liabilities	157	168			325	155	163			318
Total	935	1,907	31	3	2,876	693	1,359	14	1	2,067

Haldex's current and non-current liabilities, credit facilities and bond loans are subject to variable interest rates with a maturity of 1-6 months, which means that book values essentially correspond to fair values.

Note 25. Liquidity

The table below shows Haldex's liquid inflow and outflow based on the balance sheet at year-end. The liquid inflow and outflow is specified for the intervals within one year, 1-2 years and later than 2 years.

	3	81 Dec. 2019		31 Dec. 2018			
	<1 year	>1< 2 years	> 2 years	<1 year	>1< 2 years	> 2 years	
Non-current interest-bearing liabilities incl. interest	-6	-452		-6	-273	-303	
Current interest-bearing liabilities including interest	-323			-64			
Lease liabilities, not discounted	-77	-64	-277				
Accounts payable	-518	••••••	•	-595			
Derivative instruments	-34			-15			
Total	-958	-516	-277	-680	-273	-303	
Accounts receivable	648	_	-	699	_	_	
Derivative instruments	47	_	-	22	_	_	
Net flow	-263	-516	-277	41	-273	-303	
Derivative instruments	•		•	••••••			
-outflow	3,041	-	-	3,341	-	-	
-inflow	3,043	-	-	3,332	-	-	

Haldex's credit facilities and bond loans run at variable interest rates with a maturity of 1-6 months, which means that book values essentially correspond to fair values. Available unused credit facilities at year-end totalled SEK 616m (767). Estimated interest consists of the equivalent value in SEK based on the exchange rates as of 31 December and the future-oriented current interest rates for the liability. Liabilities related to IFRS16 Leases have been excluded in an amount of SEK 298m for non-current interest-bearing liabilities and SEK 125m for current interest-bearing liabilities.

Note 26. Inventories

	31 Dec. 2019	31 Dec. 2018
Raw materials	540	419
Semi-finished products	22	21
Finished products	253	269
Total	815	709

Note 28. Cash and cash equivalents

	31 Dec. 2019	31 Dec. 2018
Bank balances and cash	315	305
Total	315	305

Cash and short-term deposits of SEK 294m (222) are held in Brazil, China and Korea and are subject to local currency control regulations. These local currency control regulations impose restrictions on moving capital from the country, other than through normal distribution, which may entail a tax expense for the Group.

Note 27. Other current receivables

	31 Dec. 2019	31 Dec. 2018
Tax receivables	128	126
Prepaid expenses and accrued income		
Rents and insurance	18	16
Other prepaid expenses	1	1
Collateral receivable	42	109
Other current receivables	172	132
Total	361	368

Note 29. Non-current interest-bearing liabilities

	31 Dec. 2019	31 Dec. 2018
Syndicated loan	450	300
Bond loan	-	270
Total	450	570

Liabilities pertaining to IFRS16 Leases have been excluded in an amount of SEK 299m.

	20	19	2018		
	Nominal	Maturity	Nominal	Maturity	
Syndicated loan	EUR 90m	21.04.21	EUR 90m	21.04.21	
Bond loan			SEK 270m	20.01.20	
Note 30. Pensions and similar obligations

Haldex has defined-benefit pension plans for certain units, and this relates primarily to Sweden, Germany, France and the United Kingdom. The defined-benefit pension plans are mainly based on final salary. There are also defined-contribution plans in these countries. Subsidiaries in other countries within the Group mainly use defined-contribution plans. The UK pension system has a minimum funding requirement. Based on a financing valuation carried out every three years, the company and the fund managers agree on a plan for financing up to the minimum requirement.

Reconciliation of interest-bearing pension liabilities

	2019	2018
Defined-benefit obligations at 1 January	746	742
Vested pensions during the period	7	7
Interest on obligations	20	18
Benefits paid	-22	-22
Reduced commitment through transfer to defined-contribution plan	0	0
Contributed funds	0	0
Effects of reductions and adjustments	0	0
Revaluations due to changes in demographic assumptions	-3	2
Remeasurements due to changes in financial assumptions	130	-18
Experience-based remeasurements	-4	3
Translation of foreign currency	15	14
Defined-benefit commitments at 31 December	889	746
Fair value of plan assets at 1 January	295	306
Expected return on plan assets	9	8
Payment from assets	-11	-16
Effects of reductions and adjustments	1	0
Contributed funds	9	9
Measurement gains/losses on plan assets	36	-18
Translation of foreign currency	18	6
Fair value of plan assets at 31 December	357	295

Reconciliation of interest-bearing pension liabilities

	2019	2018
Pension liability (net) at 1 January	455	443
Pension expense	18	17
Benefits paid	-22	-22
Reduced liability through transfer to defined-con- tribution plan	0	0
Contributed funds	-9	-9
Payment from assets	11	16
Effects of reductions and adjustments	-1	0
Actuarial gains/losses recognised in other com- prehensive income	98	-2
Translation of foreign currency	12	12
Net amount recognised in the balance sheet		
at 31 December	562	455

Amounts recognised in the income statement

	2019	2018
Vested pensions during the period	-7	-7
Interest on obligations	-20	-18
Expected return on plan assets	9	8
Total	-18	-17

Amounts recognised in other comprehensive income

	2019	2018
Remeasurements of pension obligation		
of which changes in demographic assumptions	3	-2
including changes in financial assumptions	-130	25
of which experience-based adjustments	4	-3
Measurement gains (losses) on plan assets	36	-18
Total	-87	2

Note 30 cont. Pensions and similar obligations

Defined-benefit pension commitments and plan assets by country

2019	Sweden	Germany	United Kingdom	Other	Total
Defined-benefit obligation	313	137	453	16	919
Plan assets	43	_	306	8	357
of which shares	5	_	_	_	5
including interest-bearing securities	35	_	64	_	99
of which diversified growth funds	_	_	241	_	241
including properties	_	_	_	_	-
including cash and cash equivalents	3	_	1	8	12
Net amount recognised in the balance sheet	270	137	147	8	562

2018	Sweden	Germany	United Kingdom	Other	Total
Defined-benefit obligation	250	128	355	16	749
Plan assets	42	_	244	8	294
of which shares	5	_	_	_	5
including interest-bearing securities	34	_	34	_	68
of which diversified growth funds	_	_	206	_	206
including properties	_	_	_	_	_
including cash and cash equivalents	3	_	4	8	15
Net amount recognised in the balance sheet	208	128	111	8	455

Life expectancy after retirement at age 65

	Sweden	Germany	United Kingdom
Male	22	20	21
Female	24	24	22

Actuarial assumptions

2019, Percent	Sweden	Germany	United Kingdom
Discount rate and expected return on plan assets, 1 January 2019	2.5	2.0	2.9
Discount rate and expected return on plan assets, 31 December 2019	1.5	1.1	2.0
Salary and wage increase	2.0	0.0	2.8
Inflation	2.0	1.8	3.5

2018, Percent	Sweden	Germany	United Kingdom
Discount rate and expected return on plan assets, 1 January 2018	2.7	1.6	2.6
Discount rate and expected return on plan assets, 31 December 2018	2.5	2.0	2.9
Salary and wage increase	2.0	0.0	2.8
Inflation	2.0	2.0	3.5

Average remaining maturity on the pension plan

	Sweden	Germany	United Kingdom
Year	17	14	19

The discount rate is based on first-class corporate bonds, or Swedish government bonds with a maturity corresponding to the estimated maturity of pension obligations. All pension plans consist of listed investments. A change in the discount rate of +/- 0.25 percent for each individual country has an impact on the present value of the Group's pension obligation of approximately SEK 39m (30).

Note 31. Other provisions

		2019		2018		
	Warranty reserves	Restructuring provisions	Total	Warranty reserves	Restructuring provisions	Total
1 January	74	7	81	86	9	95
Provisions	39	177	216	71	0	71
Utilisation	-78	-19	-97	-86	-2	-88
Translation of foreign currency	1	3	4	3	0	3
31 December	36	168	204	74	7	81

Warranty and restructuring provisions are made in accordance with the principles described in Note 3.

Note 32. Other current liabilities

	2019	2018
Tax liabilities	25	13
Accrued expenses and prepaid income		
Employee benefit expenses	106	109
Accrued interest	10	
Accrued discounts	7	
Other accrued expenses	157	171
Other current liabilities	20	13
Total	325	306

Note 33. Pledge assets and contingent liabilities

	2019	2018
Pledged assets	53	52
Bankers' bills China	24	146
Pension guarantee United Kingdom	126	139
Other contingent liabilities	3	3
Total contingent liabilities	153	288

Note 34. Acquisitions

No acquisitions in 2019.

Note 35. Transactions with related parties

The parent company is a related party to its subsidiaries. Transactions with subsidiaries take place on market terms. Senior executives are related parties to the parent company. Remuneration of senior executives is recognised in Note 9 on page 64. Other than these two types of related parties, there are no transactions with persons or companies that can be considered to be related parties.

Note 36. Events after the balance sheet date

Covid-19

At the time of publication of this annual report, the Covid-19 pandemic has spread globally. Although it is difficult to predict the long-term consequences of the pandemic, it is clear that it has now had a significant negative impact on the world economy. This, in turn, has affected the production volume of new trucks, buses and trailers and expectations are that the number of newly manufactured heavy vehicles will decrease by up to 30 percent by 2020 (April 7, 2020). The lower

production rates are expected to have a strong negative effect on Haldex sales to OEM. Also, the aftermarket is adversely affected as lower consumption and sluggish trade lead to fewer transports. However, the decline in the aftermarket is expected to be less sharp.

Covid-19 also affects the ability to conduct operations as local government decisions such as curfews and quarantine affect the entire supply chain, where Haldex as well as Haldex's customers and suppliers' operations are hampered in sourcing staff and materials for their operations.

Haldex has, at the time of publication of this report, taken a series of measures to counteract the negative effects of the pandemic. As previously announced, Haldex has, among other things, temporarily closed down the distribution center in Weyersheim for a period of two weeks during March and April 2020. Haldex decided to implement short-term working plan as of 30 March, affecting the majority of employees in Landskrona. The short-term working plan was extended at the end of April to last throughout May, with room for further extensions as long as Covid-19 continue to impact the operations negatively.

Given the prevailing exceptional circumstances. Haldex has, in order to further mitigate the negative effects of Covid-19, decided on a general savings program to ensure profitability.

Structural savings program yields SEK 100 million in annual savings

In addition to Corona-related measures, Haldex has decided to implement a long-term structural cost-cutting program that incorporates additional annual savings of SEK 100 million, streamlining operations to the market situation. The measures are aimed at reducing the longterm cost base and the number of employees.

Changes in the management team

CFO Andreas Larsson leaves Haldex in July and is succeeded by Lottie Saks, who will succeed as new CFO on June 1, 2020.

Vice President and EVP Operations & Supply Chain Staffan Olsson leaves Haldex in June 2020 and is succeeded by Peter Knauer as EVP Operations & Supply Chain.

EVP Human Resources Frida Wahlgren (EVP Human Resources) leaves Haldex in September 2020. The recruitment process of a replacement is in a final phase.

Directed new share issue and secured financing

On 10 May 2020 Haldex reached an agreement with the Company's lenders to extend the maturity of the existing syndicated credit facility of EUR 90 million and the existing short-term loan of SEK 270 million to April 2022 and to make certain adjustments to the terms of the loans regarding financial ratios and the interest rates. The agreement stipulated a provision of new equity which was solved concurrently as the Board of Haldex pursued the authorization given at the annual general meeting 2019. A total of approximately 4.4 million new shares were issued to AMF Pensionsförsäkring and AFA Försäkring. The new shares have been issued at a subscription price of SEK 35.56 per share, corresponding to the volume-weighted average price of the Company's share on Nasdaq Stockholm during the last five trading days prior to the board's resolution to issue new shares. Through the new share issue, the Company raises proceeds of approximately SEK 157.2 million before issue costs.

Through the new share issue, the number of shares and votes in the Company increases from 44,215,970 to 48,637,567 shares and votes and the share capital increases from SEK 221,079,850 to SEK 243,187,835. The new share issue entails a dilutive effect for existing shareholder of about 9 percent based on the total number of shares in the Company at the time of the new share issue.

Haldex intends to use the issue proceeds mainly to finance continued value-creating investments in new technology.

Parent Company income statement

Amounts in SEKm	Note	2019	2018
Net sales		125	96
Administrative expenses	4, 5, 13	-107	-76
Operating profit		18	20
Dividends from Group companies		55	50
Impairment of shares in subsidiaries		_	-100
Interest income	6	87	73
Interest expenses	6	-33	-21
Other financial items		-10	-2
Profit after financial items		117	20
Group contributions		-67	-59
Profit before tax		50	-39
Tax	12	_	-4
Net profit for the year		50	-43

Parent Company statement of comprehensive income

Amounts in SEKm Note	2019	2018
Net profit for the year	50	-43
Other comprehensive income	-	_
Total comprehensive income	50	-43

Parent Company balance sheet

Amounts in SEKm	Note	2019	2018
ASSETS			
Non-current assets			
Financial assets			
Shares in subsidiaries	7	1,721	1,721
Other shares and participating interests			
Non-current receivables subsidiaries	8	1,181	1,149
Other non-current receivables	8	28	28
Total non-current assets		2,930	2,898
Current assets			
Receivables from subsidiaries		1,133	1,084
Other current receivables	9	29	26
Derivative instruments	10	51	24
Cash and cash equivalents	10		
Total current assets		1,213	1,134
TOTAL ASSETS		4,143	4,032
EQUITY AND LIABILITIES			
Equity			
Restricted equity			
Share capital (44,215,970 shares with a quotient value of SEK 5)		221	221
Unrestricted equity			
Share premium reserve		378	378
Retained profits		496	590
Profit for the year		50	-43
Total equity		1,144	1,146
Provisions			
Pensions and similar obligations	13	35	36
Other provisions		18	18
Total provisions		53	54
Non-current liabilities			
Non-current interest-bearing liabilities	14	450	570
Liabilities to subsidiaries		338	332
Other non-current liabilities		-	-
Total non-current liabilities		788	902
Current liabilities			
Accounts payable		4	4
Liabilities to subsidiaries		1,657	1,776
Derivative instruments	10	37	21
Other current liabilities	15	461	129
Total current liabilities	1.5	2,158	1,930
TOTAL EQUITY AND LIABILITIES		4,143	4,032
Pledged assets		None	None
Contingent liabilities	16	397	378

Changes in the parent company's equity

	Restricted equity	Unrestrict	ed equity	
Amounts in SEKm	Share capital	Share premium reserve	Retained profits	Total
Opening balance at 1 January 2018	221	378	606	1,205
Profit for the year		•	-43	-43
Cash dividend			-24	-24
Share swap incentive programme		•	8	8
Closing balance at 31 December 2018	221	378	547	1,146
Opening balance at 1 January 2019	221	378	547	1,146
Profit for the year			50	50
Cash dividend		•	-51	-51
Share swap incentive programme		•		0
Closing balance at 31 December 2019	221	378	545	1,144

Parent Company cash flow statement

Amounts in SEKm	2019	2018
Cash flow from operating activities		
Profit before tax	50	-39
Reversal of non-cash items *	74	158
Cash flow from operating activities before changes in working capital	124	119
Change in working capital		
Current receivables	-52	-63
Current liabilities	125	-221
Change in working capital	73	-284
Cash flow from operating activities	197	-165
Cash flow from investing activities		
Investment in financial assets		
Change in non-current receivable	-32	-116
Disposal of shares and participating interests	-	_
Cash flow from investing activities	-32	-116
Cash flow from financing activities		
Change in interest-bearing liabilities	-120	300
Change in other liabilities	6	-3
Dividend to shareholders	-51	-24
Share swap incentive programme	-	8
Cash flow from financing activities	-165	281
Changes in cash and bank balances	0	0
		~
Cash and cash equivalents, opening balance	0	0
Cash and cash equivalents, closing balance	0	0
*Reversal of non-cash items		
Dividend - not liquidated	9	
Non-paid Group contributions (dividend from subsidiaries)	67	59
Impairment of shares in subsidiaries		100
Other	-2	-1
	74	158

Cash and cash equivalents includes an amount of SEK 237m (222) which cannot be used by the Group without paying withholding tax.

Notes

Note 1. General information

Haldex AB is the Parent Company of the Haldex Group. The head office functions, including the central financial functions, are performed by the Parent Company. Haldex AB (publ), corporate identity number 556010-1155, is a Swedish public limited company with registered

office in Landskrona in Sweden. The address of the head office is Haldex AB, Box 507, 261 24 Landskrona. Haldex shares are listed on the Nasdaq OMX Exchange Stockholm Stock Exchange, on the MidCap list.

Note 2. Summary of significant accounting policies

The parent company's annual financial statements have been prepared in accordance with the Swedish Annual Accounts Act and RFR 2.1 – Accounting for legal entities from the Swedish Financial Reporting Board. According to the provisions of RFR 2.1, the Parent Company must apply all EU-approved IFRS principles in the legal entity's financial statements as far as possible within the framework of the Annual Accounts Act and take into account the link between accounting and taxation. This recommendation specifies what exceptions to IFRS are allowed. It also contains the necessary supplementary information. The Parent Company applies the same accounting policies as the Group, with the exceptions set out below. The Parent Company reports pension obligations in accordance with the Pension Obligations Vesting Act. Adjustments in accordance with IFRS are made at Group level. Group contributions are recognised as appropriations.

Note 3. Average number of employees

	2019			2018		
	Women	Men	Total	al Women Men		
Sweden	9	13	22	4	8	12

Note 4. Salaries and other benefits

		2019				2018		
	Salaries and benefits		contri-	pension		Of which Board of Directors, CEO and senior executives	contri-	
Sweden	43	15	15	6	22	14	17	9

The Board consists of seven members (7), two of whom are employee representatives. For information on individual remuneration paid to them and to the CEO, see Note 9 in the consolidated financial statements. Remuneration to other senior executives, 8 persons (5), totalled SEK 11m (10), of which variable remuneration totalled SEK 1m (1). For further information on remuneration of senior executives, see Note 9 on page 64. Pension payments for other senior executives were SEK 3m (4) of the total pension expenses.

Note 5. Remuneration of auditors Note 6. Interest income and

	2019	2018
Öhrlings PricewaterhouseCoopers AB and network		
Auditing engagements	2	2
Tax advice	0	0
Total	2	2

Note 6. Interest income and interest expenses

	2019	2018
Interest income		
External interest income	11	0
Interest income Group companies	76	73
Total	87	73
Interest expenses		
External interest expenses	-26	-14
Interest expenses Group companies	-7	-7
Total	-33	-21

Note 7. Shares and participating interests

As of 31 December 2019, Haldex AB had direct ownership interests in the subsidiaries listed in Note 7. JSB Hesselman AB is the parent company of the wholly owned UK subsidiary Haldex Ltd. and the US subsidiary Haldex Inc. Haldex Ltd. is the parent company of the wholly owned UK subsidiary Haldex Ltd. and the US subsidiary Haldex Inc. Haldex Ltd. is the parent company of the wholly owned UK subsidiary Haldex Brake Products Ltd., which in turn is the parent company of Haldex España SA. Haldex Inc. is a holding company for the wholly owned US subsidiaries Haldex Brake Products Corp and Haldex Acquisition Corp, which in turn is the parent company of the Mexican subsidiary Haldex Products de Mexico S.A. de C.V. Haldex Hong Kong Co. Ltd. is a holding company for the wholly owned Chinese company Haldex Vehicle Products Co. Ltd.

Shares in subsidiaries	Corp. ID no.	Registered office	Participating interests	%	31 Dec. 2019	31 Dec. 2018
Haldex Brake Products AB	556068-2758	Landskrona	127,500	100	93	93
Haldex Halmstad AB	556053-6780	Landskrona	30,000	100	4	
	550055-0760		50,000			-
Haldex GmbH	-	Germany		100	51	51
Haldex Europe S.A	-	France	625,000	100	75	75
Haldex Ltd.		Canada		100	0	0
Haldex do Brasil Indústria e Comércio Ltda		Brazil		100	0	0
Haldex Sp.z.o.o.		Poland	30,000	100	3	3
Haldex N.V.		Belgium	4,399	100	1	1
Haldex Int Trading Co Ltd		China	-	100	0	0
Haldex Italia Srl		Italy	10,400	100	8	8
Haldex Korea Ltd.		South Korea	79,046	100	0	0
Haldex Financial Services Holding AB	556633-6136	Landskrona	1,000	100	0	0
Haldex Hungary Ktf		Hungary		100	74	74
Haldex Wien Ges mbH		Austria		100	7	7
Haldex India Ltd.		India		60	7	7
JSB Hesselman AB	556546-1844	Landskrona	1,000	100	855	855
Haldex Russia		Russia		100	0	0
Haldex Holding AB	556560-8220	Landskrona	23,079,394	100	458	458
Haldex Hong Kong Co Ltd.		Hong Kong		100	85	85
Haldex Brake Products Pty		Australia		100	0	0
Haldex Traction Holding II AB	556819-2271	Landskrona		100	0	0
Total					1,721	1,721

Change in shares and participating interests	Opening balance	impairment	Closing balance
2019	1,721	0	1,721
2018	1,721	0	1,721

Note 8. Non-current receivables

Note 9. Other non-current receivables

	31 Dec. 2019	31 Dec. 2018		31 Dec. 2019	31 Dec. 2018
Deferred tax assets	10	9	Tax receivables	3	12
Non-current receivables subsidiaries	1,181	1,149	Prepaid expenses	-	_
Other non-current receivables	18	19	Other current receivables	26	14
Total	1,209	1,177	Total	29	26

Note 10. Derivative instruments

	31 Dec	31 Dec. 2019		31 Dec. 2018	
	Assets	Liabilities	Assets	Liabilities	
Currency futures – at fair value through profit or loss	7	7	7	7	
Currency swaps - at fair value through profit or loss	44	30	17	14	
Total	51	37	24	21	

Gains and losses from forward exchange contracts and currency swaps are recognised on an ongoing basis in the income statement.

Note 11. Cash and cash equivalents Note 13. Pensions and similar

	31 Dec. 2019	31 Dec. 2018
Cash and bank balances	0	0
Total	0	0

Note 12. Taxes

	2019	2018
Profit before tax	50	-39
Theoretical tax	-11	8
Tax for non-deductible expenses	12	-11
Tax attributable to previous years	-1	-1
Total tax	0	-4

obligations

Pension obligations attributable to defined benefit plans

	2019	2018
Vested pensions during the period	0	0
Interest on obligations	-1	-1
Total pension expense	-1	-1

In addition to the pension expenses above, the Parent Company has income of SEK -2m (3). This relates to funding in a pension fund related to pension commitments to former senior executives.

Reconciliation of interest-bearing pension liabilities

	31 Dec. 2019	31 Dec. 2018
Opening balance, pension liabilities	36	32
Benefits paid	-4	-3
Pension expenses	3	7
Closing balance, pension liabilities	35	36

Of the pension liability, SEK 24m (22) is attributable to PRI/FPG and is covered by the Pension Obligations Vesting Act.

Note 14. Non-current interest-bearing liabilities

	31 Dec. 2019	31 Dec. 2018
Syndicated loan	450	300
Bond loan	-	270
Total	450	570

Haldex's credit facilities and bond loans run at variable interest rates with a maturity of 1-6 months, which means that book values essentially correspond to fair values. Available unused long-term credit facilities at year-end totalled SEK 489m (767). Estimated interest consists of the equivalent value in SEK based on the exchange rates at 31 December 2019 and the forward-looking current interest rates for the liability.

Maturity structure, years

	Total	0 – 1	1 – 3	3 – 5	> 5 years	Average interest rate
SEKm	450	-	450	_	-	1,276
Total	450	-	450	-	-	1,276
Calculated interest	8	6	2	_	_	
Total	458	6	452	0	0	-

Note 15. Other current liabilities

	31 Dec. 2019	31 Dec. 2018
Liability to credit institutions	370	62
Accrued employee benefit expenses	19	13
Impairment of current receivables	45	42
Other accrued expenses	9	6
Other current liabilities	18	6
Total	461	129

Note 16. Pledged assets and contingent liabilities

	31 Dec. 2019	31 Dec. 2018
Guarantees and warranties for subsidiaries	397	378

The Board of Directors and the CEO give an assurance that the annual accounts have been prepared in accordance with generally accepted accounting principles, that the consolidated accounts have been prepared in accordance with the international accounting standards referred to in Regulation (EC) No 1606/2002 of the European Parliament and of the Council of July 19, 2002 on the application of international accounting standards and present a true and fair view of the company's and the Group's financial position and results, and that the Directors' Report and the Group Directors' Report provide a true and fair view of the development of the company's and the Group's operations, financial position and results, and describe the significant risks and uncertainties that the company and the companies that are part of the Group face.

Landskrona, 19 May 2020

Jörgen Durban Chairman of the Board

Bernd Gottschalk Board member Markus Gustafsson Board member Helene Svahn Board member Mikael Thunved Board member

Per Holmqvist Employee representative Jahad Shako Employee representative

Helene Svahn President and CEO

Our audit report was submitted on 2 June 2020 Öhrlings PricewaterhouseCoopers AB

Magnus Willfors Authorised public accountant Auditor in charge Carl Fogelberg Authorised public accountant

Audit report

To the general meeting of the shareholders of Haldex AB, corporate identity number 556010-1155

REPORT ON THE ANNUAL ACCOUNTS AND CONSOLIDATED ACCOUNTS

Opinions

We have audited the annual accounts and consolidated accounts of Haldex AB for the year 2019. The annual accounts and consolidated accounts of the company are included on pages 43-84 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 parent company and the group as of 31 December 2019 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 2019 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 group.

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.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions.

Our audit activities

The focus and scope of the audit

We designed our audit by determining materiality and assessing the risks of material misstatement in the consolidated financial statements. In particular, we considered where the President and CEO and Board of Directors have made subjective judgements; for example, in respect of significant accounting estimates that involved making assumptions and considering future events that are inherently uncertain. As in all of our audits, we also addressed the risk of the Board of Directors' and President and CEO's override of internal controls, including consideration of whether there was evidence of bias that represented a risk of material misstatement due to fraud.

We tailored the scope of our audit in order to perform sufficient work to enable us to provide an opinion on the financial statements as a whole, taking into account the structure of the Group, the accounting processes and controls, and the industry in which the Group operates. On the basis of this, we determined the companies within the Group deemed to be significant and determined the audit activities to be performed as regards these companies. The Haldex Group is comprised of some 30 reporting units of which 15 units have been deemed, in varying degrees, to be significant. The units in the Group which are not seen to be significant have been audited by the Group audit team via a review. The majority of the units not included in the audit of the consolidated accounts are subject to a statutory audit in their respective countries.

The Haldex Group operates mainly outside Sweden, and we obtain reports from each local audit team in the global PwC network over the course of the year and in connection with our audit of the annual accounts. Each year, the Group audit team makes an assessment of the scope and focus that are required to ensure that an adequate and appropriate audit is performed from a Group perspective. The activities of the local audit team are governed and monitored by the central team. As part of this work, the Group audit team has visited Haldex's businesses in the United States, Germany and France for discussions with local management and PwC auditors.

The Group audit team has also performed an audit of the Parent Company, the consolidation, the annual accounts, and material assumptions and judgements.

Materiality

The scope of our audit was influenced by our application of materiality. An audit is designed to obtain reasonable assurance whether the financial statements are free from material misstatement. Misstatements may arise due to fraud or error. They are considered material if individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

Based on our professional judgement, we determined certain quantitative thresholds for materiality, including the overall materiality for the financial statements as a whole. These, together with qualitative considerations, helped us to determine the scope of our audit and the nature, timing and extent of our audit procedures and to evaluate the effect of misstatements, both individually and in aggregate on the financial statements as a whole.

Key audit matters

Key audit matters of the audit are those matters that, in our professional judgment, were most significant in our audit of the annual accounts and consolidated accounts of the current period. These matters were addressed in 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.

Key audit matter

How the key audit matter was addressed in our audit

Other provisions

For information on other provisions, see note 2 (summary of significant accounting policies), note 3 (significant estimates and judgements) and note 31 (Provisions). Provisions are an important area for Haldex's financial reports. Subscriptions that are reported in these areas refer to commitments for guarantee reserves and restructuring programs.

The single biggest provision is the restructuring programme reported due to the moving of production facilities in Germany and the US.

This area is greatly affected by estimates on future events executed by the company. Estimates on these areas are subjective and linked with uncertainty. In our audit, all provisions have been subject to review, but we have focused our review in particular on the assessment of the provisions regarding restructuring programs.

We have taken part of the management's calculations of costs for the restructuring program, sample checked these against evidence and appropriate basis, and checked the mathematical accuracy.

We have assessed the reasonableness of the management's calculations taking into account the costs that have been historically reported and which have now been reserved for, and compared relevant data with outcomes in previous restructuring.

We have taken part of the supporting documents on which the management has based their assessments and we have challenged the management in how they came to the conclusive assessment on which the reserve is based.

For other provisions, we have assessed the reasonableness of the company's assumptions and cost estimates and obtained external opinions when necessary. The assessment has been based on available information and historical outcomes.

Deferred tax

For information on deferred tax, see note 2 (summary of significant accounting policies), note 3 (Significant estimates and judgements) and note 20 (Deferred tax).

At December 31, 2019, Haldex had deferred tax assets of 131 MSEK of which 103 MSEK. is attributable to unutilized tax losses.

Haldex operates in several countries with differing tax laws, which adds to the complexity of assessing deferred tax assets. Local tax rules and extensive intra-Group deliveries of goods and services require correct pricing between entities.

The recognition of deferred tax assets is based on assumptions and estimates of future earnings performance, which is subject to uncertainty. The carrying amounts of deferred tax assets are also significant, and this item is, therefore, a natural focus area for our audit. We have studied the company's documentation for underlying temporary differences, which constitutes the basis for deferred tax assets and deferred tax liabilities, and have, as part of the Group audit, obtained the necessary audit evidence.

Through random sampling, we have assessed the mathematical accuracy of the calculations made by management in determining the value of deferred taxes.

With regard to deferred tax assets whose value depends on future taxable profits, we have examined management's forecasts and have challenged the assumptions made.

In this context, we have compared historical forecasts with outcomes to determine the reliability of the forecasts made by management.

We have assessed whether Haldex has satisfactorily described its policies for recognition of deferred tax assets and tax liabilities in its annual report, including the estimates and judgements made in measuring the items as at 31 December 2019.

Capitalized development costs

For information on capitalized development costs, see note 2 (summary of significant accounting policies), note 3 (Significant estimates and judgements) and note 16 (intangible and tangible assets).

Haldex yearly invest significant resources in research and development. To the extent and from the time a development project meets the criteria in IAS 38 development costs are capitalized as an asset. Booked value of capitalized development costs amounts to SEK 362 million and is tested annually or when there is an indication for an impairment.

Both the decision on the date of activation and the basis for the impairment test are based on the management's assessments of probable future economic benefits, which is associated with uncertainty, which makes it a focus area in our audit We have taken note of Haldex's internal policies and guidelines for capitalization of development costs and tested these against accounting standards.

We have in a sample evaluated Haldex's management accounting regarding the accuracy and allocation of internal and external costs to each development project.

We have tested and challenged the management's judgment of the timing of capitalization and the management's calculation of future economic benefits associated with the capitalized asset.

We have reviewed the impairment tests that have been made for capitalized development costs.

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 1-42 and 88-108. 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 Director's 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.

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.

A further description of our responsibility for the audit of the annual accounts and consolidated accounts is available on Revisorsinspektionen's website: www.revisorsinspektionen.se/revisornsansvar. This description is part of the auditor's report.

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 Director's and the Managing Directors of Haldex AB for the year 2019 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. As a result of the circumstances described in the section entitled Basis for Opinions, we do not recommend the general meeting of shareholders to discharge the former Managing Director Åke Bengtsson from liability for the financial year. We recommend the general meeting of shareholders that the members of the Board of Directors and the other Managing Directors 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.

As stated in the directors' report, Haldex filed a police report against former Managing Director Åke Bengtsson on suspected corporate espionage and data breaches. In light of the fact that the preliminary investigation has not been completed and no prosecution has been brought, it is not possible, based on today's information, to assess whether any damage could occur and whether such damage was caused by intentional or negligent administrative action by the former Managing Director. However, it cannot be ruled out that further investigation or the prosecutor's investigation may find that this has been the case. We would like to point out that the former Managing Director has not been served on suspicion of crime. 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 Director's 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' 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.

A further description of our responsibility for the audit of the administration is available on Revisorsinspektionen's website: www.revisorsinspektionen.se/revisornsansvar. This description is part of the auditor's report.

Malmö 2 June 2020

Magnus Willfors

Öhrlings PricewaterhouseCoopers AB

Carl Fogelberg

Authorised Public Accountant Auditor in charge Authorised Public Accountant

AUDITOR'S STATEMENT REGARDING THE STATUTORY SUSTAINABILITY REPORT

To the Annual General Meeting of Haldex AB (publ), Corp. ID No. 556010-1155

Assignments and responsibilities

The Board of Directors is responsible for the Sustainability Report for 2019 on pages 22–33 and for it having been prepared in accordance with the Annual Accounts Act.

The focus and scope of the review

Our review has been conducted in accordance with FAR's statement RevR 12 Auditor's opinion on the statutory Sustainability Report. This means that our review of the Sustainability Report 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. In our view, this review provides us sufficient basis for our statement.

Statement

A Sustainability Report has been prepared.

Malmö, June 2, 2020 Öhrlings PricewaterhouseCoopers AB

Magnus Willfors Authorised public accountant Auditor in charge Carl Fogelberg Authorised public accountant



Board of Directors



Jörgen Durban

Chairman of the Board, as well as Chair of the Audit Committee and Remuneration Committee Current employment: Attorney-at-law and Chairman of Anoto Group.

Education: Bachelor's degree in law. Year elected: 2017 Born: 1956 Resident: Sweden

Other assignments: Chairman of Anoto Group.

Dependent: No Previous experience: Managing partner in Linklater

Sweden. Attendence at Board meetings: 13/13

Attendence at Audit Committee: 4/4

Shareholding (own and related parties): 1,000



Bernd Gottschalk Board member and member of the Remuneration Committee

Current employment: Owner and Managing Partner of AutoValue GmbH, a consultant company mainly for the automotive industry.

Education: Degree in Economics (Diplom-Volkswirt) and Doctoral Degree (Dr. rer. pol.). Year elected: 2019

Born: 1943

Resident: Germany

Other assignments: Board member of Schaeffler AG, Jost Werke AG and Plastic Omnium, Paris

Dependent: No

Previous experience: Senior management positions with Daimler AG, incl. Commercial Director of the Mannheim production plant and President of Mercedes-Benz do Brazil. He became Member of the Board of Management, responsible for Commercial Vehicles worldwide. Later Bernd Gottschalk became President of the German Association of the Automobile Industry (Verband der Automobilindustrie VDA), the organisation which has the OEMs (incl. Commercial Vehicle companies) and the suppliers under one roof.

Attendence at Board meetings: 9/10 Shareholding (own and related parties): 0



Markus Gustafsson Board member

Current employment: Customer manager and external advisor at Prime. Specialising in change work, strategy change, changeover work and advice to the CEO, management teams and boards.

Education: Master's degree in industrial marketing and bachelor's degree in industrial organisation. **Year elected:** 2019

Born: 1972

Resident: Sweden

Other assignments: Member of the Boards of Luleå University of Technology, Mobilaris, Invest in Norbotten, United Minds and Gamechange.

Dependent: No

Previous experience: 15 years as CEO of Prime, which has been named one of the world's ten best marketing agencies. Management consultant.

Attendence at Board meetings: 10/10

Shareholding (own and related parties): 0







4 Helene Svahn

Board member Current employment: President and CEO of Haldex, Professor of Nanobiotechnology at the Royal Institute of Technology. Education: MSc, Molecular Biotechnology and Doctorate in Electrical Engineering. Year elected: 2018

Born: 1974

Resident: Sweden Other assignments: Member of the Board of Axel Johnsson International.

Dependent: No

Previous experience: Senior Vice President Research and Innovation at Permobil. Marketing Director, Silex Microsystems, CEO of Picovitro. Attendence at Board meetings: 11/13 Shareholding (own and related parties): 1,160

5 Mikael Thunved

Board member and member of the Audit Committee and Remuneration Committee

Current employment: Managing Partner of Evli Corporate Finance and Evli Bank Sweden. Education: Master's degree in business and economics.

Year elected: 2019 Born: 1965 Resident: Sweden Other assignments: –

Dependent: No

Previous experience: Member of Evli Bank's management team since 2005 and has had various areas of responsibility within the bank. Partner at Arthur Andersen, where he was part of the Swedish management team. He has been a consultant in various transactions in several different sectors over the past 25 years.

Attendence at Board meetings: 10/10 Attendence at Audit Committee: 3/3 Shareholding (own and related parties): 0



6 Per Holmqvist

Employee representative for the PTK union branches. Current employment: Global responsibility for production

engineering issues. Education: Technical upper secondary school. Year elected: 2014 Born: 1961 Resident: India Attendence at Board meetings: 13/13 Shareholding (own and related parties): 1,500

7 Jahad Shako

Employee representative of IF Metall union Current employment: Deputy chair of the local IF Metall union branch and works on spare parts production. Education: Technical upper secondary school. Year elected 2019 Born: 1960 Resident: Sweden Attendence at Board meetings: 5/6 Shareholding (own and related parties): 0





8 Per-Olof Bjällstål

Employee representative for the PTK union branches, deputy Current employment: Project manager. Education: Automation technology. Year elected: 2019 Born: 1971 Resident: Sweden Attendence at Board meetings: 8/10 Shareholding (own and related parties): 0

Jimmy Emilsson Employee representative of IF Metall, deputy

member Current employment: Chair of the local IF Education: Metall union branch. Social sciences specialisation, upper secondary school. Year elected: 2019 Born: 1973 Resident: Sweden

Attendence at Board meetings: 6/6 Shareholding (own and related parties): 0

Group Management









Helene Svahn

President & CEO Education: MSc, Molecular Biotechnology and Doctorate in Electrical Engineering.

Born: 1974

Resident: Sweden

Previous experience: Professor of Nanobiotechnology at the Royal Institute of Technology, Senior Vice President Research and Innovation at Permobil. Marketing Director, Silex Microsystems, CEO of Picovitro

Attendence at Board meetings: 11/13

Shareholding (own and related parties): 1,160 Employed: 2019 In current position since: 2019

2 Andreas Larsson

CFO

Education: MSc in business and economics, Lund University. Born: 1973

Resident: Sweden Previous experience: CFO Heatex Group 2017–2018, Director Business Control ASSA ABLOY Entrance Systems Industrial Doors and Docking 2011-2017, Senior Business Controller Cardo Entrance Solutions 2007-2011, Nicorette Plant Johnson & Johnson McNeil, Finance Director 2005-2007, Production Controller 1999-2005. Shareholding (own and related parties): 0

Employed: 2019 In current position since: 2019

Staffan Olsson **Executive Vice President Operations & Supply** Chain

Deputy CEO

Education: Master of Science in Industrial Economics Born: 1967

Resident: Sweden

Previous experience: SVP Global operations at Haldex 2014-2018, Project director at Scania CV AB 2012-2013, Plant manager engine production at Scania CV AB 2007-2012, Production director powertrain production at Scania Latin America 2002-2007.

Shareholding (own and related parties): 6,300 Employed: 2014 In current position since: 2019

4 Andreas Jähnke

Executive Vice President Products & Technology Education: Officer training. Born: 1977

Resident: Sweden

Previous experience: Senior Vice President R&D at Haldex 2016-2018, Global Project Director R&D, Haldex. Manager Project Management, BorgWarner. Various R&D positions at Haldex, with focus on system development, validation, quality and project management.

Shareholding (own and related parties): 3,800 Employed: 2015 In current position since: 2019





Fredrik Seglö

Acting Executive Vice President Asia Pacific Education: B.Sc Mechanical Engineering. Born: 1969

Resident: Sweden

Previous experience: SVP Product Management Haldex AB 2016-2019, Manager Product Management Haldex AB 2010-2016, Director Advanced Product Development Haldex CVS Division 2006-2010, R&D Manager Haldex Brake Products GmbH 2001-2006.

Shareholding (own and related parties): 0 Employed: 1993

In current position since: 2019

6 Frida Wahlgren

Executive Vice President Human Resources Education: BSc in psychology.

Born: 1978 Resident: Sweden

Previous experience: Senior positions in Human Resources at SCA/Essity Hygiene, CG Drives and Automation, JBT Foodtech and Saab Automobile Powertrain. Shareholding (own and related parties): 0 Employed: 2018 In current position since: 2019





Therese Jönsson
 Executive Vice President Legal
 Education: LL.M., Örebro University.
 Born: 1985
 Resident: Sweden
 Previous experience: Senior Associate/Attorney, Law Firm
 Delphi 2011-2019.
 Shareholding (own and related parties): 0
 Employed: 2019
 In current position since: 2019

B Daniel Gustafsson Executive Vice President Business Development and M&A

Education: M.Sc. Electrical Engineering/Technology Management, CFA.

Born: 1973

Resident: Sweden

Previous experience: Senior Project Manager Roland Berger 2016-2019, Senior Project Manager Cupole Consulting Group 2012-2016, Senior Project Manager A.T. Kearney 2011-2012, Project Manager Arthur D. Little 2007-2011, Consultant/Project Manager KPMG Transaction Services 2004-2007, Equity Analyst ABN Amro/Alfred Berg 2001-2004, Junior Associate McKinsey & Company 1999-2001. Shareholding (own and related parties): 0 Employed: 2019

In current position since: 2019



Walter Frankiewicz
 Executive Vice President Americas
 Education: B.Sc. Electrical and Electronics Engineering,
 Control Systems.
 Born: 1959

Resident: USA

Previous experience: Extensive international leadership experience from the commercial vehicle, automotive and manufacturing industries. Frankiewicz has served as President of Bendix Spicer Foundation Brake LLC (2009-2012) a subsidiary of Knorr-Bremse in North America, Global President of Alcoa Electrical and Electronics Solutions (2006-2009), Vice President and GM, Strategy and Business Planning and Global Chassis Systems for Meritor (1997-2000 & 2004-2006), President and CEO North America for Benteler Automotive (2000-2004) to mention a few of the positions directly related to Haldex's industry. He has also led a private, early stage automotive braking technology start-up company focused on extended product life and performance. Shareholding (own and related parties): 0

Shareholding (own and related parties): Employed: 2016 In current position since: 2019



🛈 Stephan Kulle

Executive Vice President EMEA Education: Master of Business Administration, University of

Dortmund. Born: 1967

Resident: Germany

Previous experience: Various global leadership experience in leading international innovation-driven automotive companies. Head of Division Automotive at Con-Pearl GmbH, mainly light commercial vehicles (LCV) 2017-2019, Head of Sales for various international global OEM & Tier 1/ Truck customers (Benteler Automobiltechnik GmbH, Division Engine & Exhaust products) 2011-2016, Knorr-Bremse für Nutzfahrzeuge GmbH: Lead Account Executive Manager 2006-2011, Account & Project Manager Commercial Vehicles at Hella KGaA Hueck & Co 2000-2006, Mannesmann VDO (now: Continental AG): Account Manager Commercial Vehicles 1996-2000.

Shareholding (own and related parties): 0 Employed: 2020 In current position since: 2020

Corporate Governance Report

Haldex AB (publ) ('Haldex' or 'the company') is a Swedish public limited company with registered office in Landskrona, listed on Nasdaq Stockholm, Mid Cap. Corporate governance in Haldex is based upon the Swedish Companies Act, the Annual Accounts Act, Nasdaq Stockholm's Rules for Issuers and the Swedish Code of Corporate Governance. Haldex herewith submits the 2019 Corporate Governance Report in accordance with the Annual Accounts Act and the Code. The company's auditors have conducted statutory review of the report.

Swedish Code of Corporate Governance

In accordance with good stock market practice, Haldex applies the Swedish Code of Corporate Governance. The current code is available on the Swedish Corporate Governance website, www.bolagsstyrning.se. However, during the 2019 financial year, Haldex deviated from the rules on nomination committees under Part III, paragraph 2 of the Code. The reason for the deviation is that the Annual General Meeting did not appoint a Nomination Committee. The previous two largest shareholders, ZF and Knorr-Bremse, did not take responsibility for nominating either the Board of Directors or a Nomination Committee. Instead, it was the third-largest shareholder, Kite Lake Capital Management (UK) LLP, that submitted a proposal for the Board of Directors, the auditor and their remuneration. However, no proposal to appoint a Nomination Committee or for how the members of the Nomination Committee should be appointed was presented at the meeting.



Responsibility for management and control of the Haldex Group is divided between shareholders, the Board of Directors, its elected committees and the CEO as illustrated above.

Shareholders and Annual General Meeting

The shareholders of Haldex exercise their right to decide on the company's affairs at the Annual General Meeting. The Annual General Meeting is Haldex's highest decision-making body. The General Meeting decides on the articles of association, elects the Board of Directors and auditors, and makes decisions on their fees.

The General Meeting further decides on adoption of the accounts, on the appropriation of the company's profit or loss and on discharge from liability for the Board of Directors and the CEO. The General Meeting also decides on the appointment and work of the Nomination Committee, and decides on principles for remuneration and terms of employment for the CEO and other senior executives. Haldex's Annual General Meeting is usually held in April or May.

Ownership

The number of shareholders at year-end was 10,847. The largest shareholder was Knorr-Bremse, with an estimated holding of 10.2 percent. A large proportion of Haldex's shareholders are registered abroad and are therefore not shown under their own name in the list of shareholdings. Knorr-Bremse has declined to confirm its precise participating interest. Swedish shareholdings totalled 38.2 percent at the end of the year. Each share carries one vote at the AGM. For more information about shares and shareholdings, see page 99 and http://corporate.haldex.com.

Annual General Meeting

The 2019 Annual General Meeting took place on 9 May 2019 at the Hotel Öresund in Landskrona. The meeting was attended by 29 shareholders in person or through representatives, as well as a number of assistants and visitors. Shareholders present represented 32.9 percent of the total number of votes. The meeting was attended by the Chairman of the Board and the members who were standing for re-election and to some extent by members who were standing for new election.

Among other things, the meeting resolved on:

- SEK 1.15 per share in dividend for the financial year 2018.Granting discharge from liability for the financial year 2018 to the
- members of the Board of Directors and the company's CEO.
- Re-election of the Board members Jörgen Durban and Helene Svahn.
 New election of Bernd Gottschalk, Markus Gustafsson and Mikael Thunved
- Re-election of Jörgen Durban as Chairman of the Board.
- Re-election of the auditors Öhrlings PricewaterhouseCoopers with Magnus Willfors as auditor in charge.
- Adoption of remuneration for the Board of Directors and auditors.
- Adoption of the guidelines proposed by the Board for remuneration of senior executives.
- Authorisation for the Board of Directors, on one or more occasions during the period up to the 2020 AGM, to decide on a new share issue equivalent to a maximum of ten percent of the total number of shares in the company at the time of the meeting.

Full minutes and information on the AGM can be found at http://corporate.haldex.com.

Nomination Committee

The Nomination Committee represents the company's shareholders and nominates Board members and auditors and proposes fees for these.

It is the General Meeting of Shareholders that appoints the members of the Nomination Committee or specify how the members are to be appointed and adopt instructions for the Nomination Committee.

In accordance with the Swedish Code of Corporate Governance, the Nomination Committee submits proposals for the Chairman and other members of the Board as well as fees and other remuneration for Board assignments for each of the Board members. The Nomination Committee also submits proposals for the election and remuneration of the auditor. The Nomination Committee's proposals are to be presented in the notice of the annual general meeting. No remuneration is paid to the members of the Nomination Committee. The Chairman of the Board is responsible for informing the Nomination Committee of the Board's future expertise profile and working methods and of the outcome of the assessment of the Board's work. The company's shareholders have an opportunity to submit comments and proposals to the Nomination Committee by e-mail or phone.

Prior to the 2019 Annual General Meeting no Nomination Committee had been appointed, and at the 2019 Annual General Meeting neither was one appointed nor was a decision made on any new guidelines regarding how the Nomination Committee should be appointed since no proposal has been submitted by any shareholder. At the time of publication of this corporate governance report, no shareholder had nominated any representative to the Nomination Committee to be elected at the 2020 AGM.

Board of Directors

The Board is responsible for Haldex's organisation and administration of Haldex's affairs. According to the Articles of Association, the Board has to consist of not fewer than three and not more than eight members with a maximum of three deputies. The Board members are elected annually at the Annual General Meeting for the period until the end of the next Annual General Meeting.

Composition of the Board

In 2019, the Board of Directors consisted of five members elected by the AGM. The employees appointed two representatives and two deputy representatives to the Board. Haldex's President and CEO, Åke Bengtsson and later Helene Svahn, attended the Board meetings. Other salaried employees attended as needed during the meetings as rapporteurs on particular issues. For further information on the Board members, see pages 90-91 and Notes 9 and 10 for the Group on pages 64-65.

Independence of the Board

The Swedish Code of Corporate Governance states that a majority of the members elected by the AGM must be independent in relation to the company and company management, and that at least two of these must also be independent in relation to major shareholders. All members elected by the AGM to Haldex's Board of Directors are judged to be independent in relation both to the company/company management and to major shareholders, however with the exception of Helene Svahn who, due to her position as President and CEO, is considered to be dependent in relation to the company.

The work of the Board

The Board held 13 (11) meetings in 2019. The main issues addressed during the Board meetings were the business situation, strategy, investments, quality work, product development, personnel and organisational issues and budget and the long-term business plan. Attendance at board and committee meetings is reported on pages 90-91.

Evaluation of the Board's work

Each year, an evaluation is made of the Board's combined work. For the Chairman, there are additional questions about ability to prepare and direct the work of the Board, as well as ability to motivate and collaborate with the CEO. The evaluation of the Board's overall work is done through a joint internal review of the Board's work. The outcome of the evaluation process is available to a future Nomination Committee.

Board committees

The Board has set up two committees within itself – Audit Committee and Remuneration Committee. The work of the committees cannot be delegated from the Board, and is viewed instead as preparation of matters that the Board as a whole then decides upon.

Until the Annual General Meeting in May 2019, the Board had a Technology Committee and an Audit Committee. The Board of Directors elected at the 2019 Annual General Meeting decided to abolish the Technology Committee and instead re-establish a Remuneration Committee.

Audit Committee

The Audit Committee prepares matters relating to accounting, financial reporting, auditing and internal control. The committee reviews the principles of accounting and financial control and establishes guidelines for the purchase of services other than auditing of the company's auditors. During 2019, the Audit Committee consisted up to the 2019 Annual General Meeting of Ulf Ahlén, Jörgen Durban, Johan Giléus (Chair) and Fredrik Hudson. Following the 2019 Annual General Meeting, the Audit Committee consisted of Jörgen Durban, Mikael Thunved and Helene Svahn, as well as Andreas Larsson, CFO, as co-opted member from the Group Management. The Audit Committee held 8 (4) meetings during the year.

Remuneration Committee

Based on the guidelines adopted by the Annual General Meeting, the Remuneration Committee submits proposals to the Board regarding salary and other terms of employment for the CEO and for other senior executives, based on proposals from the CEO. Following the 2019 AGM, the Remuneration Committee was re-established, and has consisted of Jörgen Durban, Mikael Thunved and Bernd Gottschalk, and Frida Wahlgren, EVP Human Resources, as a co-opted member from the Group management. The Remuneration Committee held 1 (1) meeting in 2019.

Technology Committee

The Technology Committee was established after the 2018 AGM. The purpose of the committee was to analyse and evaluate the company's technical strategy and recommend technology choices. Until the 2019 Annual General Meeting, the Technology Committee consisted of Helene Svahn, Ulrika Hagdahl and Per Holmqvist from the Board and Andreas Jähnke, SVP R&D as a co-opted member from the Group Management. Helene Svahn chaired the committee. The Technology Committee was abolished after the 2019 AGM. The Technology Committee held 2 meetings in 2019.

Remuneration of Board members

Remuneration of the members of the Board elected by the AGM was decided upon by the AGM on a proposal from Kite Lake Capital. During 2019/20, remuneration was paid in accordance with an AGM resolution and is presented in Notes 9 and 10 for the Board on pages 64-65. The remuneration paid to the Board consists solely of a fixed portion (there is no variable remuneration). No remuneration is paid to members who are also employees of the Group.

Auditors

The AGM appoints auditors who review the annual financial statements, accounting and consolidated accounts, the Board of Directors and the CEO's administration.

Öhrlings PricewaterhouseCoopers AB was elected as audit firm by the AGM for the period up to the 2020 AGM. The auditor in charge is Magnus Willfors, who is an authorised public accountant.

The Board as a whole meets with the auditors once a year, at a Board meeting during the spring when the auditors report their findings directly to the Board without the CEO or CFO being present. At least one auditor attends the Annual General Meeting and briefly describes the audit work and summarises his or her recommendations in the audit report for the shareholders.

REMUNERATION OF AUDITORS, SEKM

PwC	2019	2018
Auditing engagements	5	5
Auditing activities in addition to auditing engagements	2	_
Tax advice	3	2
Other services	0	0
Total	10	7

AUDITORS Öhrlings PricewaterhouseCoopers AB



Magnus Willfors Authorised public accountant Auditor in charge



Carl Fogelberg Authorised public accountant

Group Management

The CEO and President manages the ongoing administration of Haldex's operations within the limits set by the Board. The CEO is assisted by a Group management consisting of heads of business areas.

The composition and size of the Group management underwent organisational changes during the course of 2019. At the end of 2019, Group management consisted of the CEO and a further nine people. The Group Management holds regular meetings chaired by the CEO. The meetings are focused on the Group's strategic and operational development and follow-up of results. For further information on the Group management, see pages 92-93.

Remuneration of senior executives

The AGM establishes principles for the remuneration of senior executives.

Principles for remuneration of senior executives decided by the Annual General Meeting 2019 are:

Remuneration and other terms of employment for senior executives within the Group must be balanced, market-based and competitive in the geographical market in which the individual operates in terms of structure, scope and level of remuneration. This is in order to create good conditions for attracting and retaining skilled employees and managers in the short and long terms.

The total remuneration of senior executives should include a well-balanced combination of fixed salary, variable remuneration, long-term incentive programme, pension benefits and other benefits as well as conditions for termination/severance pay. The variable remuneration and the long-term incentive programme are based on individual performance and must be linked to predetermined and measurable criteria and should never individually exceed 50 percent of fixed salary in the case of full target attainment.

Pension benefits must be defined-contribution plans and as a general rule must be paid out according to the pension regulations of the country concerned. The general rule is that pension provisions are based solely on fixed salary. Some individual adjustments may occur in line with local market practice. Fixed salary during the notice period (up to 12 months for the CEO and senior executives) and severance pay, taken together, must not exceed an amount corresponding to fixed salary for two years.

The above guidelines apply to employment contracts that are entered into after the AGM resolved on the principles and in the event that changes are made to existing contracts after this date. The Board may deviate from the above guidelines if there are special grounds for doing so in an individual case.

In special cases, it must be possible for the company's Board members elected by the AGM to be remunerated for services within their particular area of expertise, which does not constitute Board work, for a limited time. A market-based fee is to be paid for these services.

More information on remuneration to senior executives can be found in Notes 9 and 10 for the Group on pages 64-65.

Remuneration in 2019

Chief Executive Officer

In 2019, President and CEO Åke Bengtsson, later Helene Svahn, received fixed and variable salary according to the table on page 97. In addition to a mutual notice period of 6 months, the CEO, in the event of termination by the company, is entitled to severance pay equivalent to 6 months' salary. Upon termination by the CEO, no severance payment is made. The CEO's pension benefits are premium-based and consists of an ITP plan and an annual allocation of 30 percent of the portion of the fixed salary that exceeds 20 base amounts. The retirement age is 65.

REMUNERATION TO GROUP MANAGEMENT 2019, SEK 000

	Basic salary incl. benefits	Variable remuneration	Pension
Helene Svahn, CEO from July 2019	1,895	200	972
Åke Bengtsson, CEO until May 2019	1,480	-	493
Other senior executives (Group Management) 9 people		3,551	4,612
Total	26,575	3,751	6,077

Other senior executives

In accordance with the guidelines adopted by the AGM, the principles for remuneration matters regarding Group management must be prepared by the CEO in consultation with the Board of Directors for decision by the AGM. The compensation consists of a fixed and a variable salary component. The variable part is based on the annual targets set by the CEO and the Remuneration Committee and can amount to 50 percent of fixed annual salary. All members of Group Management have a mutual notice period of up to 6 months and, in the event of termination by the company, severance pay equivalent to between 6 and 12 months' salary. Pension benefits are regulated in pension plans that are adapted to practice in the country in question, with a retirement age of 65 up.

Incentive programmes

The 2015 and 2016 Annual General Meetings resolved on an incentive program called LTI (long-term incentive) for senior executives and key individuals, LTI2015 and LTI2016. In brief, LTI means that if certain performance targets are achieved during the financial year, the participants in LTI may be awarded variable remuneration at the beginning of the following year, of which 60 percent will be allocated in cash and 40 percent in the form of employee stock options that are conditional non-transferable deferred rights to receive one ordinary share in Haldex free of charge and automatically after four years for each performance right. The term of LTI is four years. After the end of the performance year, any amount of stock due will be allocated. Payment of any cash amount is expected to take place during the spring of the new financial year. After the allocation of any share amount, the participant will be granted performance rights, after which a three-year lock-in period will follow before final transfer of performance shares to the participant is expected to take place the year after the AGM when the term has expired (from 2018-2020 depending on programme) and before the end of June in the same year. Deferred variable remuneration according to LTI is not pensionable. However, the programmes LTI2015 and LTI2016 have not generated any outcome for the senior executives and key individuals who have been included in this programme. Since 2017, no incentive programmes have been decided upon that include shares or share price-related elements. The long-term incentive programme, which has since been implemented, has only cash remuneration where the measurement period for fulfilment of the targets extends over a three-year period.

Internal control

The Board's responsibility for internal control is regulated by the Swedish Companies Act and the Swedish Code of Corporate Governance. Internal control within Haldex is a process that is controlled by the Board of Directors and the Audit Committee and is carried out by the CEO and Group Management.

Internal control has been designed to ensure, as far as possible, that Haldex has appropriate and reliable reporting and compliance with applicable laws and other statutory instruments. The process is based on a control environment that creates a structure for other parts of the process, such as risk assessment, control activities, information and communication and follow-up. This report on internal control and risk management has been prepared in accordance with the Annual Accounts Act and the Swedish Code of Corporate Governance, and is thus limited to a description of the most important elements of Haldex's system for internal control and risk management with regard to financial reporting. The Board monitors and ensures the quality of external financial reporting in the manner documented in the Board's rules of procedure, in the instruction for the CEO and in the Group's financial policy. The CEO is responsible, together with the CFO, for review and quality assurance of all external financial reporting such as interim reports, year-end reports, annual reports, press releases with financial content and presentation material in connection with meetings with mass media, shareholders and financial institutions. The Chief Executive Officer and the CFO provide all interim reports, year-end reports and annual reports for review by the Audit Committee. The Board is responsible for ensuring that the company's financial reports are prepared in accordance with applicable laws, accounting standards and other requirements for listed companies. The Board's instructions to the CEO also contain a requirement to continuously provide the Board with internal summary reports on economic conditions. These reports are to include results and balance sheets, valuation issues, assessments, forecasts and any changes and the consequences thereof, any changes regarding accounting rules, legal matters and disputes and are to be reviewed by the Audit Committee and subsequently submitted to the Board

Control environment

The Board of Directors has established a number of policy documents for the company's internal control and governance. The Board has an Audit Committee. The Audit Committee, which prepares matters for the Board, deals with issues such as the internal control process, follows up reporting matters and discusses accounting policies and the consequences of changes to these policies. In addition, the Audit Committee maintains continuous contact with the external auditors. The committee is responsible for the evaluation of the audit work as well as the auditors' efficiency, qualifications, fees and independence. The Audit Committee also normally assists the Nomination Committee in proposals for the election of auditors and procurement of audit services.

Risk assessment

Haldex's risk assessment regarding financial reporting, that is, identification and evaluation of the most significant risks in the Group's companies and processes regarding financial reporting, constitutes the basis for risk management. Risk can be managed by accepting or reducing the risks or eliminating them, with requirements for controls and control levels within the limits established by the Board of Directors, the Audit Committee, the CEO and the Group Management. During the year, Haldex carried out an updated assessment of the risks it faces, risks that are documented in a Group-wide document and on pages 46-51.

Instruments of governance

The instruments that form the basis of corporate governance in Haldex consist mainly of the Companies Act, the Annual Accounts Act,

applicable regulations for companies listed on Nasdaq Stockholm, the Swedish Code of Corporate Governance and other relevant legislation and relevant provisions. The internal binding instruments of governance include the articles of association adopted by the AGM and the documents adopted by the Board for the Board of Directors of Haldex, instructions for remuneration and audit committees, instructions for the CEO of Haldex, communication policy and financial policy. In addition to the above, the Group has a number of policies and manuals containing regulations and recommendations with principles and guidance for the Group's operations and employees. The Board's rules of procedure regulate the Board's division of work, the decision-making process within the Board, the Board's meeting schedule and the Chairman's duties. The work of the Board follows a set routine that aims to ensure that the Board's information requirements are met. The instructions to the CEO set out the CEO's responsibility for day-to-day administration, forms of reporting to the Board and the contents thereof, requirements for internal control instruments and questions that require the Board's decision or are to be communicated to the Board.

Control activities

The work on further developing internal control and governance is ongoing, with regular documentation, evaluation and introduction of new controls and improvement of existing controls.

Information and communication

Haldex has a system for informing and communicating in order to provide complete and accurate financial reporting. Haldex has a reporting system where all the Group's companies report monthly in a fixed format and according to specified accounting policies. In connection with the reporting, the reporting units make risk assessments and comment on current valuation issues and provisions. The central finance department prepares reports from the common system structured according to the Group's established report format. Responsible managers and controllers at various levels in the Group have access to information related to their particular areas of responsibility in this system. All the Group's governance documents for internal control and governance can be found on the Group's intranet.

Follow-up

Haldex's financial reporting is followed up on an ongoing basis, by management at various levels of the company as well as by the financial organisation and controllers in the various business units. The follow-up is done monthly in connection with reporting, through analyses and reviews by responsible controllers and by business managers holding meetings with reporting units. The Audit Committee regularly communicates with the Company's external auditors and the Company's CFO, both during and between meetings. The Board receives a monthly report on developments in the company's operations. More detailed reporting is primarily done by the CEO at all Board meetings. The Board regularly assesses the risks associated with the financial reporting based on significant and qualitative factors.

Internal audit

Each year, the Board evaluates the need to set up a special function for internal auditing. In 2019, the Board considered that no such need existed. The Board made the assessment that internal control is mainly exercised:

- by the operational managers at various levels,
- by the local financial functions and the central financial function,
- through the Group Management's supervisory control.

Given the size of the company, this means that the Board of Directors does not consider it financially justifiable to have another function at present.

The Board of Directors, Landskrona, 19 May 2020

AUDITOR'S STATEMENT ON THE CORPORATE GOVERNANCE REPORT

To the Annual General Meeting of Haldex AB (publ), corporate identity number 556010-1155

It is the Board of Directors that is responsible for the Corporate Governance Report for 2019 on pages 94–98 and for it being prepared in accordance with the Annual Accounts Act.

We have read the Corporate Governance Report, and based on this reading and our knowledge of the company and the Group, we believe that we have a sufficient basis for our opinions. This means that our statutory review of the Corporate Governance Report has a different focus and a significantly smaller scope compared to the focus and scope of an audit in accordance with International Standards on Auditing and generally accepted auditing standards in Sweden.

We believe that a corporate governance report has been prepared and that its statutory information is consistent with the annual financial statements and the consolidated financial statements.

Malmö, 2 June 2020 Öhrlings PricewaterhouseCoopers AB

Magnus Willfors Authorised public accountant Auditor in charge Carl Fogelberg Authorised public accountant

Haldex shares

Haldex shares have been listed since 1960. Today the shares are listed on the Nasdaq Stockholm Mid Cap under the ticker symbol HLDX. Haldex's share capital totals SEK 221m, made up of 44,215,970 shares with a quotient value of SEK 5.00 per share on 31 December 2019.

Price trend and turnover

The highest closing price during the year was recorded on 30 April at SEK 73.40 and the lowest on 21 November at SEK 46.20. Altogether, Haldex's share price fell by -26.1 percent (-26.4) in 2019. This can be compared with the Nasdaq Stockholm general index, which rose by 31 percent (-8) and the Nasdaq Stockholm Automobiles & Parts Index (which includes Haldex), which rose by around 7 percent (-21) over the

same period. The closing price for Haldex shares was SEK 51.00 (69.00) at the end of the financial year. The total market capitalisation at yearend was SEK 2,255m (3,051).

A total of 32.9 (11.7) million Haldex shares were traded in 2019, which is equivalent to an average turnover of 132,064 (48,818) shares per day. The turnover rate rose to 74 percent (26) during the year.



Total return

The total return on Haldex shares in 2019 was -24.4 percent (-20.5), which can be compared with the SIXRX index, which rose by 35 percent.

Incentive programmes

The 2018 Annual General Meeting 2018 resolved on an incentive programme known as LTI (long-term incentive) for senior executives.

In brief, LTI2018 means that if certain performance targets are achieved during a three-year period (2018-2020), participants in LTI at the beginning of 2021 can be awarded variable remuneration that will be paid in cash.

No new active LTI plan was decided for 2019 during the 2019 AGM.

Dividend and dividend policy

The Board's policy for distributing unrestricted equity to the shareholders is to transfer at least one third of the annual profit after tax over a business cycle to the shareholders through the distribution and repurchase of shares, taking into account the expected financial position. For the financial year 2019, the Board of Directors intends to propose to the Annual General Meeting a dividend of SEK 0 (1.15) per share, which is in line with Haldex's dividend policy, as net profit has been affected by restructuring reserves for the closures of the production sites in Blue Springs and Heidelberg.

Shareholders

The number of shareholders in Haldex increased by 29 percent in 2019 to a total of 10,847 at the end of the year. The ten largest shareholders accounted for 47.4 percent (64.9) of the capital and an equal percentage of the voting rights. Knorr-Bremse is the largest shareholder with 10.1 percent of the votes. A large proportion of Haldex's shareholders are registered abroad and are therefore not shown under their own name in the list of shareholdings.

At year-end, foreign ownership had fallen sharply to 61.8 percent (86.2) compared to 2018. The main reason for the decrease is related to ZF having sold its 20 percent holding in September 2019. A large proportion of these shares were purchased by Swedish investors.

Communication with the market

Representatives of Haldex meet analysts, lenders and shareholders on a regular basis to provide an overview of developments during the financial year. The published interim reports and the annual report are distributed to the shareholders upon request. The documents can also be downloaded in PDF format from the Haldex website and via external operators, for example from the Cision website. Press releases, interim reports and year-end reports are published on the website in Swedish and English. The website also offers a subscription to these documents.

Key ratios per share

	2019	2018	2017	2016	2015
Earnings, SEK	0.12	3.46	1.67	2.00	4.28
Dividend, SEK (for 2019, the dividend is proposed to the AGM)	0	1.15	0.55	0	2.00
Share price at year-end, SEK	51	69.00	87.25	116.50	79.50
Equity, SEK	34.78	35.80	30.98	30.63	31.46
EBIT multiple	21	12	13	19	9
P/E ratio	425	20	52	58	18
Dividend share, %	_	45	33	_	47
Dividend yield, %	_	2.2	0.6	_	2.5
Total return, %	-26	-20.3	-25.1	147	80
Share price/equity, %	147	193	282	380	253

Shareholders and number of shares

	2019	2018	2017	2016	2015
Number of shareholders	10,847	8,416	8,688	8,533	18,179
Average number of shares, thousands	44,216	44,216	44,216	44,216	44,216
Total number of shares at year-end, thousands	44,216	44,216	44,216	44,216	44,216

The ten largest shareholders at 30 December 2019

Shareholder	Number of shares	% of votes and capital
BNP PARIBAS SEC SERVICES PARIS, W8IMY (GCS)	4,497,039	10.20%
UBS AG LONDON BRANCH, W8IMY	2,842,708	6.40%
CLEARSTREAM BANKING S.A., W8IMY	2,495,568	5.60%
BNY MELLON SA/NV (FORMER BNY), W8IMY	2,097,546	4.70%
AFA Försäkring	2,061,234	4.70%
Nordea Investment Funds	2,051,105	4.60%
MORGAN STANLEY & CO INTL PLC, W8IMY	1,762,462	4.00%
CGMI PB CUSTOMER ACCOUNT	1,593,383	3.60%
BANK OF AMERICA N.A.	1,524,060	3.50%
JP MORGAN BANK LUXEMBOURG S.A.	1,198,955	2.70%
Total of ten largest shareholders	22,124,060	50.00%
Haldex	11,705	0.03%
Other	22,080,205	49.97%
Total	44,215,970	100%

Ownership structure at 30 December 2019

	Number of	Number of	
Holding	shareholders	shares	Holding, %
1 – 500	7,823	31,879,714	72.10%
501 – 1,000	1,402	5,703,860	12.90%
1,001 – 5,000	1,248	5,084,837	11.50%
5,001 – 10,000	189	751,671	1.70%
10,001 – 15,000	37	132,648	0.30%
15,001 – 20,000	34	132,648	0.30%
20,001 -	114	486,376	1.10%
Total	10,847	44,215,970	100.00%

HALDEX AS INVESTMENT

- Transport needs are increasing.
- Large technological change that is changing the whole of society where Haldex has promising new technology under development.
- A stable core business that can be further streamlined.
- Long-term customer relationships with all large operators.

LONG-TERM, PROFITABLE GROWTH IN A GREEN, SAFE, ETHICAL AND HUMANE HALDEX

Sources: Euroclear and Haldex

Quarterly data

		201	9				2017		
SEKm unless otherwise stated	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1	Q4
Income statement									
Net sales	1,141	1,283	1,389	1,339	1,225	1,270	1,372	1,252	1,049
Cost of goods sold	-849	-928	-1,031	-1,005	-938	-934	-1,014	-927	-774
Gross profit	292	355	358	334	287	336	358	325	275
Product development expenses	-43	-43	-39	-33	-37	-44	-44	-36	-39
Selling and administrative expenses	-215	-227	-229	-223	-231	-216	-216	-201	-179
Share of profit from joint venture	-7	-7	-7	-	_	_	-1	-4	_
Other operating income and expenses	-160	-10	-10	19	-31	3	5	2	-24
Operating profit	-133	68	73	97	-12	79	102	86	33
Adjusted operating profit	44	85	91	97	38	79	102	86	66
Financial items	-12	-16	-8	-7	-10	-11	-11	-4	-3
Share of profit from joint venture	-	_	_	_	_	_	_	_	-4
Profit before tax	-145	52	65	90	-22	68	91	82	26
Тах	-4	-15	-16	-22	-2	-10	-30	-24	-12
Profit/loss for the period	-149	37	49	68	-24	58	61	58	14
		5,			- ·			50	
Balance sheet									
Non-current assets	2,227	2,178	2,131	2,086	1,585	1,526	1,497	1,436	1,349
Current assets	2,186	2,283	2,243	2,291	2,104	2,207	2,272	2,095	1,729
Total assets	4,413	4,461	4,374	4,377	3,689	3,733	3,769	3,531	3,078
	.,	.,	.,	.,	5,005	57.55	5,7.55	-,	5,07.0
Equity	1,537	1,745	1,675	1,708	1,611	1,617	1,581	1,502	1,395
Non-current liabilities	1,346	1,358	1,356	1,566	1,072	974	975	884	775
Current liabilities	1,530	1,358	1,343	1,103	1,006	1,142	1,213	1,145	908
Total equity and liabilities	4,413	4,461	4,374	4,377	3,689	3,733	3,769	3,531	3,078
Cook flower									
Cash flow	220	70		0.4	100	74	C.F.	C 4	45
Cash flow from operating activities	239	76	97	-84	199	74	65	-64	45
Cash flow from investing activities	-136	-82	-97	-66	-126	-85	-89	-81	-43
Cash flow from financing activities	1	21	-77	114	13	14	42	142	-74
Cash flow for the period	104	15	-77	-36	86	3	18	-3	-72
Key ratios			••••				•		
Operating margin, %	-11.6	5.3	5.3	7.2	1.0	6.3	7.4	6,9	3.1
Adjusted operating margin, %	3.8	6.6	6.5	7.2	3.1	6.3	7.4	6,9	6.3
Adjusted operating margin excluding new	4.9	7.4	7.4	7.5					
technology, %									
Earnings per share, basic and diluted, SEK	-3.36	0.83	1.11	1.54	-0.49	1.26	1.39	1.30	0.25
Equity per share, SEK	34.78	39.48	37.89	38.64	35.80	36.57	35.76	33.97	30.98
Cash flow, operating activities, per share, SEK	5.41	1.72	2.19	-1.90	3.20	1.67	1.47	-1.45	1.98
Share price, SEK	51.00	50.20	57.00	62.00	69.00	87.20	89.00	85.40	87.25
Return on capital employed % ^{1, 2}	3.1	7.5	8.2	9.7	9.8	12.5	11.7	9.0	6.8
Return on capital employed excluding non-recurring items, % ^{1, 2}	9.4	10.5	10.6	11.5	11.8	13.8	14.0	13.5	13.3
Return on equity, %	-9.3	2.1	2.9	4.1	-1.7	3.7	3.9	4.0	0.8
Equity/assets ratio, %	35	39	38	39	44	43	42	43	45
Net debt/equity ratio, % ²	66	62	62	55	45	50	51	50	42
External investments, SEKm	103	64	69	37	99	74	74	66	43
Exection investmento, JENII	•••••••••		••••••	••••••		3.9	•••••	•••••• • ••••	4.5
R&D, %	5.9	4.1	4.3	4.2	4.9	49	3.9	3.7	4 ~

Rolling twelve months.
 The effect of IFRS16 – finance leases has been excluded.

5-year summary

SEKm unless otherwise stated	2019	2018	2017	2016	2015
Income statement					
Net sales	5,151	5,119	4,462	4,374	4,777
Cost of goods sold	-3,812	-3,813	-3,237	-3,155	-3,418
Gross profit	1,339	1,306	1,225	1,219	1,359
Product development expenses	-158	-162	-158	-177	-193
Selling and administrative expenses	-894	-863	-797	-773	-749
Share of profit/loss from joint venture	-21	-5	_	_	_
Other operating income and expenses	-161	-21	-121	-65	-92
Operating profit	105	255	149	204	325
Adjusted operating profit	317	305	292	291	444
Financial items	-44	-36	-8	-36	-54
Share of profit/loss from joint venture	-	-	-12	-3	-
Profit before tax	61	219	129	165	271
Tax	-56	-66	-50	-74	-80
Profit for the year	5	153	79	91	191
Balance sheet Non-current assets	2,227	1,585	1,349	1,306	1,177
Current assets	2,227	2,104	1,549	1,751	1,177
Total assets	4,413		3,078	3,057	
	4,413	3,689	3,078	3,057	2,855
Equity	1,537	1,611	1,395	1,374	1,407
Non-current liabilities	1,346	1,072	775	757	692
Current liabilities	1,530	1,006	908	926	756
Total equity and liabilities	4,413	3,689	3,078	3,057	2,855
Cash flow					
	440	272	262	000	240
Cash flow from operating activities before changes in working capital	449	373	262	238	349
Cash flow from operating activities	328	274	173	256	220
Cash flow from investing activities	-381	-381	-231	-222	-174
Cash flow from financing activities	59	211	-35	-52	-179
Cash flow for the year	6	104	-93	-18	-133
Key ratios					
Operating margin, %	2.0	5.0	3.3	4.7	6.8
Adjusted operating margin, %	6.1	6.0	6.5	6.6	9.3
Earnings per share, basic and diluted, SEK	0.12	3.46	1.67	2.00	4.28
Equity per share, SEK	34.78	35.80	30.98	30.63	31.46
Cash flow, operating activities, per share SEK	7.42	6.20	3.91	5.80	4.99
Dividend, SEK ²	0.00	1.15	0.55	0.00	2.00
Share price, SEK	51.00	69.00	87.25	116.50	79.50
Return on capital employed % ^{1, 3}	3.1	9.8	6.8	9.7	15.9
Return on capital employed excluding non-recurring items, % ^{1,3}	9.4	11.8	13.3	13.8	21.7
Return on equity, %	0.1	9.8	5.4	13.1	14.1
Equity/assets ratio, %	35	44	45	45	49
Net debt/equity ratio, % ³	66	45	42	36	24
Investments	273	313	218	222	174
	4.6	4.1	4.0	3.5	3.6
R&D, %					

Rolling twelve months
 According to the Board's proposal.
 The effect of IFRS16 - finance leases has been excluded.

Numerical basis for alternative key ratios

SEKm	Reported sales Oct-Dec 2019	Currency adjustment to previous year's rates	Currency- adjusted sales Oct-Dec 2019	Change	Reported sales full year 2019	Currency adjust- ment to previous year's rates	Currency- adjusted sales full year 2019	Change
Sales								
Group	1,141	-47	1,094	-4%	5,151	-270	4,881	-5%
Total	1,141	-47	1,094	-4%	5,151	-270	4,881	-5%
Sales per region								
Europe	357	-8	349	-2%	1,698	-36	1,662	-2%
North America	571	-32	539	-6%	2,659	-211	2,448	-8%
Asia and Middle East	164	-7	157	-4%	586	-22	564	-4%
South America	49	_	49	1%	208	-1	207	0%
Total	1,141	-47	1,094	-4%	5,151	-270	4,881	-5%
Sales per product line								
Foundation Brake	637	-23	613	-4%	2,966	-145	2,821	-5%
Air Controls	504	-24	481	-5%	2,185	-125	2,060	-6%
Total	1,141	-47	1,094	-4%	5,151	-270	4,881	-5%
Sales per customer category								
Truck - heavy trucks	265	-10	255	-4%	1,252	-71	1,181	-6%
Trailer - trailers	303	-9	294	-3%	1,502	-56	1,446	-4%
Aftermarket	573	-28	545	-5%	2,397	-143	2,254	-6%
Total	1,141	-47	1,094	-4%	5,151	-270	4,881	-5%

Numerical basis for alternative key ratios

- quarterly data

		20	19			20	18		2017
SEKm unless otherwise stated	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1	Q4
Non-recurring items									
- Restructuring expenses	-175	-12	-17	-	-1	-	-	-	-11
- Expenses related to the acquisition process	-2	-5	-1	-	-	-	5	-	-22
- Product-related warranty costs	-	-	-	-	-49	-	-5	-	-
Total non-recurring items	-177	-17	-18	-	-50	-	-	-	-33
Research and development expenses excluding depreciation	-67	-54	-59	-56	-60	-51	-54	-47	-47
Product development expenses for new technology	-14	-10	-12	-11	_	_	_	_	_
Joint venture EMB	-7	-7	-7	_	_	_	-	_	_
Scalable brake systems	-5	-2	-6	-4	_	_	_	_	_
Total operating expenses for new technology	-12	-9	-13	-4	-	-	-	-	-
Net interest income and financial items				-					
Interest income	2	4	4	3	5	-	1	1	1
Interest expenses	-10	-11	-10	-5	-7	-2	-8	-5	-4
Total net interest income	-8	-7	-6	-2	-2	-2	-7	-4	-3
Other financial items	-4	-3	-9	-5	-8	-9	-4	-	-4
Total financial items	-12	-10	-15	-7	-10	-11	-11	-4	-7
Net debt		•					•		
- Interest-bearing assets	315	217	196	280	305	214	216	195	194
- Interest-bearing liabilities including derivative instruments	-768	-761	-731	-724	-582	-572	-554	-481	-335
- Pension liabilities	-562	-540	-511	-498	-455	-458	-470	-460	-443
Total net debt ¹	-1,015	-1,084	-1,046	-942	-732	-816	-808	-746	-584
Capital employed		-		•	-		-	•	
Total assets	4,413	4,461	4,374	4,377	3,689	3,733	3,769	3,531	3,078
Non-interest-bearing liabilities and provisions	-1,116	-1,048	-1,062	-1,043	-1,041	-1,124	-1,187	-1,081	-909
Total capital employed	3,297	3,413	3,312	3,334	2,648	2,609	2,582	2,450	2,169
Average capital employed	3,366	3,198	2,941	2,699	2,571	2,449	2,336	2,239	2,193
Net profit attributable to the Parent Company's owners		•			-		-		
Profit/loss for the period	-149	37	49	68	-24	58	61	58	14
Profit attributable to non-controlling interests	_	1	2	. 1	3	1	. 1	_	2
Total net income attributable to the parent company's owners	-149	36	47	67	-27	57	60	58	12
Equity attributable to the parent company's owners		•				-		•	
Equity	1,537	1,745	1,675	1,708	1,611	1,617	1,581	1,502	1,395
Equity attributable to non-controlling interests	32	33	33	31	28	24	27	25	25
Total equity attributable to the parent company's owners	1,505	1,712	1,642	1,677	1,583	1,593	1,554	1,477	1,370
Average equity attributable to parent company's	1,624	1,641	1,610	1,577	1,515	1,466	1,419	1,370	1,347
owners		•							
Average number of shares	44,216	44,216	44,216	44,216	44,216	44,216	44,216	44,216	44,216

¹ excluding IFRS16 - Leases

Definitions of key ratios

As a result of the European Securities and Markets Authority's new guidelines for alternative performance measures, the list of financial definitions has been expanded. The purpose of the added terms is to achieve enhanced understanding and promote the usability of the financial information and provide the reader with a more nuanced and in-depth picture of the business. No new performance measures have been added in the period in comparison with the previous quarter. In cases where the numerical basis for calculating alternative performance measures is not stated in the report, see the annex for additional information.

Return on equity¹

The proportion of net profit for the year attributable to the shareholders in the parent company as a percentage of the proportion of average equity attributable to the shareholders in the parent company.

Return on capital employed¹

Operating income plus interest income, as a percentage of average capital employed.

Gross margin

Gross profit, i.e. net sales less cost of goods sold, in relation to net sales.

Equity per share

Equity attributable to the parent company shareholders divided by average number of shares.

Non-recurring items

Income statement items which are of a non-recurring nature in normal business operations. Non-recurring items may, for example, include restructuring costs, impairments and product-related warranties attributable to specific customer commitments. The purpose of specifying these is to be able to demonstrate the trend in the underlying business.

R&D, %¹

Total research and development expenditure excluding depreciation, divided by net sales.

Cash flow per share

Cash flow from operating activities divided by average number of shares.

Net debt¹

Cash and cash equivalents plus interest-bearing receivables minus interest-bearing liabilities and provisions.

Net debt/equity ratio¹

Interest-bearing liabilities and provisions minus cash and cash equivalents and interest-bearing receivables divided by equity including non-controlling interests.

Earnings per share¹

Proportion of net profit for the year attributable to the parent company shareholders divided by weighted average number of shares.

Net interest income/expense¹

The financial difference in absolute terms between recognised interest income for financial assets and interest expenses for interest-bearing liabilities and provisions.

Interest coverage ratio¹

Operating profit excluding non-recurring items plus interest income divided by interest expenses.

Operating margin

Operating profit as a percentage of net sales for the period.

Adjusted operating margin

Operating profit excluding non-recurring items, as a percentage of net sales for the period.

Adjusted operating margin excluding investment in new technology

Operating profit excluding product development expenses for new technology and non-recurring items, as a percentage of net sales for the period.

Operating profit¹

Profit from operations before financial items and tax.

Adjusted operating profit

Profit from operations before financial items and tax, adjusted for non-recurring items.

Equity/assets ratio

Equity including non-controlling interests as a percentage of total assets.

Capital employed¹

Balance sheet total less non-interest-bearing liabilities and non-interestbearing provisions.

Currency-adjusted information¹

Financial figure converted at the same exchange rate as in the comparison period. The purpose is to show how the business operation would have developed without the impact of changes in exchange rates in the consolidation of foreign units.

¹ Supplementary financial information is presented on page 101-104.

Glossary

ABS

A system that prevents the wheels from locking during braking. ABS stands for Anti-lock Braking System.

AGM

Annual General Meeting. The AGM is Haldex's highest decision-making body. The AGM decides on, for instance, the articles of association and elects the Board of Directors.

Air Controls

Haldex product line for products that improve the safety and driving dynamics of the brake system, such as treatment and dehumidifying of compressed air, valves, ABS and EBS.

EBS

Electronically controlled brake system. EBS acts as a key part of pneumatic brake systems and can monitor and control the brake system. In brake systems without EBS, the braking force on the wheels is the same at all times, while in vehicles with EBS the braking force is distributed differently depending on need.

Aftermarket

The selling of spare parts, training and services to the workshops which repair and service vehicles that have entered service.

EMB

Electromechanical brake system. This is part of an electronic braking system, i.e. a system where the pneumatic brake system is replaced by an electronic brake system. Electromechanical brake systems are currently approved in China, but not in North America and Europe.

FABV

Fast Acting Brake Valve is one of the products in new technology. FABV is a valve that is used in brake systems based on compressed air to reduce braking distance and improve control of the vehicle's path.

Foundation Brake

Haldex product line for brake products for wheel ends such as disc brakes, brake adjusters for drum brakes and actuators.

New technology

New technology means Scalable Brake Systems, which include EMB and FABV. These are developed partly in-house by Haldex and partly with Haldex's VIE joint venture in China.

OEM

Original equipment manufacturer, i.e. manufacturer of vehicles.

Truck

Heavy goods vehicles and buses.

Trailer

Towed vehicles attached to a tractor (lorry).

Haldex Annual General Meeting 2020

The Annual General Meeting of Haldex AB (publ) will be held on Tuesday 23 June at 2 pm at 7A Strandvägen, Stockholm.

Reporting dates in 2020

Interim report January – March	23 April
Annual General Meeting	23 June
Interim report January – June	16 July
Interim report January – September	24 October
Year-end report	February, 2021

Financial reports, presentation materials and webcast recordings are available on the Haldex website: http://www.haldex.com/finansiellarapporter

Communication with the market

Our communication with the financial market is characterised by open, relevant and accurate information to shareholders, investors and analysts, in order to increase knowledge about the Group's operations and shares.' We communicate information in the form of interim reports, annual reports and press releases and provide in-depth information on our IR pages on the website. Shareholders and other stakeholders can subscribe to press releases, financial reports and the closing price of shares by e-mail. On the website, the general information on the IR pages and lists of shareholders are updated on a monthly basis. In the case of major changes, the website is updated immediately. No communication with the financial market takes place for 30 days prior to a financial report.

Haldex AB is a public limited liability company. Corporate identity number 556010-1155. Registered office in Landskrona, Sweden. The annual report is published in Swedish and English. The Swedish version is the original version and takes precedence over the English if interpretation of the translation should differ from the original. All values are expressed in Swedish kronor. Kronor is abbreviated as SEK and millions of kronor as SEKm. Figures in brackets refer to the previous year 2018 unless otherwise stated. The Swedish annual report is the binding version. This report contains forward-looking information based on Haldex's current expectations. Although the management believes that the expectations stated in such forward-looking information are reasonable, no guarantee can be given that these expectations will prove to be correct. Consequently, future outcomes may vary materially from what is stated in the forward-looking information, due for example to changed conditions regarding economics, the market and competition, changes in legal requirements and other policy measures, exchange rate fluctuations and other factors.

This annual report is produced in collaboration with Oxenstierna & Partners in Stockholm.

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We see our social media channels as complementing press releases and financial reports. We can easily provide a better insight there into what is happening in the company. As we use the channels in slightly different ways, you can choose which one suits you best.

f

www.facebook.com/haldex

Our Facebook page mixes brief company news with fun facts and Haldex-specific events.

in

https://se.linkedin.com/company/haldex

On LinkedIn you will find slightly longer summaries of product news, customer cases and financial news.

You Tube

www.youtube.com/user/HaldexTV

On YouTube, you can watch videos that describe and demonstrate our product range. Short and long videos are mixed from product demonstrations and training.



www.twitter.com/HaldexAB

Our Twitter account for the Group is perfect for anyone who wants to keep a constant lookout for financial news from Haldex. We publish press releases, information about activities and quotations and summaries of our financial presentations.



www.twitter.com/Haldexbrake

On our other Twitter account, we communicate market and product news we believe to be of interest to you as a customer.



www.instagram.com/haldexglobal/

On Instagram you can get an insight into everyday life in Haldex. Employees around the world publish photographs from trade fairs and customer events but also from internal meetings and everyday situations.

Haldex

More than 100 years of vigorously focused innovation gives Haldex unmatched expertise in brake systems and air suspension systems for heavy trucks, trailers and buses. We live and breathe our business with the goal of delivering robust and technologically superior solutions, which are based on a deep insight into the reality of our customers. By focusing on our core competencies and the passion we all share, we achieve the speed and flexibility the market demands.

Innovation cooperation is at the heart of not only our products, but also our philosophy. Our 2,200 employees, spread across four continents, challenge convention daily to ensure that the products we deliver create a unique value for our customers and all end-users.

We are listed on Nasdaq Stockholm, and in 2019 had turnover of approximately SEK 5.1 billion.

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