*Freedom to move*
*in a personal, sustainable and safe way.*

# VOLVO CAR GROUP

ANNUAL REPORT 2019

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# 2019 Highlights

**Volvo Cars' company purpose embodied**

Our purpose is to deliver the freedom to move in a personal, sustainable and safe way by offering mobility, regardless of what that looks like or who wants to use it. During the year we continued to deliver on that purpose.

In addition to selling cars via our retail partners, we continued to develop our commercial offers within the direct consumer business area. Care by Volvo, our subscription concept, continued to roll out to the markets, and we also launched our mobility brand M - Volvo Car Mobility, in Stockholm, Sweden.

Furthermore, by introducing the first fully electric XC40, and launching a plan aiming to reduce the lifecycle carbon footprint per car by 40 per cent by 2025, we demonstrated our true commitment to sustainability.

In the interest of safer roads for all, we shared more than 60 years of safety research, underlining our leading position in safety. Also, depending on the development of the Covid-19 situation, we will deliver on our decision to limit the speed on all new Volvo cars to 180 kph from 2020, paving the way for further deliveries on our safety vision that nobody should be seriously injured or killed in a new Volvo car.

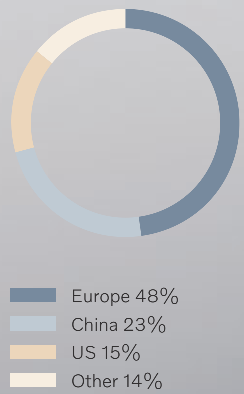
**Volvo Cars recognised as one of the World's Most Ethical Company**

For the third consecutive year, Volvo Cars was recognised as one of the World's Most Ethical Company by the Ethisphere Institute, highlighting that the company performs ethical and responsible business.

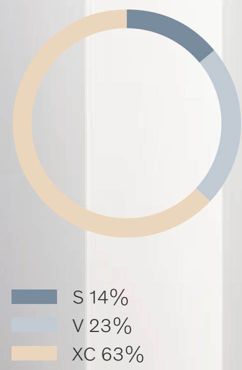
## KEY FIGURES

| MSEK | 2019 | 2018 |
|---|---|---|
| Revenue | 274,117 | 252,653 |
| Research and development expenses | –11,446 | –10,903 |
| Operating income (EBIT) | 14,303 | 14,185 |
| Net income | 9,603 | 9,781 |
| EBITDA | 29,851 | 27,398 |
| Cash flow from operating and investing activities | 11,573 | 4,705 |
| Net cash | 25,214 | 18,029 |
| Gross margin, % | 19.0 | 19.5 |
| EBIT margin, % | 5.2 | 5.6 |
| EBITDA margin, % | 10.9 | 10.8 |

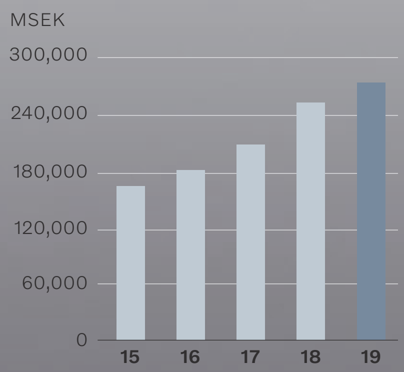
## RETAIL SALES BY MARKET



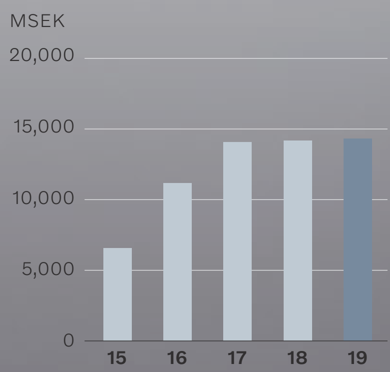

## RETAIL SALES BY CARLINE



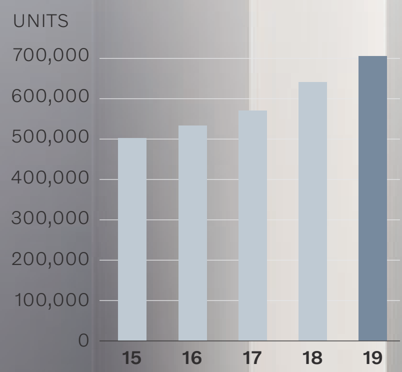

## REVENUE




## EBIT




## RETAIL SALES




# Market Development

Volvo Cars maintained strong global sales development with over 700,000 cars sold. Double digit growth across 7 of our top 10 markets translated into a global growth of 9.8 per cent; growing faster than the industry in Europe, China and the US.

| EUROPE | CHINA | US | OTHER |
| --- | --- | --- | --- |
| ↑ 7% | ↑ 19% | ↑ 10% | ↑ 6% |
| 341,200 (318,235) UNITS | 154,961 (130,593) UNITS | 108,234 (98,263) UNITS | 101,057 (95,162) UNITS |

### INDUSTRY DEVELOPMENT

The passenger and premium car market in Europe recorded slight increases. The growth was marked by a few key markets during the fourth quarter, particularly in December, which pushed the overall car registrations in Europe for the full year.

The auto industry in China continued to decline during the year. Despite softening, the premium market continued to deliver growth.

The US car market recorded a decline during the year, as a small growth in the light truck segment was offset by a sharp decline in the passenger car segment. The premium car market of imported cars marginally declined.

Total passenger car registrations in Japan, Korea and Canada recorded declines between 1.4 to 3 per cent, while registrations of imported cars in Japan declined by almost 5 per cent. These three markets represent Volvo Cars' largest 'other' markets.

### VOLVO CARS RETAIL SALES PERFORMANCE

Volvo Cars' strong growth trajectory continued, mainly driven by SUV sales. Five of Volvo Cars' main European markets displayed double digit growth and sales records were established in various markets during the year.

Strong demand continued for Volvo cars in China. The double digit sales growth was mainly driven by the locally produced XC60, XC40 and S90, followed by the XC90.

Despite the decline in the market, Volvo Cars' retail sales in the US continued to grow, mainly driven by increased demand for the locally produced S60, followed by the XC40 and also supported by an increase in XC90 sales.

Retail sales in other markets continued to grow driven by strong demand for the XC40 and XC60 and also supported by an increase in V60 sales. The largest markets were Japan, Korea and Canada.

# CEO Comment

2019 was again a year of growth. For the sixth consecutive year Volvo Cars sets a new sales record of more than 700,000 cars, and we gained market share in all our main markets.

Revenue increased by 8.5 per cent to SEK 274bn and led to an operating income of SEK 14.3bn. During the second half of the year, and specifically during the fourth quarter, both profit and profit margin outperformed the comparative period in 2018, and the robust financial result led to a strong cash flow from operating and investing activities. This is a result of continued strong growth in volume, especially in SUVs, as well as cost efficiency measurements initiated early in 2019.

Despite tough market conditions in the auto sector, we are pleased to report growth in all regions, as our progressive and modern products continue to gain attraction. In China, we sold almost 155,000 cars, an increase of nearly 19 per cent, comfortably outperforming the overall market. We broke the 100,000 cars sold threshold for the first time since 2007 in the US, generating a 10 per cent sales increase. In Europe, we saw strong growth in Germany, where sales reached more than 50,000 cars for the first time. Despite political uncertainty, the UK reported its best sales result since 1990.

As part of our electrification strategy, we now offer a plug-in variant on every model, the Recharge line-up, and sales is picking up reaching 7 per cent of sales in 2019. Given the availability of the Recharge line-up and an increased production capacity on electrified vehicles, we aim to sell 20 per cent rechargeable cars in 2020.

In November, as part of the Recharge line-up, we revealed the first fully electric Volvo model, the XC40 BEV. Production is starting in 2020 and orders are already coming in. As part of our ambition to sell 50 per cent fully electric cars and reduce total lifecycle carbon footprint per car by 40 per cent by 2025, we will be launching one fully electric car per year and we have set out our ambition to be a climate-neutral company by 2040.

Sustainability is as important to Volvo Cars as safety – and we target to have the same distinguished reputation for our sustainability achievements as we do for safety. Our commitment to conduct business in a responsible manner remain strong and so is our engagement in the UN Global Compact.

We face a great shift in technology, which offers great potential, but also creates a need for new competences. To ensure that we have the right skills for the future, we continue to invest in our people and the evolving technology that support our growing business. With the competence shift, we are also transforming the way we work, becoming an increasingly technologically driven organisation which aims to exceed our customers' expectations.

During 2020, we will continue to develop our brand with innovative product offers and customer services to further increase sales and revenue, all while maintaining a strong focus on cost. We are seeing positive effects from already implemented, as well as ongoing cost efficiencies and we will continue to create synergies within the wider Geely Group. As an example, we have announced our intention to separate our combustion engine operations into a stand-alone business unit, including potentially merging these activities with those of Geely. The proposed new business would clear the way for Volvo Cars to focus on the development of its all-electric range of premium cars.

2020 will be the year of electrification. I believe we are well prepared; we have competitive products and a global footprint with sufficient capacity. By delivering on existing, as well as developing new innovative business models and expanding our range of products and services, we will continue to deliver the mobility our customers want and need.

"2020 will be the year of electrification and I believe we are well prepared."

Since January 2020, the corona pandemic is spreading and is now severely affecting Volvo Cars in many ways with concern for its employees, a weakening market, as well as production disruptions. As an effect, the European and US manufacturing plants will be temporarily closed. At the date of signing, the assessment is that the Belgium plant will remain closed until April 5. The Swedish and US plants will be closed between March 26 and April 14.

Our primary focus is the health and safety of all employees. Initially some precautionary measures and travel restrictions were taken, followed by enhanced measures to reduce the spread of the virus by closing production, working from home and taking more personal precautions.

These actions aim at securing jobs, adjust production to demand and to ensure that Volvo Cars can come back to normal production as soon as it is possible and safe.

Earlier in March, Volvo Cars reopened its four manufacturing plants in China after an extended closure period. Today's showroom traffic is indicating a return to normal in China's car market, which is demonstrating the advantages of being a global company.

**Håkan Samuelsson**
Chief Executive
March 26, 2020

# THE WORLD AROUND US

Driven by changing consumer behaviours and technology shift, the automotive industry continues to transform. This provides new business opportunities, urges companies to evolve their business models and open up to innovation and collaboration.

# Changing Consumer Demands

Consumer preferences are rapidly changing. Our market research shows that consumer decisions and behavior are driven by factors such as convenience, digital access, environmental and social responsibility as well as ongoing urbanisation.

### CONVENIENT MOBILITY

Nowadays, many people are primarily interested in just getting from A to B and having access to a car, rather than owning it. That makes convenience an important factor for today's mobility consumers. We also know that our consumers want transparency about pricing and terms and conditions, before signing up for a car or mobility service. And consumers expect a user-friendly and seamless integration with other parts of their lives.

### SEAMLESS INTEGRATION

A digital lifestyle means that people expect a seamless integration between their smartphone, other devices and the car as they go about their daily lives. Consumers expect to have an ongoing digital relationship directly with car brands; for example by getting direct information about a product while considering a car purchase or subscription, as well as receiving swift service and support while using the car.

### ENVIRONMENTAL INDUSTRY DRIVERS

The automotive industry is moving towards electrification, driven by environmental concerns and regulatory restrictions on $CO_2$ and $NO_x$ emissions. These aim to tackle the emissions that come from the lifecycle of a car, manufacturing, logistics and tailpipe emissions. Yet with the emergence of electrification, additional challenges have emerged. Car makers now need to consider the second life of lithium-ion batteries as well as responsible supply chains.

### BROAD SCALE MOBILITY

In an increasingly urbanising world, cities are facing a number of issues related to traffic and the environment; think of problems around air quality, congestion and traffic safety. As they tackle these issues via, for example, diesel bans, congestion taxes and incentive schemes for car/ride sharing, the nature of urban mobility is changing and new models of access to a car emerge.

# Technology Shift

The ever-changing consumer demands shape the shared mobility landscape. Investments in electrification, autonomous driving and connectivity continue to represent a large portion of the financial efforts to approach the emerging business opportunities in the automotive industry.

## ELECTRIFICATION
THE FUTURE IS NOW

Sustainable mobility is in focus. The speed of transformation from traditional combustion engines to hybrids to fully electrified drivelines depends on total cost of ownership, as well as charging accessibility. However, as battery prices drop and charging infrastructures improve, consumer demand for fully electric cars is already increasing.

### THE VOLVO CARS APPROACH

- First fully electric car, XC40 Recharge, launched
- Plug-in option offered for every model in our portfolio
- Battery sourcing agreements signed with CATL and LG Chem
- First carmaker to implement global traceability of cobalt used in batteries by applying blockchain technology
- Volvo Cars is fully engaged with this major change and will be a leader as this develops

## AUTONOMOUS DRIVING
SAFETY IS KEY

AD has the potential to unlock a number of benefits for the consumer. Creating a safer traffic environment, enabling a more efficient utilisation of vehicles and freeing up time are some of them. Many hurdles are yet to be overcome, including legislative and technological challenges. However, both tech companies and car OEMs are investing heavily in the development of advanced driver assistance systems and autonomous vehicle technology.

### THE VOLVO CARS APPROACH

- For many years our brand continues to be recognised as a leader in safety
- Production-ready base car ready for self-driving presented by Volvo Cars and Uber
- Move steadily towards full AD through implementation of driver assistance technology that make everyday driving in congested traffic safer and more pleasant for our drivers and passengers

## CONNECTIVITY
KEY ENABLER FOR FUTURE MOBILITY

In the future, all cars are expected to be connected. With more connected cars and increased consumer insight gained via usage data, new digital services and consumer offerings will emerge. Cars will be upgraded with over-the-air software packages, consumers will manage their car via their smartphones and new mobility services will increasingly connect drivers and passengers with rides in real time.

### THE VOLVO CARS APPROACH

- Our driver support solution provides for app and software updates - information, entertainment, navigation and other smart functions available in real-time over the air
- Slippery road alert function provides for sharing of traffic data between Volvo cars and e. g. Volvo trucks

## SHARED MOBILITY
NEW CONSUMER SEGMENTS

Shared mobility complements private car and public transport by enabling car/ride sharing. A couple of mega players have gained strong positions in this area, some being car OEMs or mobility provider spin-offs, while others are tech start-ups. Shared mobility is expected to increase when sharing of electrified, autonomous and connected cars becomes available on a broader scale.

### THE VOLVO CARS APPROACH

- Our mobility brand M launched in Stockholm and Uppsala, Sweden
- Our subscription offer Care by Volvo provides a transparent, hassle-free way of subcribing to a car

# The Volvo Car Group

## VOLVO CARS

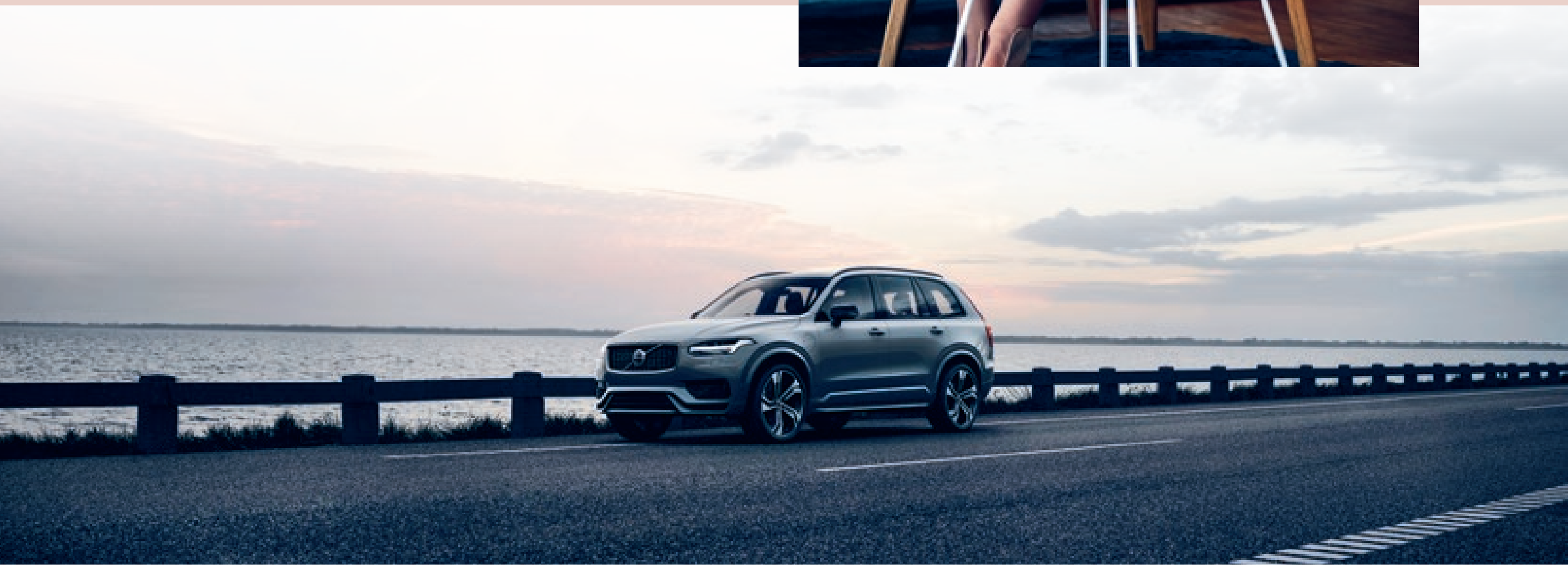
We design, develop, manufacture and sell a range of premium cars and services, including sedans, wagons and SUVs. Recognised for our design, safety and technological innovations, the cars are designed and developed by award-winning teams at design centres in Sweden, China and the US. We believe that our cars are sophisticated, safe and attractive for people who care about what we care about. Our position as a leader in safety, the experience gained and the technology we have developed through partnerships with disruptive forces, may provide a first mover advantage in the developing robotaxi market, and positions us well to take a share of the operator sales market as it grows.

## COMMERCIAL OFFERS IN TRANSITION

The challenges around the technology shift are transforming the traditional car business model as we know it. The transition from the traditional 'Car-as-a-Product' business, to also include the new 'Car-as-a-Service' business, is focusing not only on selling cars, but also providing full and flexible automotive mobility services. We embrace the new landscape and are acting rapidly to capture the additional opportunities that direct relationships with consumers provide.

**Collaboration with our retailers is key**

Our retailer network is the principal route to market. By working in collaboration with our retailers around the world, we evolve our business model to embrace digitalisation. Since our retailers are delivering and servicing both our and the consumers' cars, they will continue to play a key role in the transition regardless of sales channel of the commercial offers. In the transition to an omni-channel distribution system with direct consumer relations, we build on the strengths of both our retail partners and ourselves. There is substantial value in continuing our partnership, capturing the business opportunities together.



## DIRECT CONSUMER BUSINESSES

One of our longer term ambitions is to increase the direct consumer relationships, hence the means to achieving it, is an important part of our strategy. We are planning for significant opportunities now that the smartphone is part of everyone's daily life. As consumers want to solve their mobility needs by accessing a car either always or sometimes, or just simply making a journey, we are changing our consumer offerings accordingly. In addition to continuing to improve the traditional business model of selling cars via our retail partners, our new ways of offering mobility will attract new consumer groups by expanding the range of products and services.

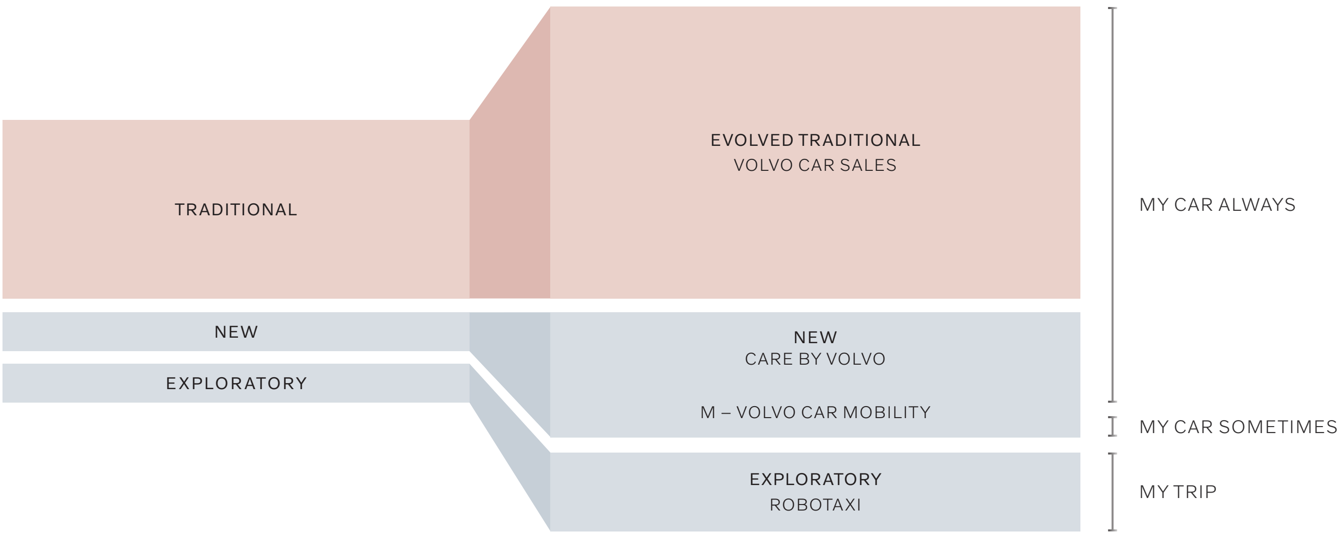
**Care by Volvo**
Care by Volvo was launched in 2017 and represents a relatively new business area within Volvo Cars that is capturing an innovative, direct consumer business. It aims to expand the core business of car sales, and is a subscription-based car access model that allows the consumers to have a car simply by paying an all inclusive prescribed monthly subscription fee. With Care by Volvo we broaden our consumer relationships. We are also capturing a greater share of the value chain, for ourselves and our retail partners, as we are expanding into new markets and consumer segments.

**M – Volvo Car Mobility**
With launches in Stockholm and Uppsala, Sweden, M is a mobility brand with global ambitions that is offering urban consumers the opportunity to use a car for a shorter period of time. By increasing the on-demand easy access to Volvo cars, we are building direct relationships with new consumer groups. We recognise the challenges that large cities face with increasing congestion, accidents and pollution, and want to be a partner in solving urban mobility needs by providing an alternative to car ownership, as well as complementing public transport and taxis. M is already contributing to the development of important capabilities for us such as supply, demand and operational fleet management, in addition to building an ecosystem of partners to develop additional services to enhance revenue opportunities.

**Volvo On Call**
For many years, Volvo On Call has been available on all Volvo cars. It is an app and one of the main channels of interacting with our consumers as it connects them with their Volvo cars and provides connected car services. Volvo On Call features include (but are not limited to) lock/unlock doors, remote start/stop engine, car warnings, vehicle information and roadside assistance.

**E-commerce**
Our ambition is to improve and modernise our websites and configurator to create a digital showroom as a complement to our retailers' showrooms. This will create the possibility to make transactions online and is done by ensuring the e-commerce solutions will work for the majority of our commercial offers. Moreover, we will ensure retailers' engagement by creating integration with various retailer management systems and capability to handle and distribute cars in collaboration with our retailers.

### COMMERCIAL OFFERS



# Our Strategic Affiliates

Our strategic affiliates Polestar, Lynk & Co and Zenuity are non-consolidated independent joint venture companies. They are important affiliates enabling us to deliver on our strategy and fulfilling our company purpose of providing Freedom to move in a personal, sustainable and safe way. In addition to developing strong and innovative consumer offerings from the businesses within the Volvo Car Group, we do so also by cooperating with our strategic affiliates. Collaborating with the different brands creates greater competitiveness and synergies in the development of next-generation technologies we will benefit from, as well as shared procurement, joint development processes and economies of scale.

## Polestar

**ELECTRIC PERFORMANCE BRAND**

Polestar is spearheading electrification with its pure progressive performance cars. With the Polestar 1 and 2 models, it has brought electrified and fully electric cars to a consumer segment not currently served by Volvo Cars. Given Polestar's Chinese production base, and Geely's 50 per cent ownership, Polestar is also well placed to gain market share in the fast growing Chinese electric vehicle market.

VOLVO CARS 50% OWNERSHIP

ZENUITY

**A MARKET-LEADING ADAS/AD SOFTWARE DEVELOPER**

Zenuity is developing Advanced Driver Assistance Systems (ADAS) and Autonomous Driving (AD) software and is a joint venture with Veoneer. Volvo Cars' expertise in active safety, combined with Veoneer's market position as a tier 1 supplier, positions Zenuity well to capture future revenue in a growing ADAS and AD market space. Zenuity's full stack software solutions include algorithms for functions ranging from sensing to vehicle control, and target a variety of applications from ADAS to advanced AD cars. Zenuity's software architecture is designed to be scalable. With a scalable software architecture, Zenuity seeks long term relationships with customers that will enable initial sales of ADAS software to gradually develop into full AD software stack sales.

VOLVO CARS 50% OWNERSHIP


LYNK&CO

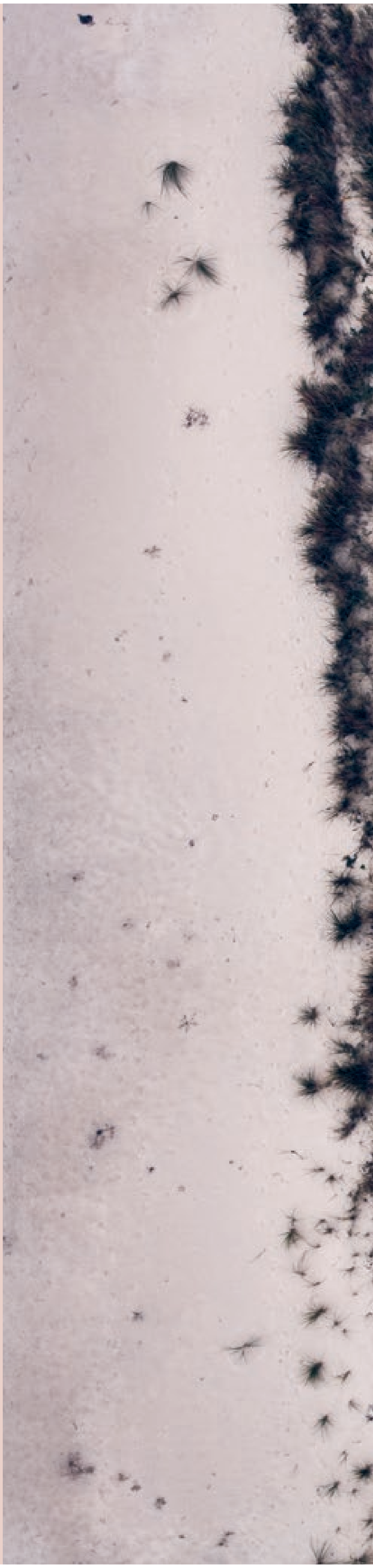
**CAPTURING NEW MASS MARKET CONSUMER GROUP**

Designed and engineered by an international team in Gothenburg, Sweden, Lynk & Co has a European heart and soul, and a refreshing approach to the automotive business. The company is offering its consumers in China unparalleled in-car connectivity, vehicle sharing, online sales and a subscription model. With the ownership in Lynk & Co, Volvo Cars seeks to benefit from collaboration and other opportunities by indirect penetration of the mass market segment that Volvo Cars is not engaged in.

VOLVO CARS 30% OWNERSHIP

# OUR STRATEGY

Our strategic framework, which is guided by our purpose of providing Freedom to move in a personal, sustainable and safe way, provides the foundation for reaching our longer term ambitions and premium profitability.



COMPANY PURPOSE

# Freedom to Move

Cars used to be the symbol for personal freedom. Owning a car meant that you had the means to be independently mobile - that you owned not just a vehicle, but choice as well. Nothing of that has changed, but the world we live in has. The earth, our cities and our everyday lives are under increased pressure. In such an age, a car can feel more like an obstacle. At Volvo Cars we have made it our mission to take back the feeling of freedom and let the car be the enabler of a richer life. We will do so by offering mobility, regardless of what that looks like or who wants to use it. We want to democratise mobility by giving all our fans Freedom to move in a personal, sustainable and safe way.

## PERSONAL

We commit to develop and build the most personal solutions in mobility; to make life less complicated and to protect your freedom to spend time and energy on the things that matter most. Our products and services are personalised, familiar and luxurious.

## SUSTAINABLE

We commit to the highest standard of sustainability to protect the world we share. We are authentic, responsible change-makers. Our commitment to responsible business conduct and our ethical values run through everything we do.

## SAFE

We commit to pioneering the safest, most intelligent technology solutions in mobility and everyday life to protect what is important to people.

# Strategic Framework

## LONGER TERM AMBITIONS

**DIRECT CONSUMER RELATIONSHIPS**
To be able to offer the best consumer experience, to win and maintain the consumers – we need an unfiltered and direct relationship with them. Through both physical and digital touchpoints, we continued to build those relationships during 2019.

**DIRECT CONSUMER BUSINESSES**
Smart car sharing (M) and flexible true subscription (Care by Volvo) are our first direct to consumer product offers on our journey to become a global mobility provider. As the roll-out to new markets continues, the products will evolve and improve.

**PURE ELECTRIC CARS AND LIFECYCLE CARBON-NEUTRAL FOOTPRINT**
With this year's launch of our first fully electric car, the XC40 Recharge, and upcoming deliveries on the initiatives set out in our new sustainability strategy, we are well positioned to reach our longer term ambitions.

**AUTONOMOUS CARS**
Work continued with developing AD capability and so did our collaborations with major players in the soft- and hardware areas, altogether moving us closer to our longer term AD sales ambition.

**NATURALLY HEDGED GLOBAL PRODUCTION**
Our global footprint has, and will continue to support eventual production reallocation needs to meet challenges in global market conditions, and will make us less sensitive to foreign exchange rate movements.

**SUPERIOR GROWTH**
2019 was the sixth consecutive year of growth in retail sales and revenue. We expect that to continue as we benefit from a strong product offer and increased production capacity.

**PREMIUM PROFITABILITY**
During 2019, we continued to build on the above ambitions and combined with competitive products, cost efficiency measurements and synergies, we aim for premium profitability.

## GROW PROFITABILITY

- Reach new consumers with complementing commercial offers
- Grow in volume to allow future investments
- Increase profitability by focusing on gross margin improvement and cost efficiency

## STRATEGIC PRINCIPLES

### STAY FOCUSED

- Ensure optimal product portfolio
- Take advantages of the synergies within the Geely Group
- Simplify the product offer

### STRENGTHEN OUR BRAND

- Focus on our values
- Focus on conquest
- Focus on relevant products

### BE PEOPLE CENTRIC

- Continue to evolve an organisation fit for the future
- Be the employer of choice
- Focus on people and bringing out the best

### ACHIEVE HIGHEST STANDARD OF SUSTAINABILITY

- Be a climate-neutral company by 2040
- Be a circular business by 2040
- Be a recognised leader in responsible business

STAY FOCUSED

# We allocate our resources efficiently to increase return on investments

### ENSURE OPTIMAL PRODUCT PORTFOLIO

We aim to continue moving our product portfolio upmarket and expand it into profitable and growing car segments without too much diversification. We intend to make BEVs available as a powertrain option for all future models and launch the Recharge carline to drive branding and adoption of our BEVs and PHEVs. Our ambition is to launch new models every year, including one BEV per year.

### FIND SYNERGIES WITHIN THE GEELY GROUP

We will continue to cooperate with companies within the Geely Group to share the expertise and competitive advantage. By doing so, we will benefit industrially and commercially in the development of next-generation technologies, shared procurement costs, joint development projects, different brand positionings, digital backbone systems and economies of scale.

### SIMPLIFY THE PRODUCT OFFERING

As a human-centric brand, we focus on consumer preferences and consumer experience by constantly improving the commercial offering for each carline. Going from an offering that is built on three trim levels, a choice of packs and single options, we are taking a number of steps to simplify it. Our aim is to enhance clarity, reduce complexity and lead time, as well as optimise revenue and residual value.

STRENGTHEN OUR BRAND

# We protect what is important to you

We offer Scandinavian luxury with the most advanced mobility innovations to protect you and your loved ones.

### FOCUS ON OUR VALUES

We are driven by our purpose to deliver Freedom to move in a personal, sustainable and safe way. We serve consumers who share our values. People who care about what we care about. People who are willing to pay more for our offer of Scandinavian luxury, sustainability and safety.

### FOCUS ON CONQUEST

There is a vast capacity for growth outside the premium segment. Therefore, we gain market share by winning consumers who are upgrading from the mass of non-premium brands.

### FOCUS ON RELEVANT PRODUCTS

We strengthen our premium product offers and continue to focus on aspirational models that consumers find desirable. Our SUVs (and Sedans in APAC) have the greatest positive influence on our brand perception, therefore they remain one of our main focus.

BE PEOPLE CENTRIC

# We are a purpose-driven organisation

### CREATE AN ORGANISATION FIT FOR THE FUTURE

Thanks to our deep understanding of our consumers' needs, we continue to operate a successful global business. Our diverse workforce has a unique ability to develop mobility solutions, products and services that make lives less complicated for people. We continue to pioneer digitalisation and connectivity, using virtual tools, best in class software development and smart communication solutions.

### BE THE EMPLOYER OF CHOICE

Our culture improves our engagement, development and performance, and therefore also our business success and attractiveness as an employer. Our core strength comes from our people. Human-centricity is key and our open-minded culture unites us and is our competitive edge. Only by working together will we achieve great results.

### FOCUS ON PEOPLE AND BRINGING OUT THE BEST

- Building on each individual's strength
- Purpose-based leadership
- Group people to work around missions
- Product focus with ownership
- Reward value of achievements

ACHIEVE HIGHEST STANDARD OF SUSTAINABILITY

# We commit to the highest standard of sustainability

By working towards climate-neutrality, embracing the circular economy and conducting business responsibly, we help protect the planet, contribute to a fairer and more equal society as well as support our profitable growth.


### CLIMATE ACTION

BE A CLIMATE-NEUTRAL COMPANY BY 2040

Reducing $CO_2$ is the highest priority in our sustainability strategy. By electrifying our cars, working with suppliers and addressing global operations we target carbon-neutrality in line with the Paris Agreement.

### CIRCULAR ECONOMY

BE A CIRCULAR BUSINESS BY 2040

We will transition to a circular economy by designing for value retention, resource efficiency and removing waste. To become a truly circular business we will develop offers optimising the usage of products and components.

### ETHICAL AND RESPONSIBLE BUSINESS

BE A RECOGNISED LEADER IN RESPONSIBLE BUSINESS

Commit to responsible business conduct and ethical values. We will fight corruption wherever we operate. We will become the employer of choice by offering a safe, motivating and inclusive workplace. We will engage in partnerships to make a wider difference and promote sustainable development.

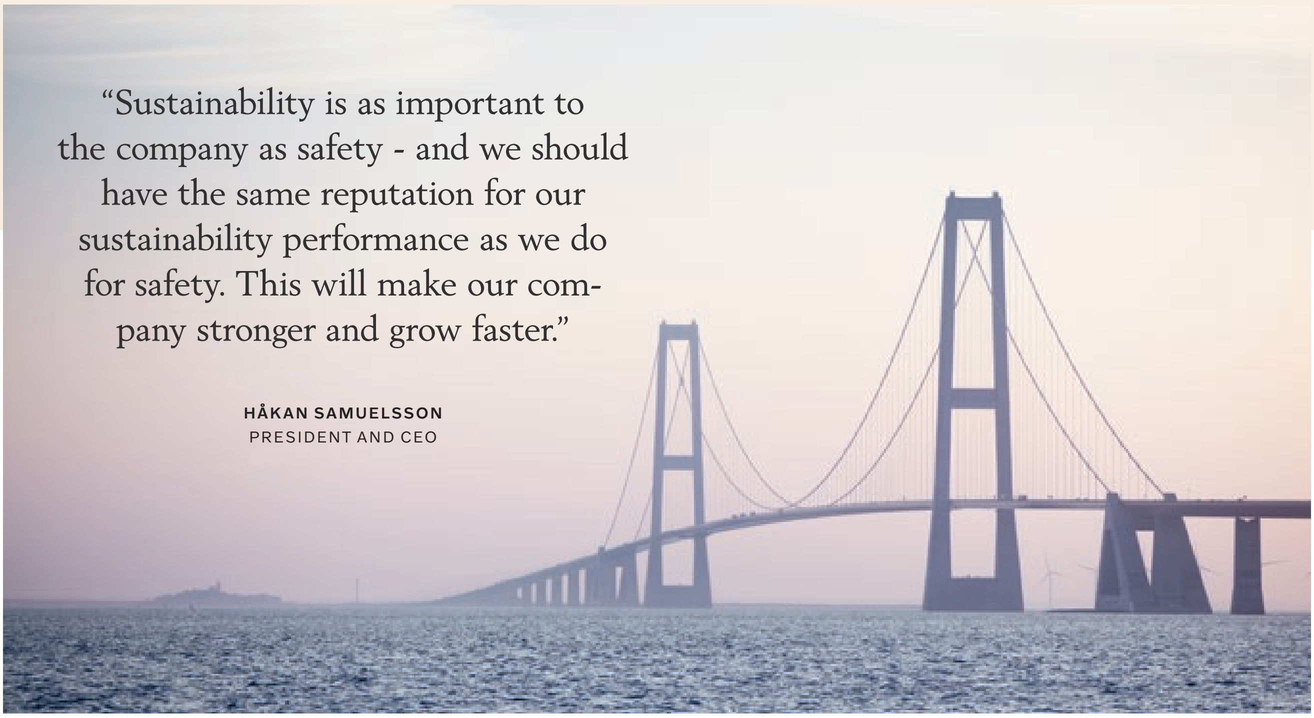
ACHIEVE HIGHEST STANDARD OF SUSTAINABILITY

# Sustainability will make our company stronger and help it grow faster

A strong focus on sustainability is, and will continue to be, critical to our success. Societal, regulatory and market trends will further emphasise this in the coming years.

Our key stakeholders find climate, electrification, ethics, supply chain and circular economy the most important sustainability topics for us to address; our new sustainability strategy encapsulates this. By working towards climate-neutrality, embracing the circular economy and conducting business responsibly, we help protect the planet, contribute to a fairer and more equal society, as well as support our profitable growth.

In partnership with our stakeholders, we can increase the impact of our efforts to make a global difference and promote sustainable development.



> "Sustainability is as important to the company as safety - and we should have the same reputation for our sustainability performance as we do for safety. This will make our company stronger and grow faster."

**HÅKAN SAMUELSSON**
PRESIDENT AND CEO

## UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

The UN Sustainable Development Goals (SDGs) is a series of 17 goals agreed on by world leaders in 2015 that aim to help end all forms of poverty, reduce inequality and tackle climate change. Governments, civil society and business will work towards meeting them up until 2030. The SDGs act as our guide, where we focus on and address 5 of the 17 through our new sustainability strategy. The SDGs relevant to our business are:

5 Gender Equality
8 Decent Work and Economic Growth
11 Sustainable Cities and Communities
12 Responsible Consumption and Production
13 Climate Action

# Be a climate-neutral company by 2040

We recognise the scale and urgency of global warming and its extreme consequences for the planet and society. Passenger vehicles represent a major source of greenhouse gas (GHG) emissions, and as a contributor to climate change, we recognise we need to do more to help protect the planet. That is why climate action represents the highest priority in our sustainability strategy.

We will reduce GHG emissions across the company and our whole value chain with the ambition of becoming climate-neutral by 2040, meeting the goals of the Paris Agreement and supporting SDG 13. Through the implementation of our electrification strategy, we are also supporting SDG 11 by increasing access to sustainable transportation and improved air quality.

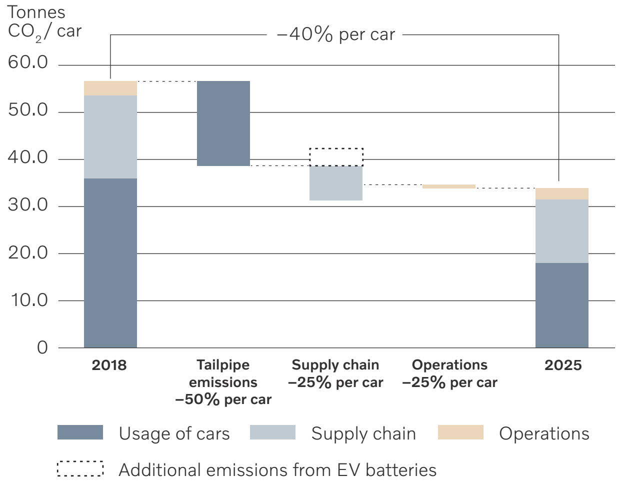
We will focus on short term actions (2018–2025) by aiming to reduce GHG emissions by 40 per cent per car, including reducing:

- Tailpipe emissions by 50 per cent, see Products chapter pages 43–44
- Supply chain emissions by 25 per cent, see Procurement chapter page 41
- Operational emissions (including transports) by 25 per cent, see Manufacturing and Logistics chapter pages 47–49

We intend to publicly and transparently report our lifecycle emissions and have our targets externally validated. We will use the International Greenhouse Gas Protocol to measure and report our emissions. We will use carbon offsetting to address any emissions we cannot mitigate ourselves.

In 2019, our total $CO_2$ emissions amounted to 38.2 million tonnes, see Sustainability Scorecard page 138 for more details. Our total lifecycle $CO_2$ emissions per car reduced by 3.2 per cent between 2018 and 2019, reaching 54.1 tonnes/car. This reduction is due to increased plug-in hybrid sales, decreased emissions from indirect purchasing and transport (decreased air freight and increased rail), as well as reductions in metal waste in our operations and business travel.

**AMBITIONS' EFFECT ON $CO_2$ EMISSIONS PER CAR 2018–2025**




**CIRCULAR ECONOMY**

# Be a circular business by 2040

A circular economy is an economic system aimed at keeping products and components in use for longer, which minimises the need to produce new materials and products, extract finite resources, as well as eliminates waste. We need to move away from a linear economy and apply circular economic principles in order to meet our climate ambitions, secure future availability of materials, ensure efficient raw material usage and waste management practices. This means that we need to transform the way our products are designed, produced and used. We aim to increase our profitability through the generation of cost savings and new revenue streams, while substantially reducing our $CO_2$ emissions by:

- Using 25 per cent recycled and bio-based materials in our cars by 2025, and by using the most sustainable options when selecting materials such as leather and wood, see Products chapter page 44
- Increasing resource utilisation and minimising waste, including through reducing production waste by 15 per cent by 2021, see Manufacturing and Logistics chapter page 49
- Retaining component value, including through reusing, refurbishing and remanufacturing parts, see Products chapter page 45
- Developing new business opportunities which optimise the efficient lifecycle use of our products and components

Our path towards 2040 will be divided into two main roadmaps:
1. Towards 2025 – extract as much of the $CO_2$ equivalent emissions and cost savings as possible from our current products and services
2. Towards 2040 – transform into a circular business through a new generation of products, services and processes

## Be a recognised leader in ethical and responsible business

Acting as a responsible business means doing what is morally and ethically right in order to have a positive social and environmental impact. Responsible businesses have a powerful influencing role within their sector, supply chain and wider industry, and they enjoy better employee engagement and retention, as well as attract investment and the best talent.

A strong corporate culture that focuses on ethics and leadership, as well as equal opportunities (SDG 5) and decent work for all (SDG 8), is critical towards achieving this.

Our ambition is to be a recognised leader in responsible business. We intend to achieve this by:

- Being an Employer of Choice. We aim to work proactively to increase our people's well-being and become one of the world's most parent friendly employers, see People chapter pages 53–55
- Further strengthening the ethical dimension of our culture and corporate governance. This is achieved by ensuring awareness on anti-corruption and unethical business practices among employees and business partners, as well as focusing on our leaders setting the tone and being role models for responsible and ethical behaviour, see People chapter pages 56–57
- Developing partnerships, including through financing, are opportunities we explore to further improve the impact we make.
- Securing a responsible supply chain by ensuring that sustainability performance has equal weight as cost and quality in the sourcing process, and by having 100 per cent transparency of cobalt and 3TG supply by 2020, see Procurement chapter pages 38–41

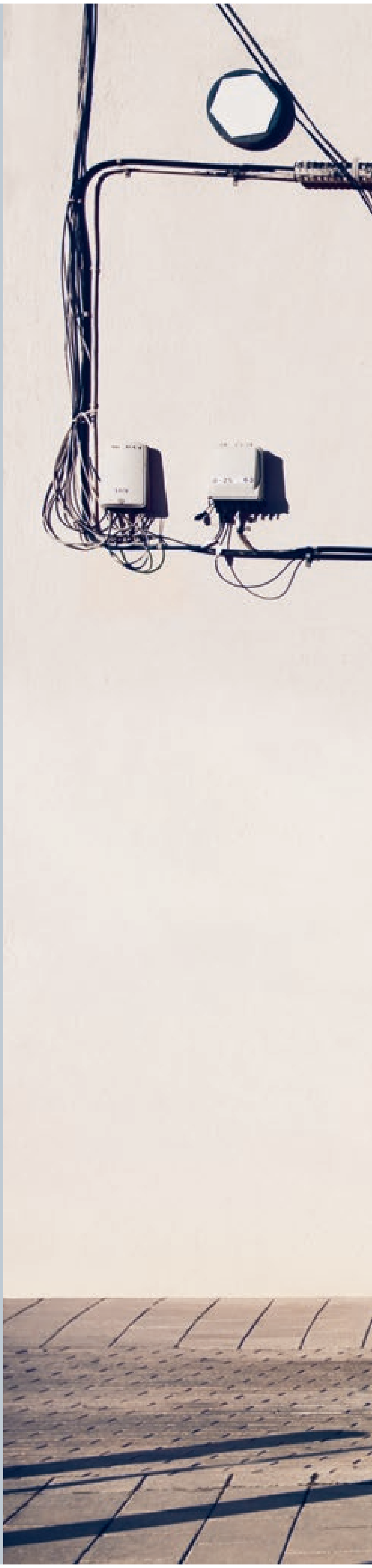
## Strategic Focus Areas and Initiatives

To create focus and implement the strategy, 10 strategic initiatives have been launched:

| STRATEGIC FOCUS AREAS | STRATEGIC INITIATIVES |
|---|---|
| CLIMATE ACTION | 1. Reduce $CO_2$ across the value chain<br>2. Develop the electrification ecosystem<br>3. Improve the real-world energy efficiency of our cars |
| CIRCULAR ECONOMY | 4. Make materials circular and eliminate waste<br>5. Retain component value over time<br>6. Capture business benefits of circularity |
| ETHICAL AND RESPONSIBLE BUSINESS | 7. Take the lead in setting a new global people standard for the industry<br>8. Put sustainability on a par with quality and cost in Procurement<br>9. Engage in sustainable financing<br>10. Tackle corruption and unethical business practices |

# HOW WE CREATE VALUE

We create sustainable value and growth by investing and utilising our resources in a sustainable way throughout our value chain with concern for people, society and the environment in which we operate.



# Creating Sustainable Value and Growth

## PRODUCT CREATION

DESIGN | TECHNOLOGY | FUTURE MOBILITY | PROCUREMENT | PRODUCTS

Read more on page 32

We compete in the premium car segment with confidence in design, innovations, products and services. Based on our Scandinavian heritage, our products are developed on highly flexible vehicle platforms and powered by our industry-leading in-house developed engine technology. Our innovations are designed to simplify and improve life and we are especially proud of our advances in safety and electrification. Our global manufacturing footprint enables us to integrate and optimise our supply chain. We work hard to engineer and produce fuel-efficient and safe cars. Our product portfolio, our engine programmes and our electrification strategy show our clear commitment to the environment.

## OUR PEOPLE MAKE THE DIFFERENCE

Read more on page 52

## CONTRIBUTING TO A BETTER SOCIETY

Read more on page 58

**MANUFACTURING AND LOGISTICS**

Read more on page 46

While carefully considering how to minimise the environmental impact of our global expansion, we aim to optimise our production footprint and logistics operations.


**CONSUMER EXPERIENCES**

PRODUCTS | SERVICES

Read more on page 50

Our human-centricity is at the heart of everything we do. It aims to improve the consumer experience. We will achieve this by developing innovative digital solutions and new commercial offers. In addition to sales of new and used cars, we offer subscription, shared mobility and connected car services.

Our strength comes from our people. Our open-minded culture unites us and is our competitive edge. We gather around missions and achieve great results. Our culture sets the scene for engagement, development and performance. It is crucial for our business success and therefore also for our attractiveness as an employer.

We contribute to a better society, and protect people and the environment by creating partnerships for sustainable development, as well as promoting traffic safety together with local and international organisations.

PRODUCT CREATION: **DESIGN**

# Evolving Our Heritage

In an increasingly digitised world, people have many more ways to express themselves; the car is no longer the dominant symbol of success and status it once was. Volvo Cars is not identifying itself with the ever louder, more aggressive and extreme designs, but is instead creating products that are much more connected to people's values and how they live their lives. We believe in creating deeper, longer-lasting connections with our consumers.

We are rethinking the foundations of how our products are designed and built from the ground up.


> The XC40 Recharge represents the next step on Volvo Cars' drive for sustainability.

**Placing the consumer at the centre of our creations**
What is clear is that the car is no longer an object that exists in a vacuum. Key to success in the 2020s is likely to be the creation of an intuitive, consistent and truly personal experience across every touchpoint – whether physical or digital – from the first point of contact a consumer has with our brand to the everyday interaction with one of our cars. In order to achieve this, the User Experience teams have been brought together within the Design department with a focus on placing the consumer at the centre of everything we create.

**True to the Scandinavian design**
The principle of designing around people is at the core of Scandinavian design and the new XC40 Recharge is a great example of how we continue to evolve this heritage. True to the Scandinavian design principle of minimalism, we looked at what we could remove or reduce in order to enhance the electric version of the XC40. Because there is no longer an internal combustion engine we were able to add storage under the hood and because there is no engine to cool we took a different approach to the grille. While many other car companies continue to create even larger grilles, we created a fresh expression with the XC40 Recharge. The result takes more influence from product design rather than referencing the car industry. Inside, the operating system has created a world-leading seamless experience across all our consumers' digital devices, again bringing the car much closer to how people live and helping make their lives even better every day. The XC40 Recharge also represents the next step on Volvo Cars' drive for sustainability by bringing electrification to a wider audience in a car that has proven its wide appeal. We understand that there is much more work to be done in this area and so the 2020s will also be the frontier of creating mobility that not only intersects intuitively with how we live, but also has as positive effect as possible on the planet. To do this we are rethinking the foundations of how our products are designed and built from the ground up.

The combination of all these factors creates the opportunity for the most transformative era in the history of Volvo Cars.

PRODUCT CREATION: **TECHNOLOGY**

# Lifesaving Technology

"Cars are made for people. The guiding principle behind everything we make at Volvo, therefore, is and must remain, safety."

**ASSAR GABRIELSSON AND GUSTAF LARSON**
FOUNDERS OF VOLVO, 1927

Volvo Cars is a worldwide industry leader in safety and has been for years. Many of our car models have been awarded the highest rank in Euro NCAP tests and several of our innovations have formed an industry standard. We have developed and introduced numerous safety features throughout the years including:

- THREE-POINT SAFETY BELT
- REAR-FACING CHILD SAFETY SEAT
- CHILD BOOSTER CUSHION FEATURES
- SIDE IMPACT PROTECTION
- WHIPLASH PROTECTION
- AUTO BRAKING CITY SAFETY
- LARGE ANIMAL DETECTION
- RUN-OFF ROAD PROTECTION PACKAGE

**Striving to deliver our safety vision**

Using the US as an example, the latest available data from 2018 from the National Highway Traffic Safety Administration (NHTSA), shows that about 94 per cent of the car crashes were attributable to human error. Volvo Cars' safety vision is that no one should be seriously injured or killed in a new Volvo car. Several important areas have been identified that need to be addressed as part of our efforts to support our safety vision. Three of them are:

- Speeding – this is a prominent gap. NHTSA data from 2018 shows that around 29 per cent of the traffic fatalities in the US were caused by speeding
- Drunk driving – is also a problem, and as difficult to end as speeding. In 2018 it remained one of the main reasons for causing injuries and fatalities on today's roads; according to the NHTSA, drunk driving accounted for about 30 per cent of the traffic fatalities in the US
- Distraction – is any activity that diverts from attention from driving. In the US in 2017, approximately 9 per cent of all fatal crashes were distraction affected

Closing the above gaps by using car technology and new opportunities that come with connectivity will not alone bring us down to zero. Therefore we have broadened our scope to also focus on driving behaviour. We believe it will lead to safer roads for all:

- Depending on the development of the Covid-19 situation, we will deliver on our decision to limit the top speed on all new Volvo cars to 180 kph from 2020. Moreover, the Care Key comes as standard on all Volvo cars from model year 2021, allowing any buyer to set an additional speed limit for anyone driving their car; themselves, their family members or friends
- In-car cameras and other sensors will be deployed that monitor the driver and allow the car to intervene if a clearly intoxicated or distracted driver does not respond to warning signals and is risking an accident involving serious injury or death. Introduction of the cameras will begin with models based on the next generation of our scalable SPA2 vehicle platform in the early 2020s
- Our industry-first connected safety technologies Hazard Light Alert and Slippery Road Alert allow Volvo cars to communicate with each other and alert drivers of nearby slippery road conditions and hazards via a cloud-based network. The features were introduced in 2016 on the 90 Series Volvo cars in Sweden and Norway. During 2019, they became available to Volvo car drivers across Europe, come as standard on all new model year 2020 Volvo cars and can be retrofitted on selected earlier models.

**Sharing in the interest of safer roads for all**

During the year, 60 years of safety research was made easily accessible in a central digital library, which we urge the automotive industry to use. The decision to share underlines not only our leading position in safety, but also reflects the responsibility that goes with it. It highlights that sharing goes beyond patents and physical products; the Equal Vehicles for All (E.V.A.) initiative launched simultaneously celebrates all this, but also highlights a fundamental issue with inequality in terms of car safety development. It is a fact that women are more at risk for some injuries than men in a car crash and the differences are not always properly addressed by using crash test dummies representing an 'average' person. By using our own research, we demonstrate how safety technologies can be developed to protect all people regardless of gender, height, shape or weight, and what the results look like in terms of real car safety features by using our own safety innovations as examples. Moreover, Volvo Cars is joining forces with other car manufacturers, service providers and national governments in a ground-breaking, pan-European pilot project to share traffic safety data that is generated by cars and infrastructure. We will contribute to the pilot project by providing anonymised real-time data from the safety technologies Hazard Light Alert and Slippery Road Alert. For further information about the technologies, see above headline 'Striving to deliver our safety vision'. We believe that sharing traffic data in real-time contributes to overall traffic safety and becomes more influential the more cars that are connected.

PRODUCT CREATION: **FUTURE MOBILITY**

# Shaping the Future of Mobility

We will continue to develop and invest in the areas of electrification, Autonomous Driving (AD) and connectivity. By using our strong heritage in safety, well-founded technology competence and innovativeness, as well as by being a pioneer in partnerships, we are well prepared to meet current and future consumer needs.

## ELECTRIFICATION

We firmly believe that electrification is core to our future business. We have made an industry-leading commitment that from 2019 every new Volvo car will be launched with an electric motor, creating a portfolio of electrified cars across the range – fully electric, plug-in hybrid and mild hybrid cars.

The first fully electric Volvo car, the XC40 Recharge, was revealed in 2019 and will be rolled out in 2020, however with uncertainties due to the Covid-19 situation. From 2019 we also offer a plug-in option on every model in our line-up and we will launch one fully electric vehicle every year over the next five years. A range of mild hybrids was introduced during the year consisting of diesel and petrol versions on the XC90 and XC60 models. Furthermore, Polestar 2, the first fully electric vehicle based on technology shared between Polestar and Volvo Cars, has been launched, however the roll-out is uncertain due to the Covid-19 situation.

We see the electrification ecosystem as an integrated part of the electrification strategy and a prerequisite to reach requirements on fleet $CO_2$ and our commitment to the Paris Agreement. The electrification strategy is more than the vehicle itself. It includes a diverse ecosystem of services and capabilities required to make the ownership of an electric vehicle as convenient as possible, supporting consumers in their transition to electrification. As electrification is a paradigm shift, new services, competences and capabilities are needed from the sales situation, through the usage phase and to end-of-life of the vehicle. The ecosystem will thus provide:

1. Technical and commercial training, making our personnel confident to sell and service electric vehicles
2. A competitive and diverse electric vehicle portfolio of digital and aftermarket services
3. Charging capabilities at Volvo retailers and for consumers' use at home and when travelling
4. Battery lifecycle management – including reuse, remanufacturing, recycling


## AUTONOMOUS DRIVING

We are well positioned in the area of AD development. For AD features to be successfully rolled out, it is key for consumers to have complete trust in the car. We view our leadership in safety as a key enabler for being their natural choice. For nearly 60 years, since the invention of the three-point safety belt in 1959, our safety innovations have led the industry and saved countless lives. We are continuing that tradition with the development of our AD technology as a key element of our safety innovation work.

Pursuing our strategy to further develop AD technology, we strive to be a partner of choice and are concentrating our efforts on hardware and software.

**Hardware**

We are working together with Uber to develop new base vehicles with redundant systems able to incorporate the latest developments in AD technologies. The base vehicles are manufactured by us and then purchased by Uber. We expect this will lead to increased economies of scale on the SPA platform and position us as a world leader of hardware solutions for AD. This year, as an important proof point of our strategic collaboration, we presented a jointly developed production car, a Volvo XC90 combined with Uber's self-driving system, capable of driving itself.

**Software**

Together with Veoneer, we have created a jointly owned company, Zenuity, which develops next-generation AD software. Zenuity aims to be a world leader in software development for AD, facilitating a faster introduction of new technologies in our cars. As an example, our first fully electric car which was launched this year, the XC40 Recharge, is equipped with a new Advanced Driver Assistance Systems (ADAS) sensor platform with software developed by Zenuity. In practical terms, the platform is a modern, scalable active safety system that consists of an array of radars, cameras and ultrasonic sensors. Because of its scalable nature it can easily be developed further and lays the foundation for the future introduction of AD technology.

## CONNECTIVITY

We are well prepared to meet consumer demand for connectivity related services, and starting with the forthcoming fully electric XC40 Recharge, Volvo Cars is fundamentally rethinking infotainment. Powered by the Android-based operating system, our next-generation infotainment offering will provide consumers even more personalisation, improved levels of intuitiveness and new embedded Google technology and services. Volvo Cars is the first company to team up with Google on integrating an infotainment system powered by Android, with the Google Assistant, Google Maps and the Google Play Store built-in. The two companies have been development partners for the past several years. The new system offers full integration of Android Automotive OS, Google's open-source Android platform, with real-time updates to services such as Google Maps, Google Assistant and automotive apps created by the global developer community. For the Chinese market specifically, Volvo Cars is working with technology firm Huawei in the area of connected services for new Volvo vehicles.

PRODUCT CREATION: **PROCUREMENT**

# Shaping Sustainable Supply Chains

We shape competitive and sustainable supply chains across the world to drive the shift of Volvo Cars into a global mobility provider. Our partners must be competitive in every area, not least in sustainability. The recently selected battery suppliers have understood our aggressive sustainability ambitions and that transparency as well as traceability of their source for cobalt is a prerequisite for doing business with us. We will continue to push our suppliers in maximising social impact and minimising environmental impact in the entire supply chain.

**ADDRESSED IMPROVEMENT FINDINGS IN SUPPLIER SUSTAINABILITY AUDITS**

79%

## Responsible supply chain

***Sustainability requirements for suppliers***

Sustainability requirements are an integrated part of our contractual agreements with suppliers. The Volvo Cars Code of Conduct for Business Partners states our basic expectations on their sustainability performance, such as legal compliance, human rights, working conditions, caring for the environment and business integrity. Additionally, all suppliers are screened in a Compliance Due Diligence prior to entering into a contractual arrangement and on a continuous basis. This is to identify and mitigate legal risks in the fields of Corruption and Trade Sanctions, Money Laundering and Violations of Human Rights. Suppliers must meet the requirements and implement systematic management of all areas, including ensuring that employees and sub-suppliers respect the principles. Our contractual agreements also include numerous other sustainability requirements, such as having a certified management system for quality and environment (ISO9001, IATF16949 and ISO14001), reporting material content to the automotive International Material Data System (IMDS) and to be proactive in addressing issues and driving efficiency.

***Supply chain sustainability risk awareness***

To ensure awareness of potential risks and prioritise suppliers based on sustainability assessments, we analyse them according to the Risk Assessment Tool developed by the Responsible Business Alliance – an industry coalition dedicated to corporate social responsibility in global supply chains.

During 2019, 4,434 supplier sites were included in the risk scoring which corresponds to 100 per cent of active first-tier supplier and directed sub-tier supplier sites delivering vehicle parts, components and services to Volvo Cars at the time of evaluation.

***Supplier sustainability assessments***

We are committed to ensuring that the people who make our products and components, or provide services, are treated with dignity and respect. Our alignment with suppliers on these principles is essential. Volvo Cars applies sustainability assessments to verify compliance with requirements, but also to identify improvement areas which could lead to increased sustainable business practices throughout the supply chain.

VOLVO CARS HIGHLIGHTS

# Ensuring responsible sourcing

Volvo Cars has the ambition to be a recognised leader in responsible business. As a premium global mobility provider, we have an opportunity to have a substantial positive impact on the planet in how we select, collaborate with, and steer our supply chain towards our sustainability strategy. We recognise that there can be significant adverse social and environmental impacts associated with the production of in particular our lithium-ion batteries, including the use of cobalt, copper, lithium and mica, and work proactively with our suppliers to provide confidence to our consumers that Volvo Cars sources responsibly with transparency and respect for the planet and people.

In 2019, Volvo Cars announced that the use of blockchain technology would be implemented to ensure complete tracability in the cobalt supply chain, all the way down to the mine.

***Sustainability Self-Assessment Questionnaire***

The Self-Assessment Questionnaire (SAQ) on CSR/Sustainability has been developed in conjunction with the automotive industry as part of a collaborative initiative called Drive Sustainability. The questionnaire covers sustainability areas such as business ethics, human rights, environmental management and responsible sourcing. All answers are validated by an external assessor and, based on the SAQ evaluation, the supplier can be provided with recommendations on how to improve. We require suppliers to complete the SAQ upon request, and the SAQ is a mandatory element in the sourcing process of all suppliers providing production material since 2019. During the reporting year, 754 supplier sites submitted a completed SAQ with us. All sites delivering production material have been invited and 88.0 per cent have so far submitted a completed SAQ.

***Supplier sustainability audits***

The purpose of Volvo Cars Sustainability Audit Program is to make comprehensive on-site evaluations of suppliers' sustainability performance that is based on the Code of Conduct for Business Partners. Most audits are conducted by an accredited third-party auditor, but we also have qualified in-house capacity to perform supplier audits. During 2019, we conducted 33 supplier audits prioritised from a list of suppliers receiving a high-risk score or was prioritised for other commercial reasons. Since 2015, we have performed 127 sustainability audits amongst our first-tier and directed sub-tier suppliers. As of 2019, we have addressed approximately 79 per cent of the improvement findings identified in our audit program. For the remaining findings, we continue to work for improvements in close collaboration with our suppliers.

During 2019, we have also focused on logistic suppliers' work situation in Europe. With the basis on our Code of Conduct for Business Partners, we have conducted unannounced interviews with suppliers entering some of our European plants to increase awareness and assess compliance on drivers' working conditions. The feedback from the interviews has encouraged us to review requirements, instructions and signs when entering the plant. We intend to enhance collaborations within the area to scale efforts.

***Supply of minerals and metals***

Volvo Cars is committed to the responsible sourcing of metals and minerals, including cobalt, within our supply chain. We work hard to ensure that we only use minerals and metals whose extraction, processing, trade and transportation have not directly or indirectly resulted in human rights abuses, severe environmental harm or provided funding to conflicts. As part of that commitment, we fully support the OECD Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. In this respect, we are working with our suppliers and sub-suppliers to secure full transparency and traceability of our cobalt and 3TG supply chain. All our suppliers are expected to comply with our Code of Conduct for Business Partners, which includes the observation of human rights, including labour rights.

Our position statement on metals and minerals is publicly available through our website. We use the Conflict Mineral Reporting Template (CMRT) established under the US Dodd Frank Act, to collect information about smelters, refiners and other entities in our supply chain. As a member of the Responsible Mineral Initiative (RMI), we gain access to additional data, most importantly audit status, on a high number of smelters upstream the supply chain. All smelters and refiners are required to undergo audits, which will determine and validate their compliance with human rights and the OECD Guidance. The aggregated information from the RMI and CMRT forms our due diligence process for conflict minerals where we identify potential discrepancies and follow-up on mitigation action plans.

VOLVO CARS HIGHLIGHTS

## Circular economy

In 2019, a closed loop system with one of our aluminium suppliers was enabled. The scrap created in the production process at our Olofström plant in Sweden, is returned to the supplier that in turn reuses the material in their production of new aluminium sheets for Volvo Cars. We are also investigating a similar set-up for other materials such as steel. Additionally, requirements on recycled materials have been added in the sourcing process for both product related parts as well as packaging.

Volvo Cars' target is to have 100 per cent RMI approved 3TG smelters by the end of 2020. So far, around 130 suppliers have reported 3TG content in production materials delivered to Volvo Cars. In 2017, Volvo Cars aligned with its suppliers and started to investigate how many smelters these suppliers had in their supply chains and how many suppliers were conformant with RMI approved smelter list. So far, at the end of 2019, we have reached 71.0 per cent conformant smelters which is in line with our target for this year.

During the year, Volvo Cars signed long-term agreements with leading battery makers CATL and LG Chem to ensure the global supply of lithium ion batteries over the coming decade for next-generation Volvo and Polestar car models. The agreements cover the supply of battery modules for all car models on the upcoming SPA2 and the existing CMA modular vehicle platforms. The agreements represent a major step towards realising our electrification strategy, which is key to providing sustainable mobility.

Moreover, Volvo Cars is the first carmaker to implement global traceability of cobalt used in our batteries by applying blockchain technology. Technology firms Circulor and Oracle operate the blockchain technology across CATL's and LG Chem's supply chain. We are also members of the Responsible Sourcing Blockchain Network (RSBN). Together with responsible sourcing specialists RCS Global and Better Mining we are also involved in monitoring of activities on the ground for the protection of human rights in artisanal and small-scale mining.

**Sustainability integration in supply chain management**
***Sustainability in VQE***
Since 2012, Volvo Cars has used the Volvo Cars Quality Excellence process (VQE) to monitor suppliers' performance in relation to our requirements and expectations, such as delivery performance and quality. An award is given to acknowledge suppliers that are successful in all evaluated sets of quality, manufacturing and delivery performance disciplines. Since 2018, sustainability is a new separate element in the VQE evaluation, showing that high sustainability performance is an absolute criteria to become an awarded supplier. The VQE sustainability element is based on the SAQ, with a Volvo Cars unique rating.

***Supplier Sustainability Dialogue***
Volvo Cars' annual Supplier Sustainability Dialogue brings together hundreds of our suppliers to discuss how we can become a more sustainable industry together. This year's theme was Climate Change. Material production emissions is a large $CO_2$ contributor, and we need each part of the supply chain to look at resource efficiency to reduce their environmental footprint. Other topics on the agenda were grievance mechanisms, conflict minerals and the UN Sustainable Development Goals (SDGs).

VOLVO CARS HIGHLIGHTS

## 25% reduction of supply chain emissions

We aim to reduce supply chain emissions by 25 per cent per car 2018–2025, including the shift to electrification and production of batteries. This will be achieved by increasing the use of recycled materials in our cars, creating closed loops of material flows, reducing emissions from materials as well as reducing emissions at our suppliers. Our ambition is to achieve 100 per cent renewable energy at our tier 1 suppliers by 2025.

***UN Action Platform on Decent Work in Supply Chains***
Volvo Cars has a LEAD Global Compact status. This year we have been an active participant in UN Global Compact Decent Work in Global Supply Chains Action Platform. It brings companies together to act to advance decent work in the supply chain by sharing knowledge, mobilising collective action and by creating a business-led advocacy effort. As part of this work, Volvo Cars has made a commitment to start a Supplier Engagement Forum. In 2019, a selection of suppliers was invited to participate in the forum to scale efforts on decent working conditions in our supply chains. We aim to learn, share experiences and collaborate to further support the UN SDGs.

PRODUCT CREATION: **PRODUCTS**

# Our Product Portfolio

Volvo Cars designs, develops, manufactures and sells a range of premium cars and is recognised for its design, safety and technological innovation. We categorise our cars by model range; 40, 60, and 90, as well as body type; Sedan (S), Wagon (V) and SUV (XC). In addition, we offer variants such as R-Design, Inscription, Cross Country and Excellence on certain models to cater for consumer demand in terms of driving experience, comfort and styling.

**INCREASE IN RETAIL SALES OF RECHARGEABLE VEHICLES**

23%

During 2019 Volvo Cars sold 45,933 (37,386) rechargeable vehicles

**Our platforms – the foundation for renewal and growth**
Designed for electrification from the start, the foundation of our product renewals and growth strategy rests on the development of our platforms; the Scalable Product Architecture (SPA) and the Compact Modular Architecture (CMA). Shared technologies between SPA and CMA include powertrains as well as the infotainment, climate and safety systems.

***Scaleable Platform Architecture***
SPA is one of the cornerstones of Volvo Cars' product strategy. SPA was introduced with the XC90 in 2015. The platform is highly flexible and allows enhancements of technological features such as driveability, electrification, safety, connectivity and interior space. Furthermore, SPA facilitates the vertical integration and thus economies of scale for our product development – a wide range of cars including all the 60 and 90 models, powertrains, electrical systems and technologies of differing complexity can be fitted on the same architecture.

***Compact Modular Architecture***
The CMA platform was developed in collaboration with CEVT and Geely Automotive. The first car on that platform, the XC40, was launched in 2017.

**Our powertrains – embracing electrification**
Based on the modularity principle, the compact engines can be effectively combined, to create plug-in hybrid and mild hybrid powertrains. Our powertrain family consists of 4-cylinder Drive-E powertrains, and we have also introduced a 3-cylinder variant. While Volvo Cars is committed to electrification, we will continue to offer internal combustion engines for the near future. However, we will no longer develop a new generation of diesel engines, and the launch of the new S60 in 2018 was our first model without a diesel option.

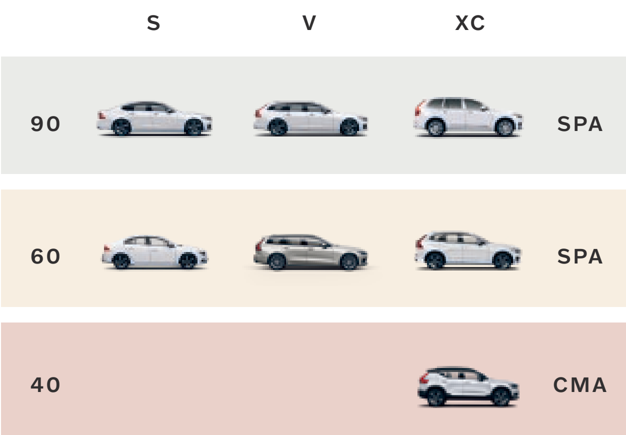
***Fully electric***
The first fully electric Volvo car, the XC40 Recharge, was launched in 2019 and will be rolled out in 2020. It has an all-wheel drive powertrain that offers a range of over 400 km (Worldwide Harmonised Light Vehicles Test Procedure – WLTP) on a single charge and output of 408 hp. The battery charges to 80 per cent of its capacity in 40 minutes on a fast-charger system. Additionally, Polestar 2, the first fully electric vehicle based on technology shared between Polestar and Volvo Cars, has been launched. Timings for the roll-outs are uncertain due to the Covid-19 situation.

The objective to generate 50 per cent of global sales from fully electric cars by 2025 is a prominent one, which would result in a 50 per cent reduction in tailpipe carbon emissions per car (on average) between 2018 and 2025.

***Plug-in hybrids***
From 2019, we offer a plug-in option on every model in our line-up. The twin engine set-up positions the high voltage battery in the tunnel console for maximum safety, improving the weight distribution while providing an enhanced driving experience. Year-over-year, sales of plug-in hybrids increased in relation to total retail sales, see Sustainability Scorecard page 140.

***Mild hybrids***
A range of mild hybrids was introduced during the year consisting of diesel and petrol versions on the XC90 and XC60 models. They offer consumers advanced kinetic energy recovery braking system, which is coupled with its existing internal combustion engines to create a new integrated electrified powertrain under the new 'B' badge. This new powertrain offers drivers up to 15 per cent fuel savings and emission reduction in real-world driving. The new brake-by-wire system interacts with the energy recovery system and reduces fuel consumption and emissions by recovering kinetic energy under braking.

***Infrastructure engagements***
A shift towards fully electric cars is underway, as battery technology improves and costs are expected to come down. However, the charging infrastructure is still limited. We believe that the global automotive industry should strive towards a stand-



ardised charging infrastructure for electric cars. To support, we have joined the Charging Interface Initiative (CII), a consortium of stakeholders founded to establish a combined charging system as the standard for charging battery powered vehicles. The CII is currently drawing up requirements for the evolution of charging related standards and certification for use with carmakers around the globe.

***$CO_2$ tailpipe emissions***

Limiting $CO_2$ emissions is a challenge for the entire automotive industry. We keep ahead of current and future emission standards in all our markets by developing efficient technological solutions and a thorough follow-up of legal compliance twice a year. Our EU fleet average $CO_2$ emissions (based on NEDC correlated figures from WLTP tests) showed a decrease from 133 g/km in 2018 to 132 g/km in 2019. This was mainly due to increased sales of our plug-in hybrids. We track our $CO_2$ fleet average continuously. With our electrification strategy, we expect to fulfil the Volvo Cars 2021 EU target of approximately 110 g $CO_2$/km (total EU fleet industry target is 95 g $CO_2$/km), without purchasing credits from others.

Worldwide Harmonised Light Vehicles Test Procedure (WLTP) has replaced the former NEDC in Europe. All our carlines offered in Europe, are homologated according to the new procedure. NEDC and WLTP figures can be presented to consumers and dealers already during configuration. By doing so, we present the $CO_2$ impact in every configuration step. Volvo Cars was the first automotive company to communicate WLTP figures for the entire range to our EU consumers. The WLTP fleet average figure for Europe in 2019 was 157 g $CO_2$/km. See Sustainability Scorecard page 140 for more details.

**Circular economy**

We recognise the value of the circular economy in reducing waste and keeping products and materials in use for a longer period of time. In this respect, Volvo Cars is committed to taking a more circular approach to our offer. This will be a focus area moving forward and one of our ways of reducing the environmental footprint of our vehicles. It includes making greater use of sustainable materials in our vehicles as well as post- first life electric vehicle battery management. In terms of recyclable materials, we design our cars so that about 95 per cent of the materials can be recovered, either reused or recycled.

***The lifecycle performance of our products***

We have a long history of carrying out environmental analyses with a holistic perspective and work has been intensified in recent years. We carry out simplified Life Cycle Assessments (LCAs) on all our models and we continuously develop and improve our methods. Additionally, we participate in several research projects and networks.

In October, we announced that we will disclose the average lifecycle $CO_2$ footprint of each new model starting with the XC40 Recharge.

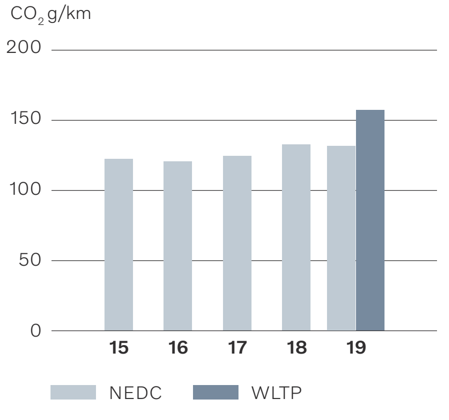
***Recycled plastics***

In 2018, we announced our Recycled Plastics Vision that by 2025, at least 25 per cent of the plastics used in every newly launched Volvo car will be made from recycled material. This will be achieved by working closely with suppliers and the recycling industry, as well as taking part in research projects and networks. Our vision is to help drive supply of more recycled plastics within the automotive industry and are working on an efficient way to measure and follow up on our progress. To demonstrate the viability of the vision, we revealed an XC60 T8 plug-in hybrid demo car with more than 170 parts made from recycled material. Our vision was commended by UN Environment as an example for other companies to follow, particularly in terms of reducing primary plastic production and plastic pollution.

***Recycled steel and aluminium***

Steel and aluminium represent a significant environmental footprint of the materials in our vehicles. Therefore, this year, we have intensified our work to minimise the negative impacts. Our work includes both increasing the recycled content and decreasing the footprint of the production processes used to create these metals. For aluminium the use of renewable

**$CO_2$ EMISSIONS – EU FLEET AVERAGE VOLVO CARS –**




*Post-first life strategy for electric vehicle batteries*
Volvo Cars has a three-step strategy (reuse, remanufacture, recycle) for handling electric vehicle batteries after their original use in the cars, i. e. post- first life. The purpose of the strategy is to maximise battery utilisation, minimise environmental impact by enabling circular material flow, and decrease cost. As of today, we have collected around 950 batteries that will be used as core material for our remanufacturing and reuse process.

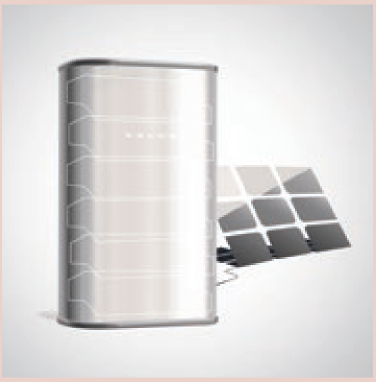
An important future step in Volvo Cars' electrification journey can be viewed at Volvo Bil in Torslanda, Sweden. The new electric vehicle charging station is a pilot using two second-life batteries from a plug-in hybrid to store solar energy captured by the solar panels on the roof.

1st life ends

1 REUSE IN CAR

Reuse batteries in car after remanufacturing.

2 2ND LIFE



Utilise batteries in non-aggressive energy storage applications outside of vehicle.

3 RECYCLING

Recover battery materials to enable new batteries to be produced.

energy in the aluminium smelting plays a very large role in reducing the $CO_2$ footprint. For steel there are more options available to reduce the footprint, like hydrogen gas reduction, carbon capture or using an electric arc furnace with renewable energy. We have initiated dialogue with suppliers to understand their roadmaps to reach carbon-neutral metal production.

*Remanufacturing*
Volvo Cars' remanufacturing programme restores replaced parts to their original specifications to realise both environmental and financial savings. A remanufactured part requires up to 85 per cent less raw materials and 80 per cent less energy compared to a new part. In 2019, the programme saved approximately 341 tonnes of steel and 144 tonnes of aluminium. The energy saved corresponds to a carbon dioxide emission reduction of 3,321 tonnes per year, see Sustainability Scorecard pag 141 for more details.

**Consumer experience and health – CleanZone Leadership**
We work to protect consumers' health, hereby improving the consumer experience. We have been dedicated to in-car air quality for more than two decades. By improving the environment in our vehicles, we are aiming to ensure the air inside a Volvo car meets our strict air quality standards and is cleaner than the air outside the car. Our newest innovation, the Advanced Air Cleaner (AAC), was launched in 2019 for the China market and will be rolled out globally in 2020. This new best-in-class air cleaning filtration technology can achieve a 95.0 per cent removal of tiny, harmful particles (PM2.5). The cars are also equipped with a sensor that can display the interior air concentration of these particles.

Consumer well-being is also related to the materials we select for the interiors of our cars. This involves careful selection to minimise odour and other interior emissions from the materials on all interior surfaces, such as textiles, plastics and metals.

MANUFACTURING AND LOGISTICS

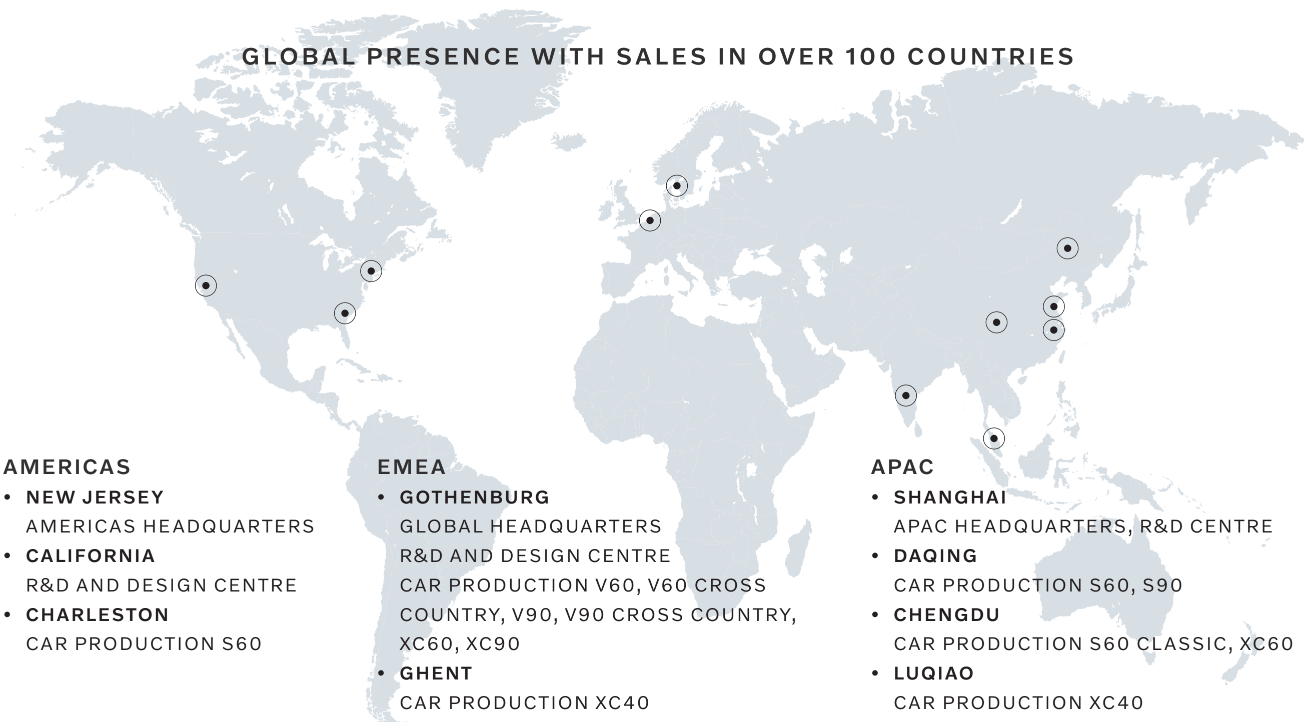
# A Global Footprint

During the year, Manufacturing and Logistics made several important contributions to our business, including realising synergy effects from collaborations with our strategic affiliates Polestar and Lynk & Co, as well as further increasing the flexibility within Volvo Cars' global manufacturing footprint. We remained focused on reducing our environmental impact, particularly making progress towards our ambition of climate-neutral manufacturing by 2025.

**CLIMATE-NEUTRAL ELECTRICITY IN MANUFACTURING**

78%

## GLOBAL PRESENCE WITH SALES IN OVER 100 COUNTRIES



**AMERICAS**

- **NEW JERSEY**
  AMERICAS HEADQUARTERS
- **CALIFORNIA**
  R&D AND DESIGN CENTRE
- **CHARLESTON**
  CAR PRODUCTION S60

**EMEA**

- **GOTHENBURG**
  GLOBAL HEADQUARTERS
  R&D AND DESIGN CENTRE
  CAR PRODUCTION V60, V60 CROSS COUNTRY, V90, V90 CROSS COUNTRY, XC60, XC90
- **GHENT**
  CAR PRODUCTION XC40

**APAC**

- **SHANGHAI**
  APAC HEADQUARTERS, R&D CENTRE
- **DAQING**
  CAR PRODUCTION S60, S90
- **CHENGDU**
  CAR PRODUCTION S60 CLASSIC, XC60
- **LUQIAO**
  CAR PRODUCTION XC40
- **BANGALORE**
  ASSEMBLY FACTORY S90, XC60, XC90
- **KUALA LUMPUR**
  ASSEMBLY FACTORY S60, V60, S90, XC60, XC90

**2019 in brief**

Production in all our plants continued according to plan, addressing the growing demand for the cars in our renewed portfolio:

- In addition to the existing production of the S60 in Charleston, manufacturing started also in Daqing.
- Increased production capacity needed to address global consumer demand for the XC40 was created in Ghent. The V40 was phased out according to plan.
- Production of the XC40 started also in Luqiao. The plant will hereby build models from all three brands within the wider Volvo Car Group on a single production line; the Volvo XC40, Lynk & Co 01 and Polestar 2. They are all based on the CMA platform which has been co-developed in collaboration with CEVT and Geely Auto, a collaboration providing economies of scale and competitiveness.

Our commitment to reduce the environmental impact of our products and operations was addressed during the year in several ways:

- Our industry-leading commitment to electrify all new Volvo cars launched after 2019 was realised by launching our first fully electric XC40 Recharge ahead of start of production in 2020 in Ghent. Start up time is uncertain due to the Covid-19 situation. We also offer a plug-in option on every model in our line-up. Moreover, mild hybrids were introduced on our XC60 and XC90 models.
- To focus on the development of our all-electric range of premium cars, we announced that we are investigating the possibility to merge our existing combustion engine operation with Geely into a stand-alone business. The aim would be to establish a new global supplier that will seek to develop next-generation combustion engines and hybrid powertrains. During the transition towards a fully electric car fleet, our plug-in hybrid cars will need the best combustion engines; the new stand-alone business would provide that. Also, it would represent a further significant industrial collaboration between Volvo Cars and its owner Geely with substantial operational, industrial and financial synergies.

**Transport**

During 2019, the emissions from transports were 1,277 kg $CO_2$/car, see Sustainability Scorecard page 140 for more details. This is a reduction of 8.0 per cent compared to the previous year. The approach to reduce $CO_2$ is to be as efficient as possible in all aspects of transportation. Minimising the use of air transport was a significant contributor to reduced emissions during 2019. Also, we continued to focus on increasing our use of rail solutions. From 2019, we were the first OEM using rail transport in both directions between Asia and Europe as part of our regular operations. During the last three quarters of 2019, more than 10,000 cars were transported in each direction, shortening both lead-time and $CO_2$ emissions. On average the $CO_2$ emissions per car are reduced by more than

60 per cent compared to conventional transportation. Also, in 2019 the Chengdu plant started using trucks running on natural gas for new cars transported from the plant to the local compound. 2,500 new cars are handled by these trucks per month and the fuel reduces $CO_2$ emissions by around 20–25 per cent compared to conventional diesel fuel. In Europe, we started a logistics terminal in the Czech Republic to consolidate inbound components for further transports to the plants in Ghent and Torslanda. This allows higher efficiency and increased filling in the transportation network.

**Resource efficient operations**

As part of the Volvo Cars Sustainability Strategy, we are working continuously to reduce our plants' energy and water consumption, as well as improve our waste management processes. Our total use of resources (e. g. energy, water) and generation of waste and emissions increases with increased production volumes. We work continuously to make our production more efficient to reduce our impact per produced vehicle, see Sustainability Scorecard pages 139-140 for more details. The environmental performance of our new and existing operations is managed in accordance with ISO14001 (Environmental Management System), which involves third-party certification, regular environmental risk analyses and continuous improvement.

***Towards climate-neutral operations***

The total $CO_2$ emissions of Volvo Cars' production sites were 197,700 tonnes in 2019.

Our ambition is to be climate-neutral in terms of $CO_2$ in all our own manufacturing operations by 2025. Our plan is based on three general activities:

1. Energy efficiency projects to reduce energy usage
2. Increased own production of renewable energy
3. Increased share of purchased renewable energy

**Energy efficiency projects to reduce energy usage**

Energy efficiency actions in our production plants during 2019 resulted in a yearly energy use reduction of 57 GWh. This also means a yearly reduction of our $CO_2$ footprint by 13,100 tonnes. Volvo Cars has worked with structured energy saving projects since 2010. During 2019, this has resulted in direct and indirect savings of MSEK 32. Some examples of the most significant energy conservation measures completed in 2019 are:

- Heat recovery from oven burner exhaust to the hot water system that reduces natural gas usage in the Daqing plant by roughly 8.4 GWh/year
- Shut down of the sealer oven in the Chengdu plant has reduced natural gas and electricity usage by 8.2 GWh/year
- Reduction of ventilation air flows in the Torslanda plant has resulted in a reduction of electricity and district heating usage by 2.9 GWh/year
- Optimisation of ventilation in the Ghent plant has reduced electricity and natural gas usage by 2.7 GWh/year

VOLVO CARS HIGHLIGHTS

## Increased own production of renewable energy

Having installed 15,000 solar panels on the roof of our Ghent plant in 2018, we followed up by nearing completion of a solar farm at our Charleston plant in 2019. Final installations are under way with an expected completion date during the second quarter of 2020. Completion time is uncertain due to the Covid-19 situation. The solar panels will generate approximately 12,000 MWh annually, or nearly 10 per cent of the plant's power consumption. The project will take the plant from 25 to 50 per cent climate-neutral electricity, ahead of the 2025 ambition.

**Increased share of purchased renewable energy**
In Europe, we have successfully reduced our $CO_2$ emissions over the years and have stabilised at a low level. In Asia, we see a positive trend with a 12.0 per cent reduction, as well as a 8.5 per cent reduction of $CO_2$ emissions per vehicle produced. We continue to evaluate new ways to further reduce our operational emissions. We are actively investigating climate-neutral electricity and heating solutions. Globally, we have achieved an 78.0 per cent share of climate-neutral electricity and, when including heating and cooling, we have a 54.0 per cent share of climate-neutral energy.

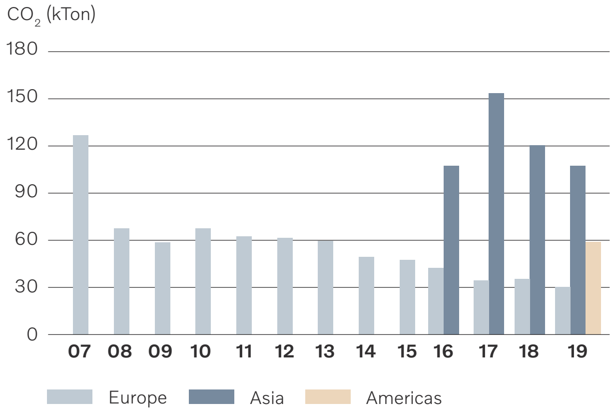
***Managing other emissions***
We continuously work to minimise emissions of Volatile Organic Compounds (VOCs). Our paint shops in Torslanda, Sweden and Ghent, Belgium are among the most advanced in the world, with emissions over four times less than the EU standards require. When building a new paint shop in the new production site in Charleston, Volvo Cars took the opportunity to install abatement equipment that leads to extremely low emissions of VOCs and significant reductions of energy usage. 2019 levels of VOCs were reduced by 6.6 per cent to 850 tonnes globally, mainly due to a 27.0 per cent reduction in China related to the installation of abatement techniques.

***Water management***
We focus our freshwater management efforts on the sites we have identified as having water scarcity issues. The total water consumption at our plants is increasing due to the added plant in Charleston. Broken down per region, we have reductions in both Europe (6.0 per cent) and Asia (12.0 per cent). Water consumption per produced car in Asia decreased by around 9 per cent to 6.3 $m^3$/vehicle in 2019. Water consumption in Europe has stayed approximately the same in 2019 as in 2018 at 1.5 $m^3$/vehicle. Globally, we have set a target of reducing water consumption by 15 per cent per produced unit between 2018 and 2025 for all plants.

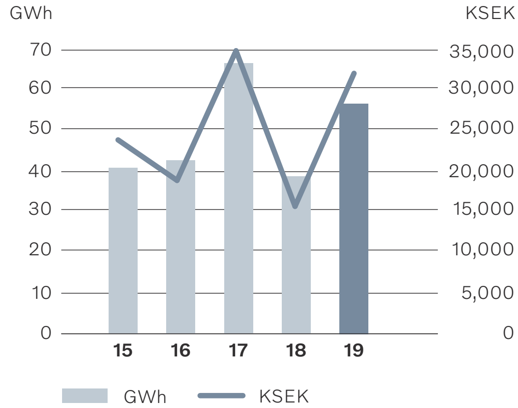
***Waste management***
We work on reducing waste by focusing on the circular economy in all our operations. Our largest waste stream is metal from car production, which is entirely recycled. In 2019, this amounted to 231,900 tonnes of metal scrap for recycling. Furthermore, initiatives were launched to reduce the amount of waste by increasing the utilisation degree of metals within the body components plants globally.

Volvo Cars is working to increase the amount of recycled waste at our production sites and decrease the amount of waste that is landfilled or incinerated. We have a global target of reducing production related waste by 15 per cent per produced unit between 2016 and 2021. Currently, we are at 6.7 per cent reduction due to continuous focus on, amongst others, material utilisation and packaging. Our waste management aims to have new solutions for waste streams with the philosophy 'every single step counts'. In 2019, we achieved a material recycling rate of 94.0 per cent and the amount of landfilled waste was 1.0 per cent. We have also created a more closed loop solution in our aluminium scrap value chain with a new sustainable partnership with our supplier.

**NET $CO_2$ EMISSIONS FROM ENERGY – MANUFACTURING OPERATIONS –**




**ENERGY EFFICIENCY SAVINGS**



CONSUMER EXPERIENCES

# Providing Freedom to Move

We create and provide cars and services that simplify people's lives. An excellent consumer experience is our top priority. To this end, we are building more direct consumer relationships to increase our opportunities to develop the consumer experience. Everything we do starts and ends with our company purpose – providing Freedom to move in a personal, sustainable and safe way.

RECORD RETAIL SALES

>700K

With 705,452 (642,253) cars sold, 2019 sets a new annual retail sales record

**Our offer**
Our promise, communicated through our strategy, is to make our consumers feel special and rewarded by choosing Volvo Cars. By doing so, we believe they share our values, hereby contributing positively to the environment while protecting what is important to them and others. The Volvo Cars brand supports this by offering refined Scandinavian luxury with the aim to simplify life with a human touch, provide better environmental technology solutions and the most advanced safety innovations.

**Connectivity and digitalisation are fundamentals for premium experience and safety**
Connectivity and digitalisation are key enablers in our ambition to simplify consumers' lives. With Volvo On Call we pioneered technologies to be connected to and communicate with our consumers. Connected services are services enabled through a connected car and a connected consumer. They are services with high potential creating significant consumer value. All new cars are enabled for internet connectivity. Connected services play an important role in creating a true premium experience for our consumers and the quality will differentiate us from competition. Connectivity and digitalisation are not only key for the premium experience, but also very important enablers for safety. We leverage digital solutions and connected cars to create smart systems and active safety solutions that enable vehicles to communicate with each other and for example warn about hazards on the road. To get speed and ensure ease of integration, we believe in open ecosystems to deliver on our connectivity and digitalisation ambitions.

**Direct relations with consumers enable us to offer more personal experiences**
As consumers change the way they solve their mobility needs, we must change our way of offering cars and access to cars. While we continue to improve our traditional business model of selling cars via our retail partners, we also offer new mobility models and move towards a direct consumer business to attract new consumer groups and expand our range of products and services. We address consumers directly via our car subscription offer Care by Volvo and our shared mobility solution M. Regardless the way our consumers prefer to access their car – through ownership, subscription or shared mobility services – we have an offer that suits their needs. In the transition to a distribution system also including direct consumer relations, we build on the strengths of both our retail partners and ourselves. We see substantial value in continuing this partnership and capturing the business opportunities together.

VOLVO CARS HIGHLIGHTS

## A climate-neutral retailer network

During 2019 we started a strategic initiative to ensure that we have a retailer network that reflects our sustainability ambitions. This means that we aim to create a climate-neutral retailer network by 2040 in alignment with the company commitment. We will provide retailers with sustainable solutions and guidance for deployment, as well as establish an Engagement Programme to share best practices across geographies.

**Our retail partners – changing with us to better serve our consumers**
Our retailer network is the principal route to market and core to ensure that the Volvo Cars brand is widely represented and well-positioned in the premium car segment globally. Our network plays a key role in our transition regardless of how our cars are accessed, as the retailer network is delivering, as well as servicing both cars and consumers. By working in collaboration with our retailer network around the world, we aim to expand digital commerce activities to enhance the online buying experience, as well as the physical network and ownership experience.

PEOPLE

# Our People Make the Difference

Our global and diverse people are central to the strong Volvo Cars culture. Attracting talent all over the world and bringing out the best in people, are crucial for delivering on our growth plans and to remain a leading player in the highly competitive premium automotive industry.

Our people are our competitive edge and the focus on being an Employer of Choice will continue.

**Fit for the future**
To be an industry leader in a rapidly changing world, we need to secure that our employees have the right skills to meet both current and future needs, from production and engineering to commercial operations. We work with competence and manning plans and lifelong learning with competence development throughout our employees' whole career. Some of our employees have been helped to find new roles within or outside the company, some have undergone training and some strategic roles have been recruited externally. During 2019 we have continued to roll out agile and lean methodology throughout large parts of the company, changing the roles and ways of working for thousands of our employees. The main objective is to achieve higher quality and better user experience. We are exploring new ways to design our organisation with the aim to work in smarter and more collaborative ways.

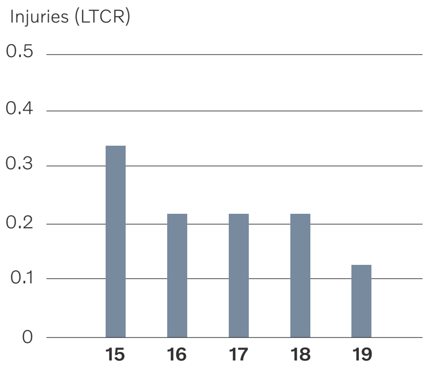
**A responsible business**
During 2019, Volvo Cars employed on average 41,517 full-time employees globally. Our People Policy ensures that we secure health and safety, that diversity and inclusion are at the top of our agenda, that labour rights are embraced and adhered to, and that we are embodying compliance and ethics.

**A sustainable work-life balance**
As a human-centric company, our aim is to offer a safe, motivating and attractive workplace where people grow and contribute to the company's development. Sustainable work-life is about addressing the life balance as well as health and safety for everyone working at Volvo Cars.

***Our approach to health and safety***
Regardless of geographic location, we have the same approach to health and safety within our entire organisation. All our operations, employees and contractors are governed by our global standards. Health and safety specialists work strategically within all parts of Volvo Cars according to Volvo Cars Work Environment Directive.

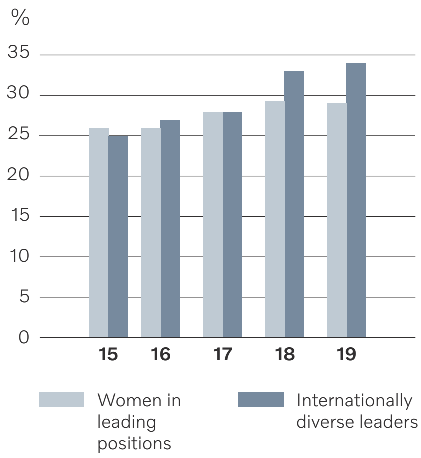
During 2019, we continued to have a global focus on risk observations as well as safe behaviour. Also, we continued to implement the Volvo Cars Health and Safety Global Procedures in the US operations and promoted our safety culture through leadership training with focus on behaviour. During the year, there have been many health initiatives such as Global Health and Safety Month, flu vaccination offers, wellness activities, seminars and implementation of Safety Training Centre. As a result, the number of injuries with sick leave, which is

**INJURIES (LOST TIME CASE RATE)**

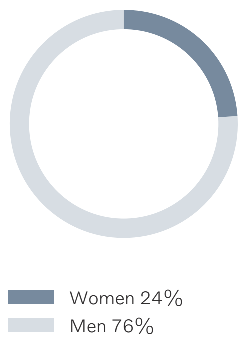



Injuries (LTCR) – Volvo Cars employees

**DIVERSITY IN LEADERSHIP POSITIONS**




**GENDER DISTRIBUTION – ALL EMPLOYEES –**



measured as Lost Time Case Rate (LTCR), decreased by 46.0 per cent to 0.13 for employees and 0.11 for supervised contractors, see Sustainability Scorecard page 142 for more details. However, a fatal accident tragically occurred involving a contractor working for a construction company during a plant shut down at our Chengdu plant in China. The accident was thoroughly investigated and appropriate actions have been taken.

***An attractive workplace that creates engagement, motivation and performance***

During 2019 a new department was created with the aim of representing the journey an employee takes within our organisation. In order to attract new people, at the same time motivate and encourage our current employees, we are creating a top-tier workplace experience – physically, digitally and socially, creating general design concepts and guidelines for our workplace, building a proactive approach for well-being and securing that we provide services that support and make life easier for our employees. During the year we have had popular Brown Bag Sessions to give all employees access to inspirational talks that address topics around sustainability, well-being and mental growth. We have had guest chefs at our restaurants and celebrated Thanksgiving in the Volvo Cars way; as Friendsgiving. We have also presented a Well-being Strategy – actions on how we are going to make people stronger, healthier and foremost more positive by working with physical, social and mental health.

**Diversity and inclusion**

***Diversity governance***

Volvo Cars People Policy outlines the values and expectations that we have for diversity and equal opportunities. Our Global Diversity and Inclusion Catalyst Team with representatives from each function and region, serve as the governing body to ensure continuous improvement.

***Promoting inclusiveness, gender balance and international experience***

We work actively in promoting inclusiveness so that everyone working at Volvo Cars is respected for who they are. During the year we continued our work of becoming an inclusive and attractive employer. One major initiative was the gender-neutral paid parental leave policy for all sales company employees in the EMEA region, offering mothers and fathers a total of six months of leave with 80.0 per cent pay. The policy is inspired by Swedish legislation and is more generous and inclusive than most existing national parental leave policies in Europe. Also, it is the first of its kind in the automotive industry. The offer aims to make Volvo Cars a more attractive employer, but also to take responsibility in pushing equality in societies in which we operate. It has been very well received by all stakeholders.

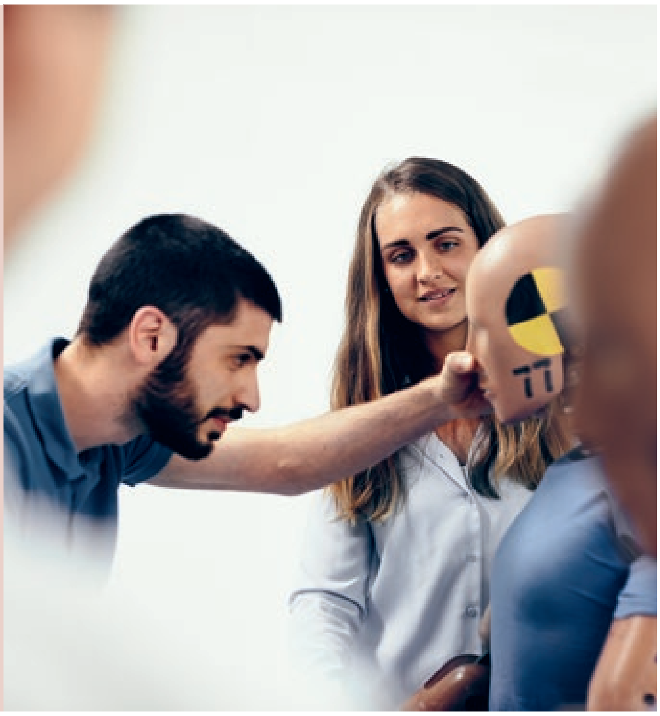
The first Employee Guide to inclusion and LGBTQ+ was launched in the summer, with the purpose of giving all employees globally a better understanding and some examples of challenges that colleagues may experience, as well as to increase awareness on how we can all contribute to a more diverse and inclusive culture within Volvo Cars.

As women remain underrepresented in the fields of STEM (Science, Technology, Engineering and Maths), we are committed to work with closing the gender gap and inspire the next-generation of female innovators and leaders. We take a proactive approach by engaging in activities and external partnerships increasing interest among youth, for example internships, 'Introduce a Girl to Engineering' , Female Leader Engi-

VOLVO CARS HIGHLIGHTS

## A diverse and inclusive culture

We have an open and inclusive culture and strive to be a truly global and diverse company by promoting inclusiveness and leading by example. We want everyone at Volvo Cars to feel that they can be their authentic self at work. We want to make sure that everyone has equal opportunities based on their competence, experience and performance. And we want to create a diverse and inclusive working culture that encourages and welcomes different perspectives, looking beyond the traditional walls that keep us thinking along the same paths and moving outside our comfort zones. Only then can we really unlock every person's full potential – making room for creativity, innovation and better decision-making.



neer' and also participating and presenting in conferences such as at the European Women in Tech in Amsterdam and the Lesbians Who Tech + Allies Summit in San Francisco, USA.

In December we were honoured to be the top automotive brand among STEM students and ranked 17 overall on the World's most Diverse and Inclusive Employers in Universum's D&I Index, one proof that our work pays off but is far from finished.

Internally, we are developing strategic succession planning, female leadership mentoring programmes and strengthening our internal and external communication on diversity and inclusion. We are dedicated to creating a diverse and multi-cultural Top Management Team that brings international experience and global perspective with varied competencies, backgrounds and cultures, and that is valued in industry-leading, innovative and consumer focused organisations. By the end of 2019, about 34 per cent of our top 435 managers were non-Swedish. Females in leading positions decreased slightly to 29.1 per cent. The stagnation is mainly due to the hiring freeze in 2019. In addition, the scope was broadened during the year, including also the US and EMEA countries not included in prior reporting periods, bringing the total percentage of females in leading positions down to 28.3 per cent, see Sustainability Scorecard page 142 for more details. To deliver on our vision of diverse leadership, we are committed to 50/50 male/female in leadership positions.

**Labour rights**

***Freedom of association and social dialogue***

Volvo Cars People Policy clearly states that all employees have the right to form or join labour organisations of their choosing and to bargain collectively. Those rights are well established among the employees. Volvo Cars encourages dialogue with its employees, whether that is through cooperation with the unions, other employee representatives or employees directly. Approximately 78 per cent of our global workforce is covered by collective labour agreements.

The social dialogue between Volvo Cars and the unions, where applicable, regarding information and consultation, is considered to create value and contributes to the development of the company. Members of the unions are represented at every board meetings through their elected representatives.

***Zero tolerance towards harassment and discrimination***

We have zero tolerance towards harassment and discrimination as defined in the Volvo Cars People Policy. Extensive Training on Discrimination, Harassment and Bullying has taken place throughout the organisation. In 2019 a limited number of cases of suspected discrimination and 63 cases of harassment were reported globally. All cases were investigated, and corrective and supportive actions were taken in all instances.

**People Policy Assessment**

The People Policy Assessment project started in 2017 and is in line with the United Nations Guiding Principles on Business and Human Rights. It assesses both potential and actual human rights impacts through desktop assessments, interviews conducted with key external and internal stakeholders, on-site verification and assessment of risks, analysis of impacts and creation of action plans. The initial scope of the project has now been concluded with the completion of the assessment of the Charleston plant. All assessments have identified improvement opportunities and proposed actions to be implemented to further strengthen the company. The actions are closely monitored and followed up on.

As a next step, the project will in 2020 focus on raising awareness and building competence among leaders in the broader APAC region, e. g. through workshops with key internal stakeholders. These workshops will build upon lessons learned through previous assessments and will be held in parallel with the ongoing follow-up on actions that will continue throughout 2020. However, the roll-out is uncertain due to the Covid-19 situation.

**Compliance and Ethics**

***Ethical and responsible business***

Responsible business is a fundamental part of our culture and our way of doing business. That is constantly promoted, both towards employees and partners. An ethical approach to business is not only the right thing to do, but it also makes business sense, helps us attract and retain talent, supports better employee engagement and allows us to act as a force for positive change within our sector, as well as wider industry.

Volvo Cars has established a Compliance and Ethics Programme to support its commitment to responsible business, as well as to prevent and mitigate legal and ethical risks. Parts of this programme are the Code of Conduct (Our Code – How we Act) and the Code of Conduct for Business Partners. They set out the principles which employees and business partners are expected to abide to when working at, or doing business with Volvo Cars. Both are based on international conventions and standards.

In 2019, 133 suspected violations of our Code and our policies were reported to the Compliance and Ethics Office. Following investigation, 23 of these reports were substantiated, and disciplinary actions were taken in 19 cases, including employee dismissals and termination of supplier contracts.

Finally, in line with our commitment to fostering an ethical culture, Volvo Cars has developed a broad range of training on ethical business practices for all employees, as well as specific training for managers focusing on behavior and role modelling. Leaders are supported in this role by the Compliance and Ethics Office, whose mission is to manage the Compliance and Ethics Programme by implementing initiatives and controls that aim to prevent, detect and mitigate legal and ethical risks in the areas of anti-corruption, anti-trust, data protection, human rights and trade sanctions and export control as further outlined in the Corporate Governance Report.

***A risk-based approach to compliance***

Regular compliance risk assessments allow us to identify and understand the main risk fields to which we are exposed and, in each of these fields, the high-risk areas. These risk assessments also serve as the basis for identifying the appropriate improvement and mitigation measures and to ensure that our Compliance and Ethics Programme is customised to address the areas within the scope of our programme where our main risks are to be found.

***Compliance and Ethics Framework***

Our Code – How we Act is at the heart of our Compliance and Ethics Programme. It is based on Volvo Cars' strong ethical values and our commitment to conduct business in a responsible manner, as well as on relevant international conventions and standards. It describes what is expected from Volvo Cars' employees when performing their work.

The corporate policies and directives detail the principles set out in Our Code and are supplemented with specific guidelines detailing how the principles stated in the policies and directives can be implemented. These documents constitute the Compliance and Ethics Framework. They apply to all employees in their daily business activities and are available via the Intranet.

We also expect that our business partners follow the same – or similar – principles as those set out in Our Code. For this purpose, we have developed a specific Code of Conduct for Business Partners that outlines Volvo Cars´ requirements on its business partners (retailers, importers, suppliers etc.) in the areas of human rights and working conditions, caring for the environment and business integrity (including zero tolerance for bribery and corruption). The Code of Conduct for Business Partners is contractually binding upon our business partners.

***Compliance and Ethics training***

Compliance and Ethics training and communications are important tools to embed responsible business within operations.

A new mandatory Code of Conduct e-learning was created in connection with the update in 2018 of the Compliance and Ethics Framework. This e-learning, which also includes the yearly Code of Conduct Certification, uses dilemmas to increase the understanding of, and potential risks connected to, the areas covered by Our Code. A mandatory training campaign was launched at the end of 2018 and finalised in 2019, with a completion rate of 87.0 per cent.

Leaders are also trained, via the leadership programmes, to develop their ethical behaviours and culture of ethics. More than 1,500 leaders have been trained since the launch of the leadership programmes and we will continue to focus on these trainings in 2020.

In 2019, all production employees in Sweden have received an introduction to the Code of Conduct, the Tell Us Reporting Line, and the responsibilities of being an employee at Volvo Cars. All other production sites will be covered in 2020. However, training and time to fulfill coverage ambitions are uncertain due to the Covid-19 situation.

Leaders have the responsibility to set the example and promote ethical conduct within the organisation. In this context, our managers are expected to have regular exchanges with their team members regarding Volvo Cars´ commitment to responsible business.

VOLVO CARS HIGHLIGHTS

## Tackle corruption and unethical business practices

In 2019, as part of the Strategic Focus Area 'Ethical and Responsible business,' we launched the strategic initiative 'Tackle corruption and unethical business practices that aims to make Volvo Cars a recognised leader in responsible business. It fits well with our culture and makes business sense. It strengthens our license to operate and constitutes a competitive advantage, including through enhancing our brand appeal as we recognise that failure to act ethically can damage our company and brand reputation, and lead to financial loss.

In 2019, we launched three Responsible Business Discussions where managers had to lead discussions with their team members around ethical challenges based on real scenarios. We also launched the Monthly Ethical Highlights which is a monthly series based on real dilemmas and cases that the Compliance and Ethics Office has dealt with.

***Continuous improvement of the Compliance and Ethics Programme***

The Compliance and Ethics Programme is continuously being improved thanks to a regular analysis of the internal and external audits and assessments that are made. Moreover, taking part in the survey process and being recognised as one of the Ethisphere Institute's World's Most Ethical Company for the third consequtive year (2017–2019), has supported us in assessing our gaps and improving our Compliance and Ethics Programme. The areas of improvements identified have been reduced over time and therefore we have decided to not participate in the survey the next couple of years, but to look for other means to drive improvements.

Our main focus in 2019 was to keep improving our Data Protection Compliance Programme with a view to comply with more and more stringent data protection regulations.

SOCIETY

# Making a Wider Difference

We are working to ensure that our company and our employees contribute to creating a better and more prosperous society, as well as protecting people and our planet. We do this in several ways, including through creating strong partnerships with international, national and local organisations. Many of our people also work to improve the quality of life in the communities in which we operate.

For the third consecutive year Volvo Cars was awarded LEAD Member status by the United Nations Global Compact.

**United Nations Global Compact**
We are a founding member of the United Nations Global Compact, the world's largest corporate sustainability initiative, focused on ensuring that business supports the delivery of the Sustainable Development Goals (SDGs).

Through our projects we work for increasing the interest among youth and young adults to work in the automotive industry.

Volvo Cars is an active member of two of the United Nations Global Compact Action Platforms; one focuses on ensuring that companies can make a meaningful contribution to the targets set under the Paris Climate Change Agreement; the second acts to advance decent work in global supply chains. In both, Volvo Cars is working with like-minded companies and specialists to demonstrate leadership in these issues. In recognition of this heightened engagement, and our industry-leading electrification strategy, the United Nations Global Compact awarded Volvo Cars LEAD Member status in 2017. The recognition continued in 2019 and highlighted the most committed, engaged and ambitious companies within the Global Compact. Volvo Cars is one of only 36 LEAD companies out of a total of 13,000 participants – and one of only two car makers.

**Enhancing social mobility and promoting diversity**
In 2019, Volvo Cars continued its projects aiming at reducing social segregation in its hometown regions, in particular the Gothenburg, Sweden area, and broadening the future talent base for recruitment. The objective is to increase interest among youth and young adults to work in the automotive industry, motivate young people to enter higher education, as well as increase diversity and inclusion within local society. Some examples of activities are:

- Volvo Experience Programme Digitalisation (VEP Digi) – a six-month work experience internship programme open to long-term unemployed people in Sweden
- Mentor programmes (Mitt Liv and Öppet Hus) – social enterprises that support recent immigrants to Sweden by helping them integrate into the local job market
- Cooperation with targeted secondary schools – Volvo Cars' employee role models have inspired and motivated students through school visits
- Activities increasing the interest among youth for the STEM area (Science, Technology, Engineering and Maths) – examples include Introduce a Girl to Engineering Day, Internships, summer jobs and summer jobs for persons with function variations

VOLVO CARS HIGHLIGHTS

## Contributing to overall traffic safety

Volvo Cars has joined forces with other car manufacturers, service providers and national governments in a ground-braking, pan-European pilot project to share traffic safety data generated by cars and infrastructure, boosting overall traffic safety, see page 35 for more details.


ONLY

# Board of Directors Report

**The Volvo Car Group**

Volvo Car AB (publ.), with its registered office in Gothenburg, is majority owned (97.8 per cent) by Geely Sweden Holdings AB, a subsidiary of Shanghai Geely Zhaoyuan International Investment Co., Ltd., registered in Shanghai, China, with ultimate majority ownership held by Zhejiang Geely Holding Group Co., Ltd, registered in Hangzhou, China.

Volvo Car AB (publ.) holds shares in its subsidiary Volvo Car Corporation and provides the Group with certain financing solutions. Volvo Car AB (publ.) indirectly, through Volvo Car Corporation and its subsidiaries, operates in the automotive industry. In excess of engaging in development, manufacturing, marketing and sales of cars, the company also offers subscriptions of cars and other related mobility services for transport of people and goods. Volvo Car Group and its global operations are referred to as “Volvo Cars” or “the Group”.

**Volvo Cars sales development**

Volvo Cars sold 705,452 (642,253) units in 2019, an increase of 9.8 per cent, the company’s 6th consecutive year of record sales and passing the 700,000 mark. Growth was supported by Volvo Cars’ award-winning SUV range, with sales accounting for 63.2 (56.0) per cent of total retail sales. Wholesales increased by 7.1 per cent to 703,534 (656,688) units. Sales of plug-in hybrid cars reached 45,933 units, mainly driven by sales in Europe, in particular Norway, Sweden and France, and, to a lesser extent, the US. About 65 per cent of the PHEV sales were related to the XC90 and XC60; nonetheless, the 22.9 per cent increase in PHEV sales was mainly driven by V60 and S60.

Overall, the best-selling model for the year remained the XC60 which grew 8.2 per cent to 204,981 (189,459) units, mainly driven by China. Demand for the XC40 remained strong with retail sales reaching 139,847 (75,828) units, and sales of the XC90 increasing by 7.0 per cent to 100,729 (94,182) units. Sales of the V60 increased 26.8 per cent to 68,577 (54,095) units, mainly driven by demand in Sweden. The S60 sold 42,795 (40,499) units, an increase of 5.7 per cent on the back of sales in the US where the car is locally produced. The decrease in the S90 sales was mainly a consequence of higher import tariffs in the US and a decline in the overall segment in that market, as well as in Europe. The decline in the V90 sales was primarily driven by lower demand in Sweden during the first nine months of the year, in part driven by the taxation scheme Bonus Malus.

***Europe***
***Market***

The passenger car market in Europe recorded a slight increase in car registrations for the full year of 1.2 per cent, whereas the premium car market grew by around 2.5 per cent. The growth was driven by a few key markets, which pushed the overall car registrations in Europe.

***Volvo Cars***

Volvo Cars’ sales growth remained resilient in Europe, growing 7.2 per cent to 341,200 (318,235) units, of which almost 10 per cent relate to PHEV sales. Overall, five of Volvo Cars’ main European markets had double digit growth. Sales records were established in various markets, in particular in Germany, where sales reached above 50,000 units, as well as in Belgium. In the UK retail sales reached 56,316 units, the highest since 1990. Overall, SUVs accounted for 57.7 (50.0) per cent of total retail sales in Europe and increased by 23.9 per cent to 196,971 (158,976) units. This drove the growth in the market, following the full introduction of the XC40 during the year. Sales of the V60 also picked up and grew by 36.4 per cent. This offset contractions in the remaining V models as well as in the S line-up.

***China***
***Market***

The passenger car market in China declined by 7.4 per cent. Despite this, the premium car market continued to grow, increasing by 8.5 per cent.

***Volvo Cars***

Strong demand continued for Volvo cars in China, with retail sales growth of 18.7 per cent to 154,961 (130,593) units. SUV sales accounted for 59.7 (50.0) per cent of total retail sales. Sales growth was mainly driven by the locally produced XC60, XC40 and S90, followed by the XC90.

| Key ratios, MSEK | **Full year 2019** | Full year 2018 | Full year 2017[1] | Full year 2016[1] | Full year 2015[1] |
|---|---|---|---|---|---|
| Revenue | 274,117 | 252,653 | 208,646 | 178,586 | 160,515 |
| Operating income, EBIT | 14,303 | 14,185 | 14,061 | 11,014 | 6,620 |
| Net Income | 9,603 | 9,781 | 10,225 | 7,460 | 4,476 |
| EBITDA | 29,851 | 27,398 | 26,159 | 21,541 | 16,019 |
| Operating and investing cash flow | 11,573 | 4,705 | –3,800 | 6,515 | 7,234 |
| EBIT margin, % | 5.2 | 5.6 | 6.7 | 6.2 | 4.1 |
| EBITDA margin, % | 10.9 | 10.8 | 12.5 | 11.9 | 9.8 |
| Equity ratio, % | 26.3 | 29.0 | 28.7 | 26.8 | 26.2 |
| Net cash | 25,214 | 18,029 | 12,513 | 18,873 | 7,721 |

1) In 2018 there was a change related to sale of certain cars accounted for as operating leasing. The comparative periods 2017, 2016 and 2015 have been changed accordingly, reducing revenue and cost of sales with an amount of MSEK 2,266 for 2017, (2016: MSEK 2,316) (2015: MSEK 1,999). The change had no effect on gross income.

***US***

***Market***

Total light vehicle sales in the US declined by almost 2.0 per cent in the year, as a small growth in the light truck segment was offset by a sharp decline in the passenger car segment, whereas the premium car market of imported cars declined by around 0.5 per cent.

***Volvo Cars***

Despite the shrinking market, retail sales in the US increased by 10.1 per cent to 108,234 (98,263) units. SUV sales accounted for 77.6 (78.1) per cent of total retail sales. Growth was mainly driven by demand for the locally produced S60 with retail sales of 17,510 units, as cars reached dealerships only at the end of 2018. The XC40 sales continued to grow reaching 17,654 (12,427) units. Growth was also supported by the XC90 sales and somewhat offset by contractions in the S90 and the V line-up sales.

***Other Volvo Cars Markets***

Retail sales in other markets grew by 6.2 per cent to 101,057 (95,162) units, driven by strong demand for the XC40 and the XC60 and moderate sales growth of the V60, slightly offset by declines in the S line-up, V40 and V90. SUV sales accounted for 71.3 (61.4) per cent of total retail sales. The largest markets were Japan, Korea and Canada. Sales in Japan grew by 6.8 per cent to 18,573 (17,389) units driven by the XC40 and the V60.

| Retail sales (units) | **2019** | 2018 | Change % |
|---|---|---|---|
| Europe | 341,200 | 318,235 | 7.2 |
| China | 154,961 | 130,593 | 18.7 |
| US | 108,234 | 98,263 | 10.1 |
| Other | 101,057 | 95,162 | 6.2 |
| **Total** | **705,452** | **642,253** | **9.8** |

| Retail sales by model (units) | **2019** | 2018 |
|---|---|---|
| XC60/XC60 Classic | 204,981 | 189,459 |
| XC40 | 139,847 | 75,828 |
| XC90 | 100,729 | 94,182 |
| V60/V60 Cross Country | 68,577 | 54,095 |
| S90 | 56,355 | 57,142 |
| V40/V40 Cross Country | 51,542 | 77,587 |
| S60 | 42,795 | 40,499 |
| V90/V90 Cross Country | 40,621 | 53,461 |
| Other (discontinued models) | 5 | — |
| **Total** | **705,452** | **642,253** |

| Top 10 Retail sales by market (units) | **2019** | 2018 |
|---|---|---|
| China | 154,961 | 130,593 |
| US | 108,234 | 98,263 |
| Sweden | 64,290 | 67,128 |
| UK | 56,316 | 50,065 |
| Germany | 52,954 | 45,134 |
| Belgium | 23,547 | 21,201 |
| Italy | 22,101 | 19,340 |
| France | 20,818 | 18,825 |
| Japan | 18,573 | 17,389 |
| Netherlands | 16,325 | 16,312 |

**Events during the year**

SEK 5 billion of existing preference shares refinanced

Volvo Cars issued SEK 5 billion worth of convertible preference shares to a group of Swedish institutional investors, comprising the Swedish pension fund AMF and the Swedish insurance and pension savings group Folksam. Being one of Sweden's largest pension funds, and leading insurance and pension savings group respectively, Volvo Cars consider their investments to represent a significant, continued endorsement for the company. At the same time the previously issued preference shares to the same investors were redeemed. The preference shares may be repurchased or converted into common shares of Volvo Car AB under certain circumstances.

Two bonds issued

A SEK 2bn bond that matures in February 2023 and a EUR 600m bond that matures in April 2024 were listed on the Luxembourg Stock Exchange. The proceeds will be used for general corporate purposes that might include repayment of debt. At year end, the total bond portfolio amounted to SEK 21.6bn.

Intention to merge combustion engine operations announced

Volvo Cars and Geely announced their intentions to merge their existing combustion engine operations into a standalone business, in order to establish a new global supplier that will seek to develop next generation combustion engines and hybrid powertrains. The proposed new business would clear the way for Volvo Cars to focus on the development of its all-electric range of premium cars.

Volvo Cars Moment – Sustainability

Volvo Cars introduced the XC40 Recharge, its first fully electric car and the first model out in the new Recharge car line concept. At the same event, an ambitious plan aiming to reduce the lifecycle carbon footprint per car by 40 per cent until 2025, was launched. This was Volvo Cars' first tangible step towards the ambition of becoming a climate neutral company by 2040.

Battery sourcing agreements and implementation of blockchain traceability of cobalt in batteries
Long-term sourcing agreements with leading battery makers CATL and LG Chem were signed to ensure the supply of lithium-ion batteries over the coming decade for next generation Volvo car models.

Volvo Cars also reached an agreement with CATL of China and LG Chem of South Korea, and with leading global blockchain technology firms, to implement traceability of cobalt, starting 2019.

Production-ready base car for self-driving presented by Volvo Cars and Uber
A jointly developed base car ready for production was presented which, when equipped with Uber's self-driving systems, is capable of driving by itself, and represents the next step in the strategic collaboration between the companies.

Named as one of the World's Most Ethical Company®
Volvo Cars received the recognition for the third consecutive year from the Ethisphere Institute, a global leader in defining and advancing the standards of ethical business practices. Decision has been taken not to participate in 2020.

180 kph speed limit to be imposed from 2020
Volvo Cars announced that the top speed limit will be imposed on all cars from 2020, depending on the development of the Covid-19 situation. Volvo Cars believes it will support the continued efforts in line with the company's safety vision, as well as its responsibility as the world leader within safety.

Equal Vehicles for All (E.V.A.) Project launched
The project is an initiative to share more than 60 years of safety research to make cars safer for everyone.

***Changes in Board of Directors and the Executive Management Team***

Changes to the Board of Directors
- Effective from March 2019, Winfried Vahland was appointed Member of the Board of Directors, replacing Carl Peter Forster.

Changes to the Executive Management Team
- Effective from October 1st 2019, Carla De Geyseleer succeeded Hans Oscarsson as CFO and Senior Vice President Finance.

**Significant events after the reporting period**

Combining strengths to lead the automotive industry transformation
In February 2020 it was announced that Volvo Car AB (publ.) and Geely Automobile Holdings Limited are considering combining their businesses to create a strong global group, which would accelerate financial and technological synergies between the two companies. This would be a combination between two strong companies. The considered combination would have the scale, knowledge and resources to be a leader in the ongoing transformation of the automotive industry. The combination would preserve the distinct identity of each of the brands Volvo Cars, Geely, Lynk & Co and Polestar.

A combined company would have access to the global capital market through Hong Kong and with the intention to subsequently list in Stockholm as well.

Volvo Cars and Geely has created a joint working group to prepare a proposal to their respective boards. The work is led by Håkan Samuelsson, CEO of Volvo Cars.

Covid-19
At the date of signature, the Covid-19 situation is developing and spreading globally.

Volvo Cars is taking actions as instructed by the relevant authorities, as well as other actions necessary to mitigate the effects on its business. Since the end of January 2020, we have seen effects on our business in China and subsequently on our business outside China.

On March 11, 2020, WHO characterised the Covid-19 virus as a pandemic. The event is considered to be a non-adjusting event as it did not exist at the balance sheet date on December 31, 2019. It has become clear that the corona virus will have a significant but not easily quantifiable impact on our societies and businesses. The corona pandemic is now severely affecting Volvo Cars in many ways, including a weakening market and production disruption as well as concerns for its employees. As an effect, the European and US manufacturing plants will be temporarily closed. The current assessment is that the Belgium plant will remain closed until April 5. The Swedish and US plants will be closed between March 26 and April 14.

The company's primary focus is on the health and safety of all employees and actions are made with a focus on adherence to the relevant authorities' demands. We focus on safeguarding jobs and on ensuring that Volvo Cars can go back to normal production and deliver to customers as soon as it is possible and safe.

We anticipate the negative effects on our sales and production will continue or worsen as the situation evolves. Uncertainty around the continued development of the Covid-19 spread, actions imposed and taken in different jurisdictions and weakening market in general, make it difficult to quantify the financial impact at this stage. Volvo Cars will continuously monitor the situation, work with different scenarios and will initiate actions depending on the development.

**Research and development**

Volvo Car Group constantly continues to invest in strengthening its product portfolio and developing new cutting-edge technologies. In 2019, the Product Creation cluster was created which brought all core product development functions together with consumer & enterprise digital and the design, procurement and quality capabilities, ensuring product development was organised end-to-end.

The rollout of Volvo Cars' ambitious electrification strategy continued with the introduction of the new 'B' badged mild hybrid powertrain which couples an advanced brake energy recovery system with a new generation of our internal combustion engines. This new powertrain, electrified via brake-by-wire energy recovery, offers drivers up to 15 per cent fuel savings and emission reductions in real world driving. In 2019 we also extended the driving range of our PHEV technology and we introduced the plug-in hybrid with the longest electric drive range in the industry with the Polestar 1, based on our in-house SPA architecture. Further, we revealed our first fully-electric cars on the CMA platform with the Polestar 2 and XC40 Recharge battery electric vehicles. Over the next five years, Volvo Cars will launch a fully electric car every year, as we seek to make all-electric cars 50 per cent of global sales by 2025, with the rest hybrids. The next generation of the SPA platform, SPA2, is under development to underpin this new range of electrified cars and we have secured battery supply for all future SPA2 models.

Volvo Cars also continues its development of driver assistance systems and future autonomous drive technology, in close collaboration with selected partners. In 2019, Volvo Cars, being a worldwide leader in safety, announced its plans to limit the top speed on all new Volvo cars to 180 kph from 2020 (depending on the development of the Covid-19 situation), introduce driver monitoring cameras in SPA2 models to detect distracted or intoxicated driving and we extended our industry-first connected safety technologies Hazard Light Alert and Slippery Road Alert beyond the Nordic markets and across Europe. Together with Uber, we presented a jointly-developed production-ready XC90 which combined Uber's self-driving system with our hardware progressing our strategy to develop safe AD technology and be a partner of choice for the world's leading tech companies. The XC40 Recharge and Polestar 2 models were also the first to showcase our new Android embedded HMI system, a further example of our strong technological partnerships.

All of the above illustrates the company's agile way of working when developing new products – which was rolled-out in 2019 – in order to increase quality and speed to market as well as incorporate consumer experiences early on in its development work. In addition, we were able to double the production volume of the XC40, with all quality metrics, tracking to target, showing an agile approach to manufacturing and supply chain operations as well.

**Environment**

Volvo Cars has a longstanding commitment in being a responsible company with a clear focus on sustainable development. This commitment is reflected throughout the Annual Report in line with international reporting guidelines set out in the Global Reporting Initiatives (GRI). All our businesses have permits regulating the environmental impact of their operations. Continuous reporting on this impact is undertaken according to guidelines and requirements submitted by local and national environmental authorities.

Volvo Car Group's sustainability report for 2019 is presented separatly from the Board of Directors report. For more information on Volvo Cars sustianability reporting, see page 71.

Volvo Cars aim to reduce the $CO_2$ emissions per car by 40 percent between now and 2025, a first tangible step towards the company's long-term goal of becoming climate neutral by 2040.

**Employees**

During 2019, there has been a reduction of white-collar employees following the cost efficiency activities announced earlier this year. During the same period, higher production volumes led to an increase of blue-collar employees, mainly in China, Ghent and the US. In total, Volvo Cars employed on average 41,517 (41,418)[1] full-time employees. Furthermore, the Group employed on average 4,448 (4,453) consultants.

1) The comparative number of FTEs has been restated due to a changed and improved methodology for calculating the average number of FTEs.

**Proposed distribution of non-restricted equity**

***The parent company***

The following funds are at the disposal of Annual General Meeting (AGM):

| | | |
|---|---|---|
| Share premium reserve | SEK | 11,497,129,047 |
| Retained earnings brought forward | SEK | –6,901,573,153 |
| Net income for the year | SEK | 11,231,161,727 |
| **At the disposal of the AGM** | **SEK** | **15,826,717,621** |

The Board proposes the following allocations of funds:

| | | |
|---|---|---|
| To the preference shareholders, a dividend of SEK 30.74 per share | SEK | 35,006,528 |
| To the common shareholder, a dividend of SEK 2.90 per share | SEK | 145,000,000 |
| Carried forward | SEK | 15,646,711,093 |
| **Total** | **SEK** | **15,826,717,621** |

# Enterprise Risk Management

The purpose of Enterprise Risk Management (ERM) is to protect the value of Volvo Car Group and to enable the fulfilment of Volvo Car Group purpose. The strategy itself is therefore the most important aspect of risk management. The compliance of the Code of Conduct, Corporate Policies and Sustainability Commitments are all parts of risk management. Enterprise Risk Management creates awareness and preparedness regarding risks and their potential impact on the business.

The automotive industry and Volvo Cars are continuing to transition towards electrification, autonomous drive (AD) and direct consumer contact. This shift depends on several factors: consumer preferences and acceptance, technical progress, legal and political development. Based on the complexity of the above in combination with the investments needed for the transition, timing is a central risk management parameter. It is crucial to have the correct offer at the right point in time.

The expansion in digitalisation affects many areas of the company including the interaction with customers, affiliates, partners and suppliers. Digitalisation, from a risk management perspective, is a development of our business which is new and has a high speed of change. With the expansion of digitalisation comes the escalation of potential cybercrime.

The slower growth of the global market, increased competitiveness and the uncertainties in trade regulations are disturbing the industry. Legal and regulatory requirements affect the business and are expected to increase in the future, especially in the environmental area. The Covid-19 risk is covered on page 63.

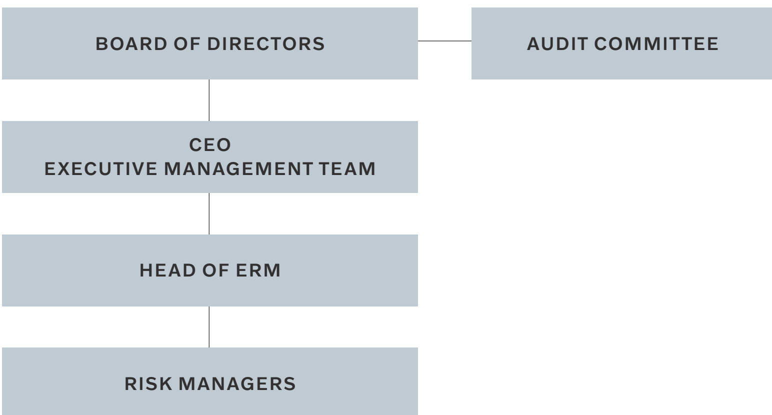
To meet the group's ambitions partners are needed. New co-operations, joint ventures and partnerships are created, with the increased business complexity that this generates. The risk areas identified also apply to the group's co-operations.

The risk descriptions below, reflects the areas that are considered, potentially, to have the most significant impact on Volvo Car Group's business and the group's longer-term ambitions. The mitigating activities explain what has been done to prevent the possible occurrence of the risks.

**Enterprise Risk Management Governance**

The Board of Directors is ultimately responsible to ensure that the risks of Volvo Car Group are handled, although certain thereto related tasks have been delegated to the Audit Committee. The Chief Executive Officer is responsible to ensure there is an appropriate level of risk management in place on an operational level. The top risks, the risks considered to best reflect the current risk situation for Volvo Car Group, are presented to the Board of Directors and discussed by the Audit Committee twice every year. The level of risk acceptance is decided for individual risks and for the overall risk situation. The Head of ERM creates the top risk report, based on input from the organisation. The CEO and Executive Management Team discuss and finally approve the risk level. The ERM governance structure is described below.

**Volvo Car Group ERM Governance**



| RISKS | MITIGATION |
|---|---|
| **COVID-19**<br>**The Covid-19 risk is covered on page 63.** | |
| **CYBER SECURITY**<br>**Cyber security breaches could cause severe disruption for our business including but not limited to operational disturbances, affecting enterprise as well as consumers, loss of intellectual property (IP) and data leakage.**<br><br>Cybercrime activities lead to business interruption. Our strategy is to constantly expand digitalisation. This combined with the escalation of cybercrime threats, e.g. related to our products, digital landscape as well as personnel, are the main drivers. | Additional technology and enforced classification of information is being implemented to increase the effectiveness of technology, i.e. our defence. Improving the risk awareness, globally, is an important ongoing effort. Resources and competence dedicated to the cyber security area have increased during the year. This advances the monitoring, predicting and continuity/crises planning capabilities related to cyber security.<br><br>Ongoing work to make sure that proper governance, risk and compliance work are introduced in our new way of working, on all levels. |
| **DATA PRIVACY**<br>**Volvo Car Group comprises a multitude of entities with operations all over the globe. The regulatory landscape concerning protection of personal data is increasing, the EU General Data Protection Regulation being an example to many other pieces of legislation already passed or currently being discussed in other countries.**<br><br>The territorial and substantial rules of application of each such data protection law are not consistent, meaning that one organisation may find itself subject to multiple regulatory frameworks at the same time. In addition, technical regulations have started to have a privacy component more often than not. | Volvo Cars' global data protection programme has already passed the stage of focusing on the EU General Data Protection Regulation. In 2019, the focus was on (i) improving the Data Protection organisation and (ii) alignment between the regions (with coordination at global level) and (iii) raising awareness in the organisation regarding applicable data protection rules. These efforts will continue going forward. |
| **DIGITALISATION**<br>**Requirements from new business models and our long-term strategies increase the level of digitalisation. Digital disturbances and outages will affect our contact with and service to potential and current customers. Connected services are especially critical, possibly causing car malfunctions.**<br><br>The high speed of change and time to market for digital solutions might affect our customers directly through the interteraction during the buying process and the owning and servicing of the products. Over the last 12 months, the speed of developing complex new features has increased. This is expected to continue through the business initiatives such as Care by Volvo, M and others. With the introduction of the next generation of products and services the digital share will increase further. | There are many strategic initiatives ongoing to address the risks regarding digitalisation. Some examples are:<br>- Evolving direct customer interaction, enables easy way of selling and charging our customers for any product or service.<br>- Make cars better every day, continuous product updates and easier to own, support future product configuration<br>- Focusing digital development by replacing several legacy applications, securing a robust data foundation and intensified license reviewing. |

| RISKS | MITIGATION |
|---|---|
| **DIRECT CONSUMER BUSINESS**<br><br>**The speed of change into business models that are new to Volvo Cars.**<br><br>Direct consumer interaction is new to Volvo Car Group and consumer expectations are predicted to change very quickly with many new market offerings emerging. Volvo Cars expects increasing consumer interest in car subscriptions and other new ways of having your car available, instead of traditional car ownership. Volvo Cars see subscriptions as well as e-commerce as a key area that will lead to direct customer interaction. In addition, mobility services, such as car sharing business, is driving direct customer interaction. | The transition towards more direct consumer business are done to meet customer preferences and automotive trends the Volvo Cars' way - people centric. It is done through our Care by Volvo programme. Our retailer strategy is being updated to ensure that our collaboration with the dealer network is relevant and fit to meet the new demands. |
| **ELECTRIFICATION**<br><br>**The timing of a broader consumer demand for electrification is difficult to predict.**<br><br>Volvo Car Group is adjusting its business towards electrification. Our company ambition of 50 per cent electrified vehicles by 2025 is completely dependent on the market development. Consumer preferences and political agendas can affect market rollout in ways that are difficult to predict and control. Availability of a competitive charging experience is an important enabler for customers willing to convert to electric vehicles. Volvo Car Group needs to provide infrastructure and paying offer for our electric vehicles customers in comparison to competition. If not, it will have a direct impact on electric vehicle sales. The charging network market is very immature and different depending on region, where EU is the most fragmented. | The best mitigation activities to transition to electrification according to our company ambition of 50 per cent electrified vehicles are to have an attractive electric vehicle offer and to offer a competitive charging experience for our customers. These activities are both well advanced. Signing of contracts with regional charging network partnerships and service supplies are ongoing, which will ensure a competitive set of suppliers for charging and related services. To secure a competitive charging experience this will be followed over time to re-evaluate needed partners.<br><br>Our recent launch of Recharge carline, which includes all PHEV's and BEV's, was done to emphasise our focus on electrification and to make it easier for our customers to find an attractive product offer. |
| **LAWS AND REGULATION**<br><br>**New or changing laws, regulations and government policies will affect our business. The number and extent of legal and regulatory requirements to our business are expected to increase in the future, especially relating to the environment. Currently the EU fleet average $CO_2$ emission requirement is one of them.**<br><br>Volvo Cars Group's products, services and operations are subject to comprehensive and constantly changing laws, regulations and policies throughout the world.<br>The group has to fulfil corporate fleet requirements regarding emissions.<br>Changes in corporate and other taxation policies as well as changes in export/import policies and other restrictions/incentives given by various governments on tariff policies could also affect Volvo Cars' results of operations and financial condition. | To comply with the emission requirements that affect the vehicle industry, Volvo Car Group is working through a number of different activities:<br>- continuously assessing technical capabilities, commercial impact, supply status and regulatory updates<br>- balancing road load (weight, aerodynamics, rolling resistance, friction/losses and auxiliary loads)<br>- market penetration of BEV and PHEV to ensure market compliance<br>- increased focus beyond the 2021 legislation<br><br>In order to minimise the negative effect of potential changes, legal and regulatory awareness and preparedness is established in all areas that might affect Volvo Car Group's business and financial condition. |

# Corporate Governance Report

**Introduction to Volvo Car Group's Corporate Governance**

The purpose of corporate governance in Volvo Cars is to create a good foundation for active and responsible ownership, a proper distribution of responsibility between the different Company bodies, as well as good communication with all of the Company's stakeholders.

The corporate governance principles adhered to by Volvo Cars are based on Swedish law (Swedish Companies Act and Swedish Annual Accounts Act). Volvo Cars applies the principles of sound corporate governance and responsible business practice and has decided to follow relevant parts of the Swedish Code of Corporate Governance (the "Code"). Being a company not listed on the stock market, Volvo Cars acknowledges it is not required to do so, and that some principles are not relevant to Volvo Cars.

The shareholders execute their influence at the shareholders' meetings, the highest decision-making body of the Company, where an annual general meeting shall be held at least once a year within six months after the end of the financial year. Some of the decisions made by the shareholders' during the shareholders' meeting are (i) election of a Nomination Committee which nominates members to the Board of Directors of the Company (the "Board" or the "Volvo Cars Board"), (ii) determination upon number of Board members, composition of the Board and remuneration for the members of the Board, based on suggestions by the Nomination Committee, (iii) election of external auditors, (iv) determination of the distribution of dividends and (v) determination of amendments to the Articles of Association.

The Board is responsible for the organisation of Volvo Cars and the management of its business worldwide and is obliged to follow directives provided by the shareholders' meetings. The Volvo Cars Board may appoint committees with specific areas of responsibility and furthermore authorise such committees to decide specific matters in accordance with regulations established by the Volvo Cars Board. Currently, the Volvo Cars Board has established the Audit Committee, the People and Sustainability Committee and the Product Strategy and Investment Committee. The Chairman of the Board shall direct the work of the Board and monitor that the Board fulfils its obligations and may elect to seek support from the Vice Chairman when so is required. The Board annually adopts the Regulations for the work of the Volvo Cars Board, which sets out the principles as regards the governance of the Board, see below under the heading "The Volvo Cars Board" for further information. The President of the Company, who is also the Chief Executive Officer (CEO), is appointed by the Board to handle the day-to-day management of Volvo Cars and to lead the Executive Management Team (EMT) as overseen by the Board. EMT's role is to assist the CEO in the operation of Volvo Cars' business. The EMT has appointed boards of the EMT to assist in carrying out decisions and actions, but the CEO will retain responsibility for the actions of the boards of the EMT.

**Nomination Committee**

The shareholders' meeting has elected a Nomination Committee, which shall nominate members to the Volvo Cars Board, proposes appropriate remuneration principles for the Volvo Cars Board and on a yearly basis proposes the remuneration and other terms for the Volvo Cars Board to be decided by the Annual General Meeting. Refer to the table under The Volvo Cars Board, regarding relevant remuneration for 2019. Any changes to the Nomination Committee's duties are subject to approval at a shareholders' meeting. Appointment or removal of a member of the Volvo Cars Board shall be proposed by the Nomination Committee but is subject to the approval of the shareholders' meeting. The Nomination Committee shall comprise of three representatives. Currently Hans Olov Olsson (chairman), Lone Fönss Schröder and Mikael Olsson are members of the Nomination Committee. The Nomination Committee has adopted a framework for nomination of members to the Board, which stipulates that the composition of the Board shall be diverse in terms of gender, nationality, professional background and other competences. This is to ensure that the Board has the appropriate balance of expert knowledge, which matches the scale and complexity of Volvo Cars, supports a sustainable development and meets the independency requirements of Volvo Cars. It is Volvo Cars' aim to have a balanced composition when it comes to gender and during 2020 it is the ambition that each gender shall have a share of at least some 40 per cent of the Board members elected by the shareholders' meeting. The Unions represented in the Volvo Cars Board shall be encouraged to apply the corresponding goal when appointing their representatives. The Nomination Committee evaluates the performance of the members of the Board once a year.

**The Volvo Cars Board**

***Composition of the Board***

At all times, the Volvo Cars Board shall consist of a minimum of three and a maximum of twelve members and in addition thereto the number of employee representatives as is required under Swedish law. The Regulations for the work of the Board stipulates that the majority of Volvo Cars Board members shall be independent of Volvo Cars and the management and at least two of these independent members shall also be independent of the shareholders. At the end of December 2019, the Board (excluding the employee representatives) consisted of ten members as further detailed below as well as in Note 8 - Employees and remunerations. No member of the management other than the CEO is a member of the Board. Details of the remuneration principles for the Board can be found in Note 8 – Employees and remuneration. Each new Board member is provided with an introduction programme to learn about the Volvo Car Group and the Board visits at least once every year a Volvo Car Group site other than the headquarters.

***Conflicts of interest***

The Board members shall immediately disclose to the Chairman and/or the Vice Chairman if they find themselves to have a conflict of interest. A Board member having a conflict of interest in relation to any matter to be dealt with by the Board may not participate in the discussions or decisions regarding such matter.

***Board meetings***

The Volvo Cars Board is, according to the Regulations for the work of the Board, expected to meet four to eight times per year at venues to be agreed by the Volvo Cars Board. The Volvo Cars Board has held ten meetings during 2019, of which eight were ordinary and two extraordinary. The Volvo Cars Board meets the statutory auditor at least once a year without the CEO or any other member of EMT present. In addition, the Volvo Cars Board holds non-executive meetings with regular intervals. The CFO and the General Counsel, who is the secretary of the Board, are also present at the Board meetings. The table on page 69 shows the Board members' attendance to the Board meetings and Committee meetings in addition to their independence according to the requirements of the Code in relation to (i) the Company and (ii) the major shareholder.

***Matters for the Board***

The Volvo Cars Board is responsible for the organisation of Volvo Cars and the management of its business worldwide. The Board continuously monitors Volvo Cars' performance, evaluates Volvo Cars' strategic direction and business plan as well as other aspects such as Volvo Cars' adherence to its Code of Conduct. The Board further monitors Volvo Cars' sustainability efforts based on the sustainability strategy being the framework for Volvo Cars sustainability work and conduct in society. Matters that have not been expressly reserved to the Board as set out in the Regulations for the work of the Volvo Cars Board are delegated to the Board's Committees or to the CEO.

The work of the Board follows a yearly cycle in order to allow the Board to address the matters within the responsibility of the Board on a yearly basis. To ensure that the Board has a good visibility of the business of the Volvo Car Group, the CEO and President of the Volvo Car Group gives a report on the business of Volvo Cars, including reporting from the Group's strategic affiliates, as applicable, at all Board meetings. The CFO also gives a report on the financials of the Volvo Car Group, including relevant matters relating to treasury, hedging, risk management, insurance etc. In addition thereto, the Board discusses specific strategic topics of relevance and the Board Committees gives a report of their work. Furthermore, at each Board meeting the Board is presented with a number of decision items for them to consider and approve as set out in the Regulations for the work of the Board.

***Evaluation of the work of the Board***

The Board conducts a yearly survey regarding its performed work during the year. The survey covers areas such as the climate at board meetings and the allocation of time spent on different topics, the work of the Board committees, the efficiency of the work of the Board, the Board leadership and the relations with the executive management team. Based on the result of the survey the Board will evaluate the performance and identify possible areas of improvement. In addition to the yearly survey, the Vice Chairman conducts meetings with each individual Board member during the year.

**Audit Committee**

The Board of Volvo Cars has assigned an Audit Committee to oversee the corporate governance, financial reporting and risks and compliance with external and internal regulations. The Audit Committee has held seven meetings during 2019, whereof four ordinary and three extraordinary interim meetings. The Audit Committee is responsible for identifying and reporting relevant issues to the Volvo Cars Board within the Audit Committee's areas of responsibility. The Audit Committee shall monitor the integrity of Volvo Cars' financial reporting system, internal controls, operation procedure and enterprise risk management framework, recommend to the Volvo Cars Board the appointment, removal and remuneration for the statutory auditors (subject to approval at the shareholders' meeting) in accordance with the Swedish Companies Act, monitor the independence of the statutory auditors and review the effectiveness of the Internal Audit and Compliance and Ethics' function. The Internal Audit function reports directly to the Audit Committee and the Compliance and Ethics function has a direct reporting line to the Audit Committee for escalation. Lone Fønss Schrøder (Chairman), Winnie K.W. Fok, Li Donghui and Michael Jackson are currently members of the Audit Committee.

| Name of the Board members | Independence in relation to the company/senior management | Independence in relation to the major shareholder of the company | Attendance at meetings of the Board | Attendance at meetings of the Committees | Remuneration Board and Committees[1], TSEK |
|---|---|---|---|---|---|
| Li Shufu (Chairman of the Board) | N | N | 3/10 | n/a | – |
| Lone Fønss Schrøder (Vice Chairman of the Board) | Y | Y | 10/10 | 7/7 | 2,600 |
| Winnie K.W. Fok | Y | Y | 7/10 | 6/7 | 900 |
| Håkan Samuelsson (CEO) | N | Y | 10/10 | 4/4 | – |
| Li Donghui | Y | N | 8/10 | 3/7 | – |
| Carl Peter Forster[2] | Y | N | 2/2 | 1/1 | 875 |
| Thomas Johnstone | Y | Y | 9/10 | 10/10 | 1,040 |
| Betsy Atkins | Y | Y | 8/10 | 8/10 | 1,000 |
| Michael Jackson[3] | Y | Y | 8/10 | 3/3 | 900 |
| Xingsheng (Jim) Zhang[4] | Y | Y | 8/10 | 3/3 | 875 |
| Winfried Vahland[5] | Y | Y | 7/7 | 3/3 | 885 |

1) Remuneration for Board and Committees on a yearly basis as agreed at the Annual Shareholders' Meeting 2019.
2) Member of the Volvo Cars Board until March 14, 2019.
3) Member of the Audit Committee from March 14, 2019.
4) Member of the People and Sustainability Committee from March 14, 2019.
5) Member of the Volvo Cars Board and the Product Strategy & Investment Committee from March 14, 2019.

**People and Sustainability Committee**
The Board has assigned a People and Sustainability Committee to prepare remuneration principles for the CEO and EMT members, approve the remuneration to the EMT members and support the chairman or vice chairman of the Board, as applicable, with the approval of the remuneration and benefits for the CEO. The People and Sustainability Committee has held six meetings during 2019, whereof five ordinary and one extraordinary. The duties of the People and Sustainability Committee are to prepare, propose and/or decide and present to the Volvo Cars Board matters related to remuneration, remuneration principles, performance and succession planning of the CEO and the EMT and other matters related thereto. The Committee is also responsible for supervising and providing guidance with regard to the People strategy. The Company's progress in delivering on the sustainability ambitions expressed in the sustainability strategy is also on the agenda for the People and Sustainability Committee twice a year, in addition to the Board's review of sustainability matters and the Committee is responsible for supervising Volvo Cars' Sustainability strategy. Thomas Johnstone (Chairman), Betsy Atkins and Jim Zhang are currently members of the People and Sustainability Committee.

**Product Strategy and Investment Committee**
The Board has assigned a Product Strategy and Investment Committee to oversee Volvo Cars' product strategy and the investments linked to it. The Product Strategy and Investment Committee has held four meetings during 2019, all ordinary. The purpose of the Product Strategy and Investment Committee is to review Volvo Cars' product strategy, cycle plan and product programmes to confirm that the strategy and the plans as well as programmes for the overall strategy, meet customer demand and market development and addresses new technology and business opportunities in all segments relevant to Volvo Cars. The duties of the Product Strategy and Investment Committee are furthermore to ensure that the changes in society, peoples view on mobility and cars as well as changes in the automotive market are reflected in Volvo Cars' strategic product plans and when choosing technologies. Winfried Vahland (Chairman), Thomas Johnstone, Betsy Atkins together with Håkan Samuelsson are members of the Product Strategy and Investment Committee. Winfried Vahland replaced Carl-Peter Forster in the Committee in March 2019 and has been chairman of the Committee since October 23, 2019, replacing Thomas Johnstone in that role.

**Global Audit Office**
Volvo Cars has an independent Internal Audit department with the assignment to determine whether Volvo Cars' governance, internal control and risk management processes, as designed, operated and represented by management, are adequate and effective. The scope for the internal audit is determined by means of a risk assessment process and any additional requirements by the Board. The head of the Internal Audit function reports to the Audit Committee.

**Corporate Compliance and Ethics Office**
The Compliance and Ethics Office supports the business operations in conducting business in a responsible and ethical manner, by developing, implementing and maintaining Volvo Cars' Compliance and Ethics Programme. This Programme consists of ten elements designed on the basis of guidelines describing "effective compliance programme" and "adequate procedures", such as the US Sentencing Guidelines and the UK Bribery Act Guidance (supporting respectively the Foreign Corrupt Practices Act and the UK Bribery Act) as well as guidance from Anti-Trust Offices throughout Europe. Among these ten elements are: a regular risk assessment that leads to identification, understanding and prioritisations of the main risk fields to which Volvo Cars is exposed, so as to customise the Compliance and Ethics Programme with a view to minimise the Group's exposure to risks; implementation of a Compliance and Ethics framework (Code of Conduct and Corporate Policies, Directives and Guidelines); Compliance and Ethics training, awareness and communication; Internal reporting and investigations; and monitoring and assessment with a view to continuously improve the Compliance and Ethics Programme. Volvo Cars' Code of Conduct (called Our Code – How We Act) reflects Volvo Cars' culture and way of doing business in a responsible manner, by putting the emphasis on our values and commitments in addition to focusing on the requirements set out in our corporate policies. The Chief Compliance and Ethics Officer reports to the General Counsel and further continuously reports on compliance issues to the Global Compliance Committee. The Chief Compliance and Ethics Officer also reports to the Audit Committee of the Board of Directors and provides compliance training to the Board of Directors.

**External Auditors**
Volvo Car Groups' external auditors are elected by the Annual Shareholders' Meeting. Deloitte AB was appointed auditor in Volvo Car Group in the financial year 2010. The Annual Shareholders' Meeting has then re-elected Deloitte AB, and the current audit engagement period is ending at the 2020 Annual Shareholders' Meeting. Lead Audit Partner is the authorized public accountant Jan Nilsson. The external auditors discuss the external audit plan, audit findings and risk management with the Audit Committee. The auditors review the interim report for the period January 1 to September 30 and present the result of the work to Audit Committee in December. The result from their financial year audit and audit of the Annual Report of the parent company and the consolidated financial statements is presented to the Audit Committee and the Board of Directors at meetings after year-end. When Deloitte is asked to provide services other than the external audit, it is done in accordance with general independency rules. Annually Deloitte assures its impartiality and independence in writing to the Audit Committee in accordance with the Swedish Companies Act and ISA 260.

**Disclosure Committee**
Volvo Car AB is required to comply with certain disclosure obligations following from the listing rules of the Luxembourg Stock Exchange's Euro MTF market and the Market Abuse Regulation (MAR) and other applicable regulations related to trading in the securities issued by Volvo Car AB. In order to ensure that Volvo Cars follows the relevant requirements Volvo Cars has established a Disclosure Committee and the Board of Directors has adopted a set of procedures for the Disclosure Committee. The Audit Committee is kept updated on the discussions and decisions by the Disclosure Committee via sharing of the minutes kept at the meetings of the Committee. The members of the Disclosure Committee are the Gen-

eral Counsel (chairman), the CFO and the Head of Corporate Communication. The Head of IR is a permanent participant as a rapporteur and other senior company representatives attend the meetings on an agenda-driven basis. The Legal Counsel, Corporate Governance Office acts as secretary. The Disclosure Committee has been established to i.a. implement required disclosure controls and procedures, resolve whether information shall be categorised as inside information or not and consider whether there is a reason to delay disclosure of inside information or if immediate disclosure is required. The Disclosure Committee also monitors the Company's fulfilment of its disclosure obligations under IFRS and MAR related to transactions with related parties.

**Internal control over financial reporting**

According to the Swedish Companies Act, the Board is ultimately responsible for ensuring that an effective internal control system exists within the Group. In order to assist the Board and management in their internal control responsibilities, Volvo Cars has implemented an internal control function over financial reporting (ICFR), with the purpose to ensure that the external financial reporting is reliable and that the financial reports follow generally accepted accounting principles. The Internal Control function reports to the Audit Committee on a periodic basis. Volvo Cars bases its internal control on the framework for internal control issued by the Committee of Sponsoring Organisations of the Treadway Commission (COSO) and it consist of five components; Control Environment, Risk Assessment, Control Activities, Information and Communication and Monitoring activities.

***Control Environment***

The foundation of Volvo Cars' control environment is the Code of Conduct, which is the guiding principle of Volvo Cars, as well as the Group's corporate policies and directives. The foundation of the control environment over financial reporting is further based upon functional policies, directives and guidelines and the Delegation of Authority directive.

***Control activities***

Control activities are the procedures that help to ensure that Volvo Cars' policies, directives and instructions are implemented. Control activities are performed throughout the organisation, at all levels, and in all functions to manage risk and to detect and correct errors in the financial processes. Control activities are documented in Volvo Cars' Internal Control framework.

***Risk assessment***

From an ICFR perspective, the outcome of the risk assessment will define the internal control reviews for the coming year.

Each entity and function is responsible for identifying risks, which are then consolidated and reported according to the Enterprise Risk Management Directive, see page 65. Additionally, on a yearly basis, the functions of Internal Control, Corporate Compliance & Ethics office, Consumer & Enterprise Digital and Sustainability jointly perform a risk assessment to evaluate and determine risks that could hinder the achievement of Volvo Cars' business objectives. The outcome from the joint risk assessment is reported to various EMT boards and to the functions having the operational responsibility.

***Information and communication***

The information and communication component within Volvo Cars includes the systems and processes that support the identification, capture and exchange of information that enable personnel to carry out their responsibilities and that financial reports are generated completely and accurately. Information around the planning, risk areas and results of the self-assessment and internal control reviews are communicated within various fora and to the Audit Committee on a periodic basis.

***Monitoring***

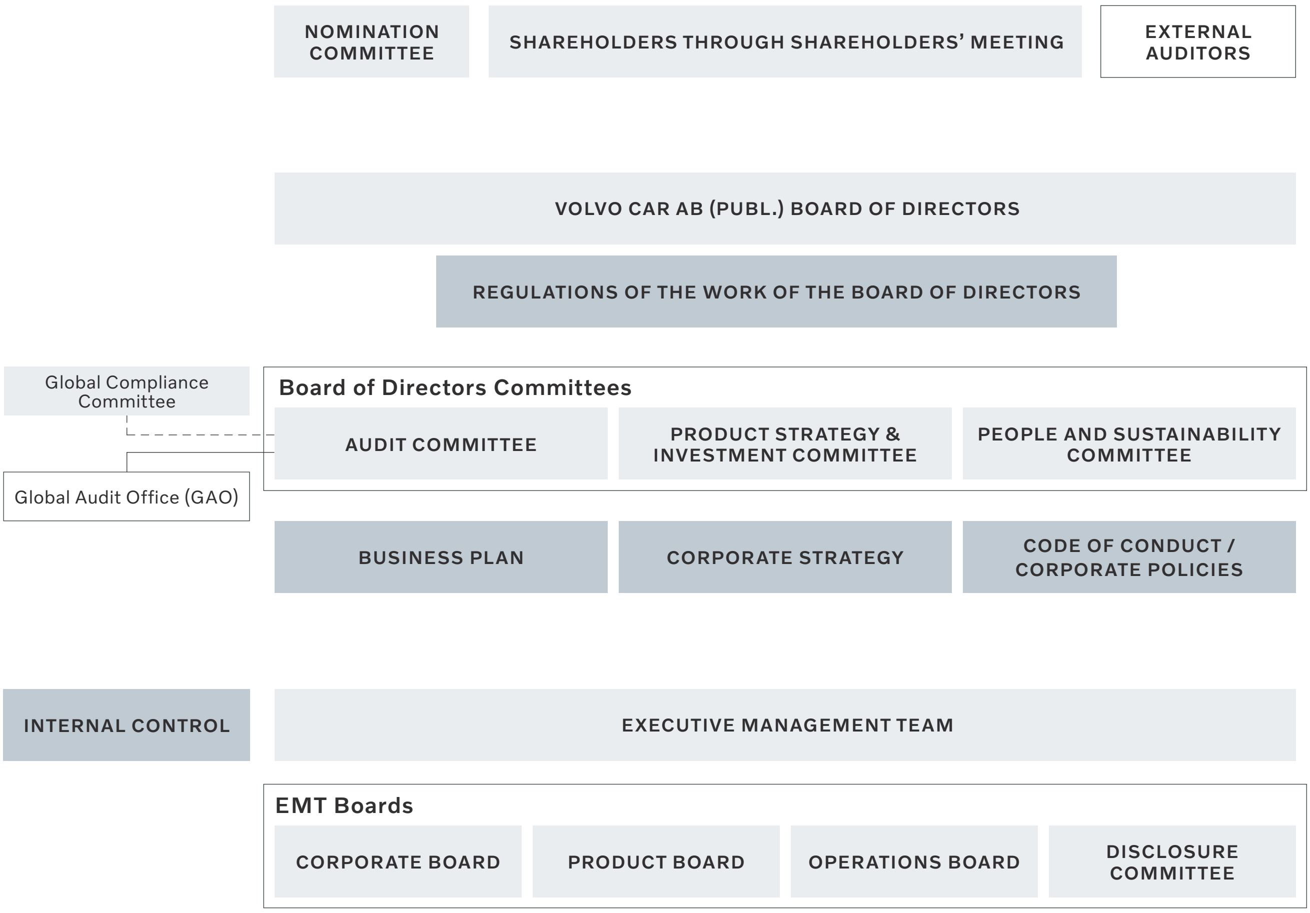
In addition to the Internal Audit function described above, a separate Internal Control function performs internal control reviews and coordinates evaluation activities through the annual self-assessment programme. This assessment programme focuses on management and transaction levels as well as self-assessments of IT general controls. When control deficiencies are identified through selfassessments, regular operations or internal or external audits, such deficiencies are tracked and appropriate corrective actions undertaken to resolve these deficiencies. The Head of the Internal Control has regular contact with the CFO.

**Sustainability reporting**

Volvo Cars has been reporting on environmental, health and safety aspects of its products and production since it signed the UN Global Compact in 2000. In 2003, the company produced its first Sustainability Report in line with the international reporting guidelines from the Global Reporting Initiative (GRI). By applying and living up to the GRI's international guidelines for sustainability reporting, Volvo Cars aims to ensure transparent reporting based on content that is relevant to its stakeholders. The 2019 report is prepared in accordance with GRI Standards, accordance level Core. Volvo Cars reports on an annual basis, and this report covers the period January 1 to December 31, 2019 (except where otherwise stated). Volvo Car Group's sustainability report has been prepared to meet the statutory requirements in accordance with the Swedish Annual Accounts Act 6 chap. 11§. The scope and content of the sustainability report is defined by the GRI index presented on pages 143-144 in this document. Definitions regarding boundaries as well as measuring techniques and calculations for each performance indicator are given in respect to the disclosure concerned. No significant changes occurred during the reporting period or from previous reporting periods. Deloitte AB has performed a limited assurance of the sustainability report in line with ISAE 3000, see page 145 for the limited assurance report. As a signatory to the UN Global Compact, the Sustainability Report is also our Communication on Progress.

Additionally, and as part of the new sustainability strategy, Volvo Cars has started a project to analyse, identify and select different initiatives and schemes which both support and externally validate our ambitions. Climate action is a focus area of the company, as is financial risk. Therefore, the Task Force on Climate-related Financial Disclosures (TCFD) is one such scheme that will be investigated in 2020.

## CORPORATE GOVERNANCE STRUCTURE




VOLVO
V60
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# Contents Financial Report

# Consolidated Income Statements

| MSEK | Note | 2019 | 2018 |
|---|---|---|---|
| Revenue | 2 | 274,117 | 252,653 |
| Cost of sales[1] | 3 | –222,047 | –203,322 |
| **Gross income** | | **52,070** | **49,331** |
| Research and development expenses[1] | 3, 15 | –11,446 | –10,903 |
| Selling expenses | 3 | –17,287 | –17,371 |
| Administrative expenses | 3 | –9,489 | –8,001 |
| Other operating income | 6 | 3,868 | 3,386 |
| Other operating expenses | 6 | –3,245 | –2,324 |
| Share of income in joint ventures and associates | 13 | –168 | 67 |
| **Operating income** | 4, 5, 7, 8, 9, 10 | **14,303** | **14,185** |
| Financial income | 11 | 575 | 407 |
| Financial expenses | 12 | –1,710 | –1,675 |
| **Income before tax** | | **13,168** | **12,917** |
| Income tax | 14 | –3,565 | –3,136 |
| **Net income** | | **9,603** | **9,781** |
| **Net income attributable to** | | | |
| Owners of the parent company | | 7,115 | 6,840 |
| Non-controlling interests | | 2,488 | 2,941 |
| | | **9,603** | **9,781** |

1) Reclassification of research and development expenses to Cost of sales amounted to MSEK 1,195 in full year 2018.

## INCOME AND RESULT

Volvo Cars revenue increased by 8.5 per cent to MSEK 274,117 (252,653), from growth in all regions and significantly increased volumes in markets such as China, US, Germany, UK and Belgium. Wholesales increased by 7.1 per cent to 703,534 (656,688) units, mainly driven by the XC40. The positive sales development and the increased demand for the XC model range, however continuously effected by price pressure in certain markets, was reflected in volume, sales mix and pricing, which contributed to revenue with MSEK 10,670. Sold licences decreased by MSEK 894, while other revenue, such as rentals, used car sales as well as parts and accessories, increased by MSEK 3,155. The exchange rate effect in revenue amounted to MSEK 8,533.

Gross income increased to MSEK 52,070 (49,331), resulting in a gross margin of 19.0 (19.5) per cent. Operational efficiencies, such as material cost improvements, freight and labour and overhead efficiencies, have had a positive effect on cost of sales. The increase in cost of sales to MSEK –222,047 (–203,322), was mainly related to a higher production volume and increasing demand for the XC model range, and a negative foreign exchange rate impact in cost of sales of MSEK –8,164. The net effect of foreign exchange rate in gross income was positive and amounted to MSEK 369 and the decreased gross income effect from licence sales amounted to MSEK 894. Consequently, the main reason for the decrease in gross margin was the continuous price competition in certain markets and lower licence sales.

Research and development expenses increased to MSEK –11,446 (–10,903). The increase was driven by continuous investments in electrification, connectivity and new car models. For details regarding research and development expenses, see table below.

Selling and administrative expenses increased to MSEK –26,776 (–25,372). The increase was mainly driven by administrative expenses of MSEK –9,489 (–8,001) related to personnel costs as well as increased expenses for digitalisation. Selling expenses were in line with 2018 and amounted to MSEK –17,287 (–17,371).

Other operating income and expense, net, amounted to MSEK 623 (1,062). The decrease was mainly related to costs for early phase-out of certain components, partly offset by foreign exchange rate effects on operating assets and liabilities of MSEK 537 (62).

Operating income (EBIT) increased slightly compared to last year to MSEK 14,303 (14,185). The EBIT margin decreased to 5.2 (5.6) per cent. While the EBIT in the prior year was positively affected by a higher level of received government grants and licences, the increase during this year was a result of strong growth in volume, and a more favourable market and model mix, as well as operational efficiencies. Since the announcement in April 2019, to implement cost efficiency measurements, the number of consultants and full-time employees has been reduced by around 900. The full financial impact is expected to come in 2020 as, on average, the number of full-time employees in 2019 was at the same level as in 2018. The net effect of foreign exchange rate in EBIT was MSEK –125.

Net financial items amounted to MSEK –1,135 (–1,268).

The effective tax rate increased to 27.1 (24.3) per cent mainly due to allocation of taxable profits between different jurisdictions and adjustments related to prior years.

Net income amounted to MSEK 9,603 (9,781). Net income in relation to revenue was 3.5 (3.9) per cent.

| Research and development spending, MSEK | 2019 | 2018 |
|---|---|---|
| Research and development spending | –14,662 | –12,816 |
| Capitalised development costs | 8,088 | 6,476 |
| Amortisation and depreciation of Research and development | –4,872 | –4,563 |
| **Research and development expenses** | **–11,446** | **–10,903** |

# Consolidated Comprehensive Income

| MSEK | 2019 | 2018 |
|---|---|---|
| Net income | 9,603 | 9,781 |
| | | |
| **Other comprehensive income** | | |
| *Items that will not be reclassified subsequently to income statement:* | | |
| Remeasurements of provisions for post-employment benefits | –3,780 | –1,925 |
| Tax on items that will not be reclassified to income statement | 792 | 404 |
| | | |
| *Items that may be reclassified subsequently to income statement:* | | |
| Translation difference on foreign operations | 947 | 805 |
| Translation difference of hedge instruments of net investments in foreign operations | –139 | –16 |
| Change in fair value of cash flow hedge related to currency and commodity price risks | –4,220 | –3,236 |
| Currency and commodity risk hedge contracts recycled to income statement | 1,003 | –603 |
| Tax on items that may be reclassified to income statement | 691 | 815 |
| **Other comprehensive income, net of income tax** | **–4,706** | **–3,756** |
| **Total comprehensive income** | **4,897** | **6,025** |
| | | |
| **Total comprehensive income attributable to** | | |
| Owners of the parent company | 2,182 | 2,965 |
| Non–controlling interests | 2,715 | 3,060 |
| | **4,897** | **6,025** |

## NET FINANCIAL POSITION AND LIQUIDITY

Cash flow from operating and investing activities amounted to MSEK 11,573 (4,705). Cash flow from operating activities amounted to MSEK 32,374 (26,765). The change is due to the positive operating income of MSEK 14,303 (14,185), adjusted for depreciation and amortisation of MSEK 15,548 (13,213) together with tax paid of MSEK –4,089 (–4,132), and a positive working capital development of MSEK 9,916 (4,044).

The positive development in working capital was mainly due to growing sales volumes and increased sales of cars held under repurchase agreements, as well as increased sales generated obligations. These were the main contributors to the positive cash flow from contract liabilities to customers of MSEK 6,503 (6,093) and other working capital assets and liabilities of MSEK 2,890 (520). Change in accounts payable resulted in a positive effect of MSEK 1,969 (4,372) mainly due to increased production. The positive effects were partly offset by a negative cash flow from inventories of MSEK –3,066 (–3,706) driven by growing sales volumes and increased sales of cars held under repurchase agreements.

Cash flow from investing activities amounted to MSEK –20,801 (–22,060). Investments in tangible assets amounted to MSEK –11,807 (–13,574) and are mainly related to the approaching launch of the fully electric XC40 Recharge and ramp up of production capacity of the XC40, the S60 and engines. Investments in intangible assets amounted to MSEK –9,176 (–7,283) as a result of continuous investments in new and upcoming car models and new technology.

Cash flow from financing activities amounted to MSEK –831 (–743) mainly related to proceeds from bonds issued of MSEK 8,221 (—), offset by repayments of liabilities of MSEK –3,553 (–7,354), dividends paid to shareholders of MSEK –2,897 (–67) and investments in marketable securities (net) of –1,985 (2,558).

Total cash and cash equivalents including marketable securities have increased to MSEK 55,515 (41,747). Net cash increased to MSEK 25,214 (18,029). Including undrawn credit facilities of MSEK 13,593 (13,328), liquidity was at MSEK 69,108 (55,075).

## EQUITY

Total equity increased to MSEK 63,648 (61,251), resulting in an equity ratio of 26.3 (29.0) per cent. The change is attributable to the positive net income of MSEK 9,603 and capital injection of MSEK 1,153 from Geely to Polestar Group which is a joint venture under common control, partly offset by negative effects in other comprehensive income. The latter is related to change in cash flow hedge reserve from unrealised hedge contracts of MSEK –2,556 (net of tax), whereof hedge contracts recycled to income statement amounted to MSEK 1,003. The change in value of cash flow hedges is mainly due to a weakened SEK against USD and GBP. Remeasurements of provisions for post-employment benefits have had a negative effect in other comprehensive income of MSEK –2,988 (net of tax) due to changes in actuarial assumptions, mainly lower discount rates. This has partly been offset by a positive foreign exchange translation effect, including hedges of net investments in foreign operations of MSEK 838 (net of tax).

Dividend of MSEK 2,897 was paid to shareholders, whereof MSEK 125 was distributed to the holders of preference shares. In December 2019, a new issue of preference shares was made of MSEK 4,989 (net) which was offset by the redemption of the preference shares issued in December 2016 of MSEK –5,745. For more information about the transaction, see note 22 - Equity.

# Consolidated Balance Sheets

| MSEK | Note | Dec 31, 2019 | Dec 31, 2018 |
|---|---|---|---|
| **ASSETS** | | | |
| **Non-current assets** | | | |
| Intangible assets | 15 | 32,786 | 29,626 |
| Property, plant and equipment | 7, 16 | 69,738 | 61,208 |
| Assets held under operating leases | 7, 16 | 3,243 | 2,523 |
| Receivables on parent company | | 54 | 54 |
| Investments in joint ventures and associates | 13 | 7,408 | 7,003 |
| Other long-term securities holdings | | 296 | 190 |
| Deferred tax assets | 14 | 7,275 | 6,586 |
| Other non-current assets | 17 | 3,253 | 2,982 |
| **Total non-current assets** | | **124,053** | **110,172** |
| | | | |
| **Current assets** | | | |
| Inventories | 18 | 38,911 | 35,163 |
| Accounts receivable | 4, 19 | 13,243 | 13,704 |
| Current tax assets | | 987 | 573 |
| Other current assets | 19 | 8,855 | 9,875 |
| Marketable securities | 21 | 3,518 | 1,577 |
| Cash and cash equivalents | 21 | 51,997 | 40,170 |
| **Total current assets** | | **117,511** | **101,062** |
| **TOTAL ASSETS** | | **241,564** | **211,234** |
| | | | |
| **EQUITY & LIABILITIES** | | | |
| **Equity** | 22 | | |
| Equity attributable to owners of the parent company | | 53,883 | 52,873 |
| Non-controlling interests | | 9,765 | 8,378 |
| **Total equity** | | **63,648** | **61,251** |
| | | | |
| **Non-current liabilities** | | | |
| Provisions for post-employment benefits | 23 | 12,583 | 8,425 |
| Deferred tax liabilities | 14 | 975 | 1,688 |
| Other non-current provisions | 24 | 7,291 | 6,189 |
| Liabilities to credit institutions | 20 | 4,489 | 8,273 |
| Bonds | 20 | 21,643 | 13,200 |
| Non-current contract liabilities to customers | 25 | 5,210 | 4,184 |
| Other non-current interest bearing liabilities | 7 | 5,076 | — |
| Other non-current liabilities | 4, 26 | 4,913 | 4,609 |
| **Total non-current liabilities** | | **62,180** | **46,568** |
| | | | |
| **Current liabilities** | | | |
| Current provisions | 24 | 8,357 | 6,936 |
| Liabilities to credit institutions | 20 | 4,105 | 2,175 |
| Current contract liabilities to customers | 25 | 20,478 | 17,511 |
| Accounts payable | 4 | 44,876 | 43,633 |
| Current tax liabilities | | 1,302 | 1,645 |
| Other current interest bearing liabilities | 7 | 1,073 | — |
| Other current liabilities | 27 | 35,545 | 31,515 |
| **Total current liabilities** | | **115,736** | **103,415** |
| **TOTAL EQUITY & LIABILITIES** | | **241,564** | **211,234** |

# Changes in Consolidated Equity

| MSEK | Share capital[1] | Share premium | Other contributed capital | Currency translation reserve | Other reserves | Retained earnings | Attributable to owners of the parent | Non-controlling interests | Total |
|---|---|---|---|---|---|---|---|---|---|
| **Balance at January 1, 2018** | **51** | **11,405** | **8,034** | **–258** | **1,270** | **28,227** | **48,729** | **5,931** | **54,660** |
| **Net income** | **—** | **—** | **—** | **—** | **—** | **6,840** | **6,840** | **2,941** | **9,781** |
| **Other comprehensive income** | | | | | | | | | |
| Remeasurements of provisions for post-employment benefits | — | — | — | — | — | –1,925 | –1,925 | — | –1,925 |
| Translation difference on foreign operations | — | — | — | 696 | — | — | 696 | 109 | 805 |
| Translation difference of hedge instruments of net investments in foreign operations | — | — | — | –16 | — | — | –16 | — | –16 |
| Change in fair value of cash flow hedge related to currency and commodity price risks | — | — | — | — | –3,249 | — | –3,249 | 13 | –3,236 |
| Currency and commodity risk hedge contracts recycled to income statement | — | — | — | — | –602 | — | –602 | –1 | –603 |
| Tax attributable to items recognised in other comprehensive income | — | — | — | 1 | 816 | 404 | 1,221 | –2 | 1,219 |
| **Other comprehensive income** | **—** | **—** | **—** | **681** | **–3,035** | **–1,521** | **–3,875** | **119** | **–3,756** |
| **Total comprehensive income** | **—** | **—** | **—** | **681** | **–3,035** | **5,319** | **2,965** | **3,060** | **6,025** |
| **Transactions with owners** | | | | | | | | | |
| Group contributions[2] | — | — | 418 | — | — | — | 418 | — | 418 |
| Capital contribution from non-controlling interests[3] [4] | — | — | — | — | — | — | — | 662 | 662 |
| Divestment of non-controlling interests[3] [4] [5] | — | — | — | — | — | –17 | –17 | –1,271 | –1,288 |
| Change in the Group's composition[4] [5] | — | — | — | — | — | –5 | –5 | — | –5 |
| Capital injection into joint venture under common control[4] [5] | — | — | — | — | — | 846 | 846 | — | 846 |
| Dividend to shareholders[2] | — | — | — | — | — | –63 | –63 | –4 | –67 |
| **Transactions with owners** | **—** | **—** | **418** | **—** | **—** | **761** | **1,179** | **–613** | **566** |
| **Balance at December 31, 2018** | **51** | **11,405** | **8,452** | **423** | **–1,765** | **34,307** | **52,873** | **8,378** | **61,251** |
| **Net income** | **—** | **—** | **—** | **—** | **——** | **7,115** | **7,115** | **2,488** | **9,603** |
| **Other comprehensive income** | | | | | | | | | |
| Remeasurements of provisions for post-employment benefits | — | — | — | — | — | –3,780 | –3,780 | — | –3,780 |
| Translation difference on foreign operations | — | — | — | 709 | — | — | 709 | 238 | 947 |
| Translation difference of hedge instruments of net investments in foreign operations | — | — | — | –139 | — | — | –139 | — | –139 |
| Change in fair value of cash flow hedge related to currency and commodity price risks | — | — | — | — | –4,221 | — | –4,221 | 1 | –4,220 |
| Currency and commodity risk hedge contracts recycled to income statement | — | — | — | — | 1,016 | — | 1,016 | –13 | 1,003 |
| Tax attributable to items recognised in other comprehensive income | — | — | — | 30 | 660 | 792 | 1,482 | 1 | 1,483 |
| **Other comprehensive income** | **—** | **—** | **—** | **600** | **–2,545** | **–2,988** | **–4,933** | **227** | **–4,706** |
| **Total comprehensive income** | **—** | **—** | **—** | **600** | **–2,545** | **4,127** | **2,182** | **2,715** | **4,897** |
| **Transactions with owners** | | | | | | | | | |
| Issue of preference shares[3] | 1 | 4,988 | — | — | — | — | 4,989 | — | 4,989 |
| Redemption of preference shares[3] | –1 | –4,896 | — | — | — | –848 | –5,745 | — | –5,745 |
| Transactions with non-controlling interests | — | — | — | — | — | –57 | –57 | 57 | — |
| Capital injection into joint venture under common control[4] [5] | — | — | — | — | — | 1,153 | 1,153 | — | 1,153 |
| Dividend to shareholders[2] | — | — | — | — | — | –1,512 | –1,512 | –1,385 | –2,897 |
| **Transactions with owners** | **—** | **92** | **—** | **—** | **—** | **–1,264** | **–1,172** | **–1,328** | **–2,500** |
| **Balance at December 31, 2019** | **51** | **11,497** | **8,452** | **1,023** | **–4,310** | **37,170** | **53,883** | **9,765** | **63,648** |

1) Share capital amounted to SEK 51,138,794 (50,500,000).
2) For further information, see Note 4 – Related parties.
3) For further information, see Note 22 – Equity.
4) For further information, see Note 8 – Participation in subsidiaries (Parent company).
5) For further information, see Note 31 – Business Combinations.

# Consolidated Statement of Cash Flows

| MSEK | Note | 2019 | 2018 |
|---|---|---|---|
| **OPERATING ACTIVITIES** | | | |
| Operating income | | 14,303 | 14,185 |
| Depreciation and amortisation of non-current assets | 9 | 15,548 | 13,213 |
| Interest and similar items received | | 572 | 408 |
| Interest and similar items paid | | –854 | –818 |
| Other financial items | | –607 | –203 |
| Income tax paid | | –4,089 | –4,132 |
| Adjustments for items not affecting cash flow | 30 | –2,415 | 68 |
| | | **22,458** | **22,721** |
| *Movements in working capital* | | | |
| Change in inventories | | –3,066 | –3,706 |
| Change in accounts receivable | | 694 | –2,627 |
| Change in accounts payable | | 1,969 | 4,372 |
| Change in provisions | | 926 | –608 |
| Change in contract liabilities to customers | | 6,503 | 6,093 |
| Change in other working capital assets/liabilities[1] | | 2,890 | 520 |
| **Cash flow from movements in working capital** | | **9,916** | **4,044** |
| **Cash flow from operating activities** | | **32,374** | **26,765** |
| **INVESTING ACTIVITIES** | | | |
| Investments in shares and participations, net[2] | 13, 31 | –235 | –1,565 |
| Dividends received from joint ventures and associates | 13 | 64 | 240 |
| Investments in intangible assets[1] | | –9,176 | –7,283 |
| Investments in tangible assets | | –11,807 | –13,574 |
| Disposal of tangible assets | | 353 | 122 |
| **Cash flow from investing activities** | | **–20,801** | **–22,060** |
| **Cash flow from operating and investing activities** | | **11,573** | **4,705** |
| **FINANCING ACTIVITIES** | | | |
| Proceeds from credit institutions | | 1,361 | 3,087 |
| Proceeds from bond issuance | 20 | 8,221 | — |
| Repayment of liabilities to credit institutions | | –3,553 | –7,354 |
| Repayment of interest bearing liabilities | | –1,356 | — |
| Proceeds from preference shares issuance | 22 | 5,011 | — |
| Redemption of preference shares | 22 | –5,745 | — |
| Dividend paid to shareholders | 4 | –2,897 | –67 |
| Investments in marketable securities, net | 21 | –1,985 | 2,558 |
| Other[3] | | 112 | 1,033 |
| **Cash flow from financing activities** | | **–831** | **–743** |
| **Cash flow for the year** | | **10,742** | **3,962** |
| **Cash and cash equivalents at beginning of year** | | **40,170** | **35,402** |
| Exchange difference on cash and cash equivalents | | 1,085 | 806 |
| **Cash and cash equivalents at end of year** | 21 | **51,997** | **40,170** |

1) Up until the second quarter, expenses related to the delivery of unique IP (now classified as customer contracts) were capitalised as an intangible asset, an asset expensed when transferred to the customer. For comparison reasons, the affected line items for 2018 have been restated.
2) Investments in shares and participations, net, includes for 2018: effects from loss of control of Polestar Group.
3) Other is attributable to realised result from financial instruments MSEK 226 (694) and change in Other non-current liabilitities MSEK –114 (339).

# Notes to the Consolidated Financial Statements

All amounts are in MSEK unless otherwise stated.
Amounts in brackets refer to the preceding year.

## NOTE 1 – GENERAL INFORMATION FOR FINANCIAL REPORTING IN VOLVO CAR GROUP

**Basis of preparation**

The consolidated financial statements of Volvo Car AB (publ.) have been prepared in accordance with the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB), as adopted by the European Union. This Annual Report is prepared in accordance with IAS 1 Presentation of Financial Statements and the Swedish Annual Accounts Act. In addition, RFR 1 Supplementary Rules for Groups has been applied, a standard issued by the Swedish Financial Reporting Board. RFR 1 specifies mandatory additions to the IFRS disclosure requirements in accordance with the Swedish Annual Accounts Act. Group companies apply the same accounting principles, irrespective of national legislation, as defined in the Group accounting directives and they have been applied consistently for all periods, unless otherwise stated.

All accounting principles considered material to Volvo Car Group has been described in conjunction with each note. When a new accounting principle has been implemented or when there has been changes in disclosures this is described as part of the relevant note.

Preparation of the financial statements in accordance with IFRS requires the Company's Executive Management and the Board of Directors to make estimations and judgements that affect the value of the reported assets, liabilities, income and expenses. Estimates are based on historical experience. The results of these estimates and judgements are used to report the values of assets and liabilities. The actual outcome (value) may differ from these estimates and judgements and corrections maybe necessary to make. Therefore, the estimates and judgements are reviewed on a regular basis. Changes are recognised in the period of the change and in future periods if the change affects both.

In order to avoid duplication of information, cross-references have been made between notes. The estimates and judgements that are deemed to be the most important for an understanding of Volvo Car Group's financial reports within each area, taking into account the degree of materiality and uncertainty, are presented as part of each applicable note.

**Basis of consolidation**

The consolidated accounts include Volvo Car AB (publ.) and its subsidiaries. Subsidiaries are all entities over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity.

All wholly owned subsidiaries, certain companies owned to 50 per cent, mainly in China, are consolidated, see Note 8 – Participation in subsidiaries (parent company). Subsidiaries are fully consolidated from the date on which control is transferred to the Group. They are deconsolidated from the date that control ceases.

Foreign currency

The primary economic environment is the one in which a group company primarily generates and spends cash. Normally the functional currency is the currency of the country where the company is located. Volvo Car Group's and Volvo Car AB's (publ.) presentation currency is Swedish krona (SEK).

Assets and liabilities denominated in currencies other than the functional currency (foreign currencies) are translated to the functional currency using the balance sheet closing rate. Exchange rate differences are recognised in the income statement.

Exchange rate differences on operating assets and liabilities are recognised in other operating income and expenses, while exchange rate differences arising in financial assets and liabilities are recognised in financial income and expenses.

When preparing the consolidated financial statements, items in the income statements of foreign subsidiaries are translated to SEK using monthly average exchange rates. Balance sheet items are translated into SEK using exchange rates at year-end (closing rate). Exchange rate differences arising on translation are recognised in other comprehensive income and accumulated in equity. The accumulated translation differences related to subsidiaries, joint ventures or associates are reversed to the income statement as a part of the gain/loss arising from disposal of such a company.

The main exchange rates applied are presented in the table below:

| | | Average rate | | Close rate | |
|---|---|---|---|---|---|
| **Country** | Currency | **2019** | 2018 | **2019** | 2018 |
| China | CNY | 1.37 | 1.32 | 1.34 | 1.30 |
| Euro zone | EUR | 10.56 | 10.27 | 10.46 | 10.25 |
| Great Britain | GBP | 12.04 | 11.60 | 12.31 | 11.35 |
| United States | USD | 9.42 | 8.69 | 9.32 | 8.95 |
| Japan | JPY | 0.09 | 0.08 | 0.09 | 0.08 |

**Classification of current and non-current assets and liabilities**

An asset is classified as a current asset when it is held primarily for the purpose of trading, is expected to be realised within twelve months after the balance sheet date or consists of cash or cash equivalents, provided it is not subject to any restrictions. All other assets are classified as non-current. A liability is classified as a current liability when it is held primarily for the purpose of trading or is expected to be settled within twelve months after the balance sheet date. All other liabilities are classified as non-current.

## NOTE 2 – REVENUE

### ACCOUNTING PRINCIPLES

Revenue is defined as the sales price for goods or services net of variable considerations, for instance discounts and variable marketing expenses.

Revenue is recognised when the customer obtains control of a delivered good or service, and thus has the ability to direct the use and obtain the benefits from the goods or services. Revenue could either be recognised at a point in time or over time depending on the applied business model. The sale of goods or services will sometime give rise to the recognition of contract liabilities to customers. These liabilities are recognised when Volvo Car Group are obligated to transfer goods or services for which consideration is already received. Contract liabilities to customers include sales generated obligations, deferred revenue from extended service business, sales with repurchase commitments as well as advance payments from customers.

#### Revenue from sale of goods

Revenue is recognised when the customer has gained control over the goods according to agreed contract terms. At the point of revenue recognition, there are normally no material unfulfilled obligations that could affect the customer's acceptance. If the customer contracts include variable considerations the revenue recognised will be effected. In the case of volume discounts that are triggered over time a contract liability will be recognised. This is as well the case for other variable considerations, like incentive programmes and variable marketing expenses.

Revenue from sale of a vehicle to a customer, where there is a residual value guarantee issued to an independent financing provider, is recognised at the time of sale, less an amount corresponding to the estimated residual value risk. The estimated residual value risk remaining at the Group is classified and recognised as a contract liability, see Note 25 – Current and non-current contract liabilities to customers. Revenue is only recognised provided that transfer of control over the vehicle can be confirmed.

Revenue from sale of a vehicle to a customer combined with a repurchase commitment (the right or obligation (put option) to buy back the car) is recognised over the contract period as if it were an operating lease contract. This is based on the fact that the customer has not obtained the control of the vehicle. Based on historical experience a majority of customers use the put option at the end of the contract period. During the contract period the cars are recognised on the balance sheet and are depreciated to the estimated residual value, see Note 9 – Depreciation and amortisation. The useful life of the asset and the corresponding residual value is monitored closely and changed if necessary, see Note 18 – Inventories and Note 16 – Tangible assets. Liabilities related to repurchase commitments are recognised as other non-current and other current liabilities, refer to Note 26 – Other non-current liabilities and Note 27 – Other current liabilities.

#### Revenue from sale of services

Volvo Car Group sells services in the form of maintenance contracts and extended warranties to end customers. Income from these sales is deferred and revenue recognised on a straight-line basis over the contract period. The deferred revenue is presented as contract liabilities to customers, since the customers payment is made before the service is transferred. When an extended warranty contract is included in the sales price of the car, and the inclusion in the contract is assessed to be common practice in the market, such extended warranty costs is recognised as a provision. This warranty is not recognised as a separate performance obligation.

Where an extended warranty is included in the sale of a car and the offer goes beyond common practice in the market, it is accounted for as a separate performance obligation; a stand-alone selling price is identified, and revenue is recognised on a straight-line basis over the contract period. The stand-alone selling price is not directly observable, why the price in general is estimated based on expected cost plus a reasonable margin.

#### Revenue from sale of licences

Revenue from the sale of licences is recognised at a point in time or over time, depending on whether the sold licence gives the customer a right to use or a right to access the underlying asset. Volvo Car Group sells both types of licences and revenue is therefore recognised in accordance with the substance of the relevant agreement. Income from sold licenses related to intellectual property (IP) and other developed technology is classified as revenue.

#### Revenue from subscription, leasing and rental business

Revenue from subscription, leasing and rental business is recognised as revenue on a straight-line basis over the contract period. Revenues related to an operating lease arrangement are recognised as revenue on a straight-line basis over the leasing period.

### CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

***Variable consideration***

The inherent risk with regards to different forms of variable considerations is that recognised revenue has to be reversed in future periods as an effect of not allocating a correct part of the transaction price to the variable consideration part. As a direct effect of this, Volvo Car Group is prudent in the judgement of variable considerations, in order to minimise the risk of reversal, that is, rather overstating the contract liabilities than overstating revenue. Variable considerations could be paid out in the future or it could be reversed in the income statement.

#### Volume discounts

Cars may be sold with volume discounts based on aggregate sales over a 3–12 months period. Revenue from these sales is recognised based on the price specified in the contract, adjusted for volume discounts for the whole contract period. Accumulated historical experience is used to estimate and calculate the total discount. A contract liability is recognised for expected volume discounts to customers in relation to sales made until the end of the reporting period.

#### Residual value guarantees

Volvo Car Group is exposed to residual value risks, meaning that there is a potential loss for Volvo Car Group if the future market value of a used car is lower than the guaranteed value of the car according to the contract. This potential negative effect is recognised as a contract liability and the future market value of cars is monitored individually on a continuing basis. An estimate is made based on evaluating recent car auction values, future price deterioration due to expected change of market conditions, vehicle quality data and repair and reconditioning costs etc.

#### Repurchase Commitment

Cars sold with a repurchase obligation are recognised in the balance sheet as assets under operating leases or inventories depending on the contract period. Volvo Car Group is exposed to a risk (in principle the same risk as for contracts including residual value guarantees). During the contract period there is risk for a potential loss for Volvo Car Group as the estimated value of the car is or might be lower than the market value at the time. This potential negative effect is recognised as an increased depreciation or an impairment of the car. An estimate of the value of the car is therefore made based on recent car auction values, future price deterioration due to expected change of market conditions, vehicle quality data and repair and reconditioning costs etc. The value of the car in the balance sheet is adjusted if necessary.

| The Revenue allocated to geographical regions: | 2019 | 2018 |
|---|---|---|
| China | 60,530 | 54,653 |
| US | 40,110 | 39,366 |
| Europe[1] | 130,983 | 121,671 |
| *of which Sweden* | *26,092* | *28,034* |
| *of which Germany* | *20,343* | *18,366* |
| *of which United Kingdom* | *16,911* | *14,933* |
| Other markets | 42,494 | 36,963 |
| *of which Japan* | *7,937* | *6,593* |
| *of which South Korea* | *4,623* | *3,322* |
| **Total** | **274,117** | **252,653** |

| The Revenue allocated to category: | | |
|---|---|---|
| Sale of products and related goods and services | 251,107 | 231,891 |
| Sale of used cars | 15,840 | 13,808 |
| Revenue from subscription, leasing and rental business | 4,177 | 3,326 |
| Sale of licences | 1,648 | 2,542 |
| Other revenue | 1,345 | 1,086 |
| **Total** | **274,117** | **252,653** |

1) Europe is defined as EU28+EFTA.

### Revenue recognised in relation to contract liabilities to customers

For revenue recognised in the current reporting period in relation to opening balance of contract liabilities see Note 25 – Current and non-current contract liabilities to customers. The majority of Volvo Car Group contracts recgonised as a contract liability are classified as current.

## NOTE 3 – EXPENSES BY NATURE

| | 2019 | 2018 |
|---|---|---|
| Material cost incl. freight, distribution and warranty | –186,126 | –170,921 |
| Personnel | –36,997 | –33,077 |
| Amortisation/depreciation | –15,548 | –13,213 |
| Other | –21,598 | –22,386 |
| **Total** | **–260,269** | **–239,597** |

Capitalised development costs as well as received government grants have reduced the amounts presented as personnel and other. See Note 10 – Government grants.

## NOTE 4 – RELATED PARTIES

### ACCOUNTING PRINCIPLES

Volvo Car Group has multiple related parties especially related to development of new technology. Related parties include companies outside the Volvo Car Group but within the Geely sphere of companies, but also other companies such as associates and joint ventures.

All transactions with related parties are being performed on commercial terms.

During the year, Group companies entered into the below transactions with related parties. The information in the table below includes all assets and liabilites with regards to related parties. Besides from other non-current assets of MSEK 376 (—) all assets and liabilities are current.

| | Sales of goods, services and other | | Purchases of goods, services and other | |
|---|---|---|---|---|
| | **2019** | 2018 | **2019** | 2018 |
| Related companies[1) 2)] | 4,133 | 5,715 | –1,487 | –217 |
| Joint ventures and associated companies[1)] | 1,320 | 981 | –2,603 | –1,659 |

| | Receivables | | Payables | |
|---|---|---|---|---|
| | **Dec 31, 2019** | Dec 31, 2018 | **Dec 31, 2019** | Dec 31, 2018 |
| Related companies[1)] | 7,209 | 7,999 | 2,927 | 4,145 |
| Joint ventures and associated companies[1)] | 733 | 465 | 408 | 271 |

1) Joint ventures within the Geely sphere are reported as related companies. For joint ventures and associated companies see Note 13 – Investments in joint ventures and associates.
2) Licence revenue represent a value of MSEK 1,410 (2,458).

As of September 28, 2018 Volvo Car Group deconsolidated the Polestar Group. Thereafter, the Polestar Group is a related party and transactions with entities within the Polestar Group are disclosed accordingly[3)].

**Significant transactions during the year**

- Volvo Car Group sold Technology licences to Polestar Performance AB of MSEK 874 (1,769) and to Polestar New Energy Vehicle Co., Ltd of MSEK 446 (378). In 2019, Volvo Car Group also sold services to Polestar Performance AB of MSEK 253 (80) and to Polestar New Energy Vehicle Co., Ltd, generating other operating income of MSEK 478 (305). Volvo Cars offers a Polestar performance enhancement product to its end customers. This product is purchased from Polestar Performance AB and resulted in other operating expenses of MSEK 472 (56).
- Zhangjiakou Volvo Car Engine Manufacturing Co., Ltd, has sold engines to Asia-Europe Automobile Manufacturing (Taizhou) Co., Ltd (Luqiao plant) for the production of Lynk&Co CX11 vehicles. The sales generated revenue of MSEK 856 (1,691).
- Volvo Car AB (publ.) has paid dividend of MSEK 125 (63) to its preference shareholders and MSEK 1,387 (—) to its shareholder Geely Sweden Holdings AB. Daqing Volvo Car Manufacturing Co., Ltd has paid dividend of MSEK 1,381 (—) to its shareholder Zhejiang Geely Holding Group Co., Ltd. Furthermore Group contributions amounted to MSEK — (64) from Geely Sweden Holdings AB and MSEK — (354) from Geely Sweden Industry Investment AB.

**Significant transactions in previous years**

- In 2016, Volvo Car Group entered into an agreement with Asia-Europe Automobile Manufacturing (Taizhou) Co., Ltd, the Luqiao plant that produces the range of smaller 40-series CMA-based cars. The plant is owned by Zhejiang Geely Holding Group Co., Ltd but is operated by Volvo Car Group. The agreement covers support service for operating the plant and resulted 2019 in other income of MSEK 356 (307).
- In 2017, Volvo Car Group signed a licence agreement with London Taxi Co., Ltd, a wholly owned subsidiary to Zhejiang Geely Holding Group Co., Ltd, which has resulted in an income during 2019 of MSEK — (300).

During 2019 Volvo Personvagnar AB has sold shares in the company PSINV AB to certain members of EMT to a value of MSEK 38.

With the exception of above described transaction Volvo Car Group does not engage in any transactions with Board Members or senior executives except remuneration for services and the share-based programme as described in Note 8 – Employees and remuneration.

3) See the Note 31 – Business combinations and Note 8 – Participation in subsidiaries (Parent company).

## NOTE 5 – AUDIT FEES

| | 2019 | 2018 |
|---|---|---|
| **Deloitte** | | |
| Audit fees | –37 | –34 |
| Audit-related fees | –5 | –18 |
| Tax services | –4 | –2 |
| Other services | –5 | –12 |
| **Total** | **–51** | **–66** |

**Audit fees** involve audit of the Annual Report, interim report and the administration by the Board of Directors and the Managing Directors. The audit also includes advice and assistance as a result of the observations made in connection with the audit.

**Audit-related fees** refer to other assignments to ensure quality in the financial statements including consultations on reporting requirements and internal control.

**Tax services** include tax-related advisory.

All other work performed by the auditor is defined as **other services**.

## NOTE 6 – OTHER OPERATING INCOME AND EXPENSES

| | 2019 | 2018 |
|---|---|---|
| **Other operating income** | | |
| Foreign exchange rate gains | 537 | 62 |
| Sold services | 1,379 | 1,117 |
| Government grants | 633 | 776 |
| Other | 1,319 | 1,431 |
| **Total** | **3,868** | **3,386** |

| | 2019 | 2018 |
|---|---|---|
| **Other operating expenses** | | |
| Amortisation and depreciation of intangible and tangible assets | –244 | –229 |
| Royalty | –916 | –826 |
| Property tax | –109 | –109 |
| Other | –1,976 | –1,160 |
| **Total** | **–3,245** | **–2,324** |

## NOTE 7 – LEASING

### ACCOUNTING PRINCIPLES

As of January 1, 2019 IFRS 16 – Leasing has been applied. IAS 17 has been applied for 2018.

***Change in accounting principle and disclosures***

IFRS 16 – Leasing was endorsed by the EU in November 2017 and replaced IAS 17 Leases. IFRS 16 represents a new framework for how to account for and disclose leasing contracts. For lessees, the new standard has had an impact on the financial statements, as most of the leases previously have been accounted for off-balance sheet, operating leases have been recognised on the balance sheet. For lessors, IFRS 16 does not contain substantial changes compared to IAS 17. The lessor still has to classify leases as either finance or operating leases, depending on whether substantially all of the risk and rewards associated with ownership of the underlying asset has been transferred.

In order to implement IFRS 16, Volvo Car Group has analysed all significant contracts where Volvo Car Group is the lessee focusing on the following areas: asset category, contract length, number of leased items, if the contract includes service or maintenance fees and how many short-term leases and/or leases of low value assets there are. Volvo Car Group has defined low value assets as asset classes that are typically of low value, for example small IT equipment (cell-phones, laptops, computers, printers) and office furniture. Short-term leases are leases with a lease term of twelve months or less.

The following conclusions have been made:

- The major leasing commitments consist of land and buildings and machinery and equipment as follows: land and buildings 80 per cent and machinery and equipment 19 per cent.
- Low value assets are common within the Group but represent less than 1 per cent of the total remaining leasing commitments.
- Short-term leases are not common since the majority of the leasing agreements have a minimum leasing term of more than twelve months.
- The leasing period for larger real estate contracts has taken into consideration extension options.

Volvo Car Group has applied the modified retrospective approach and the comparative information has not been restated. For all asset classes, the Group has recognise the right-of-use assets at an amount equal to the lease liability, adjusted by the amount of any prepaid or accrued lease payments recognised in the balance sheet immediately before the date of initial application. When applying IFRS 16 for the first time, Volvo Car Group has applied relevant practical expedients, that are;

- Leases ending within twelve months from January 1, 2019 has been classified as short-term leases. This means these leases have not been included in the lease liability, but instead accounted for as operating leases.
- Initial direct costs have been excluded from the measurement of the lease liability.
- No hindsight has been applied when determining the lease term for the contract containing options to extend or terminate the lease.

The adoption of IFRS 16 resulted in increased assets of MSEK 6,978 and increased liabilities of MSEK 6,698 as of January 1, 2019. The difference is due to the land-use-rights in China that are prepaid and therefore Volvo Car Group does not recognise a liability for these. The implementation of IFRS 16 has not rendered any change in equity. Further, the implementation has impacted the timing of the expense recognition in the consolidated income statements over the period of the lease and impacted the classification of expenses. The walk from lease commitments for operating lease contracts according to IAS 17 and the lease liability according to IFRS 16 are presented in the table below.

***IAS 17 – applied for year 2018***

Volvo Car Group as a lessee

When a finance leases, the asset was recognised as a current or non-current asset at the lower of fair value or the present value of the minimum lease payments. The asset was depreciated using the straight-line method over the asset's useful life or over the term of the lease if this was shorter. The commitment to pay future lease payments was discounted to a net present value and recognised as a current or non-current liability in the balance sheet. The lease payments were allocated between amortisation of liabilities and interest expense.

For operating leases, i.e., when the risks and rewards associated with the ownership of the asset were not transferred to Volvo Car Group, lease payments were expensed as they arose on a straight-line basis over the leasing period.

Volvo Car Group as a lessor

Volvo Car Group did not have any finance leases as lessor during 2018.

Sale transactions including repurchase commitments were recognised as operating leases. Operating lease contracts with a maturity less or equal to twelve months were recognised as inventory in the balance sheet, see Note 18 – Inventories. Operating lease contracts with a maturity more than twelve months were recognised as Property, Plant and Equipment, see Note 16 – Tangible assets. These operating leases were mainly related to vehicles sold with repurchase commitments. The difference between the original sales price and the repurchase price was recognised in the income statement as revenue on a straight-line basis over the lease term, see Note 2 – Revenue. The remaining lease revenue to be recognised was presented as part of current and non-current contract liabilities to customers in the balance sheet, see Note 25 – Current and non-current contract liabilities to customers. The repurchase obligation was considered to be a financial liability and was classified as Other non-current liabilities, see Note 26 and Other current liabilities, see Note 27.

**IFRS 16 – Information on the transition to the new leasing standard**

| | |
|---|---|
| Lease commitments for operational lease contracts as of December 31, 2018 | 5,818 |
| Discounted with the Group's average incremental borrowing rate 2,5 % | –1,131 |
| Include liabilities for financial lease contracts as of December 31, 2018 | 113 |
| Exclude short-term lease contracts with a lease term of 12 months or less as they are expensed on a linear basis | –390 |
| Exclude lease contracts for which the underlying asset is of low value and therefore expensed on a linear basis | –53 |
| Exclude lease contracts that have been classified as service agreements | — |
| Include/exclude adjustments due to different handling of options to extend or terminate agreements | 2,335 |
| Include/exclude adjustments due to changes in index or price attributable to variable lease payments | 6 |
| Lease liability as of January 1, 2019 | 6,698 |

***IFRS 16 – applied for year 2019***

Volvo Car Group as a lessee

At the lease commencement date, a right-of-use asset and a lease liability are recognised on the balance sheet. The lease liability is initially measured at an amount equal to the present value of the future lease payments under the lease contract. Lease payments included in the measurement of the lease liability comprise of fixed lease payments including in-substance fixed payments, variable lease payments that depend on an index or a rate, amounts expected to be payable under a residual value guarantee and payments related to options that Volvo Car Group is reasonably certain to exercise. The lease payments are discounted using the interest rate implicit in the lease if this can be readily determined. In most contracts this is not the case. In cases where the interest rate is not implicit in the lease, Volvo Car Group generally has used the incremental borrowing rate.

The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and the estimate of costs to dismantle and remove the underlying asset or the site on which it is located, less any lease incentives received. The asset is subsequently depreciated on a straight-line basis from the commencement date to the earlier of the end of the useful life of the underlying asset or the end of the lease term. For more information regarding Deprecation see Note 9 - Depreciation and amortisation. The right-of-use asset is reduced by impairment losses, if any, and adjusted for certain remeasurements of the lease liability.

Volvo Car Group applies the recognition exemptions regarding short-term leases and leases where the underlying asset is of low value. Hence, payments associated with short-term leases and leases of low-value assets are recognised on a straight-line basis as an expense in the income statement. Short-term leases are leases with a lease term of twelve months or less and low value assets are defined as asset classes that are typically of low value, for example small IT equipment (cell-phones, laptops, computers, printers) and office furniture. Non-lease components are included in the measurement of the lease liability for all asset classes.

In the balance sheet, the lease liabilities are presented as Other non-current and current interest bearing liabilities. The right-of-use asset is presented as part of property, plant and equipment, see Note 16 – Tangible assets. In the income statement, depreciation expenses of the right-of-use asset is presented on the same line item/items in which similar expenses are. The interest expense on the lease liability is presented as part of finance expenses. In the statement of cash flows, amortisations on the lease liability are presented as a cash flow from financing activities. Payments of interest as well as payments for short-term leases and leases of low value is presented as cash flow from operating activities.

Volvo Car Group as a lessor

Volvo Car Group is acting as a manufacturer finance lessor in a few cases. In these cases revenue is recognised at the fair value of the underlying asset or the present value of the lease payments, if lower, reduced with the carrying amount of the asset less any unguaranteed residual values.

Sale transactions including repurchase commitments are recognised as operating leases. Operating lease contracts with a maturity less or equal to twelve months are recognised as inventory in the balance sheet, see Note 18 – Inventories. Operating lease contracts with a maturity more than twelve months are recognised as Property, Plant and Equipment, see Note 16 – Tangible asset. These operating leases are mainly related to vehicles sold with repurchase commitments. The difference between the original sales price and the repurchase price is recognised in the income statement as revenue on a straight-line basis over the lease term, see Note 2 – Revenue. The remaining lease revenue yet to be recognised is presented as part of current and non-current contract liabilities to customers in the balance sheet, see Note 25 – Current and non-current contract liabilities to customers. The repurchase obligation is considered to be a financial liability and is classified as non-current or current liabilities, see Note 26 – Other non-current liabilities and see Note 27 – Other current liabilities. Although accounting remains substantially the same for lessors, there is new guidance impacting subleases and the accounting for sale and leaseback transactions. The sub-leases and sale and leaseback transactions are not considered material for Volvo Car Group.

## CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

IFRS 16 requires Volvo Car Group to make judgmental decisions when determining the lease term for contracts, especially for the leasing of buildings. Factors included in the determination of the lease term are if Volvo Car Group, as a lessee, have made investments to improve the asset or have tailored it for our special needs and/or the importance of the underlying asset to Volvo Car Groups operations.

**Lease term**

When determining the lease term, management in the organisation have considered all facts and circumstances that creates an economic incentive to exercise an extension option, or not exercise a termination option. The assessment is reviewed if a significant event or a significant change in circumstances occurs which affects this assessment.

**Discount rate**

Volvo Car Group has a process of indicating discount rates to use when evaluating whether to lease or buy an asset. The same process is used when determining the disount rate to by applied. Volvo Car Group uses an applicable industrial yield curve and taking into consideration for example Volvo Car Groups credit risk, adjustment for currency, lease term and economic environment.

***Volvo Car Group as lessee***

**IAS 17 — 2018**

**Operating lease contracts**

The operating lease contracts Volvo Car Group holds are mainly contracts for premises and office equipment. Also some production equipment such as forklifts for the factories are classified as operating lease contracts.

| **Operating lease expenses** | 2018 |
|---|---|
| Minimum lease payments | –1,325 |
| Contingent rents | –46 |
| Less subleases | 14 |
| **Total** | **–1,357** |

| **Operating lease commitments per Dec 31, 2018** | Minimum lease payments | Less subleases | Total | Present value of operating lease commitments less subleases |
|---|---|---|---|---|
| No later than 1 year | 1,125 | 22 | 1,103 | 1,088 |
| Later than 1 year but no later than 5 years | 2,947 | 80 | 2,867 | 2,649 |
| Later than 5 years | 1,946 | 98 | 1,848 | 1,499 |
| **Total** | **6,018** | **200** | **5,818** | **5,236** |

### Finance lease contracts

Volvo Car Group holds finance lease contracts for production equipment and for some buildings and land used in production. The assets will be owned by Volvo Car Group at the end of the lease contracts at no additional cost. All leases are fixed terms with fixed payments.

| Finance lease assets | Asset under Construction | Buildings and land | Machinery and equipment |
|---|---|---|---|
| **Acquisition cost** | | | |
| Balance at January 1, 2018 | — | 97 | 75 |
| Additions | 22 | 47 | 29 |
| Disposals | — | −82 | — |
| Effect of foreign currency exchange differences | — | 4 | 3 |
| **Balance at December 31, 2018** | **22** | **66** | **107** |
| **Accumulated depreciation** | | | |
| Balance at January 1, 2018 | — | −89 | −7 |
| Depreciation expense | — | −10 | −4 |
| Disposals | — | 82 | — |
| Effect of foreign currency exchange differences | — | −4 | — |
| **Balance at December 31, 2018** | — | −21 | −11 |
| **Net balance at December 31, 2018** | **22** | **45** | **96** |

| Gross finance lease liabilities – minimum lease payments | Dec 31, 2018 |
|---|---|
| No later than 1 year | 18 |
| Later than 1 year but no later than 5 years | 57 |
| Later than 5 years | 58 |
| **Total** | **133** |
| **Future finance charges on finance leases** | **–20** |
| **Present value of finance lease liabilities** | **113** |

The present value of finance lease liabilities is as follows:

| Gross finance lease liabilities – minimum lease payments | Dec 31, 2018 |
|---|---|
| No later than 1 year | 15 |
| Later than 1 year but no later than 5 years | 50 |
| Later than 5 years | 48 |
| **Total** | **113** |

As of December 31, 2018 the finance lease liabilities are included in the financial statement as Non-current liabilities to credit institutions of MSEK 97 and Current liabilities to credit institutions of MSEK 16.

### IFRS 16 — 2019

Volvo Car Group mainly leases buildings and other items such as IT-equipment and production equipment.

| Right-of-use asset | Buildings and land | Machinery and equipment | Total |
|---|---|---|---|
| **Acquisition cost** | | | |
| Balance at January 1, 2019 | — | — | — |
| Reclassification from finance lease of Tangible assets (Note 16) | 36 | 58 | 94 |
| Operating leases (first application, IFRS 16) | 6,294 | 590 | 6,884 |
| Additions | 308 | 131 | 439 |
| **Balance at December 31, 2019** | **6,638** | **779** | **7,417** |
| **Accumulated depreciation** | | | |
| Balance at January 1, 2019 | — | — | — |
| Depreciation expense | −981 | −221 | −1,202 |
| **Balance at December 31, 2019** | **−981** | **−221** | **−1,202** |
| **Net balance at December 31, 2019** | **5,657** | **558** | **6,215** |

| Lease liabilities | 2019 |
|---|---|
| Non-current lease liabilities | 5,076 |
| Current lease liabilities | 1,073 |

The lease liabilities related to the leasing contracts are presented in the balance sheet as Other non-current interest bearing liabilities and Other current interest bearing liabilities. The difference between Right-of-use asset is due to the land-used-rights in China that are prepaid and therefore not included as a liability. The maturity analysis of lease liabilities is presented in Note 20 – Financial risks and financial instruments.

| Amounts recognised in profit and loss | 2019 |
|---|---|
| Deprecation expenses on right-of-use | −1,225 |
| Interest expense on lease liabilities | −236 |
| Expense relating to short-term leases | −156 |
| Expense relating to leases of low value assets | −27 |
| Expense relating to variable lease payments not included in the measurement of the lease liability | −23 |
| Income from sub-leasing right-of-use assets | 26 |

The total cash outflow for leases amounts to MSEK 1,641. The amount include payments for lease agreements recognised as liabilities, variable payments, short-term payments and payments for leases of low value.

### *Volvo Car Group as lessor*

Operating lease contracts mainly relate to vehicles sold with repurchase commitments.

### IAS 17 — 2018
### Operating leases contracts

| Future lease income of operating lease contracts | 2018 |
|---|---|
| No later than 1 year | 973 |
| Later than 1 year but no later than 5 years | 443 |
| **Total** | **1,416** |

### Finance lease contracts

Volvo Car Group did not have any finance leases during 2018.

### IFRS 16 — 2019
### Operating leases contracts

The table contains a maturity analysis of leasing payments and the total of undiscounted lease payments that will be received after the balance day.

| Future lease income of operating lease contracts, undiscounted. | 2019 |
|---|---|
| No later than 1 year | 934 |
| Later than 1 year but no later than 2 years | 194 |
| Later than 2 year but no later than 3 years | 104 |
| Later than 3 year but no later than 4 years | 9 |
| Later than 4 year but no later than 5 years | 8 |
| Later than 5 years | — |
| **Total** | **1 249** |

### Finance lease contracts

During 2019 Volvo Car Group entered into finance leasing arrangements as a lessor for certain equipment.

| Amounts receivable under finance leases | 2019 |
|---|---|
| No later than 1 year | 59 |
| Later than 1 year but no later than 2 years | 59 |
| Later than 2 year but no later than 3 years | 59 |
| Later than 3 year but no later than 4 years | 59 |
| Later than 4 year but no later than 5 years | 59 |
| Later than 5 years | 139 |
| **Undiscounted lease payments** | **434** |
| Less unearned finance income | 58 |
| **Net investment in the lease** | **376** |

The following table presents the amounts included in income statement

| | 2019 |
|---|---|
| Finance income on the net investment in finance leases | 10 |

## NOTE 8 – EMPLOYEES AND REMUNERATION

ACCOUNTING PRINCIPLES

### *Incentive programmes*

Volvo Car Group manages different global incentive programmes. Two of them are short-term and one long-term and the design and payout of these programmes are subject to an annual approval of the Board of Directors.

### Short-term incentive programmes

There are two short-term programmes. The Short Term Variable Pay for Senior Leaders (STVP for Senior Leaders) is an incentive programme for the CEO, EMT and certain senior executives. Volvo Bonus is an incentive progamme that includes all other employees. If all prerequisites are met a liability is recognised.

### Long-term incentive programme

The Long Term Variable Pay (LTVP) is a cash-settled share based programme for the CEO, EMT and certain senior executives.

The fair value of the cash-settled payments is determined at the grant date, and revalued at each balance sheet date, and is recognised as an expense during the vesting period and as a corresponding liability. An assessment whether the terms for allotment will be fulfilled is made continuously. Based on such assessment, the expense might be adjusted.

The fair value is based on the share price reduced by dividends connected with the share during the vesting period. As Volvo Car Group is not listed, no official market value is available. Hence, the LTVP programme is based on a synthetic share price derived from variables known to determine the value of an automotive OEM. Additional social expenses are reported as a liability, revalued at each balance sheet date.

### Share-based incentive programme

This share-based incentive programme is cash-settled. The fair value of the warrants acquired is determined at the grant date and is recognised as a financial liability. The liability is revalued at each balance sheet date and changes of the fair value are recognised in the income statement as a financial expense or income.

During the duration of the programme the participants, at certain predetermined periods, between 2016 to 2021, have an option to sell the received warrants at fair value to the parent company. The warrants have been acquired by the participants at fair value, why the programme will not render any recognition of personnel cost.

| Average number of employees by region: | 2019 | Of whom women | 2018 | Of whom women |
|---|---|---|---|---|
| Sweden | 23,005 | 28% | 23,078 | 28% |
| Nordic countries other than Sweden | 736 | 34% | 834 | 48% |
| Belgium | 5,109 | 15% | 5,521 | 14% |
| Europe other than the Nordic countries and Belgium | 1,237 | 32% | 974 | 32% |
| North and South America | 2,036 | 33% | 1,889 | 29% |
| China | 8,404 | 16% | 8,253 | 15% |
| Asia other than China | 878 | 17% | 770 | 17% |
| Other countries | 112 | 32% | 99 | 31% |
| **Total** | **41,517** | **24%** | **41,418**[1] | **24%** |

| Number of Board members and senior executives[2] | Dec 31, 2019 Board members (Chief Executive Officers and senior executives) | Of whom women | Dec 31, 2018 Board members (Chief Executive Officers and senior executives) | Of whom women |
|---|---|---|---|---|
| Parent company | 10 | 30% | 10 | 30% |
| Subsidiaries | 111 (301) | 19% (26%) | 106 (287) | 17% (23%) |
| **Total** | **121 (301)** | **20% (26%)** | **116 (287)** | **18% (23%)** |

| Salaries and other remunerations | 2019 Wages and salaries, other remunerations | 2019 Social security expenses (of which pension expenses) | 2018 Wages and salaries, other remunerations | 2018 Social security expenses (of which pension expenses) |
|---|---|---|---|---|
| Parent company | 9 | 3(—) | 6 | 2 (—) |
| Subsidiaries | 22,727 | 8,819 (4,232) | 20,257 | 8,229 (3,984) |
| **Total** | **22,736** | **8,822 (4,232)** | **20,263** | **8,231 (3,984)** |

| Salaries and other remuneration to the Board[3], CEO, Excecutive Management Team (EMT)[4] and other employees | 2019 Wages and salaries, other remunerations (of which variable salaries) | 2019 Social security expenses (of which pension expenses) | 2018 Wages and salaries, other remunerations (of which variable salaries) | 2018 Social security expenses (of which pension expenses) |
|---|---|---|---|---|
| Board, Chief Executive Officers and EMT | 296 (81) | 117 (41) | 278 (41) | 102 (35) |
| Other employees | 22,440 | 8,705 (4,191) | 19,985 | 8,129 (3,949) |
| **Total** | **22,736 (81)** | **8,822 (4,232)** | **20,263 (41)** | **8,231 (3,984)** |

1) The comparative number of FTEs has been restated due to a changed and improved methodology for calculating the average number of FTEs.
2) Senior excecutives are defined as key personnel within the subsidiaries.
3) The Board includes all board members in the subsidiaries within Volvo Car Group.
4) The Excecutive Management Team (EMT) consists of the CEO in Volvo Car Corporation and key management personnel other than Board members, in total 12 (15).

### *Compensation to Board members*

The shareholders have elected a Nomination Committee, which on a yearly basis proposes appropriate remuneration principles and remuneration for Volvo Cars Board within the frames of the remuneration principles decided by the Annual General Meeting. The remuneration to the members of the board is determined at the Annual General Meeting. At the Annual General Meeting 2019 it was decided that Board members elected at the meeting who are employed or otherwise remunerated by Volvo Car Group or the Zhejiang Geely Holding Group shall not be entitled to any remuneration. The other board members elected at the Annual General Meeting shall receive remuneration containing the following elements: (i) a market based fixed remuneration decided at the Annual General Meeting (ii) a company car in accordance with the Company´s company car policy in force from time to time and (iii) to Board members who are members of any of the Boards' committees an additional market based fixed remuneration as decided at the Annual General Meeting. Expensed remuneration to the individual Board members is specified below:

| Board member | 2019<br>Ordinary compensation, TSEK | 2018<br>Ordinary compensation, TSEK |
|---|---|---|
| Li Shufu, Chairman | — | — |
| Håkan Samuelsson | — | — |
| Li Donghui | — | — |
| Carl Peter Forster (until March 2019) | — | — |
| Winfried Vahland (from March 2019) | 690 | — |
| Dr. Peng Zhang (until March 2018) | — | — |
| Winnie K. W. Fok | 869 | 775 |
| Mikael Olsson (until March 2018) | — | 750 |
| Lone Fønss Schrøder | 2,550 | 2,012 |
| Thomas Johnstone | 1,006 | 875 |
| Betsy Atkins | 969 | 844 |
| Michael Jackson (from July 2018) | 831 | 262 |
| Jim Zhang (from August 2018) | 813 | 229 |
| **Total** | **7,728** | **5,747** |

***Terms of employment and remuneration to the CEO***

The Board has assigned a People and Sustainability Committee (PSC) to determine the remuneration principles for the CEO, subject to the shareholders' meetings approval. The chairperson of the board shall in dialogue with PSC decide the remuneration to the CEO. The CEO is entitled to a remuneration consisting of a fixed annual salary, STVP, LTVP and other benefits such as a company car and insurance.

The CEO has a defined contribution pension plan to which Volvo Car Group allocates 50 per cent of the fixed monthly salary on a rolling basis. The CEO agreement is fixed term and there are no severance pay included in the terms of agreement.

***Remuneration to Executive Management Team***

The Board has assigned a People and Sustainability Committee to determine the remuneration to the Executive Management Team (EMT), proposed by the CEO. Volvo Car Group members of EMT are entitled to a remuneration consisting of a fixed annual salary, STVP, LTVP and other benefits such as company car and insurance. In order to retain critical competences and deliveries within Volvo Car Group, some of the members of EMT have an additional variable pay. This variable pay is based on fulfillment of the member of EMT's yearly individual objectives and can vary from 0 up to maximum 20 per cent of the annual salary depending on fulfillment rate.

The notice period for a member of EMT is a maximum of twelve months in case of termination by Volvo Car Group and twelve months in case of termination by the member of EMT. Furthermore the member of EMT is, in case of termination by Volvo Car Group, entitled to severance pay based on the fixed salary, during a period of maximum twelve months.

During 2019 3 (—) members of EMT left the Volvo Car Group. Remuneration during the notice period and severance pay amounted to MSEK 4 (—), excluding social expenses.

Members of EMT employed in Sweden are covered by the ITP plan and, where applicable, a supplementary pension plan – Volvo Management Pension (VMP). On average, the contributions for members of EMT is 28–35 per cent of the pensionable salary. Disability benefits follow the ITP and VMP regulations.

For members of EMT employed outside of Sweden, varying pension terms and conditions apply, depending upon the country of employment.

Volvo Car Group's outstanding post-employment benefits obligations to former CEO's and EMT amounted to MSEK 59 (61).

***Short-term incentive programmes***

**STVP for Senior Leaders**

The purpose of the STVP for Senior Leaders is to support the corporate strategy and the transformation of Volvo Cars. The qualifier for the STVP for Senior Leaders is that the Volvo Car Group profit target (EBIT) is reached. To reach maximum pay-out a number of performance targets must be reached. The STVP for Senior Leaders is based on a percentage of annual base salary and the remuneration is paid in cash.

**Volvo Bonus**

The purpose of the Volvo Bonus is to strengthen global alignment among employees around Volvo Car Group's vision, objectives and strategies and to encourage all employees to achieve and exceed the business plan targets. The qualifier for the Volvo Bonus is that the Volvo Car Group profit target (EBIT) is reached. In order for the Volvo Bonus to be paid out at all, a minimum acceptable performance regarding EBIT needs to be met. This is called the threshold level and the remaining two levels (target and maximum) increase the bonus paid out in relation to increased performance. Depending on the employee´s position, he/she is eligible for a certain target level that can be either a fixed amount or a percentage of the employee´s annual base salary. The remuneration is paid in cash. For 2019 the cost for the Volvo Bonus/STVP programmes amounted to MSEK 1,402 including social security expenses, of which MSEK 53 related to EMT. For 2018 the threshold level was not met and the Board of Directors decided that no Volvo Bonus should be paid out.

***Long-term incentive programme***

**Long term variable pay**

The purpose of the LTVP-programme is to attract, motivate and retain key competence within Volvo Car Group. The LTVP-programme is based on calculated market value of Volvo Car Group over three years. As Volvo Car Group is not listed, no official market value is available. Hence, the LTVP programmes for previous years are based on a synthetic share price derived from variables known to determine the value of an automotive OEM. Valuation of Volvo Car Group is based on the 4 year business plan and trading multiples for listed peers. The business plan is adopted annually by the Board. The valuation of Volvo Cars has been done by an external party and in two ways;

i) through discounted cash flow analysis of Volvo Cars estimated future cash flows, based on Volvo Cars latest business plan four years ahead and certain key assumptions; and
ii) through comparable market analysis based on peer group analysis.

Depending on the participant's position they receive a LTVP bonus award equivalent to a certain percentage of their annual base salary. Each LTVP award has a vesting period of three years and is paid out in cash. The cash amount paid depends on the valuation of Volvo Cars on the vesting date, three years after grant.

The programme is capped to a maximum of 200 per cent of the value of the award at grant. To be eligible for pay out, the employee must remain within the Group on the pay-out date. The cost for the LTVP-programme amounted to MSEK 130 (149) including social security expenses, of which MSEK 37(41) related to EMT. The total liability amounted to MSEK 214 (221).

| Compensation to Executive Management Team (EMT), TSEK | 2019 Salary[5] | 2019 Variable pay[6] | 2019 Long term variable pay | 2019 Social security expenses (of which pension expenses) | 2018 Salary[5] | 2018 Variable pay[6] | 2018 Long term variable pay | 2018 Social security expenses (of which pension expenses) |
|---|---|---|---|---|---|---|---|---|
| Håkan Samuelsson, CEO in Volvo Car Corporation | 14,440 | 14,250 | 7,040 | 16,909 (8,862) | 12,807 | — | 6,658 | 10,647 (7,463) |
| Other members of EMT | 76,525 | 27,543 | 20,036 | 58,520 (17,817) | 65,655 | 7,843 | 24,273 | 41,928 (15,748) |
| **Total** | **90,965** | **41,793** | **27,076** | **75,429 (26,679)** | **78,462** | **7,843** | **30,931** | **52,575 (23,211)** |

5) Includes benefits such as housing and company car.
6) Includes both STVP and additional variable pay in accordance with individual agreements.

### *Share-based incentive programme*

During 2015, Volvo Car AB's (publ.) subsidiary Volvo Car Corporation issued 1,359 warrants with the right to subscribe for shares in Volvo Car Corporation, which the parent company decided to offer to a number of members of management and Board of Directors to purchase. The purchase was made at fair market value in accordance with an external valuation. Each warrant gives the right to subscribe for one share in Volvo Car Corporation for a predetermined amount under certain periods during the years 2016–2021.

In case a participant is no longer employed, and also during other specified circumstances, the parent company has an option to redeem the warrants. During the duration of the programme the participants (i.e. the holders of the warrants) at certain predetermined periods have an option to sell the warrants at fair market value to the parent company.

The terms of the agreement is from 2016 to 2021 and will thereafter be prolonged as long as none of the parties terminates the agreement. The warrants have been valued at fair market value by an external party. The valuation has been made based on all material conditions in the agreement in accordance with the Black & Scholes model. The valuation has been made based on the following assumptions:

- Market value of the warrants has been determined to SEK 214,775 as per December 31, 2019.
- The duration for the warrants has been determined to six years.
- The volatility has been determined as 30 per cent.
- Assessed risk free interest has been determined to –0.34 per cent.

Considering a weighted assessment of the conditions in the agreement the programme is accounted for as a share-based payment that will be cash-settled and is therefore accounted for as a financial liability at fair value through the income statement, with changes to fair value recorded as a financial expense or income.

As the participants have been offered to purchase the warrants at fair market value the programme will not render any personnel costs.

| TSEK | Number of warrants | Assessed fair market value |
|---|---|---|
| At the beginning of the year | 1,274 | 311,856 |
| Used/redeemed | –719 | –176,000 |
| Sold during the year | 12 | 2,937 |
| Change in valuation | — | –17,016 |
| **At the end of the year** | **567** | **121,777** |

As the accounting is made at fair value, there is no difference between book value and fair value. A fair valuation is made continuously based on external valuations.

| Specification of warrant programme | Number of warrants |
|---|---|
| CEO and Board of Directors | 420 |
| Other members of EMT | 147 |
| **Total** | **567** |

### *Other long-term benefits*

Apart from the compensation accounted for under Incentive programmes, EMT does not have any other long-term benefits.

## NOTE 9 – DEPRECIATION AND AMORTISATION

### ACCOUNTING PRINCIPLES

Amortisation methods for intangible assets

Intangible assets with definite useful lives are amortised on a straight-line basis over their respective expected useful lives. The amortisation period for contractual rights such as licences does not exceed the contract period. All intangible assets are considered to have a definite useful life, with the exception of goodwill and trademarks. Trademarks are assumed to have indefinite useful lives since Volvo Car Group has the right and the intention to continue to use the trademarks for the foreseeable future, while generating net positive cash flows for Volvo Car Group. Intangible assets with an indefinite useful life are not amortised. The following useful lives are applied:

| | |
|---|---|
| Dealer network | 30 years |
| Software | 3–8 years |
| Product development costs | 3–10 years |
| Patents, licences and similar rights | 3–10 years |

Amortisation is included in cost of sales, research and development expenses as well as selling or administrative expenses depending on what way the assets have been used.

Depreciation methods for tangible assets

Tangible assets are systematically depreciated over the expected useful life of the asset. Each part of a tangible assets, with a cost that is significant in relation to the total cost of the item, is depreciated separately when the useful life for the part differs from the useful life of the other parts of the item. Land is assumed to have an indefinite useful life and is not depreciated.

Vehicles sold combined with a repurchase commitment are depreciated evenly over their respective useful life's. They are depreciated from their original acquisition value to their expected residual value, being the estimated net realisable value, at the end of the lease term. If the market value of these vehicles is lower than the originally set residual value, the depreciations made are adjusted during the contract period.

The following useful lives are applied in Volvo Car Group:

| | |
|---|---|
| Buildings | 14.5–50 years |
| Land improvements | 30 years |
| Machinery | 8–30 years |
| Equipment | 3–20 years |

Depreciation is included in cost of sales, research and development expenses as well as selling or administrative expenses depending on how the assets have been used.

Impairment of Assets

The carrying amounts of intangible and tangible assets are tested regularly to assess whether there is an indication of impairment. Intangible assets that have an indefinite useful life as well as assets that are not yet available for use are not subject for amortisation and are tested for impairment at least annually or whenever there is an indication that the value will not be recoverable. The carrying amount of tangible and intangible assets with definite useful lives are tested whenever events or changes in circumstances indicate that the value of the asset will not be recovered.

When performing an impairment test, the asset's recoverable amount is calculated. The recoverable amount is the higher of an asset's fair value less costs to sell or value in use. Value in use is defined as the present value of the future cash flows expected to be derived from an asset. For the purpose of assessing impairment, assets are grouped in cash-generating units. If the recoverable amount is lower than the carrying value an impairment loss is recognised. Previously recognised impairment loss is reversed, with the exception of goodwill, if reasons for the previously impairment no longer exist. An impairment loss is reversed only to the extent that the asset's carrying amount after reversal does not exceed the carrying amount, net of amortisation, which would have been reported if no impairment loss had been recognised in prior years.

### CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

The useful life of intangible assets is to a large extent based on historical experience, expected application as well as other individual characteristics of the asset. The useful life of the assets are regularly assessed and adjusted if necessary.

In order to test an asset or a group of assets for impairment several estimates need to be performed, which are further described in Note 15– Intangible assets and Note 16 –Tangible assets.

| **Operating income includes depreciation and amortisation as specified below:** | **2019** | 2018 |
|---|---|---|
| Software | –287 | –213 |
| Capitalised product development cost | –4,872 | –4,563 |
| Other intangible assets | –472 | –434 |
| Buildings and land improvements[1] | –1,839 | –719 |
| Machinery and equipment[1] | –7,673 | –6,974 |
| Assets under operating leases | –405 | –310 |
| **Total** | **–15,548** | **–13,213** |

| **Depreciation and amortisation according to plan by function:** | **2019** | 2018 |
|---|---|---|
| Cost of sales[2] | –8,550 | –7,340 |
| Research and development expenses | –5,357 | –4,944 |
| Selling expenses[2] | –496 | –201 |
| Administrative expenses | –808 | –499 |
| Other income and expense | –337 | –229 |
| **Total** | **–15,548** | **–13,213** |

1) The adoption of IFRS 16 has resulted in increased depreciation during the year. Depreciation expense related to Buildings and land improvements include Right-of-use asset of MSEK –981 (—) and Machinery and equipment Right-of-use-asset of MSEK –221 (—).
2) Of which impairment loss MSEK –10 (–66).

## NOTE 10 – GOVERNMENT GRANTS

### ACCOUNTING PRINCIPLES

Government grants are recognised in the financial statements in accordance with their purpose, either as a reduction of expense or a reduction of the carrying amount of the asset. Government grants accounted for as a cost reduction, are recognised in the same periods as the expenses for which the grant was intended to compensate for has occurred. Government grants related to acquiring assets are deducted from the carrying amount of the asset and are recognised in the income statement over the life of a depreciable asset as a reduced depreciation expense. In cases where the received government grant is not intended to compensate for any expenses or the acquisition of assets it is recognised as other income. Government grants for future expenses are recorded as deferred income.

### CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

A government grant is recognised when there is reasonable assurance that Volvo Car Group will comply with the conditions attached to the grant and that the grant will be received.

Judgement includes assessing if Volvo Car Group is in compliance with the prerequisites in the contract or not and if there is a potential risk of repayment if these prerequisites are breached during the contract period. As of today Volvo Car Group assessment is that there are no government grants received where there is a risk of material repayments.

Volvo Car Group receives grants from several parties, such as Swedish, American, Chinese and Belgian Governments as well as from the European Union. In 2019, the government grants received amounted to MSEK 1,177 (3,058) and the government grants realised in the income statement amounted to MSEK 741 (2,243). MSEK 138 (35) of the grants have been received as support for the production of new car models and to upgrade facilities used for production. The received grants have reduced the carrying amount of the related machinery and equipment.

Non-monetary government grants have been received in China, mainly in the form of rent-free office and factory premises, and in the US in the form of reduced lease fees related to office premises and manufacturing site.

## NOTE 11 – FINANCIAL INCOME

| | 2019 | 2018 |
|---|---|---|
| Interest income on bank deposits | 575 | 407 |
| **Total** | **575** | **407** |

## NOTE 12 – FINANCIAL EXPENSES

| | 2019 | 2018 |
|---|---|---|
| Net foreign exchange rate losses on financing activities | –77 | –96 |
| Interest effect from the measurement of repurchase obligations | –187 | –185 |
| Interest expenses related to provisions for post-employment benefits | –216 | –175 |
| Expenses for credit facilities | –77 | –458 |
| Interest expenses to related companies | –2 | –2 |
| Interest expenses | –796 | –584 |
| Interest expenses related to IFRS 16 lease liabilities | –242 | – |
| Other financial expenses | –113 | –175 |
| **Total** | **–1,710** | **–1,675** |

## NOTE 13 – INVESTMENTS IN JOINT VENTURES AND ASSOCIATES

### ACCOUNTING PRINCIPLES

Joint ventures refer to joint arrangements whereby Volvo Car Group together with one or more parties that have joint control and have rights to the net assets of the arrangements.

Associated companies are companies in which Volvo Car Group has a significant but not controlling influence, which generally is when Volvo Car Group holds between 20 and 50 per cent of the shares, but it also includes investments with less participation if significant influence is proven based on other criteria.

Investments in joint ventures and associated companies are reported in accordance with the equity method and are initially recognised at acquisition cost. The Group's share of post-acquisition profit or loss is recognised in the income statement, and its share of post- acquisition movements in other comprehensive income is recognised in other comprehensive income, with a corresponding adjustment to the carrying amount of the investment. When the Group's share of losses in an associate equals or exceeds its interest in the associate, the Group does not recognise further losses unless it has incurred legal or constructive obligations in relation to the associate or joint venture.

### CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

The critical judgement in terms of associates refer to situations where Volvo Car Group has voting power of less than 20 per cent but based on other facts and circumstances could have significant influence over a company. This could be based on the content of a shareholder agreement or other market-based assumptions and other relationship-based facts. The judgement that is made is whether Volvo Car Group based on these identified facts and circumstances could conclude on significant influence. Currently Volvo Car Group do not recognise any associate with a voting power of less than 20 per cent.

In terms of a joint venture the judgement is whether facts and circumstances indicate that joint control really exists when other facts and circumstances are taken into consideration.

| | 2019 | 2018 |
|---|---|---|
| Share of income in joint ventures | –171 | 65 |
| Share of income in associates | 3 | 2 |
| **Total** | **–168** | **67** |

| **Share of income in joint ventures and associates is specified below:** | 2019 | 2018 |
|---|---|---|
| V2 Plug-In Hybrid Vehicle Partnership HB[1)] | 454 | 401 |
| Volvofinans Bank AB[2)] | 210 | 187 |
| Zenuity AB[3)] | –657 | –540 |
| Lynk & Co Investment Co., Ltd[4)] | 237 | 218 |
| Polestar Automotive (Shanghai) Co., Ltd[5)] | –414 | –214 |
| Other companies | 2 | 15 |
| **Total** | **–168** | **67** |

| Investments in joint ventures and associates | Dec 31, 2019 | Dec 31, 2018 |
|---|---|---|
| At beginning of the year/acquired acquisition value | 7,003 | 5,480 |
| Share of net income | –168 | 67 |
| Investment in Zenuity AB[3] | 550 | 600 |
| Investment in GV Automobile Technology (Ningbo) Co., Ltd[6] | — | 37 |
| Reclassification from subsidiaries to joint venture[5] | — | 1,887 |
| Elimination of intra-group profit[5] | –891 | –1,252 |
| Capital injection into joint venture under common control[5] | 1,153 | 846 |
| Obligation to cover accumulated losses classified as Non-current liabilities[3] | 107 | –59 |
| Capital repayment V2 Plug-In Hybrid Vehicle Partnership HB[1] | –418 | –464 |
| Dividends | –67 | –240 |
| Translation difference | 139 | 101 |
| **Total** | **7,408** | **7,003** |

| Volvo Car Group's carrying amount on investments in joint ventures and associates: | Corp. ID no. | Country of incorporation | % interest held | Dec 31, 2019 | Dec 31, 2018 |
|---|---|---|---|---|---|
| *Joint ventures* | | | | | |
| Volvo Trademark Holding AB | 556567-0428 | Sweden | 50 | 6 | 5 |
| V2 Plug-In Hybrid Vehicle Partnership HB[1] | 969741-9175 | Sweden | 50 | 232 | 197 |
| Volvofinans Bank AB[2] | 556069-0967 | Sweden | 50 | 2,427 | 2,267 |
| VH Systems AB | 556820-9455 | Sweden | 50 | 37 | 41 |
| Zenuity AB[3] | 559073-6871 | Sweden | 50 | — | — |
| VCFS Germany GmbH | HRB 85091 | Germany | 50 | 1 | 1 |
| VCIS Germany GmbH | HRB 86800 | Germany | 50 | 5 | 3 |
| Polestar Automotive (Shanghai) Co., Ltd[5] | 91310000MA1FL17P99 | China | 50 | 1,195 | 1,288 |
| GV Automobile Technology (Ningbo) Co., Ltd[6] | 91330201MA2AGKLQ8E | China | 50 | 34 | 37 |
| Lynk & Co Investment Co., Ltd[4] | 91330200MA2AF25Y7B | China | 30 | 3,446 | 3,126 |
| *Associated companies* | | | | | |
| VCC Tjänstebilar KB | 969673-1950 | Sweden | 50 | 4 | 3 |
| VCC Försäljnings KB | 969712-0153 | Sweden | 50 | 2 | — |
| Volvohandelns PV Försäljnings KB | 916839-7009 | Sweden | 50 | 4 | 18 |
| Volvohandelns PV Försäljnings AB | 556430-4748 | Sweden | 50 | 11 | 11 |
| Volvo Event Management Corporation[7] | 444517742 | Belgium | 33 | — | 1 |
| Trio Bilservice AB | 556199-1059 | Sweden | 33 | — | — |
| Göteborgs Tekniska College AB | 556570-6768 | Sweden | 26 | 4 | 5 |
| Leiebilservice AS | 879 548 632 | Norway | 20 | — | — |
| **Carrying amount, participation in joint ventures and associates** | | | | **7,408** | **7,003** |

The share of voting power corresponds to holdings in per cent as per above. For practical reasons, some of the joint ventures and associates are included in the consolidated financial statements with a certain time lag, normally one month.

1) V2 Plug-In Hybrid Vehicle Partnership HB is a joint venture between Volvo Car PHEV Holding AB and Vattenfall PHEV Holding AB. Volvo Car Group and Vattenfall have together developed the world's first diesel-powered hybrid car, which can be driven as an ordinary diesel car, as a hybrid, or as a fully electric car. During 2019, V2 Plug-In Hybrid Vehicle Partnership HB provided a repayment of MSEK 418 (464) to Volvo Car PHEV Holding AB.

2) Volvofinans Bank AB is a joint venture between Volvo Car Corporation and AB Volverkinvest. In Sweden, Volvofinans Bank AB is the leading bank within vehicle financing services.

3) Zenuity AB is a joint venture between Volvo Car Corporation and Veoneer Sweden AB. The purpose of the company is to develop software for autonomous driving and driver assistance systems. Due to the fact that Volvo Car Group, together with the other investor, is obligated to cover the accumulated losses in Zenuity AB larger than the accumulated investment, a non-current liability is recognized, see Note 26 – Other non-current liabilities.

4) The joint venture company Lynk & Co Investment Co., Ltd is an establishment between Volvo Cars (China) Investment Co., Ltd, (30 per cent), Zhejiang Jirun Automobile Co., Ltd (50 per cent) and Zhejiang Haoqing Automobile Manufacturing Co., Ltd (20 per cent ). The principal activity of the Lynk & Co Investment Co., Ltd is to engage in the manufacturing and sale of vechicles under the "Lynk & Co" brand, and support after-sale services relating thereto.

5) In September 2018, Zhejiang Geely Holding Group Co., Ltd (Geely Group) subscribed for 50 per cent of the equity in Polestar Automotive (Shanghai) Co., Ltd, the parent company in the Polestar Group, resulting in Polestar Group being jointly owned by Volvo Car Group and Zhejiang Geely Holding Group Co., Ltd. In connection with the Geely investment, a shareholders agreement was signed between Volvo Cars (China) Investment Co., Ltd and Zhejiang Geely Holding Group Co., Ltd giving the owners joint control over the Polestar Group. Polestar Group is since then a joint venture company. During the year, Geely Group injected capital into Polestar Automotive (Shanghai) Co., Ltd. which increased Volvo Car Group's investment in the joint venture with MSEK 1,153 (846). See Note 31 – Business Combinations and Note 8 – Participation in subsidiaries (Parent company) for further information.

6) GV Automobile Technology (Ningbo) Co., Ltd is a joint venture between Volvo Car Corporation and Ningbo Geely Automobile Research & Development Co., Ltd. The purpose of the company is to coordinate engineering of shared technologies and common sourcing in order to reach industrial synergies and economics of scale. The GV Automobile Technology Group consists of the parent company GV Automobile Technology (Ningbo) Co., Ltd and its subsidiary GV Technology Sweden AB.

7) Volvo Event Management Corporation was liquidated in December 2019.

The following tables present summarised financial information for the Volvo Car Group's material joint ventures.

| | V2 Plug-In Hybrid Vehicle Partnership HB[1] | | Volvofinans Bank AB[2, 11] | | Polestar Automotive (Shanghai) Co., Ltd[5, 12] | | Lynk & Co Investment Co., Ltd[4, 13] | | Zenuity AB[3, 14] | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Summarised balance sheets** | **2019** | 2018 | **2019** | 2018 | **2019** | 2018 | **2019** | 2018 | **2019** | 2018 |
| Percentage voting/ownership | 50 | 50 | 50 | 50 | 50 | 50 | 30 | 30 | 50 | 50 |
| Non-current assets | 60 | 133 | 37,162 | 37,393 | 10,094 | 5,691 | 13,126 | 9,211 | 456 | 474 |
| Cash and cash equivalents | 199 | 200 | 2,622 | 1,185 | 2,178 | 2,283 | 2,134 | 624 | 326 | 498 |
| Other current assets | 254 | 159 | 4,474 | 4,734 | 2,723 | 3,886 | 9,165 | 10,477 | 176 | 162 |
| **Total assets** | **513** | **492** | **44,258** | **43,312** | **14,995** | **11,860** | **24,425** | **20,312** | **958** | **1,134** |
| Equity[8] | 469 | 447 | 4,103 | 3,782 | 6,075 | 5,051 | 11,448 | 10,442 | 697 | 910 |
| Non-current liabilities[8, 9] | 13 | 28 | 37,659 | 37,077 | 145 | 24 | 3,377 | 430 | 40 | 51 |
| Current liabilities[10] | 31 | 17 | 2,496 | 2,453 | 8,775 | 6,785 | 9,600 | 9,440 | 221 | 173 |
| **Total equity and liabilities** | **513** | **492** | **44,258** | **43,312** | **14,995** | **11,860** | **24,425** | **20,312** | **958** | **1,134** |

8) Equity and non-current liabilities are adjusted with the portion of untaxed reserves where appropriate.
9) In Volvofinans Bank AB, the non-current liabilities include financial liabilities of MSEK 36,775 (35,879).
10) In Polestar Automotive (Shanghai) Co.,Ltd, the current liabilities include financial liabilities of MSEK 4,980 (4,737).
11) Volvofinans Bank AB's equity share in the Volvo Car Group is included with a time lag of a quarter.
12) The figures include the consolidated figures from Polestar Automotive (Shanghai) Co., Ltd and its subsidiaries Polestar Performance AB, Polestar Holding AB, Polestar New Energy Vehicle Co., Ltd, Polestar Automotive Consulting Service (Shanghai) Co., Ltd, Polestar Automotive China Distribution Co., Ltd, Polestar Automotive USA Inc, Polestar Automotive UK Ltd, Polestar Automotive Netherlands B.V., Polestar Automotive Norway AS, Polestar Automotive Canada Inc, Polestar Automotive Belgium BV, Polestar Automotive Germany GmbH and Polestar Automotive Sweden AB.
13) The figures include the consolidated figures from Lynk & Co Investment Co., Ltd and its subsidiaries Kai Yue Zhangjiakou Component Manufacturing Co., Ltd, Lynk & Co Automobile Sales Co., Ltd, Lynk & Co Auto Technology (Taizhou) Co., Ltd, Lynk & Co International AB, Lynk & Co Hong Kong Investment Co., Ltd, Lynk & Co Europe AB and Yuyao Lynk & Co Automobile Part Co., Ltd.
14) The figures include the consolidated figures from Zenuity AB and its subsidiaries Zenuity GmbH, Zenuity Inc and Zenuity Software Technology Co., Ltd.

| | V2 Plug-In Hybrid Vehicle Partnership HB[1] | | Volvofinans Bank AB[2, 11] | | Polestar Automotive (Shanghai) Co., Ltd[5, 12] | | Lynk & Co Investment Co., Ltd[4, 13] | | Zenuity AB[3, 14] | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Summarised income statements** | **2019** | 2018 | **2019** | 2018 | **2019** | 2018 | **2019** | 2018 | **2019** | 2018 |
| Revenue | 916 | 826 | 4,729 | 4,419 | 721 | 454 | 23,673 | 22,635 | 35 | 39 |
| Profit/loss from continuing operations[15, 16, 17, 18, 19] | 916 | 826 | 325 | 319 | –1,511 | –520 | 694 | 764 | –1,316 | –1,086 |
| **Profit (loss) for the year** | **916** | **826** | **325** | **319** | **–1,511** | **–520** | **694** | **764** | **–1,316** | **–1,086** |
| **Other comprehensive income for the year** | **—** | **—** | **—** | **—** | **85** | **—** | **–9** | **–4** | **3** | **8** |
| **Total comprehensive income for the year** | **916** | **826** | **325** | **319** | **–1,426** | **–520** | **685** | **760** | **–1,313** | **–1,078** |
| Dividends received from joint ventures during the year | — | — | 49 | 240 | — | — | — | — | — | — |

15) In V2 Plug-In Hybrid Vehicle Partnership HB the profit for the year includes depreciation and amortisation of MSEK –73 (–73).
16) In Volvofinans Bank AB the profit for the year includes depreciation and amortisation of MSEK –6 (–4).
17) In Polestar Automotive (Shanghai) Co., Ltd the loss for the year includes depreciation and amortisation of MSEK –276 (–33), interest income of MSEK 124 (45) and interest expenses of MSEK –174 (–23).
18) In Lynk & Co Investment Co., Ltd the profit for the year includes depreciation and amortisation of MSEK –1,268 (–877) and interest income of MSEK 14 (12).
19) In Zenuity AB the loss for the year includes depreciation and amortisation of MSEK –113 (–92), interest income of MSEK 5 (4) and interest expenses of MSEK –5 (–3).

Reconcilation of the summarised financial information presented to the carrying amount of its interest in joint ventures.

| | V2 Plug-In Hybrid Vehicle Partnership HB[1] | | Volvofinans Bank AB[2, 11] | | Polestar Automotive (Shanghai) Co., Ltd[5, 12] | | Lynk & Co Investment Co., Ltd[4, 13] | | Zenuity AB[3, 14] | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Reconciliation of summarised financial information** | **2019** | 2018 | **2019** | 2018 | **2019** | 2018 | **2019** | 2018 | **2019** | 2018 |
| Net asset of the joint venture | 469 | 447 | 4,103 | 3,782 | 6,075 | 5,051 | 11,448 | 10,442 | 697 | 910 |
| Proportion of the Group's ownership in the joint venture | 50% | 50% | 50% | 50% | 50% | 50% | 30% | 30% | 50% | 50% |
| Adjustments for differences in accounting principles | –3 | –27 | — | — | — | — | — | — | — | — |
| Goodwill | — | — | 376 | 376 | — | — | — | — | — | — |
| Adjustments for Common control transaction | — | — | — | — | — | — | 11 | –7 | — | — |
| Elimination of intra-group profit, net of foreign exchange rate effect | — | — | — | — | –1,843 | –1,238 | — | — | — | — |
| Capital injection from investors other than Volvo Cars | — | — | — | — | — | — | — | — | –139 | –352 |
| Obligation to cover accumulated losses classified as Non-current liabilities | — | — | — | — | — | — | — | — | –210 | –103 |
| **Carrying amount of the Group´s interest in joint ventures** | **232** | **197** | **2,427** | **2,267** | **1,195** | **1,288** | **3,446** | **3,126** | **—** | **—** |

### Significant restrictions

For the Chinese joint venture companies, there are some restrictions on the Volvo Car Group's ability to access cash.

## NOTE 14 – TAXES

### ACCOUNTING PRINCIPLES

***Income taxes***

Volvo Car Group's tax expense consists of current tax and deferred tax. Taxes are recognised in the income statement except when the underlying transaction is recognised directly in equity or other comprehensive income, whereupon related taxation is also recognised in equity or other comprehensive income.

Current tax is tax that must be paid or will be received for the current year. Current tax also includes adjustments to current tax attributable to previous periods. Deferred tax is calculated according to the balance sheet method for all temporary differences, with the exception of goodwill, that arise between the tax value and the carrying amount of assets and liabilities.

Deferred tax assets and liabilities are measured at the nominal amount and at the tax rates that are expected to be applied when the asset is realised or the liability is settled, using the tax rates and tax rules that have been enacted or substantively enacted at the balance sheet date.

Deferred tax assets relating to deductible temporary differences and loss carry forwards are recognised to the extent it is probable that they will be utilised in the future. Deferred tax assets and deferred tax liabilities are offset when they are attributable to the same taxation authority on either the same taxable entity or different taxable entities where there is an intention to settle the balances on a net basis and the affected company has a legally adopted right to offset tax assets against tax liabilities.

Tax laws in Sweden and in certain other countries allow companies to defer tax payments through allocation to untaxed reserves. These items are treated as temporary differences in the consolidated balance sheet where the untaxed reserves are divided between deferred tax liability and equity. In the consolidated income statement an allocation to, or withdrawal from, untaxed reserves is divided between deferred taxes and net income for the year.

### CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

***Deferred tax assets***

The recognition of deferred tax assets requires assumptions to be made with regard to the level of future taxable income and the timing of recovery of deferred tax assets. These assumptions take into consideration forecasted taxable income. The measurement of deferred tax assets is subject to uncertainty and the actual result may diverge from judgements due to future changes in business climate, altered tax laws, etc. An assessment is made at each closing date of the likelihood that the deferred tax asset will be utilised. If needed the carrying amount of the deferred tax asset will be altered. The judgements that have been made may affect net income both positively and negatively.

| **Income tax recognised in income statement** | **2019** | 2018 |
|---|---|---|
| Current income tax for the year | –3,100 | –3,982 |
| Current income tax for previous years | –41 | 36 |
| Deferred taxes | –300 | 929 |
| Other taxes | –124 | –119 |
| **Total** | **–3,565** | **–3,136** |

| **Information regarding current year tax expense compared to tax expense based on the applicable Swedish tax rate** | **2019** | 2018 |
|---|---|---|
| Income before tax for the year | 13,168 | 12,917 |
| Tax according to applicable Swedish tax rate, 21.4% (22.0%) | –2,818 | –2,842 |
| Operating income/costs, non-taxable | 62 | –55 |
| Other taxes, non-taxable | –124 | –119 |
| Capital gains or losses, non-taxable | –184 | –19 |
| Effect of different tax rates | –216 | 18 |
| Tax effect on deferred tax due to change of tax rate | –62 | –84 |
| Revaluation of previously non-valued losses and other temporary differences | –215 | –28 |
| Other | –8 | –7 |
| **Total** | **–3,565** | **–3,136** |

| **Income tax recognised in other comprehensive income** | **2019** | 2018 |
|---|---|---|
| **Deferred tax** | | |
| Tax effects on cash flow hedge reserve | –661 | –814 |
| Tax effect of remeasurement of provisions for post-employment benefits | –792 | –404 |
| Tax effects on translation difference of hedge instruments of net investments in foreign operations | –30 | –1 |
| **Total** | **–1,483** | **–1,219** |

| **Specification of deferred tax assets** | **Dec 31, 2019** | Dec 31, 2018 |
|---|---|---|
| Goodwill arising from the purchase of the net assets of a business | 161 | 183 |
| Provision for employee benefits | 2,489 | 1,715 |
| Unutilised tax loss carry-forwards | 5,441 | 7,194 |
| Reserve for unrealised income in inventory | 78 | 19 |
| Provision for warranty | 1,382 | 1,262 |
| Fair value of derivative instruments | 1,074 | 528 |
| Other temporary differences | 6,370 | 5,827 |
| **Total deferred tax assets** | **16,995** | **16,728** |
| Netting of assets/liabilities | –9,720 | –10,142 |
| **Total deferred tax assets, net** | **7,275** | **6,586** |

| **Specification of deferred tax liabilities** | **Dec 31, 2019** | Dec 31, 2018 |
|---|---|---|
| Fixed assets | 7,771 | 6,788 |
| Untaxed reserves | 219 | 648 |
| Auto lease portfolio | 2,664 | 3,858 |
| Other temporary differences | 41 | 536 |
| **Total deferred tax liabilities** | **10,695** | **11,830** |
| Netting of assets/liabilities | –9,720 | –10,142 |
| **Total deferred tax liabilities, net** | **975** | **1,688** |

Deferred tax assets and deferred tax liabilitites are offset when the item relates to income taxes levied by the same taxation authority on either the same taxable entity or different taxable entities which intend either to settle current tax liabilities and assets on a net basis, or to realise the assets and settle the liabilities simultaneously.

Deferred tax assets are only recognised in countries where Volvo Car Group expects to be able to generate corresponding taxable income in the future to benefit from tax reductions.

Significant tax loss carry-forwards are related to countries with long or undefinite periods of utilisation, mainly Sweden and US. Of the total MSEK 5,441 (7,194) recognised deferred tax assets related to tax loss carry-forwards, MSEK 4,109 (4,136) relates to Sweden with indefinite periods of utilisation. MSEK 1,230 (2,987) relates to US where tax loss carry-forwards are expected to be utilised before expiration date. The assessement is that Volvo Car Group will be able to generate sufficient income in the coming years to also utilise the remaining part of the recognised amounts.

Deferred tax that may arise on distribution of remaining unrestricted earnings of foreign subsidiaries has not been booked, hence they can be distributed free of tax or Volvo Car Group may consider them permanently reinvested in the subsidiaries.

| Changes in deferred tax assets and liabilities during the reporting period | Dec 31, 2019 | Dec 31, 2018 |
|---|---|---|
| Net book value of deferred taxes at January 1 | 4,898 | 2,581 |
| Deferred tax income/expense recognised through income statement | –300 | 929 |
| Change in deferred taxes recognised directly in other comprehensive income | 1,483 | 1,219 |
| Exchange rate impact | 219 | 169 |
| **Net book value of deferred taxes at December 31** | **6,300** | **4,898** |

Deferred tax assets regarding tax loss carry-forwards are reported to the extent that realisation of the related tax benefit through future taxable profits is probable also when considering the period during which these can be utilised, as described below.

Deferred tax assets have been considered on all tax losses carry forward as per 2019 and as of December 31, 2019, the recognised tax loss carry-forwards amounted to MSEK 25,093 (31,682). The tax value of these tax loss carry-forwards is reported as an asset. The final years in which the recognised loss carry-forwards can be utilised are shown in the following table.

| Tax-loss carry-forwards; year of expiration | Dec 31, 2019 | Dec 31, 2018 |
|---|---|---|
| **Due date** | | |
| 2020 | — | — |
| 2021 | — | 6 |
| 2022 | — | 1 |
| 2023 | 17 | 76 |
| 2024 | 64 | — |
| 2025– | 25,012 | 31,599 |
| **Total** | **25,093** | **31,682** |

## NOTE 15 – INTANGIBLE ASSETS

### ACCOUNTING PRINCIPLES

An intangible asset is recognised when it is identifiable, Volvo Car Group controls the asset and it is expected to generate future economic benefits. Intangible assets consist of product development, licences and patents, trademarks, goodwill, dealer network and investments in IT-systems and software. Intangible assets such as trademarks, goodwill and dealer networks are normally identified and measured at fair value in connection with business combinations.

Both acquired and internally generated intangible assets are recognised at acquisition cost, less accumulated amortisation and any impairment loss (with the exception of goodwill and trademark). Goodwill and trademark are recognised at fair value at the date of the acquisition less any accumulated impairment losses. When applicable, internal costs directly related to the development of intangible assets are included in the value. Borrowing costs are included in the cost of assets that take a substantial period of time to get ready for its intended use. Subsequent expenditure on intangible assets increases the cost only if it is likely that Volvo Car Group will have future economic benefit from it. All other subsequent expenditure is recognised as an expense in the period in which it is incurred.

#### Capitalised development costs

Volvo Car Group's research and development activities are divided into a concept phase and a product development phase. Costs incurred during the concept phase are normally research costs for developing new products at an early stage, where the outcome of the project is still uncertain and where for example different options and alternatives are still evaluated. Research costs during the concept phase are expensed as incurred.

When a research and development project has developed to the extent that there is a definable future product that is assessed to generate future economic benefits, the project is considered to be in the development phase. Costs for development of new products, production systems and software are recognised as an asset if certain conditions are met. Capitalised development costs are comprised of all expenditures that can be directly attributed to the development phase and that serve to prepare the asset for use. All other development costs are expensed as incurred. Development costs previously recognised as an expense are not recognised as an asset in a subsequent period.

Development costs incurred by Volvo Car Group that are contractually shared with other parties and where Volvo Car Group remain in control of a share of the developed product, either through a licence or through ownership of patents, are accounted for as intangible assets, reflecting the relevant proportion of Volvo Car Group interests, to the extent they are:

- Part of the asset controlled by Volvo Car Group,
- Are incurred in the product development phase and
- The conditions for capitalisation are met.

Volvo Car Group incur development costs on behalf of other parties. In cases where the developed technology is sold and therefore not controlled by Volvo Car Group, the costs are expensed as Cost of Sales at the time of the sale. These costs are also used to measure development progress for revenue recognition for the sold technology, licenses or IP. Refer to Note 2 – Revenue for more information.

### CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

Intangible assets with a definite useful life are amortised on a straight-line basis over their estimated useful lives. Management regularly reassesses the useful life of all significant assets. If circumstances change such that the estimated useful life has to be revised, additional amortisation expense could be the result in future periods. Assets with definite useful lives are only tested if there are any indications of impairment. Intangible assets with indefinite useful lives, i.e. trademark, goodwill, and other intangible assets not yet ready for use, are tested for impairment annually or when there are any indications of impairment.

An impairment test is made by calculating the asset or assets recoverable value. If the recoverable value is less than the carrying value, the asset is written down to its recoverable value. The recoverable value in the form of value in use, is based on discounted cash flow, where certain estimations must be made regarding future cash flows, required return on investments and other adequate assumptions. The estimated future cash flows are based on assumptions that represent management's best estimate of the economic conditions that will exist during the asset's remaining lifetime and are based on internal business plans or forecasts. Future cash flows are determined on the basis of long-term planning, which is approved by Management and which is valid at the date of preparation of the impairment test and this planning is based on expectations regarding future market share, the market growth as well as the products' profitability.

| | Capitalised development cost[1) 4)] | Software | Trademark and goodwill[2)] | Other intangible assets[3)] | Total |
|---|---|---|---|---|---|
| **Aquisition cost** | | | | | |
| Balance at January 1, 2018 | 31,838 | 3,167 | 4,219 | 12,005 | 51,229 |
| Additions | 6,444 | 726 | 5 | 387 | 7,562 |
| Acquired through business combinations | — | — | 22 | — | 22 |
| Divestments and disposals | –334 | –47 | –507 | –22 | –910 |
| Reclassifications | — | 13 | –4 | 2 | 11 |
| Effect of foreign currency exchange differences | 32 | –7 | — | 50 | 75 |
| **Balance at December 31, 2018** | **37,980** | **3,852** | **3,735** | **12,422** | **57,989** |
| Additions | 8,088 | 576 | — | 103 | 8,767 |
| Divestments and disposals | –28 | –424 | –20 | –7,052 | –7,524 |
| Reclassifications | 3 | 65 | 23 | 2 | 93 |
| Effect of foreign currency exchange differences | — | –6 | — | 38 | 32 |
| **Balance at December 31, 2019** | **46,043** | **4,063** | **3,738** | **5,513** | **59,357** |
| **Accumulated amortisation and impairment** | | | | | |
| Balance at January 1, 2018 | –12,371 | –1,839 | — | –9,048 | –23,258 |
| Amortisation expense | –4,563 | –213 | — | –434 | –5,210 |
| Divestments and disposals | 97 | 31 | — | 9 | 137 |
| Reclassifications | — | –7 | — | — | –7 |
| Effect of foreign currency exchange differences | — | 1 | — | –26 | –25 |
| **Balance at December 31, 2018** | **–16,837** | **–2,027** | **—** | **–9,499** | **–28,363** |
| Amortisation expense | –4,872 | –287 | — | –472 | –5,631 |
| Divestments and disposals | — | 414 | 17 | 7,048 | 7,479 |
| Reclassifications | –1 | –15 | –21 | –4 | –41 |
| Effect of foreign currency exchange differences | — | 6 | — | –21 | –15 |
| **Balance at December 31, 2019** | **–21,710** | **–1,909** | **–4** | **–2,948** | **–26,571** |
| **Net balance at December 31, 2018** | **21,143** | **1,825** | **3,735** | **2,923** | **29,626** |
| **Net balance at December 31, 2019** | **24,333** | **2,154** | **3,734** | **2,565** | **32,786** |

1) Volvo Car Group has capitalised borrowing costs related to product development of MSEK 133 (154). A capitalisation rate of 2.6 (2.6) per cent was used to determine the amount of borrowing costs eligible for capitalisation.
2) Of the total Net balance at December 31, 2019, Goodwill amounted to MSEK 136 (134).
3) Other intangible assets refers to licences, dealer network and patents.
4) Reclassification of research and development expenses (related to amortisation of intangible assets sold to Polestar) to Cost of sales amounted to MSEK 1,195 in 2018.

When performing impairment test by calculating the asset or assets recoverable value based on discounted cash-flow Volvo Car Group constitues one single Cash Generating Unit. Assumption of future market share, market growth and Volvo Car Group's expected performance in this environment is the basis for the valuation.

Management's business plan for 2020–2023 is used as a basis for the calculation. In the model, Volvo Car Group is expected to maintain stable efficiency over time and the estimates for the cash flows following the end of the planning period are based on the same growth rate and cash flow as for the last year in the calculation onwards in perpetuity. The business plan is an integral part of Volvo Car Group's financial planning process and represents management's best estimate of the economic conditions that will exist during the asset's remaining lifetime. The business plan process is based on the historic and current financial performance and financial position of the company, i.e. assumptions for margin development, fixed cost and new investments are based on current year financials and balanced towards what is containable given the projection of exogenous factors. Exogenous factors as industry and segment volumes, exchange rates, raw material etc. are based on external assessments from analyst companies and banks. In 2019, the discounted cash flow exceeded the carrying amount and no impairment loss was recognised. A sensitivity test has been performed whether a negative adjustment of one percentage point to the margin or in the discount rate would result in impairment. The discount rate before tax was 11.5 (10.3) per cent. No impairment loss was recognised as a result of performed test.

## NOTE 16 – TANGIBLE ASSETS

### ACCOUNTING PRINCIPLES

A tangible asset is recognised when it is controlled by Volvo Car Group, it is expected to generate future economic benefits and is measurable. Tangible assets are recognised at acquisition cost, less accumulated depreciation and potential impairment loss. The cost of the asset includes expenditures that can be directly attributed to the acquisition and bringing the asset in place for its intended use. Borrowing costs are sometimes included in the acquisition cost of an asset if it takes more than twelve months to get it ready for its intended use or sale.

Repairs and maintenance expenditures are charged to the income statement during the period in which they incur.

### CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

Tangible assets are depreciated on a straight-line basis over their estimated useful lives. Management regularly reassesses the useful life of all significant assets. If circumstances change such that the estimated useful life has to be revised, it could mean additional depreciation in future periods.

The carrying amounts of non-current tangible assets are tested for impairment if there are indicators of a decline in value with regards to future economic benefits related to the asset. Impairment is recognised if the carrying value of the asset exceeds the recoverable amount. The recoverable amount is the higher of the net selling price and its value in use. For these calculations, certain estimations must be made with regards to future cash flows, required return on investments and other adequate assumptions. The estimated future cash flows are based on assumptions that represent management's best estimate of the economic conditions that will exist during the asset's remaining lifetime and are based on internal business plans or forecasts. Future cash flows are determined on the basis of long-term planning, which is approved by Management and which is valid at the date of preparation of the impairment test. This planning is based on expectations regarding future market share, the market growth as well as the products' profitability.

| | Buildings and land[1) 2) 3) 4)] | Machinery and equipment[1) 2) 3) 4)] | Construction in progress[1)] | Assets under operating leases | Total |
|---|---|---|---|---|---|
| **Aquisition cost** | | | | | |
| Balance at January 1, 2018 | 17,704 | 96,542 | 8,622 | 3,005 | 125,873 |
| Additions | 813 | 8,066 | 4,610 | 1,330 | 14,819 |
| Acquired through business combinations | 83 | — | — | — | 83 |
| Divestments and disposals | –559 | –6,399 | –179 | –1,362 | –8,499 |
| Reclassification | 3,002 | 4,726 | –7,728 | — | — |
| Effect of foreign currency exchange differences | 331 | 834 | 462 | — | 1,627 |
| **Balance at December 31, 2018** | **21,374** | **103,769** | **5,787** | **2,973** | **133,903** |
| Adjustment on transition to IFRS 16 | 6,330 | 648 | — | — | 6,978 |
| Additions | 1,011 | 7,207 | 3,012 | 2,301 | 13,531 |
| Divestments and disposals | –169 | –3,086 | –1 | –1,535 | –4,791 |
| Reclassification | 1,857 | 2,430 | –4,139 | — | 148 |
| Effect of foreign currency exchange differences | 321 | 729 | 100 | — | 1,150 |
| **Balance at December 31, 2019** | **30,724** | **111,697** | **4,759** | **3,739** | **150,919** |
| **Accumulated depreciation and impairment** | | | | | |
| Balance at January 1, 2018 | –8,824 | –58,799 | — | –428 | –68,051 |
| Depreciation expense | –719 | –6,974 | — | –310 | –8,003 |
| Divestments and disposals | 156 | 6,015 | — | 288 | 6,459 |
| Effect of foreign currency exchange differences | –144 | –433 | — | — | –577 |
| **Balance at December 31, 2018** | **–9,531** | **–60,191** | **—** | **–450** | **–70,172** |
| Depreciation expense[5)] | –1,839 | –7,673 | — | –405 | –9,917 |
| Divestments and disposals | 137 | 2,163 | — | 359 | 2,659 |
| Reclassification | –90 | –110 | — | — | –200 |
| Effect of foreign currency exchange differences | –88 | –220 | — | — | –308 |
| **Balance at December 31, 2019** | **–11,411** | **–66,031** | **—** | **–496** | **–77,938** |
| **Net balance at December 31, 2018** | **11,843** | **43,578** | **5,787** | **2,523** | **63,731** |
| **Net balance at December 31, 2019** | **19,313** | **45,666** | **4,759** | **3,243** | **72,981** |

1) Buildings and land include Right-of-use asset of MSEK 5,657 (45), Machinery and equipment include Right-of-use asset of MSEK 558 (96) and Construction in progress include Right-of-use asset of MSEK 23 (22). For further information regarding lesase, see Note 7 – Leasing.
2) Depreciation expense includes an impairment loss of MSEK –10 (–66). For further information regarding depreciations, see Note 9 – Depreciation and amortisation.
3) Volvo Car Group has no mortgages in property, plant and equipment. For further information regarding pledged assets, see Note 28 – Pledged assets.
4) Volvo Car Group has capitalised borrowing costs related to Machinery and equipment of MSEK 5 (—) and Buildings of MSEK 8 (79).
5) The adoption of IFRS 16 has resulted in increased depreciation during the year. Depreciation expense related to Buildings and Land include Right-of-use asset of MSEK –981 (—) and Machinery and equipment Right-of-use-asset of MSEK –221 (—).

## NOTE 17 – OTHER NON-CURRENT ASSETS

| | Dec 31, 2019 | Dec 31, 2018 |
|---|---|---|
| Restricted cash | 145 | 188 |
| Endowment insurance for pensions | 381 | 337 |
| Rental deposition | 60 | 57 |
| Derivative assets, non-current | 214 | 310 |
| Other receivables, non-current | 654 | 679 |
| Other non-current assets | 1,799 | 1,411 |
| **Total** | **3,253** | **2,982** |

## NOTE 18 – INVENTORIES

### ACCOUNTING PRINCIPLES

Inventories consist of raw material, consumables and supplies, semi-manufactured goods, work in progress, finished goods and goods for resale. Assets held under operating lease, with a maturity less or equal to twelve months, are also reported as inventory. Inventories are measured at the lower of cost and net realisable value. Cost of inventories comprise all costs of purchase, production charges and other expenditures incurred in bringing the inventories to their present location and condition.

The cost of inventories of similar assets is established using the first-in, first-out method (FIFO). Net realisable value is calculated as the selling price in the ordinary course of business less estimated costs of completion and selling costs. For groups of similar products a group valuation method is applied. Physical stock counts are carried out annually or more often where appropriate in order to verify the records.

### CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

Inventories are measured at the lower of cost and their net realisable value. Net realisable value is based on the most reliable evidence of the amount Volvo Car Group expects to realise from vehicles and components on future sales trends or needs (for components) and also takes into account items that are wholly or partially obsolete. A future unexpected decline in market conditions could result in an adjustment in future expected sales, requirements and in estimated selling prices assumptions, which may require an adjustment to the carrying amount of inventories.

| | Dec 31, 2019 | Dec 31, 2018 |
|---|---|---|
| Raw materials and consumables | 112 | 145 |
| Work in progress | 8,359 | 7,558 |
| Current assets held under operating lease | 8,735 | 6,886 |
| Finished goods and goods for resale | 21,705 | 20,574 |
| **Total** | **38,911** | **35,163** |
| Of which value adjustment reserve: | –693 | –522 |

The cost of inventories recognised as an expense and included in cost of sales amounted to MSEK 212,945 (195,002). Current assets held under operating lease consists of a sale of vehicles combined with a repurchase committment with a maturity less or equal to twelve months.

## NOTE 19 – ACCOUNTS RECEIVABLE AND OTHER CURRENT ASSETS

### ACCOUNTING PRINCIPLES

Accounts receivables are recognised at amortised cost after a provision is made for doubtful receivables. A credit loss provision for accounts receivable is recognised as soon as it is expected. The credit loss reserve is consisting of incurred losses as well of expected credit losses. A credit loss has been incurred when there has been an event that has triggered the customers inability to pay. The expected credit loss reserve is as well including a general provision for credit losses based on, for instance macroeconomic trends in different countries. In these cases there has not yet been any events incurred showing any inability to pay.

| | Dec 31, 2019 | Dec 31, 2018 |
|---|---|---|
| Accounts receivable from non-group companies | 7,818 | 7,037 |
| Accounts receivable from related companies | 5,425 | 6,667 |
| VAT receivables | 2,207 | 2,702 |
| Prepaid expenses and accrued income | 2,141 | 2,150 |
| Other financial receivables | 281 | 1,001 |
| Restricted cash | 185 | 152 |
| Other receivables | 4,041 | 3,870 |
| **Total** | **22 098** | **23,579** |

| **Aging analysis of accounts receivable and accounts receivables from related companies** | Not due | 1–30 days overdue | 30–90 days overdue | >90 days overdue | Total |
|---|---|---|---|---|---|
| **2019** | | | | | |
| Accounts receivable gross | 11,732 | 454 | 356 | 829 | 13,371 |
| Provision doubtful accounts receivable | –92 | 13 | –39 | –10 | –128 |
| **Accounts receivable net** | **11,640** | **467** | **317** | **819** | **13,243** |
| **2018** | | | | | |
| Accounts receivable gross | 12,787 | 263 | 380 | 360 | 13,790 |
| Provision doubtful accounts receivable | –15 | –1 | –59 | –11 | –86 |
| **Accounts receivable net** | **12,772** | **262** | **321** | **349** | **13,704** |

Accounts receivable amounted to MSEK 13,243 (13,704) and included provision for doubtful accounts receivable of MSEK 128 (86) as well as provision for potential future credit losses of MSEK 18 (20). As of December 31, 2019 the total provision for doubtful accounts recievable and future credit losses was 1.09 (0.77) per cent of total accounts receivable. Accounts receivable not yet due or subject to impairment have been assessed to have high credit quality.

The size and geographical spread of the accounts receivable areclosely linked to the distribution of the Group's sales and do not contain any significant concentration of credit risk to individual customers or markets.

| **Change in provision for doubtful accounts receivable is as follows:** | 2019 | 2018 |
|---|---|---|
| Balance at January 1 | 86 | 65 |
| Additions | 57 | 37 |
| Reversals | –5 | –3 |
| Write-offs | –12 | –14 |
| Translation difference | 2 | 1 |
| **Balance at December 31** | **128** | **86** |

## NOTE 20 – FINANCIAL RISKS AND FINANCIAL INSTRUMENTS

### ACCOUNTING PRINCIPLES

***Financial assets and liabilities***

Financial instruments are any form of contract that gives rise to a financial asset in one company and a financial liability or equity instrument in another company. Financial assets are initially recognised at fair value plus transaction costs, except for those financial assets carried at fair value through the income statement. Financial assets carried at fair value through the income statement are initially recognised at fair value, and transaction costs are expensed in the income statement.

Financial liabilities are initially recognised at fair value less transaction costs, except for those financial liabilities carried at fair value through the income statement. Financial liabilities carried at fair value through the income statement are initially recognised at fair value, and transaction costs are expensed in the income statement.

Financial assets in the consolidated balance sheet encompass interest-bearing investments, accounts receivables, other current and non-current financial assets, derivative assets and cash and cash equivalents. Derivatives include forwards, options and swaps.

Financial liabilities in the consolidated balance sheet encompass liabilities to credit institutions, issued bonds, accounts payables, other current and non-current financial liabilities and derivative liabilities, including issued warrants related to share-based incentive programme, see Note 8 – Employees and remuneration.

Financial assets and liabilities are measured at amortised cost or fair value depending on their initial classification. Fair value is defined as the price that would be received when selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Amortised cost is calculated using the effective interest method, where any premiums or discounts and directly attributable costs and revenue are capitalised over the contract period using the effective interest rate. Valuation of financial instruments at fair value is based on prevailing market data and on a discounting of estimated cash flows using the deposit/swap curve of the cash flow currency and include risk assumptions. For currency option instruments, the valuation is based on Black & Scholes formula. Fair value of commodity contracts is calculated by discounting the difference between the actual contractual forward price and the contracted forward price that can be obtained on the balance sheet date for the remaining contract period.

The fair value of a financial asset or liability reflects non-performance risk including the counterparty's credit risk for an asset and an entity's own credit risk for a liability. Volvo Car Group has chosen to use Default Probability derived from the Credit Default Swap curve per counterparty to adjust the positive fair value on derivatives and commercial papers. The same adjustment for Volvo Car Group own credit risk is based on an average of the Default Probability of a peer group of car manufacturers.

### Initial recognition and final derecognition of financial assets and liabilities

Financial assets and liabilities are recognised in the balance sheet when Volvo Car Group becomes a party to the contractual terms and conditions, i.e. at the transaction date. A financial asset or a portion of a financial asset is derecognised when all significant risks and benefits linked to the asset have been transferred to a third party. Where Volvo Car Group concludes that all significant risks and benefits have not been transferred, the portion of the financial assets corresponding to Volvo Car Group's continuous involvement continues to be recognised.

A financial liability or a portion of a financial liability is derecognised when the obligation in the contract has been fulfilled, cancelled or has expired.

### Classification of financial assets and liabilities

Derivatives as well as some equity instruments are carried at fair value through the income statement. A few holdings of equity instruments are recognised at fair values through other comprehensive income.

Financial assets in the form of interest-bearing instruments are categorised as either an asset;

- carried at fair value through the income statement
- carried at amortised cost, or
- carried at fair value through consolidated other comprehensive income

The basis for classification depends on the entity's business model and the contractual cash flow characteristics of the financial asset. Classification takes place at initial recognition. Volvo Car Group applies different business models for interest-bearing instruments. Financial assets that are held for trading are carried at fair value through the income statement. In Volvo Car Group, this encompass interest-bearing investments such as commercial papers recognised as marketable securities and cash and cash equivalents. All remaining interest-bearing instruments are held to collect contractual cash flows and are carried at amortised cost.

The Group classifies its financial liabilities as either:

- financial liabilities carried at fair value through the income statement
- other financial liabilities

### Financial assets and liabilities carried at fair value through the income statement

Financial instruments carried at fair value through the income statement consists of derivatives, including issued warrants related to share-based incentive programme (see Note 8 – Employees and remuneration), equity investments as well as commercial papers and cash and cash equivalents.

Changes in fair value of these instruments are recognised in the income statement. Changes in fair value are reported as financial income/expense. Derivatives with positive fair values (unrealised gains) are recognised as other current, or non- current assets. Derivatives with negative fair values (unrealised losses) are recognised as other current or non-current liabilities.

### Financial assets carried at amortised cost

Financial assets, other than those carried at fair value through the income statement (described in above paragraph), are carried at amortised cost. These assets include accounts receivables, other financial assets as well as time deposits recognised in marketable securities and cash and cash equivalents. The business model and the contractual cash flow characteristics for accounts receivables and other financial assets is to collect the payment for these financial assets once they are due. Initially, these financial assets are recognised at fair value plus transaction costs and subsequently measured at amortised cost. Amortised cost is calculated using the effective interest method, where any premiums or discounts and directly attributable transaction costs are capitalised over the contract period using the effective interest rate. Accounts receivables are recognised at the amount expected to be received, i.e. after deduction of bad debts allowance. A bad debt allowance is incurred when there has been a triggering event for the customer's inability to pay. The bad debts on accounts receivable are recognised as a revenue deduction. In addition to the bad debts allowance, an allowance for expected credit losses is recorded. The expected credit loss allowance is based on a multiplier consisting of average historical write-offs and forward-looking macroeconomic data.

### Other financial liabilities

Financial liabilities to credit institutions, issued bonds, accounts payables and other financial liabilities are assigned to this category. Amortised cost is calculated using the effective interest method, where any premiums or discounts and directly attributable transaction costs are capitalised over the contract period using the effective interest rate.

Other financial liabilities are recognised in the balance sheet at fair value less transaction costs and are subsequently measured at amortised cost.

### Hedge accounting

Hedge accounting is adopted for derivative instruments that are included in a documented hedge relationship. For hedge accounting to be applied, a direct connection between the hedge instrument and the hedged item is required. At the inception of the hedge, the Group documents the relationship between hedging instruments and hedged items, as well as its risk management strategy and objectives for undertaking various hedging transactions. The Group also documents its assessment, both at hedge inception and on an ongoing basis, of whether the derivatives that are used in hedging transactions are highly effective in offsetting changes in fair values or cash flows of the hedged items.

The Group designates certain derivatives and or financial liabilities as either a:

a) Fair value hedge
b) Net investment hedge, or
c) Cash flow hedge

The fair value of a hedging instrument is classified as a non-current asset or liability when the remaining maturity of the hedged item is more than twelve months, and as a current asset or liability when the remaining maturity of the hedged item is less than twelve months.

a) Fair value hedge

The purpose of a fair value hedge is to hedge the variability in the recorded fair value adjustment of fixed-rate debt (issued bond) from changes in the relevant benchmark yield curve for its entire term by converting fixed interest payments to a floating rate (e.g. STIBOR or LIBOR) by using interest rate swaps (IRS). The credit risk is not hedged. The fixed leg of the IRS is matched against the cash flows of the hedged loan/bond. Hereby, the fixed-rate bond is converted into a floating-rate debt. Changes in the fair value of derivatives that are designated and qualify as fair value hedges are recorded in the income statement, together with any changes in the fair value adjustment related to the interest component of the hedged liability (issued bond) that are attributable to the hedged risk. Both gains and losses relating to the interest rate swaps hedging fixed rate borrowings and the changes in the fair value of the hedged fixed rate borrowings attributable to interest rate risk are recognised in the income statement within Financial expenses.

If the hedge no longer meets the criteria for hedge accounting, the adjustment to the carrying amount of a hedged item for which the effective interest method is used is amortised to the income statement over the remaining period to maturity.

b) Net investment hedge

Hedging of net investments in foreign operations refers to hedges held to reduce the effect of changes in the value of a net investment in a foreign operation due to changes in foreign exchange rates. The fair value changes on the hedge instrument are recognised in other comprehensive income.

In the event of a divestment, the accumulated result from the hedge is immediately transferred from the hedge reserve in equity to the income statement.

c) Cash flow hedge

Cash flow hedging refers to the hedging of expected future commercial cash flows in foreign currencies against currency rate risks, as well as for the purpose of hedging expected future commodity consumption against commodity price risk. In cash flow hedge accounting the changes in fair value of the hedging instruments is recognised in other comprehensive income and accumulated in the other reserves in equity. These reserves are recycled to the income statement in the same period as an underlying sales/cost of sales transaction is being recognised in the income statement. The effect from realised cash flow hedges is classified as Revenue and Cost of sales, respectively, depending on the underlying substance of the transaction.

The hedging relationship is regularly tested up until its maturity date. If the identified relationships are no longer deemed effective, the fluctuation in fair value on the hedging instrument from the last period the instrument was considered effective is recognised in the income statement. If the hedged transaction is no longer expected to occur, the hedge's accumulated changes in value are immediately transferred from other comprehensive income to the income statement and are included in Operating income.

## CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

Accounting for financial instruments includes performing certain estimates and judgements, among others:

- **Applied business model with regards to the valuation of interest-bearing instruments:** The main purpose of holding interest bearing assets is to collect contractual cash flows of interest and principal. Sales of recivables are not performed in that magnitude that the business model could be challenged. A majority of interest bearing assets will therefore be valued at amortised cost.
- **Derecognition of accounts receivables:** Invoiced sales are in certain cases subject to contracts for factoring with a third party (bank or financial institution). If the criteria for derecognition of accounts receivable are not fulfilled, the receivable remains recognised on the balance sheet.
- **Recognition of fair value changes with regards to holdings of equity instruments:** Securities (holdings of for instance equity instruments) include unlisted securities where it is difficult to value them at fair value regularly. Therefore they are revalued each time a transaction is performed and a current value is available.

**Financial risks**

In its operations, Volvo Car Group is exposed to various types of financial risks such as currency risk, funding and liquidity risk, interest rate risk, commodity price risk and credit risk.

Volvo Car Group's treasury function is responsible for management and control of these financial risks, it ensures that appropriate financing is in place through capital market transactions, loans and committed credit facilities and manages the Group's liquidity. The management of financial risks is governed by Volvo Car Group's Financial Policy Framework which is approved by the Board of Directors and is subject to annual review. The policy is focused on minimising the effects from fluctuating financial markets on Volvo Car Group's financial earnings.

**Currency risk**

The currency exposure arises from the production in various countries, procurement and the mix of sales currencies. Relative changes in the currency rates have a direct impact on the Volvo Car Group's operating income, finance net, balance sheet and cash flow statement.

The currency risk is related to:

- Expected future cash flows from sales and purchase in foreign currencies (transaction risk)
- Changes in value of assets and liabilities denominated in foreign currencies (translation risk)
- Net investments in foreign operations (translation risk)

***Transaction exposure risk***

Volvo Car Group Financial Policy Framework

The currency transaction exposure risk arises from cash flows in other currencies than the presentation currency of the Group, which is SEK. Sales to different markets in combination with purchases in different currencies determine the transaction exposure.

The policy for currency transaction risk management states that up to 80 per cent of the future expected cash flows in the coming twenty-four months and up to 60 per cent of the future expected cash flows in the coming twenty-five to forty-eight months can be hedged with adequate financial instruments: options, forwards or combined instruments with maturities matching expected timing of cash flows. Hedging strategies using financial instruments for long term exposures (over forty-eight months) require a Board of Directors decision.

For currency risk management, transaction exposure is expressed in terms of Cash Flow at Risk (CFaR), which is the maximum loss at a 95 per cent confidence level in one year. The CFaR is based on the cash flow forecast, market volatility and correlations.

The steering model for hedging of transaction risk is stipulated in the Group's Financial Policy Framework. The hedging strategy is proposed by Group Treasury and approved by the CFO and is expressed as a strategic hedge level of CFaR with a mandate to deviate from that strategic hedge level. The deviation mandate is given as a tactical mandate in terms of timing. The hedging strategy is revised at least quarterly.

### Status at year end

Sales to markets other than Sweden generate transaction exposure. For the majority of the sales Volvo Cars invoices the national sales companies in their local currencies. The total currency inflow and outflow was distributed according to below table:

| | Inflow | | Outflow | |
|---|---|---|---|---|
| | **2019** | 2018 | **2019** | 2018 |
| CNY | 24% | 23% | 25% | 27% |
| EUR | 28% | 28% | 50% | 49% |
| GBP | 7% | 7% | 1% | 1% |
| JPY | 3% | 3% | 7% | 7% |
| USD | 19% | 20% | 12% | 10% |
| Other | 19% | 19% | 5% | 6% |

Forward contracts, currency options and foreign exchange swaps are used to hedge the currency risk in expected future cash flows from sales and purchase in foreign currencies. The hedging of the currency risk from the Chinese industrial entities is made onshore in China.

The CFaR at year end for the cash flows in one year for the Group, excluding hedges, was approximately SEK 5 (5) billion. The table below shows the percentage of the forecasted cash flows that were hedged expressed both in nominal terms and in CFaR. CFaR has a higher percentage hedge than the nominal cash flow because it leverages the correlation between currencies.

| | 0–24 months | | 25–48 months | |
|---|---|---|---|---|
| | **2019** | 2018 | **2019** | 2018 |
| Nominal hedge, % | 31 | 33 | 6 | 8 |
| CFaR incl hedges, % | 36 | 51 | 11 | 19 |

***Maturities of cash flow hedges (forwards and options), nominal amounts in millions, local currency***

| Maturity | AUD | CAD | CHF | CNY | DKK | EUR | GBP | JPY | KRW | NOK | PLN | RUB | USD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1–12 months | −256 | −351 | −256 | −1,709 | −503 | 1,472 | −924 | 29,700 | −235,510 | −1,000 | −68 | −5,665 | −1,923 |
| 13–24 months | −16 | −205 | −162 | — | −480 | 404 | −500 | 6,000 | −26,358 | — | — | — | −1,377 |
| 25–36 months | — | −101 | −127 | — | −120 | 77 | −420 | — | — | — | — | — | −690 |
| 37–48 months | — | — | −48 | — | — | 11 | −80 | — | — | — | — | — | −40 |

The average duration of the portfolio was 13 (14) months. The fair value of the outstanding currency derivatives as at December 31, 2019 amounted to MSEK −5,458 (−2,319).

### Hedge accounting – cash flow hedge

The highly probable forecast transactions in foreign currencies that are hedged are expected to occur at various dates during the next 48 months. Gains and losses recognised in other comprehensive income and accumulated in other reserves in equity on foreign exchange forward contracts as of December 31, 2019 are recognised in the income statement in the periods when the hedged forecast transaction affects the income statement, which are shown in the maturity table above.

The cash flow hedge reserve related to currency hedges, included in other reserves, in shareholders' equity as at December 31, 2019 amounts to MSEK −5,458 (−2,318) before tax. The fluctuation from December 31, 2018 to December 31, 2019 within the hedge reserve that has had an impact on other comprehensive income in 2019 is MSEK −3,140 (−3,926) before tax. The balance of MSEK −5,458 (−2,318) represents the fair value of derivatives used for cash flow hedging per December 31, 2019. Along with cross currency options, recorded in the income statement, this builds up the total fair value of MSEK −5,458 (−2,319).

Prospective effectiveness testing is performed at inception of the hedge and on an aggregated level on a monthly basis. The test is performed by comparing the critical terms (nominal amount, timing, and foreign currency) of the hedging instrument and the hedged item. If critical terms match and the credit risk of the counterparty has not changed significantly, the hedge relationship is highly effective.

| **Fair value of currency derivatives for cash flow hedging** | **2019** | 2018 |
|---|---|---|
| Hedge reserve | −5,458 | −2,318 |
| **Recognised in other comprehensive income** | **−5,458** | **−2,318** |
| | | |
| Time value in options and cross currency options | — | −1 |
| **Recognised in other operating income and expenses** | **—** | **−1** |
| | | |
| **Total fair value** | **−5,458** | **−2,319** |

### *Translation exposure risk*

Volvo Car Group Financial Policy Framework

Translation risk in Volvo Car Group relates to the translation of net investments in foreign operations. This exposure can generate a positive or negative impact on other comprehensive income. Translation

### Status at year end

The table below shows the translation exposure of net investments in foreign operations as at December 31, 2019.

| | CNY | EUR | USD | JPY | MYR | Other | Total |
|---|---|---|---|---|---|---|---|
| Investments in foreign operations (MSEK) | 28,962 | 5,141 | 3,354 | 1,017 | 843 | 2,986 | 42,303 |
| **Translation exposure** | **28,962** | **5,141** | **3,354** | **1,017** | **843** | **2,986** | **42,303** |

risk of assets and liabilities in foreign currencies related to the operations, as accounts receivable, accounts payable and warranty provisions, will generate an impact on the operating income. All translation of assets and liabilities to credit institutions and intercompany loans and deposits are reflected in the finance net.

The translation risk is hedged either by matching the currency composition of debt with the composition of assets or via financial derivatives.

A one per cent change in the Swedish krona against major currencies has a net impact on other comprehensive income of approximately MSEK 423 (327). Part of the investments in operations in the Eurozone and Americas are hedged which is further explained below. The residual translation risk is part of the strategic risk management and is not hedged with financial instruments, the translation effect is recognised in other comprehensive income.

Total translation effect of net investments in foreign operations was MSEK 947 (805). This effect is recognised in other comprehensive income.

***Hedge accounting – hedge of net investments in foreign operations***

Hedge accounting is applied for net investment in foreign operations. Volvo Car Group designates MEUR 320 of the EUR debt and MUSD 200 of the USD debt to reduce the translation exposure on net investments in EUR and USD. The exchange rate from the translation of the net investments in operations in EUR and USD are recognised in other comprehensive income. The hedge reserve for net investment in foreign operations, included in equity in the currency translation reserve, as at December 31, 2019 amounts to MSEK –620 (–482) before tax. No ineffectiveness has affected net income for 2019 or 2018.

| **Fair value of financial instruments for hedging of net investment in foreign operations** | **2019** | 2018 |
|---|---|---|
| Hedge reserve | –620 | –482 |
| **Recognised in other comprehensive income** | **–620** | **–482** |
| | | |
| **Total fair value** | **–620** | **–482** |

## Funding and liquidity risk management

### *Capital Structure*

Volvo Car Group's Financial Policy Framework stipulates that the capital structure shall reflect a reasonable balance between risks and rewards/cost of capital. The medium-to-long term capital structure target for Volvo Cars shall be optimised among cost of capital, rating considerations/peer group comparison and company specific risk factors. The capital structure shall be analysed on a regular basis as part of the overall financial reporting process. The longer term objective is to have a capital structure that enables investment grade rating; Volvo Car Group's current external rating by Moody's is Ba1 and by Standard & Poor BB+. The equity ratio as per December 31, 2019 is 26.3 (29.0) per cent, whereof shareholders' equity amounted to MSEK 63,648 (61,251).

***Funding risk management***

Volvo Car Group Financial Policy Framework

Funding risk is the risk that the Group does not have access to adequate financing on acceptable terms at any given point.

All draw down on new loans is evaluated against future liquidity needs and investment plans. Volvo Car Group should for the coming twelve months at any given time have available committed financing for investments and maturing loans. To limit the risk of refinancing, debt maturing over the next twelve months should not exceed 25 per cent of total debt. Less than 50 per cent of the long term debt should be re-financeable within three years.

Status at year end

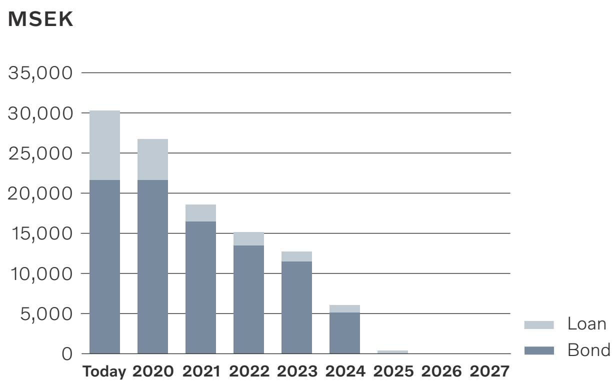
In February and April Volvo Car Group issued two bonds of MSEK 2,000 and MEUR 600, respectively.

The outstanding amount of bonds and liabilities to credit institutions, excluding finance lease contracts and capitalised transaction costs, in Volvo Car Group as per year end 2019 was MSEK 30,359 (23,615). Remaining credit duration of the outstanding facilities was 3.0 (3.4) years. Debt maturing over the next twelve months was at year end 13 per cent. 50 per cent of the Group's long term debt is refinanceable within three years, refinancing activites are ongoing.

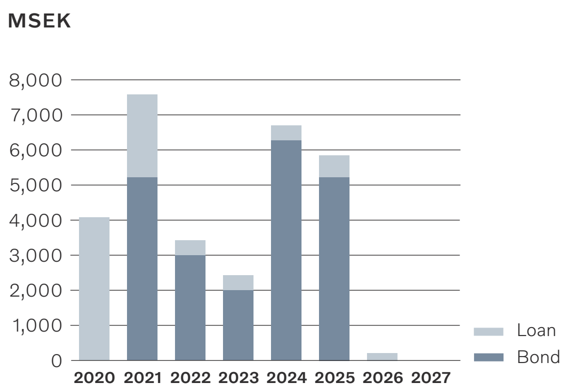
Outstanding debt are shown below.

| **Funding** | Currency | Nominal amount in respective currency (million) | MSEK |
|---|---|---|---|
| Bank loan | USD | 642 | 5,978 |
| Bank loan | SEK | 1,900 | 1,900 |
| Bond | EUR | 1,600 | 16,730 |
| Bond | SEK | 5,000 | 5,000 |
| Other | SEK | 751 | 751 |
| **Total** | | | **30,359** |

***Maturity structure of bonds and liabilities to credit institutions***




***Loan and bond amortisation schedule***




In relation to all external financing there are information undertakings and covenants according to Loan Market Association (LMA) and capital market standards. These are monitored and calculated quarterly to fulfill the terms and conditions stated in the financial agreements. Covenants are based on standard measurements such as EBITDA and Net debt. As of December 31, 2019 there is substantial headroom in the fulfillment of all covenants.

### *Liquidity risk management*

Volvo Car Group Financial Policy Framework

Liquidity risk is the risk that Volvo Car Group is unable to meet ongoing financial obligations on time. In order to meet seasonal volatility in cash requirements, Volvo Car Group shall always have committed credit facilities or cash and marketable securities available corresponding to 15 per cent or more of Revenue. The rolling twelve months cash flow forecasts are the basis for the risk assessment of the liquidity risk management.

| Volvo Car Group has the following undrawn committed credit facilities: | Dec 31, 2019 | Dec 31, 2018 |
|---|---|---|
| – Expiring after one year but within five years | 13,593 | 13,328 |
| – Expiring after five years | — | — |
| **Total** | **13,593** | **13,328** |

Status at year end

As at December 31, 2019, Volvo Car Group had committed credit facilities and cash and marketable securities available of MSEK 69,109 (55,075) approximately 25 (22) per cent of Revenue. The liquidity of the Group is strong considering the maturity profile of the external borrowings, the balance of cash and cash equivalents and marketable securities, and available credit facilities from banks.

The following table presents the maturity structure of the Group's financial assets and liabilities. The figures shown are contractual undiscounted cash flows based on contracted date, when the Group is liable to pay or eligible to receive, and includes both interest and nominal amounts.

| | 2019 | | | | 2018 | | | |
|---|---|---|---|---|---|---|---|---|
| **Dec 31, 2019** | Less than 3 months | 3 months to 1 year | 1–5 years | Over 5 years | Less than 3 months | 3 months to 1 year | 1–5 years | Over 5 years |
| **Assets** | | | | | | | | |
| Receivables on parent company | — | — | 54 | — | — | — | 54 | — |
| Derivative assets | — | — | 214 | — | — | — | 310 | — |
| Other non-current assets1) | — | — | 2,017 | 450 | — | — | 1,970 | 574 |
| **Total non-current financial assets** | **—** | **—** | **2,285** | **450** | **—** | **—** | **2,334** | **574** |
| Accounts receivable | 12,100 | 1,143 | — | — | 12,751 | 953 | — | — |
| Derivative assets | 51 | 70 | — | — | 356 | 549 | — | — |
| Other current assets1) | 993 | 3,108 | — | — | 1,289 | 2,560 | — | — |
| Marketable securities | 1,134 | 2,384 | — | — | — | 1,577 | — | — |
| Cash and cash equivalents | 51,997 | — | — | — | 40,170 | — | — | — |
| **Total current financial assets** | **66,275** | **6,705** | — | — | 54,566 | 5,639 | — | — |
| **Total financial assets** | **66,275** | **6,705** | **2,285** | **450** | **54,566** | **5,639** | **2,334** | **574** |
| **Liabilities** | | | | | | | | |
| Bonds2) | 134 | 402 | 17,682 | 5,318 | 90 | 271 | 8,928 | 5,315 |
| Liabilities to credit institutions2) | — | — | 4,137 | 642 | — | — | 7,775 | 1,157 |
| Derivative liabilities | — | — | 2,455 | — | — | — | 1,610 | — |
| Other non-current interest bearing liabilities3) | — | — | 3,050 | 1,942 | — | — | — | — |
| Other non-current liabilities1) | — | — | 2,535 | 6 | — | — | 2,944 | 54 |
| **Total non-current financial liabilities** | **134** | **402** | **29,859** | **7,908** | **90** | **271** | **21,257** | **6,526** |
| Liabilities to credit institutions2) | 446 | 3,903 | — | — | 406 | 2,156 | — | — |
| Accounts payable | 43,369 | 1,507 | — | — | 38,738 | 4,895 | — | — |
| Derivative liabilities | 1,143 | 2,311 | — | — | 663 | 1,178 | — | — |
| Other current interest bearing liabilities3) | 258 | 815 | — | — | — | — | — | — |
| Other current liabilities1) | 5,499 | 8,440 | — | — | 3,882 | 8,089 | — | — |
| **Total current financial liabilities** | **50,715** | **16,976** | **—** | **—** | **43,689** | **16,318** | **—** | **—** |
| **Total financial liabilities** | **50,849** | **17,378** | **29,859** | **7,908** | **43,779** | **16,589** | **21,257** | **6,526** |

1) Pre-payments as well as statutory receivables and liabilities excluded.
2) Including interest.
3) As of 2019 maturity of lease liabilities under IFRS 16 are included in the table.

### Interest rate risk management

Changes in interest rates will impact Volvo Car Group's net financial income/expense and the value of financial assets and liabilities. The return on cash and cash equivalents, short term investments and credit facilities are impacted by changes in the interest rates. The exposure can be either direct from interest rate bearing debt or indirect through leasing or other financing arrangements.

Volvo Car Group Financial Policy Framework

According to the policy, the interest rate risk in Volvo Car Group's net debt position has a benchmark duration of twelve months. The policy allows a deviation of −9/+12 months from the benchmark. The interest rate strategy shall be proposed by Group Treasury and be approved by the CFO. The hedging strategy shall be revised at least quarterly.

Status at year end

As at December 31, 2019, Volvo Car Group's interest-bearing assets consisted of cash in the form of cash at bank, short term deposits and commercial papers. The average interest fixing term on these assets was less than one month. The average interest fixing term on debt was around 23 months. At year end the duration of the net debt position was 21 (19) months. The average cost of borrowing was 2.9 (3.2) per cent.

To manage interest rate risk, the Group uses interest rate swaps and forward rate agreements.

The table below shows the estimated effect in MSEK of a parallel shift of the interest curves up or down by one per cent (100 basis points) on all external loans and interest rate swaps.

| Interest rate sensitivity, effect on Finance Net | 2019 | 2018 |
|---|---|---|
| Market rate +1% | –69 | –44 |
| Market rate –1% | 54 | 15 |

### *Hedge accounting – fair value hedge*

Hedge accounting can be applied for hedging of changes in the fair value of fixed rate loans (bank loans or issued bonds) due to changes in market interest rate. Changes in the fair value of derivatives that are designated and qualify as fair value hedges are recorded in the income statement, together with any changes in the fair value of the hedged loan that are attributable to the hedged risk. The carrying amount of the hedged loan is adjusted for the gain or loss attributable to the hedged risk, i.e. the loan is recorded at amortised cost with a fair value adjustment. Both gains and losses relating to the interest rate swaps and the changes in the fair value of the hedged fixed rate loans attributable to the interest rate risk are recognised in the income statement within financial expenses.

Volvo Car Group hedges the fair value risk of the MEUR 500 bond issued in May 2016 by using interest rate swaps, the bond with fixed interest payments has been swapped into floating interest. Changes in fair value of the interest component of the bond is hedged through a fair value hedge by means of interest rate swaps. The carrying amount of the bond is MSEK 5,217 (5,105). A fair value adjustment related to the interest component of the bond is included in the carrying amount of the bond. The fair value component of the carrying value amounts to MSEK 20 (14).

### Commodity price risk management

Commodity price risk is the risk that the cost of materials could increase as commodity prices rise in global markets. Changes in commodity prices impact Volvo Car Group's cash flow and earnings.

Strategic commodity price risk arises from the procurement mix of commodities and is primarily managed through contracts with the suppliers using clauses or similar constructions and fixed prices with suppliers.

#### Volvo Car Group Financial Policy Framework

Forecasted cash flows in commodities for the coming fourty-eight months can be hedged up to 70 per cent with adequate financial instruments. The hedging strategy shall be proposed by Group Treasury and approved by CFO. Hedging strategy shall be revised at least quarterly.

#### Status at year end

#### Raw material

In 2019, Volvo Car Group had cost for raw materials of approximately SEK 16 (16) billion. A one per cent change in the prices of raw materials has an impact on operating income of approximately MSEK 157 (159).

As of April 2019, Volvo Car Group manages risk of changes in copper prices in the forecasted copper consumption with forwards and futures contracts.

#### Electricity

Volvo Car Group manages the changes in prices for electricity by using forward contracts. The hedging is performed for the electricity usage in the Swedish factory and is managed under an advisory contract with Vattenfall Power Management AB. The highly probable forecast transactions in electricity consumption that are hedged are expected to occur in any chosen calendar quarter during the next fourty-eight months.

The hedging instruments used are bilateral OTC contracts between Volvo Car Corporation and Vattenfall Power Management AB.

A one per cent change in the electricity spot price has an impact on other comprehensive income of MSEK 3 (4).

### *Hedge accounting – cash flow hedge of commodity price risk*

Hedge accounting is applied for cash flow hedging of commodity price risk. Gains and losses on the effective portions of derivatives designated under cash flow hedge accounting, i.e. the value of the hedging instrument that corresponds to the value of forecasted commodity consumption, are recognised in other comprehensive income and accumulated in other reserves in equity. The gains and losses are then recognised in the income statement in the periods when the hedged forecast transaction affects the income statement. Any ineffectiveness in a hedge relationship is recognised in the income statement.

The cash flow hedge reserve related to commodity hedges, included in other reserves in shareholders' equity as at December 31, 2019 amounts to MSEK 31 (109) before tax. No ineffectiveness has affected net income for 2019 and 2018.

| Fair value of derivatives for commodity hedging | 2019 | 2018 |
|---|---|---|
| Hedge reserve | 31 | 109 |
| **Recognised in other comprehensive income** | **31** | **109** |
| | | |
| Non hedge accounting | — | — |
| **Recognised in other operating income and expenses** | **—** | **—** |
| | | |
| **Total fair value** | **31** | **109** |

### Credit risk management

Volvo Car Group's credit risk can be divided in financial credit risk and operational credit risk. These risks are described in the following sections.

### *Financial counterparty credit risk*

#### Volvo Car Group Financial Policy Framework

Credit risk on financial transactions is the risk that Volvo Car Group will incur losses as a result of non-payment by counterparties related to the Group's bank accounts, investments of cash surplus, bank deposits or derivative transactions. All investments must meet the requirements of low credit risk, high liquidity and the exposure with any single counterparty is limited. All counterparties used for investments and derivative transactions shall have credit rating A- or better from one of the well-established credit rating institutions and ISDA agreements are required for counterparties with which derivative contracts are entered. Limits are established according to counterparty credit rating and limit usage is monitored for the Volvo Car Group's treasury counterparties and deposits are diversified between relationship banks. Subsidiaries' bank balances are diversified in order to limit credit risk.

#### Status at year end

The maximum amount exposed to financial credit risk is the total of cash and cash equivalents MSEK 51,997 (40,170), investments in marketable securities MSEK 3,518 (1,577) and fair value of outstanding derivative assets MSEK 335 (1,215). The maximum amount exposed to credit risk for financial instruments is best represented by their fair values, see table 'Financial assets and liabilities by category' in this note.

No financial assets and liabilities are offset in the balance sheet. Derivative contracts are subject to master netting agreements (ISDA). No collateral has been received or posted. The table below shows derivatives covered by master netting agreements (ISDA).

| Outstanding net position for derivative instruments | Gross | Offset in Balance sheet | Net in Balance sheet | Master netting agree-ments | Net position |
|---|---|---|---|---|---|
| **December 31, 2019** | | | | | |
| Derivative assets | 335 | — | 335 | −250 | 85 |
| Derivative liabilities | 5,909 | | 5,909 | −250 | 5,659 |
| **December 31, 2018** | | | | | |
| Derivative assets | 1,215 | — | 1,215 | −950 | 265 |
| Derivative liabilities | 3,451 | — | 3,451 | −950 | 2,501 |

### Operational credit risk

The operational credit risk arises from accounts receivables. For the risk in customer and dealer financing, the objective is to have a sound and balanced credit portfolio and to engage in credit monitoring by means of detailed procedures which include follow-up and repossession. In cases where the credit risk is considered unsatisfactory a letter of credit or other instruments are used. The maximum amount exposed to credit risk is the carrying amount of accounts receivable, see table 'Financial assets and liabilities by category' in this note. For quantification of credit risk in accounts receivable refer to Note 19 – Accounts receivable and other current assets.

### Financial Instruments – Classification and measurement

Financial instruments are divided into three levels depending on the market information available.

- Level 1: Instruments are valued based on quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date.
- Level 2: Instruments are valued based on quoted prices included within level 1 that are observable for the assets or liabilities, either directly or indirectly.
- Level 3: Instruments are valued based on unobservable inputs for the assets or liabilities.

All derivative financial instruments and commercial papers that Volvo Car Group holds as of December 31, 2019 belong to level 2. In level 3, the amount invested in other long-term securities holdings MSEK 296 (190) is valued based on internal valuation methods, for more detailed information see Critical Accounting estimates and judgements in this note.

#### *Fair value estimation*

The table below presents Volvo Car Group's financial assets and liabilities that are measured at fair value.

| **December 31, 2019** | Level 1 | Level 2 | Level 3 | **Total** |
|---|---|---|---|---|
| Derivative instruments for hedging of currency risk in future commercial cash flows | — | 224 | — | 224 |
| Derivative instruments for hedging of currency risk related to financial assets and liabilities | — | 38 | — | 38 |
| Derivative instruments for hedging of interest rate risk | — | 31 | — | 31 |
| Commodity derivatives | — | 42 | — | 42 |
| Commercial papers[1] | — | 7,321 | — | 7,321 |
| Other long-term securities holdings | — | — | 296 | 296 |
| **Total assets** | **—** | **7,656** | **296** | **7,952** |
| Derivative instruments for hedging of currency risk in future commercial cash flows | — | 5,687 | — | 5,687 |
| Derivative instruments for hedging of currency risk related to financial assets and liabilities | — | 211 | — | 211 |
| Commodity derivatives | — | 11 | — | 11 |
| **Total liabilities** | **—** | **5,909** | **—** | **5,909** |

| **December 31, 2018** | Level 1 | Level 2 | Level 3 | **Total** |
|---|---|---|---|---|
| Derivative instruments for hedging of currency risk in future commercial cash flows | — | 1,007 | — | 1,007 |
| Derivative instruments for hedging of currency risk related to financial assets and liabilities | — | 81 | — | 81 |
| Derivative instruments for hedging of interest rate risk | — | 16 | — | 16 |
| Commodity derivatives | — | 111 | — | 111 |
| Commercial papers[1] | — | 2,152 | — | 2,152 |
| Other long-term securities holdings | — | — | 190 | 190 |
| **Total assets** | **—** | **3,367** | **190** | **3,557** |
| Derivative instruments for hedging of currency risk in future commercial cash flows | — | 3,327 | — | 3,327 |
| Derivative instruments for hedging of currency risk related to financial assets and liabilities | — | 122 | — | 122 |
| Commodity derivatives | — | 2 | — | 2 |
| **Total liabilities** | **—** | **3,451** | **—** | **3,451** |

1) Whereof MSEK 1,101 (1,064) are reported as marketable securities in the balance sheet and MSEK 6,220 (1,088) are reported as cash and cash equivalents.

| Financial assets and liabilities by category | Financial instruments at fair value through the income statement: Instruments held for trading | Financial instruments at fair value through the income statement: Derivatives used in hedge accounting | Financial liabilities | Financial assets carried at amortised cost | Other liabilities | Total | Fair value |
|---|---|---|---|---|---|---|---|
| **December 31, 2019** | | | | | | | |
| Receivables on parent company | — | — | — | 54 | — | 54 | 54 |
| Other non-current assets[1] | — | — | — | 2,844 | — | 2,844 | 2,844 |
| Accounts receivable | — | — | — | 13,243 | — | 13,243 | 13,243 |
| Derivative assets | 71 | 264 | — | — | — | 335 | 335 |
| Other current assets[1] | — | — | — | 4,102 | — | 4,102 | 4,102 |
| Marketable securities | 1,101 | — | — | 2,417 | — | 3,518 | 3,518 |
| Cash and cash equivalents | 6,219 | — | — | 45,778 | — | 51,997 | 51,997 |
| **Total financial assets** | **7,391** | **264** | — | **68,438** | — | **76,093** | **76,093** |
| Bonds and liabilities to credit institutions[2] | — | — | — | — | 30,237 | 30,237 | 31,163 |
| Other non-current liabilities[1] | — | — | 122 | — | 2,420 | 2,542 | 2,542 |
| Accounts payable | — | — | — | — | 44,876 | 44,876 | 44,876 |
| Derivative liabilities | 219 | 5,690 | — | — | — | 5,909 | 5,909 |
| Other current liabilities[1] | — | — | — | — | 13,916 | 13,916 | 13,916 |
| **Total financial liabilities** | **219** | **5,690** | **122** | — | **91,449** | **97,480** | **98,406** |
| **December 31, 2018** | | | | | | | |
| Receivables on parent company | — | — | — | 54 | — | 54 | 54 |
| Other non-current assets[1] | — | — | — | 2,544 | — | 2,544 | 2,544 |
| Accounts receivable | — | — | — | 13,704 | — | 13,704 | 13,704 |
| Derivative assets | 97 | 1,118 | — | — | — | 1,215 | 1,215 |
| Other current assets[1] | — | — | — | 3,849 | — | 3,849 | 3,849 |
| Marketable securities | 1,064 | — | — | 513 | — | 1,577 | 1,577 |
| Cash and cash equivalents | 1,088 | — | — | 39,082 | — | 40,170 | 40,170 |
| **Total financial assets** | **2,249** | **1,118** | — | **59,746** | — | **63,113** | **63,113** |
| Bonds and liabilities to credit institutions[2] | — | — | — | — | 23,648 | 23,648 | 23,687 |
| Other non-current liabilities[1] | — | — | 312 | — | 2,687 | 2,999 | 2,999 |
| Accounts payable | — | — | — | — | 43,633 | 43,633 | 43,633 |
| Derivative liabilities | 124 | 3,327 | — | — | — | 3,451 | 3,451 |
| Other current liabilities[1] | — | — | — | — | 11,971 | 11,971 | 11,971 |
| **Total financial liabilities** | **124** | **3,327** | **312** | — | **81,939** | **85,702** | **85,741** |

1) Pre-payments as well as statutory receivables and liabilities excluded.
2) The carrying amount of the bonds are presented above including a fair value adjustment amounting to MSEK 20 (14), which relates to the fair value hedge, see Accounting principles. Fair value of the bonds is estimated based on level 1 inputs.

The carrying amount essentially equals the fair value for all current items.

For aging analysis regarding accounts receivable refer to Note 19 – Accounts receivable and other current assets. For aging analysis regarding liabilities to credit institutions refer to Funding and liquidity risk management section in this note. Accounts payables are for the most part due within 60 days.

| Nominal amounts and fair values of derivative instruments | Dec 31, 2019 Nominal amount | Dec 31, 2019 Fair value | Dec 31, 2018 Nominal amount | Dec 31, 2018 Fair value |
|---|---|---|---|---|
| **Derivative instruments for hedging of currency risk related to financial assets and liabilities** | | | | |
| *Foreign exchange swaps and forward contracts* | | | | |
| – receivable position[1] | 5,931 | 38 | 11,273 | 81 |
| – payable position[2] | 16,999 | –211 | 13,928 | –122 |
| **Subtotal** | **22,930** | **–173** | **25,201** | **–41** |
| **Derivative instruments for hedging of currency risk in future commercial cash flows** | | | | |
| *Foreign exchange swaps and forward contracts* | | | | |
| – receivable position[1] | 14,409 | 221 | 31,900 | 1,002 |
| – payable position[2] | 64,763 | –5,679 | 61,750 | –3,317 |
| *Currency options* | | | | |
| – receivable position[1] | 732 | 3 | 2,005 | 5 |
| – payable position[2] | 1,465 | –8 | 3,152 | –10 |
| **Subtotal** | **81,369** | **–5,463** | **98,807** | **–2,320** |
| **Derivative instruments for hedging of interest rate risk** | | | | |
| *Interest rate swaps* | | | | |
| – receivable position[1] | 7,774 | 31 | 5,876 | 16 |
| – payable position[2] | — | — | — | — |
| **Subtotal** | **7,774** | **31** | **5,876** | **16** |
| **Derivative instruments for hedging of commodity price risk** | | | | |
| *Forward contracts* | | | | |
| – receivable position[1] | 494 | 42 | 47 | 111 |
| – payable position[2] | 127 | –11 | 3 | –2 |
| **Subtotal** | **621** | **31** | **50** | **109** |
| **Total** | **112,694** | **–5,574** | **129,934** | **–2,236** |

1) Financial instruments included in the balance sheet under other non-current assets and other current assets.
2) Financial instruments included in the balance sheet under other non-current liabilities and other current liabilities.

The table below shows how gains and losses as well as interest income and expenses have affected the income statement divided on the different categories of financial instruments.

| **Net gains/losses, interest income and expenses related to financial instruments** — Recognised in operating income | 2019 Gains/ losses | 2019 Interest income | 2019 Interest expenses | 2018 Gains/ losses | 2018 Interest income | 2018 Interest expenses |
|---|---|---|---|---|---|---|
| **Financial assets and liabilities at fair value through the income statement** | | | | | | |
| Derivative instruments for hedging of currency and commodity risk in future commercial cash flows rerouted from the hedge reserve, including time value in options and cross currency options | –3,537 | — | — | –796 | — | — |
| Electricity derivatives | — | — | — | –2 | — | — |
| **Financial assets carried at amortised cost, other financial liabilities** | | | | | | |
| Accounts receivable/accounts payable[1),2)] | 540 | — | — | 76 | — | — |
| **Effect on operating income** | **–2,997** | — | — | **–722** | **—** | **—** |
| **Recognised in financial items** | | | | | | |
| **Financial assets and liabilities at fair value through the income statement** | | | | | | |
| Derivative instruments for hedging of currency risk related to financial assets and liabilities | 94 | — | — | 669 | — | — |
| Derivative instruments for hedging of interest rate risk | 8 | 15 | — | 4 | 11 | — |
| Financial liabilities at fair value through profit and loss | 17 | — | — | –96 | — | — |
| Marketable securities | 24 | 41 | — | 117 | 62 | — |
| **Financial assets carried at amortised cost, other financial liabilities** | | | | | | |
| Financial assets carried at amortised cost | 241 | — | — | 408 | — | — |
| Cash and cash equivalents[1] | 507 | 466 | — | 357 | 333 | — |
| Other financial liabilities including currency effects[1] | –941 | — | –928 | –1,648 | — | –822 |
| **Effect on financial items** | **–50** | **522** | **–928** | **–189** | **406** | **–822** |

1) The total income and expenses from items that are not measured at fair value through income statement amounts to MSEK 1,754 (1,174) and MSEK –1,869 (–2,470) respectively.
2) Unrealised and realised foreign exchange effect on accounts receivable and accounts payable.

## NOTE 21 – MARKETABLE SECURITIES AND CASH AND CASH EQUIVALENTS

### ACCOUNTING PRINCIPLES

***Marketable securities***
Marketable securities are liquid financial instruments that can be quickly converted into cash. The liquidity of marketable securities comes from the fact that the maturities tend to be less than one year. In Volvo Car Group, marketable securities comprise of interest-bearing investments with a term of more than three months from acquisition date.

***Cash and cash equivalents***
Cash and cash equivalents consist of cash and bank balances as well as short-term investments in the form of commercial papers with a maturity of maximum 90 days from the date of acquisition, which are subject to an insignificant risk of fluctuations in value.

| **Marketable securities** | **Dec 31, 2019** | Dec 31, 2018 |
|---|---|---|
| Commercial papers | 1,101 | 1,064 |
| Time deposits in banks | 2,417 | 513 |
| **Total** | **3,518** | **1,577** |

| **Cash and cash equivalents** | **Dec 31, 2019** | Dec 31, 2018 |
|---|---|---|
| Cash in banks | 29,858 | 24,730 |
| Time deposits in banks | 15,919 | 14,352 |
| Commercial papers | 6,220 | 1,088 |
| **Total** | **51,997** | **40,170** |

Cash and Cash equivalents includes MSEK 2,537 (1,913) where limitations exist, mainly liquid funds in certain countries where exchange controls or other legal restrictions apply. It is not possible to immediately use the liquid funds in other parts of Volvo Car Group, however there is normally no limitation for use in the Group's operation in the respective country.

## NOTE 22 – EQUITY

### ACCOUNTING PRINCIPLES

***Equity***
An equity instrument is any contract that constitutes a residual interest in the net assets of an entity. Volvo Car AB (publ.) has issued preference shares recognised as equity instruments. Preference shares are equity instruments as long as fundamental criteria for classification as equity is fulfilled. Preference shares have a preferential status compared to common shares, in terms of priority to dividends and priority to net assets in case of a liquidation. However, preference shares are subordinated to financial liabilities.

***Group contributions and unconditional shareholders' contributions***
Distributed group contributions to the main owner are recorded in equity, along with the tax effect. Group contributions received from the main owner and the tax effect on these contributions are recognised in equity in accordance with the principles for shareholders' contributions.

Unconditional shareholders' contributions received from the main owner are recognised in equity.

### CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

Volvo Car Group has issued convertible preference shares. Based on the fact, there is no unconditional obligation for Volvo Car Group to make any payments to the investors during the contract period, hence the instruments are classified as equity instruments.

The preference shares constitute equity instruments, since payment of dividends is subject to a decision by a general meeting of the shareholders and a possible redemption (exercising of an embedded call option) of preference shares is on Volvo Car AB's (publ.) initiative. Thus, it is discretionary for the company whether payment of dividends or redemption of these preference shares occurs and consequently no contractual obligation exists to pay out funds. In addition, in the event of conversion of preference shares into ordinary shares, the conversion ratio on Volvo Car Group level is fixed for fixed. A conversion of preference shares to ordinary shares is subject to a decision by the annual general meeting.

**The share capital** consists of 50,000,000 common A-shares and 1 138 794 preference P-shares. Each ordinary A-share carries ten votes, and each preference share carries one vote. A common A-share entitles its holder to a dividend that is determined in due course. All issued shares are fully paid.

In 2016, a directed issue of 500,000 preference shares was made, whereby MSEK 5,000 was added to equity of Volvo Car Group and classified as equity instruments (for more detailed information, see Note 23 – Equity in the Annual report 2016). During 2019 the shares have been redeemed.

In 2019, a directed new issue of 1,138,794 convertible preference shares was made, whereby MSEK 5,011 (reduced by transaction costs) was added to equity of Volvo Car Group.

**The share premium** relates to issue in kind attributable to Zhejiang Geely Holding Group Co., Ltd's acquisition in year 2010. Share pre-

### Share capital trend

| Day | Month | Year | Event | Change in number of shares | Total number of outstanding shares | Par value per share, SEK | Change in share capital, SEK | Total share capital, SEK |
|---|---|---|---|---|---|---|---|---|
| 07 | 06 | 2010 | Start date | 100,000 | 100,000 | 1.00 | 100,000 | 100,000 |
| 04 | 05 | 2016 | Bonus issue | — | 100,000 | 5.00 | 400,000 | 500,000 |
| 22 | 12 | 2016 | Split | 400,000 | 500,000 | 1.00 | — | 500,000 |
| 22 | 12 | 2016 | Bonus issue | 49,500,000 | 50,000,000 | 1.00 | 49,500,000 | 50,000,000 |
| 22 | 12 | 2016 | Directed new issue of preference shares | 500,000 | 50,500,000 | 1.00 | 500,000 | 50,500,000 |
| 16 | 12 | 2019 | Redemption of preference shares | –500,000 | 50,000,000 | 1.00 | –500,000 | 50,000,000 |
| 16 | 12 | 2019 | Directed new issue of preference shares | 1,138,794 | 51,138,794 | 1.00 | 1,138,794 | 51,138,794 |

mium also includes capital received (reduced by transaction costs) in excess of par value of issued capital.

**Other contributed capital** consists of Group contributions from Geely Sweden Holding Group and unconditional shareholders' contribution from Shanghai Geely Zhaoyuan International Investment Co., Ltd.

**The currency translation reserve** comprises exchange rate differences of hedge instruments of net investments in foreign operations and exchange rate differences resulting from the translation of financial reports of foreign operations that have prepared their financial reports in a currency other than Volvo Car Group's reporting currency. The parent company and Volvo Car Group present their financial reports in SEK.

**The other reserve** consists of the change in fair value of cash flow hedging instruments in cases where hedge accounting is applied.

**Retained earnings** comprises net income for the year and preceding years as well as remeasurements of post-employment benefits. Retained earnings also include the effects of business combinations under common control within the Geely Group and dividend to shareholders.

**Non-controlling interests** mainly refers to the share of equity that belongs to Zhejiang Geely Holding Group Co., Ltd without a controlling influence. Volvo Car Group holds 50 per cent of the equity in the following companies; Daqing Volvo Car Manufacturing Co., Ltd, Zhangjiakou Volvo Car Engine Manufacturing Co., Ltd, Shanghai Volvo Car Research and Development Co., Ltd and up until July 2018 Polestar New Energy Vehicle Co., Ltd and has the decision-making power over the operation. In the consolidated financial statements, these companies are classified as subsidiaries and fully consolidated with a non-controlling interest of 50 per cent. The non-controlling interest decreased during the year 2019 due to a dividend paid of MSEK 1,381 (—) from Daqing Volvo Car Manufacturing Co., Ltd to its shareholder Zhejiang Geely Holding Group Co., Ltd. In year 2018 the non-controlling interest increased through a capital contribution to Polestar New Energy Vehicle Co., Ltd with MSEK — (662).

In July 2018, the wholly owned subsidiary Polestar Automotive (Shanghai) Co., Ltd acquired the 50 per cent non-controlling interest in Polestar New Energy Vehicle Co., Ltd, resulting in a divestment of non-controlling interests of MSEK –1,271. See Note 8 – Participation in subsidiaries (Parent company) for further information.

At year end 2019, non-controlling interests amounted to MSEK 9,765 (8,378).

**Total equity** consists of the equity attributable to the owners of the parent company and non-controlling interests. At year end 2019, the Volvo Car Group's total equity amounted to MSEK 63,648 (61,251 ).

## NOTE 23 – POST EMPLOYMENT BENEFITS

### ACCOUNTING PRINCIPLES

***Pension benefits***

Volvo Car Group has various schemes for post-employment benefits, mainly relating to pension plans. Other benefits can in some locations include disability, life insurance and health benefits. Pension plans are classified either as defined contribution plans or defined benefit plans. Volvo Car Group has both defined contribution plans and defined benefit plans for qualifying employees in some subsidiaries and the largest plans are in Sweden and Belgium.

Under a defined contribution plan, Volvo Car Group pays fixed contributions into a separate external legal entity and will have no legal obligation to pay further contributions if the fund does not hold sufficient assets to pay all employee benefits. The contributions are recognised as employee benefit expenses in the income statement when earned by the employee. Some defined contribution plans combine the promise to make periodic payments with a promise of a guaranteed minimum return on investments. Such plans are accounted for as defined benefit plans.

A defined benefit plan is a pension plan that defines the amount of post-employment benefits an employee will receive upon retirement, usually dependent on one or more factors such as age, years of service and compensation. For funded defined benefits plans, plan assets have been separated, with the majority invested in pension foundations. The net pension provision or asset recognised in the balance sheet in respect of defined benefit pension plans is the present value of the defined benefit obligation at the balance sheet date less the fair value of plan assets.

The calculation of the present value of defined benefit pension obligations is performed according to the Projected Unit Credit method, which also considers future earnings. The calculation is performed by independent actuaries. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of high-quality corporate, or when data is not available, government bonds that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating to the terms of the related pension liability. The discount rate for the Swedish pension obligation is determined by reference to mortgage bonds. The most important actuarial assumptions are stated below.

Actuarial gains and losses arising from changes in actuarial assumptions and adjustments based on experience are charged or credited to other consolidated comprehensive income in the period in which they arise. Past service costs are recognised immediately in the income statement when the settlement occurs.

The net interest cost is calculated by applying the discount rate to the net balance of the defined benefit obligation and the fair value of plan assets.

***Termination benefits***

Termination benefits are payable when employment is terminated by the Group before the normal retirement date, or whenever an employee accepts voluntary redundancy in exchange for these benefits. The Group recognises termination benefits at the earlier of the following dates: (a) when the Group can no longer withdraw the offer of those benefits and (b) when the entity recognises costs for a restructuring that involves payment of termination benefits.

## CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

The value of defined benefit obligations is determined through actuarial calculations performed by independent actuaries. The calculations are based on different assumptions and estimates, for instance with regards to the discount rate, future salary increases, inflation, mortality rates and demographic conditions. Changes in these assumptions affect the calculated value of the post-employee benefits obligations. The discount rate, which is the most critical assumption, is based on market return on high-quality corporate or government bonds that are denominated in the currency in which the benefits will be paid and with maturities corresponding to the related pension liability. The discount rate for the Swedish pension obligation is determined by reference to mortgage bonds. A decrease in the discount rate increases the present value of post-employee benefits obligations while an increase in the discount rate has the opposite effect.

Description of the substantial pension schemes within the Group is presented below.

***Sweden***

In Sweden, Volvo Car Group has six retirement plans of which three are funded. The largest plan overall is the Swedish ITP 2 plan which is a collectively agreed pension plan for white collar employees. ITP 2 is a final salary-based plan. Volvo Car Group's defined benefit plans are secured in three ways: as a provision in the balance sheet, assets held in separate pension funds or funded through insurance payments. The "funded through insurance payments" plans are defined benefit plans accounted for as defined contribution plans. In Sweden, these plans are secured with the mutual insurance company Alecta.

The portion secured through insurance with Alecta refers to a defined benefit plan that comprises several employers and is reported according to a pronouncement by the Swedish Financial Reporting Board, UFR 10. For 2019, Volvo Car Group did not have access to the information to report it's proportionate share of the plan's obligations, assets under management and cost, that would make it possible to report this plan as a defined benefit plan. The Group estimates it will pay premiums of about MSEK 172 to Alecta in 2020. The Group's share of the total saving premiums for ITP2 in Alecta as at December 31, 2019 amounted to 0.28 (0.30) per cent and the Group's share of the total number of active policy holders amounted to 1.47 (1.48) per cent.

The collective consolidation level comprises the market value of Alecta's assets as a percentage of the insurance obligations calculated in accordance with Alecta's actuarial methods and assumptions, which do not conform to IAS 19. The collective funding ratio is normally allowed to vary between 125 and 175 per cent. If the consolidation level falls short or exceeds the normal interval one measure may be to increase the contract price for new subscriptions and expanding existing benefits or introduce premium reductions. At year end 2019, the consolidation level amounted to 148 (142) per cent.

In case local legal requirements exist, funded or unfunded plans are credit insured with an external party.

***Belgium***

In Belgium, Volvo Car Group has three retirement – indemnity plans which are all funded. All three are based on the Collective Labour Agreement applicable to the company. The pension plan for white collar employees and the closed plan for blue collar employees who were in service before 2009 are defined benefit plans. The benefits are based on the final salary and seniority within the company. The pension plan for blue collars who are in service as from 2009 is a defined contribution plan. The pension obligations are secured through a transfer of the required funds to a separate pension fund. The funding of the obligations under these defined benefit and defined contribution pension plans is fully externalised through a number of pension funds and through insurance contracts.

In Belgium, Volvo Car Group also has early retirement arrangements (termination benefits – bridge plans) as well as seniority premiums (other long-term benefits). The early retirement arrangements are unfunded and the seniority premiums are funded.

***Summary of provision for post-employment benefits***

The provision for post-employment benefits have been recorded in the balance sheet as follows:

| | Dec 31, 2019 | Dec 31, 2018 |
|---|---|---|
| Post-employment benefits | 12,583 | 8,425 |
| Other provisions (Note 24) | 381 | 337 |
| **Closing balance** | **12,964** | **8,762** |

The tables below show the Group's provision for post employment benefits, the assumptions used to calculate the value of these provisions and the plan assets related to these provisions, as well as the amounts recognised in the income statement. The Group's reported pension provision amounts to MSEK 12,964 (8,762) in total, which includes endowment insurances and similar undertakings amounting to MSEK 381 (337) in respect of defined premium pension plans in Sweden.

| Financial year ending on | Total Dec 31, 2019 | of which Sweden Dec 31, 2019 | of which Belgium Dec 31, 2019 | Total Dec 31, 2018 | of which Sweden Dec 31, 2018 | of which Belgium Dec 31, 2018 |
|---|---|---|---|---|---|---|
| **Amounts recognised in the statement of financial position** | | | | | | |
| Defined benefit obligation | 27,345 | 19,145 | 4,227 | 22,146 | 15,064 | 3,784 |
| Fair value of plan assets | 14,762 | 8,873 | 3,046 | 13,721 | 8,455 | 2,749 |
| **Funded status** | **12,583** | **10,272** | **1,181** | **8,425** | **6,609** | **1,035** |
| **Net provision (asset) as recorded in the balance sheets** | **12,583** | **10,272** | **1,181** | **8,425** | **6,609** | **1,035** |
| **Principal actuarial assumptions** | | | | | | |
| *Weighted average assumptions to determine benefit obligations* | | | | | | |
| Discount rate, % | 1.60 | 1.70 | 0.85 | 2.45 | 2.50 | 1.82 |
| Rate of salary increase, % | 2.97 | 3.00 | 2.91 | 3.09 | 3.00 | 3.16 |
| Rate of price inflation, % | 1.73 | 1.60 | 1.75 | 1.91 | 1.75 | 2.00 |
| Rate of pension indexation, % | 1.73 | 1.60 | N/A | 1.88 | 1.75 | N/A |

The actuarial assumptions are the most significant assumptions applied when calculating the value of a defined benefit pension plan. The Group determines the discount rate based on AA-rated corporate bonds and mortage bonds that match the duration of the obligations. If no such corporate bonds and mortgage bonds are available, government bonds are used.

Inflation assumptions are based on a combination of central banks targets, implicit market expectations and long-term analyst forecasts.

Assumptions regarding future mortality are set based on actuarial advice in accordance with published statistics and experience in each territory. Mortality assumptions for Sweden are based on the DUS14 (white collar) mortality study, and the DUS14 (white collar) mortality table is generational. Mortality assumptions in Belgium is not significant, since there are lump sum payments .

The actuarial assumptions are annually reviewed by Volvo Car Group and modified when deemed appropriate to do so.

| Financial year ending on | Total Dec 31, 2019 | of which Sweden Dec 31, 2019 | of which Belgium Dec 31, 2019 | Total Dec 31, 2018 | of which Sweden Dec 31, 2018 | of which Belgium Dec 31, 2018 |
|---|---|---|---|---|---|---|
| **Change in defined benefit obligation** | | | | | | |
| Defined benefit obligation at end of prior year | 22,146 | 15,064 | 3,784 | 19,653 | 12,916 | 3,450 |
| Service cost | 670 | 688 | –58 | 771 | 565 | 158 |
| Interest expense | 542 | 373 | 70 | 490 | 345 | 56 |
| Cash flows | –571 | –291 | –129 | –554 | –273 | –125 |
| Remeasurements | 4,284 | 3,311 | 490 | 1,500 | 1,511 | 101 |
| Effect of changes in foreign exchange rates | 274 | — | 70 | 286 | — | 144 |
| **Defined benefit obligation at end of year** | **27,345** | **19,145** | **4,227** | **22,146** | **15,064** | **3,784** |
| **Change in fair value of plan assets** | | | | | | |
| Fair value of plan assets at end of prior year | 13,721 | 8,455 | 2,749 | 13,128 | 8,135 | 2,458 |
| Interest income | 346 | 211 | 53 | 446 | 220 | 153 |
| Cash flows | –21 | — | 61 | 422 | 450 | 55 |
| Remeasurements | 477 | 207 | 132 | –475 | –350 | –20 |
| Effect of changes in foreign exchange rates | 239 | — | 51 | 200 | — | 103 |
| **Fair value of plan assets at end of year** | **14,762** | **8,873** | **3,046** | **13,721** | **8,455** | **2,749** |
| **Components of defined pension cost** | | | | | | |
| Service cost | 670 | 688 | –58 | 771 | 565 | 158 |
| Net interest cost | 196 | 162 | 17 | 44 | 125 | –97 |
| Remeasurements of Other long term benefits | 28 | — | 25 | 52 | — | 50 |
| Administrative expenses and taxes | 24 | — | 21 | 22 | — | 18 |
| **Total pension cost for defined benefit plans** | **918** | **850** | **5** | **889** | **690** | **129** |
| Pension cost for defined contribution plans | 3,315 | 2,748 | 271 | 3,095 | 2,624 | 266 |
| **Total pension cost recognised in P&L** | **4,233** | **3,598** | **276** | **3,984** | **3,314** | **395** |
| Remeasurements (recognised in other comprehensive income) | 3,780 | 3,105 | 333 | 1,925 | 1,861 | 73 |
| Effect of changes in demographic assumptions | 13 | — | — | 74 | — | 78 |
| Effect of changes in financial assumptions | 3,617 | 2,756 | 388 | 455 | 651 | –91 |
| Effect of experience adjustments | 625 | 555 | 76 | 920 | 861 | 64 |
| Return on plan assets (excluding interest income) | –475 | –206 | –131 | 476 | 349 | 22 |
| **Total defined benefit cost recognised in P&L and OCI** | **4,698** | **3,955** | **338** | **2,814** | **2,551** | **202** |

| Financial year ending on | Total Dec 31, 2019 | of which Sweden Dec 31, 2019 | of which Belgium Dec 31, 2019 | Total Dec 31, 2018 | of which Sweden Dec 31, 2018 | of which Belgium Dec 31, 2018 |
|---|---|---|---|---|---|---|
| **Net defined benefit provision (asset) reconciliation** | | | | | | |
| Net defined benefit provision (asset) | 8,425 | 6,609 | 1,035 | 6,525 | 4,781 | 992 |
| Defined benefit cost included in the income statement | 918 | 850 | 5 | 889 | 690 | 129 |
| Total remeasurements included in OCI | 3,780 | 3,105 | 333 | 1,925 | 1,861 | 73 |
| Cash flows | –576 | –292 | –211 | –1,000 | –723 | –200 |
| Employer contributions | –225 | — | –180 | –660 | –450 | –167 |
| Employer direct benefit payments | –331 | –292 | –31 | –340 | –273 | –33 |
| Effect of changes in foreign exchange rates | 36 | — | 19 | 86 | — | 41 |
| **Net defined benefit provision (asset) as of end of year** | **12,583** | **10,272** | **1,181** | **8,425** | **6,609** | **1,035** |
| **Defined benefit obligation** | | | | | | |
| Defined benefit obligation by participant status | | | | | | |
| Actives | 16,982 | 11,807 | 3,589 | 13,289 | 8,873 | 3,107 |
| Vested deferreds | 4,854 | 3,391 | 458 | 3,903 | 2,718 | 385 |
| Retirees | 5,509 | 3,947 | 180 | 4,954 | 3,473 | 292 |
| **Total** | **27,345** | **19,145** | **4,227** | **22,146** | **15,064** | **3,784** |

### *Plan assets*

| Fair value of plan assets | 2019 | 2018 | Of which with a quoted market price 2019 | Of which with a quoted market price 2018 |
|---|---|---|---|---|
| Cash and cash equivalents | 479 | 360 | 479 | 360 |
| Equity instruments | 1,949 | 1,511 | 1,949 | 1,511 |
| Debt instruments | 2,793 | 1,920 | 2,793 | 1,808 |
| Real estate | 138 | 159 | 9 | 10 |
| Investment funds | 7,824 | 8,353 | 7,343 | 7,194 |
| Other | 1,579 | 1,418 | 1,562 | 1,418 |
| **Total** | **14,762** | **13,721** | **14,135** | **12,301** |

Responsibility for the management of the pension plans rest with the Group and therefore pension funds have been set up in different countries. Assets are held by long-term employee benefit funds that is legally separate from the Group.

These assets are available to fund employee benefits only. Sweden, Belgium and United Kingdom have the largest pension funds. The pension funds are managed in accordance with a capital preservation strategy where the risk exposure is adjusted accordingly. The investment strategy is long term and the distribution of assets ensures that investment portfolios are well diversified. Capital is managed in accordance with the investment policies of the pension funds. Continuous monitoring is performed by the trustees monthly to ensure that capital is allocated and managed according to the investment policies. In Sweden the minimum funding target is decided by PRI Pensionsgaranti.

Volvo Car Group has a wholly-owned subsidiary, VCG Investment Management AB ("VCGIM") to manage the Group's pension fund assets. VCGIM is regulated and authorised by the Swedish Financial Supervisory Authority to perform Investment Advisory and Discretionary Portfolio Management Services.

The actual return on plan assets amounts to MSEK 824 (–139).

### Risks

There are mainly three categories of risks related to defined benefit obligations and pension plans. The first category relates to risks affecting the actual pension payments. Increased longevity and inflation of salary and pensions are the principle risks that may increase the future pension payments and hence, increase the pension obligation. The second category relates to investment return. Pension plan assets are invested in a variety of financial instruments and are exposed to market fluctuations. Poor investment return may reduce the value of investments and render them insufficient to cover future pension payments. The final category relates to the discount rate used to measuring the obligation and the plan assets. The discount rate used for measuring the present value of the obligation may fluctuate which impacts the valuation of the defined benefit obligation. The discount rate also impacts the value of the interest income and expense that is reported in the financial items and the service cost. The risk related to pension obligations, i.e. mortality exposure, discount rate and inflation, are monitored on an ongoing basis.

| Sensitivity analysis on defined benefit obligation | Sweden | Belgium |
|---|---|---|
| Discount rate +0,5% | –2,082 | –239 |
| Discount rate –0,5% | 2,354 | 270 |
| Inflation rate +0,5 % | 2,354 | 156 |
| Inflation rate –0,5% | –2,082 | –146 |

The weighted average duration of the obligation is 23.1 years for Sweden and 12 years for Belgium.

## NOTE 24 – CURRENT AND OTHER NON–CURRENT PROVISIONS

### ACCOUNTING PRINCIPLES

***Provisions***

Provisions are recognised in the balance sheet when a legal or constructive obligation exists as a result of a past event and it is deemed more likely than not that an outflow of resources will be required to settle the obligation and the amount can be reliably estimated.

**Warranties**

Warranty provisions include the Group's cost of satisfying the customers with specific contractual warranties, as well as other costs not covered by standard contractual commitments. All warranty provisions are recognised at the sale of the vehicles or spare parts. The initial calculations of the reserves are based on historical warranty statistics considering known quality improvements, costs for remedy of defaults etc. The warranty provision booked at point of sale is adjusted as campaign decisions for specific quality problems are made. On a quarterly basis the provisions are adjusted to reflect latest available data such as actual spend, exchange rates, discounting rates etc. The provisions are reduced by virtually certain warranty reimbursements from suppliers

### CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

***Provisions***

The amount recognised as provision is the best estimate of the expenditure required to settle the present obligation at the balance sheet date. Provisions are regularly reviewed and adjusted as further information becomes available or circumstances change. If the effect of the time value of money is material, non-current provisions are recognised at present value by discounting the expected future cash flows at a pre-tax rate reflecting current market assessments of the time value of money. The discount rate does not reflect such risks that are taken into consideration in the estimated future cash flow. Revisions to estimated cash flows (both amount and likelihood) are allocated as operating cost. Changes to present value due to the passage of time and revisions of discount rates to reflect prevailing current market conditions are recognised as a financial cost.

**Warranties**

The recognition and measurement of provisions for product warranties is generally connected with estimates. Estimated costs for product warranties are charged to cost of sales when the products are sold. Estimated warranty costs include contractual warranty, warranty campaigns (recalls and buy-backs) and warranty cover in excess of contractual warranty or campaigns, which is accepted as a matter of policy or normal practice in order to maintain a good business relation with the customer. Warranty provisions are estimated based on historical claims statistics and the warranty period. Quality index improvements based on historical patterns have been reflected in all categories of warranty. Refunds from suppliers that decrease Volvo Car Group's warranty costs are recognised to the extent these are considered to be virtually certain, based on historical experience.

| | Warranties | Other provisions | Total |
|---|---|---|---|
| **Balance at 1 January 2018** | **8,467** | **3,007** | **11,474** |
| Provided for during the year | 6,662 | 4,606 | **11,268** |
| Utilised during the year | –4,702 | –4,579 | **–9,281** |
| Reversal of unutilised amounts | –559 | –83 | **–642** |
| Translation differences and other | 257 | 49 | **306** |
| **Balance at December 31, 2018** | **10,125** | **3,000** | **13,125** |
| Of which current | 4,706 | 2,230 | **6,936** |
| Of which non-current | 5,419 | 770 | **6,189** |

| | Warranties | Other provisions | Total |
|---|---|---|---|
| **Balance at 1 January 2019** | **10,125** | **3,000** | **13,125** |
| Provided for during the year | 6,755 | 4,992 | **11,747** |
| Utilised during the year | –5,701 | –3,265 | **–8,966** |
| Reversal of unutilised amounts | –50 | –511 | **–561** |
| Translation differences and other | 264 | 39 | **303** |
| **Balance at December 31, 2019** | **11,393** | **4,255** | **15,648** |
| Of which current | 4,972 | 3,385 | **8,357** |
| Of which non-current | 6,421 | 870 | **7,291** |

## NOTE 25 – CURRENT AND NON–CURRENT CONTRACT LIABILITIES TO CUSTOMERS

### ACCOUNTING PRINCIPLES

Contract liabilities to customers are obligations related to contracts with customers. Changes in the income statement to those obligations are recorded in Revenue. The amounts include transactions where the Group either;

- Has an obligation to transfer goods or services to the customer for which the Group has received consideration (or an amount of consideration is due). This is the case of Deferred revenue – extended service business, Deferred revenue – sales with repurchase commitment (recorded as an operating lease) as well as of Advance payments from customers.
- Has transferred goods or services to the customer but a sales generated obligation is yet to be paid out or settled by the Group.

| | Sales generated obligations | Deferred revenue – extended service business | Deferred revenue – sale with repurchase commitment | Advance payments from customers | Total |
|---|---|---|---|---|---|
| **Balance at 1 January 2018** | **11,840** | **3,370** | **1,708** | **1,252** | **18,170** |
| Provided for during the year | 38,161 | 2,547 | 4,674 | 1,311 | **46,693** |
| Utilised during the year | –35,767 | –2,208 | –5,088 | –957 | **–44,020** |
| Translation differences and other | 489 | 243 | 120 | — | **852** |
| **Balance at 31 December 2018** | **14,723** | **3,952** | **1,414** | **1,606** | **21,695** |
| | | | | | |
| Of which current | 14,162 | 1,421 | 973 | 955 | 17,511 |
| Of which non-current | 561 | 2,530 | 443 | 650 | 4,184 |
| | | | | | |
| **Balance at 1 January 2019** | **14,723** | **3,952** | **1,414** | **1,606** | **21,695** |
| Provided for during the year | 30,432 | 3,683 | 4,390 | 1,084 | **39,589** |
| Utilised during the year | –27,550 | –2,914 | –4,797 | –955 | **–36,216** |
| Translation differences and other | 509 | 195 | –84 | — | **620** |
| **Balance at 31 December 2019** | **18,114** | **4,916** | **923** | **1,735** | **25,688** |
| | | | | | |
| Of which current | 17,264 | 1,765 | 737 | 712 | 20,478 |
| Of which non-current | 850 | 3,151 | 186 | 1,023 | 5,210 |

***Sales generated obligations***
Sales generated obligations refer to all variable marketing programmes not effectuated on the balance sheet date, including discounts and residual value guarantees.

***Deferred revenue – extended service business***
Volvo Car Group is on some markets offering service contracts to customers. This is normally referred to as Extended Service Business. The customer signs up for regular services, paid for upfront or by monthly payments. The contracts can also be a marketing promotion.

***Deferred revenue – sale with repurchase commitment***
Deferred revenue – sale with repurchase commitment, is recognised as an operating lease contract, where the revenue is recognised over the contract period.

***Advance payments from customers***
Advance payments from customers refer to payments related to customer contracts where Volvo Car Group has received a payment in advance of transfer of control over the product or service.

## NOTE 26 – OTHER NON–CURRENT LIABILITIES

| | Dec 31, 2019 | Dec 31, 2018 |
|---|---|---|
| Liabilities related to repurchase commitments | 977 | 1,307 |
| Derivative liabilities | 2,455 | 1,610 |
| Participation in joint venture company[1)] | 210 | 103 |
| Other liabilities | 1,271 | 1,589 |
| **Total** | **4,913** | **4,609** |

1) For further information, see Note 13 – Investments in joint ventures and associates.

## NOTE 27 – OTHER CURRENT LIABILITIES

| | Dec 31, 2019 | Dec 31, 2018 |
|---|---|---|
| Accrued expenses and prepaid income | 10,233 | 10,091 |
| Liabilities related to repurchase commitments | 10,552 | 7,869 |
| Personnel related liabilities | 5,643 | 5,026 |
| VAT liabilities | 2,590 | 2,790 |
| Derivative liabilities | 3,454 | 1,841 |
| Other liabilities | 3,073 | 3,898 |
| **Total** | **35,545** | **31,515** |

## NOTE 28 – PLEDGED ASSETS

| | Dec 31, 2019 | Dec 31, 2018 |
|---|---|---|
| Restricted cash | 330 | 340 |
| Inventory | 374 | 311 |
| Real estate mortgages | 168 | 161 |
| Floating charges | 205 | 154 |
| Other pledged assets | 679 | 666 |
| **Total** | **1,756** | **1,632** |

## NOTE 29 – CONTINGENT LIABILITIES

### ACCOUNTING PRINCIPLES

When a possible obligation does not meet the criteria for recognition as a liability it may be disclosed as a contingent liability. These possible obligations derive from past events and their existence will be confirmed only when one or several uncertain future events, which are not entirely within Volvo Car Group's control, take place or fail to take place. A contingent liability could also exist for a present obligation, due to a past event, where an outflow of resources is less likely (<50 per cent) or when the amount of the obligation cannot be reliably measured.

### CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

***Legal proceedings***

Companies within Volvo Car Group may at times be involved in legal proceedings. Such proceedings may cover a range of different matters in various jurisdictions. These include, but are not limited to, commercial disputes such as alleged breach of contract, insufficient supplies of goods or services, product liability, patent infringement or infringement of other intangible rights. The various matters raised are often of a difficult and complex nature and often legally complicated. It is therefore difficult to predict the final outcome of such matters. The companies within Volvo Car Group work closely with legal advisors and other experts in the various matters in each jurisdiction. A provision is made when it is determined that an adverse outcome is more likely than not and the amount of the loss can be reliably estimated. In instances where these criteria are not met, a contingent liability has been disclosed provided the risk qualifies as such liability.

***Tax processes***

Volvo Car Group is, like other global companies, at times involved in tax processes of varying scope and in various stages. These tax processes are evaluated regularly and provisions are made when it is more likely than not that additional tax must be paid and the outcome can be reliably estimated. If it is not probable that the additional tax will be paid but the risk is more than remote, such amounts are disclosed as contingent liabilities.

| | Dec 31, 2019 | Dec 31, 2018 |
|---|---|---|
| Guarantees to insurance company FPG | 164 | 150 |
| Legal claims | 48 | 111 |
| Tax claims[1)] | 423 | 315 |
| Guarantee commitments | 76 | 33 |
| Other contingent liabilities[2)] | 162 | 118 |
| **Total** | **873** | **727** |

1) In addition to the contingent liabilities related to tax claims there are also tax related contingent assets amounting to MSEK — (33).
2) Apart from the above contingent liabilities, there are other commitments and guarantees that are not recognised since the likelihood of an outflow of resources is very low.

## NOTE 30 – CASH FLOW STATEMENTS

| | 2019 | 2018 |
|---|---|---|
| **Adjustments for items not affecting cash flow consist of:** | | |
| Capital gains/losses on sale of tangible and intangible assets | 388 | 772 |
| Share of income in joint ventures and associates | 168 | –67 |
| Interest effect from the measurement of repurchase obligations | –187 | –185 |
| Provision for variable pay | 1,035 | 334 |
| Provision for repurchase commitments | –23 | –110 |
| Deferred income | –3,011 | –2,566 |
| Inventory impairment | 171 | 92 |
| Elimination of intra-group profit[1] | 891 | 1,252 |
| Effects of the Polestar Group deconsolidation | — | 280 |
| IFRS 16 Adjustments | –1,354 | — |
| Other non-cash items | –493 | 266 |
| **Total** | **–2,415** | **68** |

1) Reclassification of Research and development expenses (related to amortisation of intangible assets sold to Polestar) to Cost of sales amounted to MSEK 1,195 in 2018.

| | | Cash flows | Non-cash changes | | | | |
|---|---|---|---|---|---|---|---|
| **Change in net cash** | **Jan 1, 2018** | | Reclassi-fications | Foreign exchange movement | Fair value changes | Other non-cash changes | **Dec 31, 2018** |
| Cash and cash equivalents | 35,402 | 3,962 | — | 806 | — | — | 40,170 |
| Marketable securities | 3,992 | –2,558 | — | 144 | –1 | — | 1,577 |
| Liabilities to credit institutions (non-current) | –6,622 | –2,706 | 1,559 | –412 | — | –92 | –8,273 |
| Bonds[2] | –12,749 | — | — | –413 | –28 | 4 | –13,186 |
| Other interest-bearing non-current liabilities | –84 | — | — | — | — | — | –84 |
| Liabilities to credit institutions (current) | –7,426 | 6,940 | –1,559 | –112 | — | –18 | –2,175 |
| **Net cash** | **12,513** | **5,638** | **—** | **13** | **–29** | **–106** | **18,029** |

| **Change in net cash** | **Jan 1, 2019** | | | | | | **Dec 31, 2019** |
|---|---|---|---|---|---|---|---|
| Cash and cash equivalents | 40,170 | 10,742 | — | 1,085 | — | — | 51,997 |
| Marketable securities | 1,577 | 1,985 | — | –47 | 3 | — | 3,518 |
| Liabilities to credit institutions (non-current) | –8,273 | 497 | 3,562 | –299 | — | 25 | –4,489 |
| Bonds[2] | –13,186 | –8,221 | — | –211 | –6 | 1 | –21,623 |
| Other interest-bearing non-current liabilities | –84 | — | — | — | — | — | –84 |
| Liabilities to credit institutions (current) | –2,175 | 1,696 | –3,562 | –76 | — | 11 | –4,105 |
| **Net cash** | **18,029** | **6,699** | **—** | **452** | **–3** | **37** | **25,214** |

2) The bonds are presented above at amortised cost. The MEUR 500 fixed interest rate bond issued in May 2016, is hedged into a variable interest rate bond, hence a part of the bond is valued at fair value through the income statement, amounting to MSEK 20 (14) and the remaining part is valued at amortised cost.

## NOTE 31 – BUSINESS COMBINATIONS

### ACCOUNTING PRINCIPLES

In a business combination Volvo Car Group measures all acquired identifiable assets and liabilities at fair value. Any surplus amount from the purchase price, possible non-controlling interest and fair value of previously held equity interests at the acquisition date compared to Volvo Car Group's share of acquired net assets is recognised as goodwill. Any deficit amount (bargain purchase), so called negative goodwill, is directly recognised as income in the income statement. In step acquisitions, a business combination occurs only on the date control is achieved. Transactions with the non-controlling interest are recognised within equity as long as control of the subsidiary is retained.

All acquisition-related transaction costs are expensed. Companies acquired are consolidated as of the date of acquisition. Companies that have been divested are included in the consolidated financial statements up to and including the date of the divestment. All business combinations are recognised in accordance with the acquisition method.

### CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

One area of critical judgement, relevant to Volvo Car Group is the one of common control, a situation where there is an acquisition between parties under common control. This means the acquired company has the same ultimate parent as the acquiring company. The standard is silent on the subject and Volvo Car Group has therefore made a policy choice when it comes to handle common control transactions. Volvo Car Group has elected to apply predecessor accounting, meaning that the acquirer consolidates the predecessors respective carrying values for assets and liabilities. These are the carrying values that are related to the acquired entity from the consolidated financial statements of the highest entity that has common control and for which consolidated financial statements are prepared. When applying predecessor accounting, Volvo Car Group has chosen to include acquired entities under common control for the entire period and not only from the transaction date. Adjustment is also made for the comparative period. Hence, the consolidated financial statements include the acquired entity's results as if both entities (acquirer and acquire) have always been combined. These consolidated financial statements will reflect both entities' full year's results. The corresponding amounts for the previous years also reflect the combined results of both entities, even though the transaction did not occur until the current year. The effect in the opening balance of the comparative period is accounted for directly in equity.

In 2018, Volvo Car Group derecognised the Polestar business, i.e. Polestar Automotive (Shanghai) Co., Ltd and its wholly-owned subsidiaries. Derecognition was made from the date that control of these subsidiaries ceased, subsequent to an assessment of level of ownership and contractual arrangements between the owners. In the case of Polestar control ceased as an effect of the Geely Group subscribing for 50 per cent of the equity in Polestar Automotive (Shanghai) Co., Ltd, the parent company in the Polestar Group, combined with joint control contractual arrangements. In the consolidated balance sheets, Polestar Group´s assets and liabilities have been derecognised, and replaced by an investment in joint venture.

The investment retained in Polestar Group were recognised at its fair value at the date when control were lost. The difference between fair value and carring value was recognised directly in equity, as this was a transaction with the owner, a common control transaction. The remeasured value at the date control was lost, is regarded as the cost on initial recognition of the investment in the joint venture.

In 2018 and 2019, subsequent to initial recognition of the investment in the joint venture, Geely Group injected capital into Polestar Automotive (Shanghai) Co., Ltd. As these capital injections were an integrated part of above common control transaction, the capital injection by Geely Group increased Volvo Car Group's investment in the joint venture, and increased equity in Volvo Car Group, reflected as transaction with the owner.

***Adoption of preliminary acquistion analysis***

An acquistion analysis is preliminary until adopted which must take place within twelve months from the acquisition.

The preliminary acquisition analysis previously recognised for Fastighetsbolag Sörred 8:9 AB and Volvo Car Real Estate and Assets 3 AB was adopted in 2019.

## NOTE 32 – SEGMENT REPORTING

### ACCOUNTING PRINCIPLES

Operating segments are defined as parts of the Group for which separate financial information is available and is evaluated regularly by the Chief operating decision-making body how to allocate resources and in assessing performance.

The automotive business includes all activities related to development, design, manufacturing, assembly and sale of vehicles, as well as sale of related parts and accessories from which the Group derives its revenues. Volvo Car Group is managed by the Executive management team (EMT) with 12 members, led by the CEO and overseen by the Board of Directors. EMT takes all significant operating decisions and members of EMT have the responsibility for implementation of decisions in their respective areas. The operating decision-making is at EMT level as a whole and Volvo Car Group consider the EMT to be the Chief operating decision-making body. All substantial decisions regarding allocation of resources as well as the assessment of the performance is based on the Group as a whole.

### CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

The regional organisation is not considered to constitute reporting segments. The main purpose of the regional organisation is to emphasise the responsibility for the regional market from a sales perspective, with an increased focus on sales with more direct involvement from Group Management. All substantial decisions regarding allocation of resources as well as the assessment of the performance is based on the group as a whole. The allocation of resourses is not done by regions, but rather directly to individual markets. Therefore Volvo Car Group is considered to have only one operating segment.

For further information of the geographic spread of revenue, see Note 2 – Revenue. The geographic spread of non-current assets is disclosed below.

| | Sweden | China | Rest of the World |
|---|---|---|---|
| **Dec 31, 2019** | | | |
| Non-current assets | 65% | 15% | 20% |
| **Dec 31, 2018** | | | |
| Non-current assets | 66% | 15% | 19% |

# Definitions of Performance Measures

Performance measures disclosed in the annual report are those that are deemed to give the most true and fair as well as relevant view of Volvo Car Group's financial performance for a reader of the annual report.

**Gross margin**
Gross margin is Gross income as a percentage of revenue and represents the percent of total revenue that Volvo Cars retains after incurring the direct costs associated with producing the goods and services sold.

**EBIT**
EBIT represents earnings before interest and taxes. EBIT is synonymous with operating income which measures the profit Volvo Car Group generates from its operations.

**EBIT margin**
EBIT margin is EBIT as a percentage of revenue and measures Volvo Car Group's operating efficiency.

**EBITDA**
EBITDA represents earnings before interest, taxes, depreciations and amortisation, and is another measurement of the operating performance. It measures the profit Volvo Car Group generate from its operations without effect from previous periods capitalisation levels.

**EBITDA margin**
EBITDA margin is EBITDA in percentage of revenue.

**Equity ratio**
Total equity divided by total assets, is a measurement of Volvo Car Group's long-term solvency and financial leverage.

**Net cash**
Net cash is an indicator of Volvo Car Group's ability to meet its financial obligations. It is represented by liabilities to credit institutions, bonds and other interest-bearing non-current liabilities.

**Liquidity**
Liquidity consist of cash and cash equivalents, undrawn credit facilities and marketable securities.

**Revenue**
Revenue is the sales price for goods or services net of discounts and certain variable marketing expenses.

## RECONCILIATION TABLES OF PERFORMANCE MEASURES

| Gross Margin | 2019 | 2018 |
|---|---|---|
| **Gross income in % of revenue** | **19.0** | **19.5** |

| EBIT Margin | 2019 | 2018 |
|---|---|---|
| **Operating income (EBIT) in % of revenue** | **5.2** | **5.6** |

| EBITDA/EBITDA Margin | 2019 | 2018 |
|---|---|---|
| Operating income | 14,303 | 14,185 |
| Depreciation and amortisation of non-current assets | 15,548 | 13,213 |
| **EBITDA** | **29,851** | **27,398** |
| **EBITDA in % of revenue** | **10.9** | **10.8** |

| Equity ratio | Dec 31, 2019 | Dec 31, 2018 |
|---|---|---|
| Total equity | 63,648 | 61,251 |
| Total assets | 241,564 | 211,234 |
| **Equity in % total assets** | **26.3** | **29.0** |

| Net cash | Dec 31, 2019 | Dec 31, 2018 |
|---|---|---|
| Cash and cash equivalents | 51,997 | 40,170 |
| Marketable securities | 3,518 | 1,577 |
| Liabilities to credit institutions (non-current) | –4,489 | –8,273 |
| Bonds[1] | –21,623 | –13,186 |
| Other non-current interest-bearing liabilities | –84 | –84 |
| Liabilities to credit institutions (current) | –4,105 | –2,175 |
| **Net cash[2)]** | **25,214** | **18,029** |

1) The bond loans are presented above at amortised cost. The MEUR 500 fixed interest rate bond issued in May 2016, is hedged into a variable interest rate bond, hence a part of the bond is valued at fair value through the income statement, amounting to MSEK 20 (14) and the remaining part is valued at amortised cost.
2) The net cash calculation excludes financial liabilities related to the new leasing standard IFRS 16 amounting to MSEK –6,065.

| Liquidity | Dec 31, 2019 | Dec 31, 2018 |
|---|---|---|
| Cash and cash equivalents | 51,997 | 40,170 |
| Marketable securities | 3,518 | 1,577 |
| Undrawn credit facilities | 13,593 | 13,328 |
| **Liquidity** | **69,108** | **55,075** |

# Income Statements and Comprehensive Income – Parent Company

| MSEK | Note | 2019 | 2018 |
|---|---|---|---|
| Administrative expenses | 3, 4, 5 | –19 | –12 |
| **Operating income** | | **–19** | **–12** |
| | | | |
| Income from participation in subsidiaries | 3 | 11,280 | — |
| Financial income | 3, 6 | 555 | 345 |
| Financial expenses | 3, 4, 6 | –599 | –770 |
| **Income before tax** | | **11,217** | **–437** |
| | | | |
| Income tax | 7 | 14 | –80 |
| **Net income** | | **11,231** | **–517** |

Other comprehensive income and Net income are consistent since there are no items in other comprehensive income.

# Balance Sheets – Parent Company

| MSEK | Note | Dec 31, 2019 | Dec 31, 2018 |
|---|---|---|---|
| **ASSETS** | | | |
| **Non-current assets** | | | |
| Participation in subsidiaries | 8 | 10,267 | 10,267 |
| Deferred tax assets | 7 | 2,082 | 2,068 |
| Receivables from group companies | 3 | 21,662 | 13,208 |
| **Total non-current assets** | | **34,011** | **25,543** |
| | | | |
| **Current assets** | | | |
| Receivables from group companies | 3 | 3,852 | 4,650 |
| Other current assets | | 35 | 59 |
| Cash and cash equivalents | | 3 | — |
| **Total current assets** | | **3,890** | **4,709** |
| **TOTAL ASSETS** | | **37,901** | **30,252** |
| | | | |
| **EQUITY & LIABILITIES** | | | |
| **Equity** | 9 | | |
| *Restricted equity* | | | |
| Share capital (51,138,794 shares with par value of 1 SEK) | | 51 | 51 |
| | | **51** | **51** |
| *Non-restricted equity* | | | |
| Share premium reserve | | 11,497 | 11,405 |
| Retained earnings | | –6,901 | –4,024 |
| Net income | | 11,231 | –517 |
| | | **15,827** | **6,864** |
| **Total equity** | | **15,878** | **6,915** |
| | | | |
| **Non-current liabilities** | | | |
| Bonds | 10 | 21,638 | 13,208 |
| Non-current liabilities to group companies | 3 | — | 9,645 |
| Other non-current liabilities | | 122 | 312 |
| **Total non-current liabilities** | | **21,760** | **23,165** |
| | | | |
| **Current liabilities** | | | |
| Liabilities to group companies | 3 | 2 | 6 |
| Accrued expenses and prepaid income | | 261 | 166 |
| **Total current liabilities** | | **263** | **172** |
| **TOTAL EQUITY & LIABILITIES** | | **37,901** | **30,252** |

# Changes in Equity – Parent Company

| MSEK | Restricted equity<br>Share capital[1] | Non-restricted equity<br>Share premium reserve | Other contributed capital | Retained earnings | Total |
|---|---|---|---|---|---|
| **Balance at January 1, 2018** | **51** | **11,405** | **–3,564** | **–461** | **7,431** |
| **Net income for the year** | **—** | **—** | **—** | **–517** | **–517** |
| **Transactions with owners** | | | | | |
| Received Group contribution | — | — | 64 | — | **64** |
| Dividend to shareholders | — | — | — | –63 | **–63** |
| **Balance at December 31, 2018** | **51** | **11,405** | **–3,500** | **–1,041** | **6,915** |
| **Net income for the year** | **—** | **—** | **—** | **11,231** | **11,231** |
| **Transactions with owners** | | | | | |
| Issue of preference shares | 1 | 4,988 | — | — | **4,989** |
| Redemption of preference shares | –1 | –4,896 | — | –848 | **–5,745** |
| Dividend to shareholders | — | — | — | –1,512 | **–1,512** |
| **Balance at December 31, 2019** | **51** | **11,497** | **–3,500** | **7,830** | **15,878** |

1) Share capital amounts to SEK 51.138.794 (50,500,000)

# Statement of Cash Flows – Parent Company

| MSEK | Note | 2019 | 2018 |
|---|---|---|---|
| **OPERATING ACTIVITIES** | | | |
| Operating income | | –19 | –12 |
| Interest received | | 428 | — |
| Interest paid | | –492 | –60 |
| Other financial items | | –14 | –224 |
| | | **–97** | **–296** |
| *Movements in working capital* | | | |
| Change in current receivables group companies | 3 | 905 | 307 |
| Change in current receivables | | — | –57 |
| Change in current liabilities group companies | 3 | –4 | 6 |
| Change in liabilities | | –190 | 103 |
| **Cash flow from movements in working capital** | | **711** | **359** |
| **Cash flow from operating activities** | | **614** | **63** |
| **Cash flow from investing activities** | | **—** | **—** |
| **Cash flow from operating and investing activities** | | **614** | **63** |
| **FINANCING ACTIVITIES** | | | |
| Proceeds from bond issuance | 10 | 8,221 | — |
| Change in non current receivables group companies | 10 | –8,221 | — |
| Amortisation of non current liabilities group companies | 3 | –9,645 | — |
| Dividend received from subsidiary | 3 | 11,280 | — |
| Dividend paid to shareholders | 3 | –1,512 | –63 |
| Proceeds from preference shares issuance | 9 | 5,011 | — |
| Redemption of preference shares | 9 | –5,745 | — |
| **Cash flow from financing activities** | | **–611** | **–63** |
| **Cash flow for the year** | | **3** | **—** |
| **Cash and cash equivalents at beginning of year** | | **—** | **—** |
| **Cash and cash equivalents at end of year** | | **3** | **—** |

# Notes to The Parent Company Financial Statements

All amounts are in MSEK unless otherwise stated.
Amounts in brackets refer to the preceding year.

## NOTE 1 – SIGNIFICANT ACCOUNTING PRINCIPLES

**Basis of preparation**

The Parent company has prepared its financial statements in accordance with the Swedish Annual Accounts Act (1995:1554) and RFR 2, Accounting for Legal entities. According to RFR 2, the Parent company shall apply all the international financial Reporting standards endorsed by the EU as far as this is possible within the framework of the Swedish Annual Accounts Act. Changes in RFR 2 applicable to the fiscal year beginning January 1, 2019, have had no material impact on the financial statements of the Parent company.

All specific accounting principles considered material to Volvo Car Group is described in conjunction with each presented note in the consolidated financial statements. The main deviations between the accounting policies applied by the Volvo Car Group and the Parent company are described below.

***Shares and participations in Group companies***

Shares and participations in Group companies are recognised at cost in the Parent company's balance sheet and test for impairment is performed annually. Dividends are recognised in the income statement. All shares and participations are related to business operations and profit and loss from these are reported within operating income.

Transaction costs directly attributable to acquisitions of shares and participations in Group companies are accounted for as an increase in the carrying amount.

Group contributions made to subsidiaries are reported as an increase of investments in these subsidiaries. A review is at the same time made to conclude whether or not there is an impairment risk with regards to the same shares of the subsidiaries having received the group contribution. Tax effect of these group contributions are recgonised in the income statement. Group contributions made to parent company are recgonised in equity, along with the tax effect. Received group contributions from subsidiaries are recgonised as financial income. Tax effect on received group contributions are recgonised in the income statement. Received group contributions from parent company are recorded in equity, along with the tax effect.

Made shareholders' contributions are recognised in shares in subsidiaries and as such they are subject to impairment testing.

***Income taxes***

Deferred tax liability on untaxed reserves are included in untaxed reserves in the parent company.

***Equity***

In accordance with the Swedish Annual Accounts Act, equity is split between restricted and non-restricted equity.

## NOTE 2 – CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

Preparation of the financial statements in accordance with the Swedish Annual Accounts Act (1995:1554) and RFR 2 requires the Company's Executive management and Board of Directors to make estimates and judgements as well as to make assumptions that affect application of the accounting policies and the reported assets, liabilities, income and expenses. Critical accounting estimates and judgements applied by the Volvo Car Group are described in conjunction with applicable note in the consolidated financial statements. None of these critical accounting estimates are applicable to the parent company. Shares and participations in Group companies recognised at cost in the Parent company are being tested for impairment annually or if an indication of impairment exists.

## NOTE 3 – RELATED PARTIES

During the year, the parent company entered into the following transactions with related parties:

| | Sales of goods, services and other | | Purchase of goods, services and other | |
|---|---|---|---|---|
| | **2019** | 2018 | **2019** | 2018 |
| Companies within the Volvo Car Group | 100% | 100% | 10% | 6% |

| | Receivables | | Payables | |
|---|---|---|---|---|
| | **Dec 31, 2019** | Dec 31, 2018 | **Dec 31, 2019** | Dec 31, 2018 |
| Companies within the Volvo Car Group | 25,449 | 17,794 | 2 | 9,651 |
| *whereof short-term* | *3,787* | *4,586* | *2* | *6* |
| Companies within the Geely Sweden Holdings Group | 65 | 64 | — | — |
| *whereof short-term* | *65* | *64* | — | — |

Business transactions between the parent company and related parties all arise during the normal course of business and are conducted on the basis of arm's length principles. During 2019, Volvo Car AB (publ.) has received group contribution from subsidiaries of MSEK 15 (—) and MSEK — (64) from its shareholder, Geely Sweden Holdings AB. Volvo Car AB (publ.) has received dividend of MSEK 11,280 (—) from its subsidiary, Volvo Car Corporation, and paid dividend of MSEK 1,387 (—) to its shareholder Geely Sweden Holdings AB and MSEK 125 (63) to its preference shareholders. Volvo Car AB (publ.) does not engage in any transactions with Board members or senior executives except ordinary remunerations for services. For further information regarding remunerations, see Note 8 - Employees and remuneration, in the consolidated financial statements.

## NOTE 4 – AUDIT FEES

| TSEK | 2019 | 2018 |
|---|---|---|
| **Deloitte** | | |
| Audit fees | –155 | –103 |
| Audit-related fees | –436 | –14,246 |
| Other services | — | –9,429 |
| **Total** | **–591** | **–23,778** |

**Audit fees** involve audit of the Annual Report, financial accounts and the administration by the Board of Directors and the Managing Directors. The audit also includes advice and assistance as a result of the observations made in connection with the audit.

**Audit-related fees** refer to other assignments to ensure quality in the financial statements including consultations on reporting requirements and internal control.

All other work performed by the auditor is defined as **other services**.

## NOTE 5 – REMUNERATION TO THE BOARD OF DIRECTORS

Information on remuneration to Board members by gender is shown in Note 8 – Employees and remuneration, in the consolidated statements.

## NOTE 6 – FINANCIAL INCOME AND EXPENSES

| | 2019 | 2018 |
|---|---|---|
| **Financial income** | | |
| Group contribution from subsidiaries | 15 | — |
| Interest income from subsidiaries | 523 | 345 |
| Other | 17 | — |
| **Total** | **555** | **345** |
| **Financial expenses** | | |
| Interest expenses to subsidiaries | –53 | –44 |
| Interest expenses | –511 | –505 |
| Other | –35 | –221 |
| **Total** | **–599** | **–770** |

## NOTE 7 – TAXES

| **Income tax recognised in income statement** | **2019** | 2018 |
|---|---|---|
| Deferred taxes | 14 | –80 |
| **Total** | **14** | **–80** |
| **Information regarding current year tax expense compared to tax expense based on the applicable Swedish tax rate** | | |
| Income before tax for the year | 11,217 | –437 |
| Tax according to applicable Swedish tax rate, 21.4 % (22%) | –2,400 | 96 |
| Costs non-deductable | –7 | –21 |
| Non-taxable dividends | 2,414 | — |
| Non-taxable income | 3 | — |
| Tax effect of deductable costs reported over equity | 5 | — |
| Tax effect on deferred tax due to change of tax rate | –1 | –141 |
| Tax effect of Group contributions received reported in equity | — | –14 |
| **Total** | **14** | **–80** |

Total deferred tax assets of MSEK 2,082 (2,068) mainly relates to loss-carry forward. Deferred tax assets are only accounted for to the extent there are taxable temporary differences or other factors that convincingly indicate there will be sufficient future taxable profit. Deferred tax is mainly tax loss-carry forward with an indefinite period of utilisation. Tax effect on Group contributions which are reported directly against Equity amounts to MSEK — (–14).

## NOTE 8 – PARTICIPATION IN SUBSIDIARIES

| | Dec 31, 2019 | Dec 31, 2018 |
|---|---|---|
| At beginning of the year/acquired acquisition value | 10,267 | 10,267 |
| **Total** | **10,267** | **10,267** |

| Volvo Car AB's (publ.) investments in subsidiaries: | Corp. ID no. | Registered office | No. of shares | % interest held | Book value Dec 31, 2019 | Book value Dec 31, 2018 |
|---|---|---|---|---|---|---|
| Volvo Personvagnar AB[1] | 556074-3089 | Gothenburg / Sweden | 723,530 | 100 | 10,267 | 10,267 |

Details of Volvo Car Corporation's direct owned subsidiares at the end of the reporting period are presented in below table.

| Legal entity | Corp. ID no. | Registered office | % interest held |
|---|---|---|---|
| **Sweden** | | | |
| Automotive Components Floby AB | 556981-8874 | Falköping / Sweden | 100 |
| Care by Volvo Car AB | 556746-9407 | Gothenburg / Sweden | 100 |
| Fastighetsbolag Sörred 8:9 AB | 559176-3890 | Gothenburg / Sweden | 100 |
| PSINV AB | 559140-6409 | Gothenburg / Sweden | 79 |
| VCG Investment Management AB | 556955-7118 | Gothenburg / Sweden | 100 |
| Volvo Bil i Göteborg AB | 556056-6266 | Gothenburg / Sweden | 100 |
| Volvo Car Australia Holding AB | 556152-2680 | Gothenburg / Sweden | 100 |
| Volvo Car Försäkrings AB | 556877-5778 | Gothenburg / Sweden | 100 |
| Volvo Car Investment and Borrowing AB | 556130-4246 | Gothenburg / Sweden | 100 |
| Volvo Car NSC Holding AB | 556754-8283 | Gothenburg / Sweden | 100 |
| Volvo Car Overseas Corporation AB | 556223-0440 | Gothenburg / Sweden | 100 |
| Volvo Car PHEV Holding AB | 556785-9375 | Gothenburg / Sweden | 100 |
| Volvo Car Real Estate and Assets 1 AB | 556205-7298 | Gothenburg / Sweden | 100 |
| Volvo Car Real Estate and Assets 3 AB | 559176-3908 | Gothenburg / Sweden | 100 |
| Volvo Car Services 4 AB | 559140-6417 | Gothenburg / Sweden | 100 |
| Volvo Car Services 5 AB | 559140-6425 | Gothenburg / Sweden | 100 |
| Volvo Car Services 7 AB | 559228-9341 | Gothenburg / Sweden | 100 |
| Volvo Car Services 8 AB | 559228-9358 | Gothenburg / Sweden | 100 |
| Volvo Car Services 9 AB | 559228-9366 | Gothenburg / Sweden | 100 |
| Volvo Car Services Sweden AB[2] | 556601-7843 | Gothenburg / Sweden | 100 |
| Volvo Car Sverige AB | 556034-3484 | Gothenburg / Sweden | 100 |
| Volvo Car Technology Fund AB | 556877-5760 | Gothenburg / Sweden | 100 |
| Volvo Personvagnar Norden AB | 556413-4848 | Gothenburg / Sweden | 100 |
| Volvo Car Mobility AB | 556955-6441 | Stockholm / Sweden | 100 |
| Volvo Car Center Uddevalla AB | 556651-0193 | Uddevalla / Sweden | 100 |
| Volvo Car Uddevalla AB | 556232-0142 | Uddevalla / Sweden | 100 |
| **Europe** | | | |
| Volvo Car Austria GmbH | | Austria | 100 |
| Volvo Car Czech Republic s.r.o. | | Czech Republic | 100 |
| Volvo Car Denmark A/S | | Denmark | 100 |
| Volvo Car Finland Oy Ab | | Finland | 100 |
| Volvo Car France SAS | | France | 100 |
| Volvo Car Germany GmbH | | Germany | 100 |
| Volvo Car Hellas Anonymous[3] | | Greece | 100 |
| Volvo Car Hungary Trading and Service Ltd | | Hungary | 100 |
| Volvo Car Gallery Ltd | | Hungary | 100 |
| Volvo Car Ireland Ltd | | Ireland | 100 |
| Volvo Car Italia S.p.A. | | Italy | 100 |
| Volvo Car Nederland B.V. | | The Netherlands | 100 |
| SNEBE Holding B.V. | | The Netherlands | 100 |
| SNITA Holding B.V. | | The Netherlands | 100 |
| SWENE Holding B.V. | | The Netherlands | 100 |
| Volvo Car Norway AS | | Norway | 100 |
| Volvo Car Poland Sp. z.o.o. | | Poland | 100 |
| Volvo Car Portugal S.A. | | Portugal | 100 |
| Volvo Car Espana S.L. | | Spain | 100 |
| Volvo Car Switzerland AG | | Switzerland | 100 |
| Volvo Car UK Ltd | | United Kingdom | 100 |

| Legal entity | Registered office | % interest held |
|---|---|---|
| **North and South America** | | |
| Volvo Car Brasil Importacao e Comercio de Veiculos Ltda | Brazil | 100 |
| Volvo Car do Brasil Automoveis Ltda | Brazil | 100 |
| Volvo Car Canada Ltd | Canada | 100 |
| Volvo Car Mexico S.A. de C.V. | Mexico | 100 |
| Volvo Car Financial Services U.S., LLC | USA | 100 |
| Volvo Car North America, LLC | USA | 100 |
| **Africa and Asia** | | |
| Volvo Cars (China) Investment Co., Ltd.[4)] | China | 100 |
| Volvo Cars Technology (Shanghai) Co., Ltd. | China | 100 |
| Volvo Auto India Pvt. Ltd | India | 100 |
| Volvo Car Japan Ltd | Japan | 100 |
| Volvo Car Korea Co., Ltd | Korea | 100 |
| Volvo Car Manufacturing Malaysia Sdn Bhd | Malaysia | 100 |
| Volvo Car Taiwan Ltd | Taiwan | 100 |
| Volvo Car Turkey Otomobil Ltd Sirketi | Turkey | 100 |
| Volvo Car Singapore PTE Ltd | Singapore | 100 |
| Volvo Car South Africa Pty Ltd | South Africa | 100 |

1) Refered to as Volvo Car Corporation
2) Prior name: Hertz Sverige AB
3) Legal name in full: Volvo Car Hellas Anonymous and Industrial company of car and spare parts imports and trade

The share of voting power corresponds to holdings in per cent as seen in the table above. The countries where the subsidiaries are registered are also where their main operations are carried out.

## Significant restrictions

For some subsidiaries there are restrictions on the Volvo Car Group's ability to access or use cash from these subsidiaries, for more information on cash that is not available or with other limitations, see Note 21 – Marketable securities and cash and cash equivalents in the consolidated financial statements.

## Change in the Group's ownership interest in a subsidiary

The Polestar Group consists of the parent company Polestar Automotive (Shanghai) Co., Ltd based in China, with subsidiaries, currently in China, Sweden, US, UK, Netherlands, Norway, Canada, Belgium and Germany. Previously, the Polestar Group have been wholly owned by Volvo Cars through its subsidiary Volvo Cars (China) Investment Co., Ltd with the exception of the Chinese manufacturing subsidiary that has been under joint ownership with certain Geely Group companies, although still consolidated into Volvo Car Group. On July 12, 2018 Polestar Automotive (Shanghai) Co., Ltd acquired the non-controlling interest of 50 per cent related to the Chinese manufacturing entity Polestar New Energy Vehicle Co., Ltd. Further, on September 28, 2018, Zhejiang Geely Holding Group Co., Ltd subscribed for 50 per cent of the equity in Polestar Automotive (Shanghai) Co., Ltd the parent company in the Polestar Group. A shareholders agreement was entered into between Volvo Cars (China) Investment Co., Ltd and Zhejiang Geely Holding Group Co., Ltd, giving the owners joint control over the Polestar Group. As a result, Volvo Cars lost control over the Polestar Group and it were deconsolidated. Polestar Group is thereafter considered as a joint venture and accounted for in accordance with the equity method.

## Details of non-wholly owned subsidiaries that have material non-controlling interests[4)]

On June 25, 2015 Volvo Car Group has, through one of its wholly owned subsidiaries, Volvo Cars (China) Investment Co., Ltd, acquired an additional 20 per cent in Volvo Cars' Chinese joint venture companies. In the consolidated financial statements, these joint venture companies are classified as subsidiaries and fully consolidated with a non-controlling interest of 50 per cent since Volvo Car Group has the decision-making power over the operations. Additionally, Daqing Volvo Car Manufacturing Co., Ltd has acquired 100 per cent of the shares in Volvo Car (Asia Pacific) Investment Holding Co., Ltd which holds 100 per cent of Zhongjia Automobile Manufacturing (Chengdu) Co., Ltd and Shanghai Zhawo Auto Sales Co., Ltd.

On September 22, 2017 Volvo Cars (China) Investment Co., Ltd has, through one of its wholly owned subsidiary, Polestar Automotive (Shanghai) Co., Ltd, established a new joint venture company Polestar New Energy Vehicle Co., Ltd together with Zhejiang Haoqing Automobile Manufacturing Co., Ltd, 40 per cent shareholding, and Chengdu Zhaoyuan New Energy Vehicle Investment Co., Ltd, 10 per cent shareholding. Both companies are owned subsidiaries to Zhejiang Geely Holding Group Co., Ltd. In the consolidated financial statements up to July 12, 2018 this joint venture company was classified as a subsidiary and fully consolidated with a non-controlling interest of 50 per cent since Volvo Car Group had the decision-making power over the operation. On July 12, 2018 Polestar Automotive (Shanghai) Co., Ltd acquired the non-controlling interest of 50 per cent related to Polestar New Energy Vehicle Co., Ltd and consequently the non-controlling interest ceased.

The table on the next page shows details of non-wholly owned subsidiaries of the Group that have material non-controlling interests.

| Legal entity: | Registered office | % interest held Dec 31, 2019 | % interest held Dec 31, 2018 | Profit allocated to non-controlling interests Dec 31, 2019 | Profit allocated to non-controlling interests Dec 31, 2018 | Accumulated non-controlling interests Dec 31, 2019 | Accumulated non-controlling interests Dec 31, 2018 |
|---|---|---|---|---|---|---|---|
| Daqing Volvo Car Manufacturing Co., Ltd.[5)] | China | 50 | 50 | 2,318 | 2,829 | 8,218 | 7,085 |
| Zhangjiakou Volvo Car Engine Manufacturing Co., Ltd.[5)] | China | 50 | 50 | 142 | 104 | 1,214 | 1,045 |
| Shanghai Volvo Car Research and Development Co., Ltd. [5)] | China | 50 | 50 | –1 | 1 | 108 | 106 |
| Polestar New Energy Vehicle Co., Ltd. [5)] | China | — | — | — | –11 | — | — |
| Bra Bil Sverige AB | Sweden | 50 | 50 | 29 | 18 | 186 | 142 |
| **Total non-controlling interests** | | | | **2,488** | **2,941** | **9,726** | **8,378** |

5) 50 per cent held by Zhejiang Geely Holding Group Co., Ltd, which is the ultimate parent company of the Volvo Car Group.

## NOTE 9 – EQUITY

In 2016, a directed issue of 500,000 preference shares was made, whereby MSEK 5,000 (reduced by transaction costs) was added to equity of Volvo Car AB (publ.). These preference shares were redeemed in December 2019 and replaced with new convertible preference shares. This new directed issue of 1,138,794 convertible preference shares was made in December 2019, whereby MSEK 5,011 (reduced by transaction costs) was added to equity of Volvo Car AB (publ.).

For further information, see Note 22 – Equity in the consolidated financial statements.

## NOTE 10 – BONDS

Volvo Car AB (publ.) has during 2019 issued two new bonds. A 4 year bond, MSEK 2,000 with a floating coupon rate was issued in February and a 5 year bond, MEUR 600 with a fixed coupon rate of 2.13 per cent was issued in April.

For more information see Note 20 – Financial risks and financial instruments in the consolidated financial statements.

No fair value hegde is applied in Volvo Car AB (publ.).

# Proposed Distribution of Non-Restricted Equity

**The parent company**

The following funds are at the disposal of Annual General Meeting (AGM):

| | | |
|---|---|---|
| Share premium reserve | SEK | 11,497,129,047 |
| Retained earnings brought forward | SEK | −6,901,573,153 |
| Net income for the year | SEK | 11,231,161,727 |
| **At the disposal of the AGM** | **SEK** | **15,826,717,621** |

The Board proposes the following allocations of funds:

| | | |
|---|---|---|
| To the preference shareholders, a dividend of SEK 30.74 per share | SEK | 35,006,528 |
| To the common shareholder, a dividend of SEK 2.90 per share | SEK | 145,000,000 |
| Carried forward | SEK | 15,646,711,093 |
| **Total** | **SEK** | **15,826,717,621** |

In view of the Board of Directors' proposal to the Annual General Meeting to be held March 26, 2020 to decide on the distribution of a dividend of SEK 30.74 per preference share and of SEK 2.90 per common share, the Board hereby makes the following statement in accordance with Chapter 18, Section 4 of the Swedish Companies Act. The Board of Directors concludes that the Company's restricted equity is fully covered after the proposed dividend. The Board further concludes that the proposed dividend is justifiable in view of the parameters set out in Chapter 17, Section 3, second and third paragraphs of the Swedish Companies Act. The Board of Directors has the view that the Company's and the Group's shareholders' equity will, after the proposed dividend, be sufficient in relation to the nature, scope and risks of the business. The dividend will be paid in two tranches in 1st half and 2nd half 2020. The record date for determining who is entitled to receive dividend is proposed to be on March 30, 2020.

The Board of Directors and the CEO hereby affirm that the consolidated financial statements have been prepared in accordance with International Financial Reporting Standards, IFRS, as adopted by the EU and provide a true and fair view of the Group’s financial position and earnings.

The Annual Report has been prepared in accordance with generally accepted accounting principles and provides a fair and true view of the parent company’s financial position and earnings. The Board of Directors report for the Group and the parent company provides a true and fair overview of the development of the operations, financial position and earnings of the Group and parent company and describes material risks and uncertainty factors facing the parent company and the companies included in the Group.

Gothenburg, March 26, 2020

**Li Shufu**
*Chairman of the Board*

**Håkan Samuelsson**
*Board member and CEO*

**Lone Fønss Schrøder**
*Vice Chairman of the Board*

**Michael Jackson**
*Board member*

**Daniel Li**
*Board member*

**Xingsheng (Jim) Zhang**
*Board member*

**Winfried Vahland**
*Board member*

**Betsy Atkins**
*Board member*

**Winnie K.W. Fok**
*Board member*

**Thomas Johnstone**
*Board member*

**Marko Peltonen**
*Employee representative*

**Jörgen Olsson**
*Employee representative*

**Glenn Bergström**
*Employee representative*

Our audit report was submitted on March 26, 2020
Deloitte AB

**Jan Nilsson**
*Authorized Public Accountant*

# Auditor's Report

*This auditor's report is a translation of the Swedish language original. In the events of any differences between this translation and the Swedish original the latter shall prevail.*

**To the general meeting of the shareholders of Volvo Car AB (publ.) corporate identity number 556810-8988**

**Report on the annual accounts and consolidated accounts**

***Opinions***

We have audited the annual accounts and consolidated accounts of Volvo Car AB (publ.) for the financial year 2019-01-01–2019-12-31 except for the corporate governance statement on pages 68–72. The annual accounts and consolidated accounts of the company are included on pages 61–127 in this document.

In our opinion, the annual accounts have been prepared in accordance with the Annual Accounts Act and present fairly, in all material respects, the financial position of the parent company as of 31 December 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. Our opinions do not cover the corporate governance statement on pages 68–72. 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.

***Other Information than the annual accounts and consolidated accounts***

The Board of Directors and the Chief Executive Officer are responsible for the other information. The other information comprises pages 1–60 and 128–147 in this document but does not include the annual accounts, consolidated accounts and our auditor's report thereon.

Our opinion on the annual accounts and consolidated accounts does not cover this other information and we do not express any form of assurance conclusion regarding this other information.

In connection with our audit of the annual accounts and consolidated accounts, our responsibility is to read the information identified above and consider whether the information is materially inconsistent with the annual accounts and consolidated accounts. In this procedure we also take into account our knowledge otherwise obtained in the audit and assess whether the information otherwise appears to be materially misstated.

If we, based on the work performed concerning this information, conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

***Responsibilities of the Board of Directors and the Chief Executive Officer***

The Board of Directors and the Chief Executive Officer 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 Chief Executive Officer 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 Chief Executive Officer 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 Chief Executive Officer intends 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.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the annual accounts and consolidated accounts, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of the company's internal control relevant to our audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Directors and the Chief Executive Officer.
- Conclude on the appropriateness of the Board of Directors' and the Chief Executive Officer's use of the going concern basis of accounting in preparing the annual accounts and consolidated accounts. We also draw a conclusion, based on the audit evidence obtained, as to whether any material uncertainty exists related to events or conditions that may cast significant doubt on the company's and the group´s ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the annual accounts and consolidated accounts or, if such disclosures are inadequate, to modify our opinion about the annual accounts and consolidated accounts. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause a company and a group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the annual accounts and consolidated accounts, including the disclosures, and whether the annual accounts and consolidated accounts represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient and appropriate audit evidence regarding the financial information of the entities or business activities within the group to express an opinion on the consolidated accounts. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our opinions.

We must inform the Board of Directors of, among other matters, the planned scope and timing of the audit. We must also inform of significant audit findings during our audit, including any significant deficiencies in internal control that we identified.

## Report on other legal and regulatory requirements

### *Opinions*

In addition to our audit of the annual accounts and consolidated accounts, we have also audited the administration of the Board of Directors and the Chief Executive Officer of Volvo Car AB (publ.) for the financial year 2019-01-01–2019-12-31 and the proposed appropriations of the company's profit or loss.

We recommend to the general meeting of shareholders that the profit to be appropriated in accordance with the proposal in the statutory administration report and that the members of the Board of Directors and the Chief Executive Officer be discharged from liability for the financial year.

### *Basis for Opinions*

We conducted the audit in accordance with generally accepted auditing standards in Sweden. Our responsibilities under those standards are further described in the Auditor's Responsibilities section. We are independent of the parent company and the group in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements.

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

### *Responsibilities of the Board of Directors and the Chief Executive Officer*

The Board of Directors is responsible for the proposal for appropriations of the company's profit or loss. At the proposal of a dividend, this includes an assessment of whether the dividend is justifiable considering the requirements which the company's and the group's type of operations, size and risks place on the size of the parent company's and the group's equity, consolidation requirements, liquidity and position in general.

The Board of Directors is responsible for the company's organization and the administration of the company's affairs. This includes among other things continuous assessment of the company's and the group´s financial situation and ensuring that the company's organization is designed so that the accounting, management of assets and the company's financial affairs otherwise are controlled in a reassuring manner. The Chief Executive Officer 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 Chief Executive Officer in any material respect:

- has undertaken any action or been guilty of any omission which can give rise to liability to the company, or
- in any other way has acted in contravention of the Companies Act, the Annual Accounts Act or the Articles of Association.

Our objective concerning the audit of the proposed appropriations of the company's profit or loss, and thereby our opinion about this, is to assess with reasonable degree of assurance whether the proposal is in accordance with the Companies Act.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with generally accepted auditing standards in Sweden will always detect actions or omissions that can give rise to liability to the company, or that the proposed appropriations of the company's profit or loss are not in accordance with the Companies Act.

As part of an audit in accordance with generally accepted auditing standards in Sweden, we exercise professional judgment and maintain professional scepticism throughout the audit. The examination of the administration and the proposed appropriations of the company's profit or loss is based primarily on the audit of the accounts. Additional audit procedures performed are based on our professional judgment with starting point in risk and materiality. This means that we focus the examination on such actions, areas and relationships that are material for the operations and where deviations and violations would have particular importance for the company's situation. We examine and test decisions undertaken, support for decisions, actions taken and other circumstances that are relevant to our opinion concerning discharge from liability. As a basis for our opinion on the Board of Directors' proposed appropriations of the company's profit or loss we examined the Board of Directors' reasoned statement and a selection of supporting evidence in order to be able to assess whether the proposal is in accordance with the Companies Act.

Gothenburg 26th of March 2020
Deloitte AB

*Signature on Swedish original*

Jan Nilsson
Authorized public accountant

# Board of Directors

**BOARD OF DIRECTORS VOLVO CAR AB (PUBL.)**
Volvo Car AB (publ.) is the parent company of Volvo Car Group.

### Li Shufu

**Chairman of the Board**
Since: August 2010
Born: 1963
Education: MSc in Mechanical Engineering, BSc in Management Engineering

**Other assignments:**
Founder and Chairman of the Board Zhejiang Geely Holding Group; Chairman of the Board Geely Sweden Holdings AB; Member of the Board other entities within the Zhejiang Geely Holding Group

**Previous positions:**
Founder Geely Holding Group

### Lone Fønss Schrøder

**Vice Chairman of the Board**
Since: March 2018
(Member since August 2010)
Born: 1960
Education: MSc in Law, MSc in Economics

**Other assignments:**
Chairman of the Board Cashworks AG; Vice Chairman of the Board and Chairman of the Audit Committee Akastor ASA; Member of the Board and Chairman of the Audit Committee Kværner ASA; Member of the Board and Audit Committee INGKA Holding BV; Member of the Board and Sustainability Committee CSL Group Inc.; Member of the Board Geely Sweden Holdings AB

**Previous positions:**
Chairman of the Board Nustay A/S; Several senior management positions A.P. Möller-Maersk A/S; President and CEO Wallenius Lines, Concordium; Positions at Aker ASA, Handelsbanken, Saxo Bank, Cash Works

### Håkan Samuelsson

**Member of the Board**
**Chief Executive Officer**
Since: August 2010
(Chief Executive Officer since October 2012)
Born: 1951
Education: MSc in Mechanical Engineering

**Other assignments:**
Chairman of the Board Polestar Automotive (Shanghai) Co. Ltd.; Member of the Board Teknikföretagen, Lynk & Co Investment Co. Ltd., Lynk & Co Europe AB, Volvo Trademark Holding AB

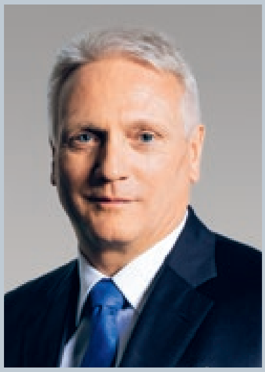
**Previous positions:**
Chairman and CEO MAN AB; Several leading technical positions Scania Group

### Li Donghui

**Member of the Board**
Since: April 2011
Born: 1970
Education: MBA, MSc in Mechanical Engineering

**Other assignments:**
Chairman of the Board Lotus Advance Technologies Sdn. Bhd., Group Lotus Plc., Saxo Bank; Vice Chairman of the Board Geely Automobile Holdings Ltd.; Member of the Board Zhejiang Geely Holding Group Co. Ltd.

**Previous positions:**
Member of the Board Proton Holdings Berhad; Executive Vice President and CFO Geely Holding Group; Director certain subsidiaries Geely Automobile Holdings Ltd., Geely Holdings Group Ltd.; Independent Director China CYTS Tours Holding Co. Ltd., YTO Express (International) Holdings Ltd.; CFO and Vice President Liugong Machinery; Executive Director Geely Automobile Holdings Ltd.; Managing Director and several other senior positions Cummins; CFO and other senior positions BMW Brilliance Automotive; Senior positions ASIMCO Braking System, Danfoss Tianji



### Winfried Vahland

**Member of the Board**
Since: March 2019
Born: 1957
Education: PhD in Mechanical Engineering, PhD in Economics, MSc in Mechanical Engineering, MBA

**Other assignments:**
Chairman of the Supervisory Board Eldor Corporation S.p.A.; Honorary Chairman of the Supervisory Board EuroCar AG; Member of the Supervisory Board Proton Holdings Berhad; Member of the Supervisory Board and Personnel and Nomination Committee Vibracoustic AG

**Previous positions:**
Chairman of the Executive Board Skoda Auto; President and CEO Volkswagen Group China; Global Executive Vice President Volkswagen Group

### Winnie K.W. Fok

**Member of the Board**
Since: August 2010
Born: 1956
Education: Bachelor's Degree in Commerce

**Other assignments:**
Member of the Board G4S Plc., Skandinaviska Enskilda Banken AB; Member of the Investment Committee HOPU Investments Co. Ltd.; Senior Advisor Wallenberg Foundation

**Previous positions:**
CEO EQT Partners Asia Ltd.; Senior Advisor Investor AB, FAM; Managing Director CEF New Asia Partners; Director and Co-head Peregrine Direct Investments Ltd.; Director Strategic Assets International Ltd.

### Michael Jackson

**Member of the Board**
Since: July 2018
Born: 1962
Education: BSc in Electrical and Electronics Engineering

**Other assignments:**
Member of the Board and Audit and Risk Committees AXA UK Group Plc., Luminor AB; Member of the Board Kneip Communications SA

**Previous positions:**
Member of the Board Blockchain SA; COO Skype; Europe Business Development Tele2; Director Tele2 Denmark; Head of Services and Support NKT Denmark; Senior Systems Engineer Motorola Mobile Data, Digital Mobile Communications; Partner Mangrove Capital Partners

### Betsy Atkins

**Member of the Board**
Since: January 2016
Born: 1953
Education: Bachelor's Degree in Liberal Arts

**Other assignments:**
Member of the Board Wynn Resorts, SL Green

**Previous positions:**
Member of the Board Ascend, Schneider Electric; CEO Clear Standards Inc., Baja Ventures; Chairman BT Global Services Advisory Board; Co-founder and President Global Go to Market

### Thomas Johnstone

**Member of the Board**
Since: January 2015
Born: 1955
Education: Master of Arts

**Other assignments:**
Chairman of the Board Husqvarna AB, Combient AB, The British Swedish Chamber of Commerce, The English School Gothenburg; Deputy Chairman Wärtsila; Member of the Board Investor AB, NorthVolt AB

**Previous positions:**
President and CEO and other senior positions AB SKF

### Xingsheng (Jim) Zhang

**Member of the Board**
Since: August 2018
Born: 1955
Education: University Certificate in Telecom Engineering, Bachelor's Degree in Modern Communication, Master's Degree, MBA

**Other assignments:**
Founding Partner Daotong Capital, Haiying Capital; Chairman of the Board Link Capital (Asia) Co. Ltd.

**Previous positions:**
Chairman of the Board Forever Natural Capital Foundation; Founding Member of China Entrepreneur Club, China Entrepreneurs Forum, Alishan SEE Environmental Protection Association; Managing Director North Asia Region of the Nature Conservatory; Chairman of Beijing Link Capital; President and CEO Asiainfo; Executive Vice President and other senior positions Ericsson China; Positions at China International Telecom Construction Corp, Beijing Telecom Administration

## EMPLOYEE REPRESENTATIVES

### Glenn Bergström

**Employee Representative of the Board**
Since: August 2010
Appointed by: IF Metall
Born: 1955
Employed by Volvo Cars: 1974

**Other assignments:**
Chairman of the Board VFF Pension Fund

### Jörgen Olsson

**Employee Representative of the Board**
Since: March 2016
Appointed by: Unionen
Born: 1968
Employed by Volvo Cars: 1988

**Other assignments:**
—

### Marko Peltonen

**Employee Representative of the Board**
Since: August 2010
Appointed by: IF Metall
Born: 1965
Employed by Volvo Cars: 1984

**Other assignments:**
—

### Anna Margitin

**Deputy Employee Representative of the Board**
Since: 2016
Appointed by: Akademikerna
Born: 1969
Employed by Volvo Cars: 1994

**Other assignments:**
—

### Björn Ohlsson

**Deputy Employee Representative of the Board**
Since: 2009
Appointed by: IF Metall
Born: 1963
Employed by Volvo Cars: 1981

**Other assignments:**
—

# Executive Management Team

**EXECUTIVE MANAGEMENT TEAM VOLVO CAR CORPORATION**

Volvo Car Corporation is a subsidiary of Volvo Car AB (publ.). Volvo Car Corporation is managed by the Executive Management Team, led by the Chief Executive Officer and overseen by the Board of Directors of Volvo Car AB (publ.). In addition to managing Volvo Car Corporation, the Executive Management Team also sets out the directions for the company's operations.

### Håkan Samuelsson

**Chief Executive Officer**
Since: October 2012
Born: 1951
Education: MSc in Mechanical Engineering

### Carla De Geyseleer

**Chief Financial Officer**
Since: October 2019
Born 1968
Education: MBA, Master's Degree in Economic and Financial Sciences

### Henrik Green

**Chief Technology Officer**
Since: December 2016
Born: 1973
Education: MSc in Computer Engineering

### Björn Annwall

**EMEA and Global Commercial Operations**
Since: October 2016
Born: 1974
Education: MSc in Business Administration

### Anders Gustafsson

**Americas**
Since: August 2017
Born: 1968

### Xiaolin Yuan

**APAC**
Since: March 2017
Born: 1969
Education: Master's Degree

**Lex Kerssemakers**

**Direct Consumer Business**
Since: August 2017
Born: 1960
Education: Degree in Automotive Business Management

**Javier Varela**

**Manufacturing and Logistics**
Since: November 2016
Born: 1964
Education: Industrial Engineering

**Martina Buchhauser**

**Procurement**
Since: October 2017
Born: 1966
Education: Master's Degree in Management

**Hanna Fager**

**People Experience**
Since: October 2016
Born: 1975
Education: BSc in Human Resource Development and Labour Relations

**Mårten Levenstam**

**Strategy and Business Ownership**
Since: January 2018
Born: 1964
Education: PhD in Fluid Mechanics, MSc in Vehicle Engineering

**Maria Hemberg**

**Group Legal and Corporate Governance**
Since: March 2012
Born: 1964
Education: Master of Law

# Sustainability Management and Governance

**Volvo Cars' approach to sustainability management**
Volvo Cars is committed to protecting and improving the environment and wider society, as well as the lives of our own customers and employees. Volvo Cars' sustainability strategy and ambitions guide the strategic and operational decisions. Volvo Cars has a clear governance structure to ensure that the company is delivering on these ambitions, and takes action in order to improve the performance. Volvo Cars is always looking to identify new ways to measure sustainability performance and seek out strong external partnerships that will improve the performance. We realise that our existing and potential customers expect us to deliver on our ambitions. We recognise that a sustainable approach brings environmental and social benefits, as well as enhances the appeal of our products and improves profitability, engages employees and helps attract the best talent.

**International commitments**
Volvo Cars is proud over the fact that it was a founding member of the UN Global Compact in 2000. Since then, Volvo Cars has endeavoured to observe the Ten Principles of the Global Compact. This includes Principle 7, the adoption of a precautionary approach to environmental challenges. Furthermore, Volvo Cars is committed to supporting the Sustainable Development Goals (SDGs), which guide our sustainability approach. In addition to the UN Global Compact, our own Code of Conduct reflects the following international conventions and guidelines:

- The eight core conventions of the UN agency, the International Labour Organisation (ILO):
  - Child Labour (138 and 182)
  - Forced Labour and Compulsory Labour (29 and 105)
  - Equal Remuneration and Discrimination (100 and 111)
  - Freedom of Association and Collective Bargaining (87 and 98)
- The 10 principles of the Global Compact
- The Universal Declaration of Human Rights
- UN Convention on the Rights of the Child
- OECD Guidelines for Multinational Companies
- UN Guiding Principles on Business and Human Rights

## SUSTAINABILITY GOVERNANCE

Volvo Cars has a clear governance structure to monitor progress against the sustainability ambitions, and to develop the existing programme. Sustainability is centrally governed and coordinated by the Global Sustainability Office, and includes progress and follow-up of the strategic initiatives.

**Board of Directors – People and Sustainability Committee**
The committee brings a diverse outside-in perspective to sustainability issues for the company. More details are explained on page 69 in this report.

**Executive Management Team (EMT)**
The EMT is updated with information regularly and when relevant. EMT sets the direction for the sustainability strategy, as well as approves and decides on actions to ensure implementation. EMT is the owner of key sustainability KPIs and monitors and follows up on the overall progress of the sustainability strategy implementation.

**Global Sustainability Committee (GSC)**
The GSC is chaired by the Head of Global Sustainability and consists of members that are authorised line organisation representatives with the mandate to take decisions, provide guidance and support initiatives. The purpose of the GSC is to improve cross-departmental collaboration, understanding and acts on major sustainability issues and risks. The GSC provides a regular flow of sustainability issues to relevant EMT Boards for decision, and takes collective decisions on matters which do not require EMT consideration. It leads the focus on sustainability as a profitability driver, including identifying opportunities. Also, the progress of the implementation of the overall strategy, including each strategic initiative, is monitored and followed up on by the GSC.

**Functional Management Teams**
Functional Management Teams are responsible for ensuring that sustainability becomes an integrated part of everyone's daily work. They are sounding boards for the GSC members and can be requested to secure resources and funding for sustainability initiatives.

**Global Sustainability Office**
The Global Sustainability Office is centrally responsible for the governance and coordination of sustainability. It develops the sustainability strategy, leads and supports the strategic initiatives, monitors and controls KPIs and is responsible for gathering business intelligence on sustainability matters.

**Sustainability reporting**
Volvo Cars has been reporting on environmental, health and safety aspects of its production and products since it signed the UN Global Compact in 2000. In 2003, the company produced its first Sustainability Report in line with the international reporting guidelines from the Global Reporting Initiative (GRI). This is explained further on page 71 in this report.

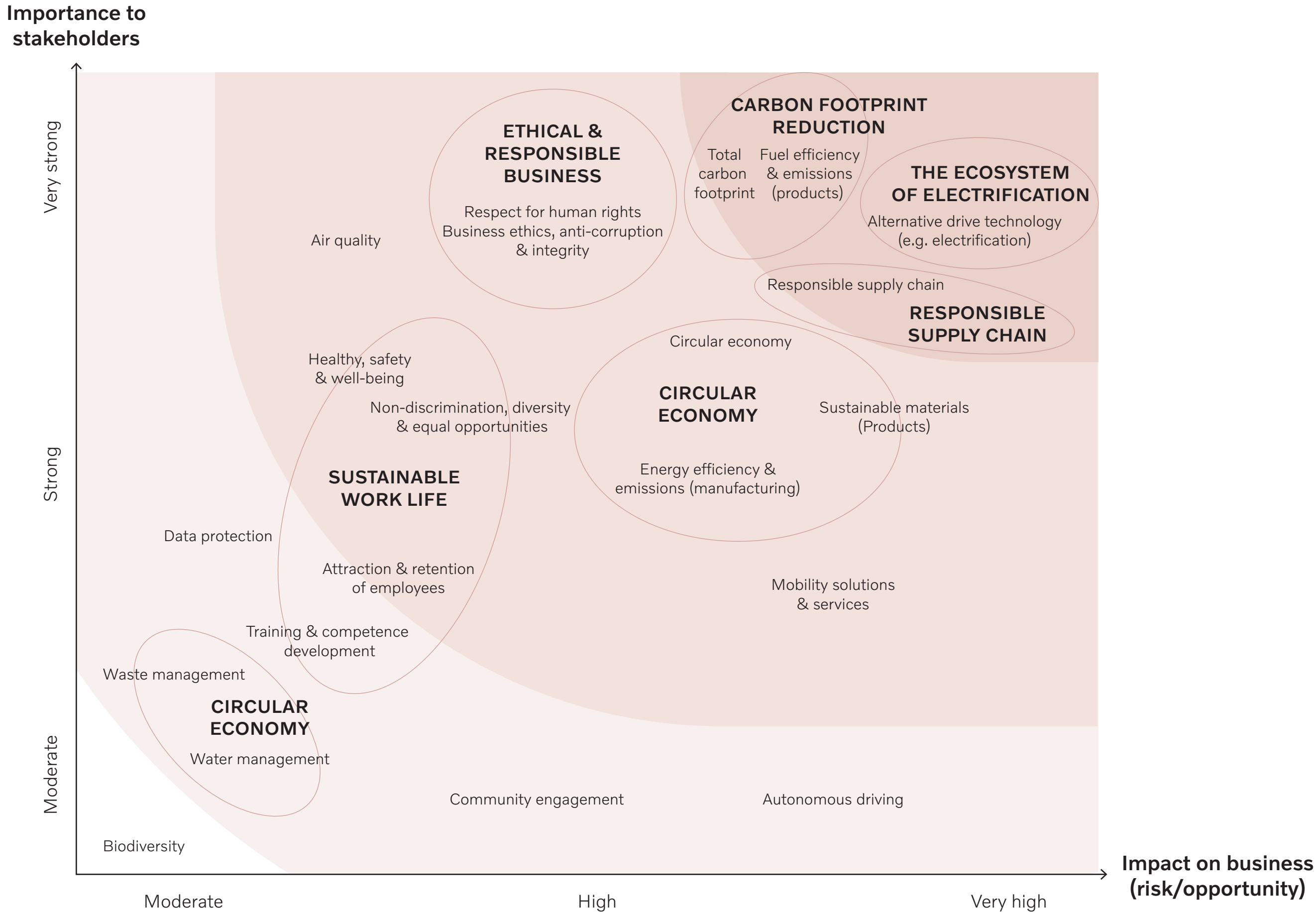
**Stakeholder engagement**
Our stakeholder involvement provides guidance on how we should develop and communicate our sustainability work. One indicator of our success, is whether our stakeholders chose to buy our products and/or do business with us. We have an open dialogue with our major stakeholders not only through networks, conferences, our website or at citizen@volvocars.com, but also through deeper interviews, surveys and analysis. Throughout 2019, we continued to promote our sustainability credentials to our stakeholders through press releases, our website, social media, presentations at conferences and in individual meetings. We will carry on doing so in 2020.


**Materiality analysis**

In 2019, we carried out an international survey where external and internal stakeholders were asked to indicate which sustainability areas they considered to be of greatest relevance to Volvo Cars. The stakeholders were selected based on relevance and previous contacts. Based on importance to stakeholders and impact on business (i. e. significance of economic, environmental and social impacts), the following are the most important sustainability topics for Volvo Cars to address (in order of priority):

1. Carbon footprint reduction
2. The ecosystem of electrification
3. Ethical and responsible business
4. Responsible supply chain
5. Circular economy
6. Sustainable work life

We gathered this analysis and input from our stakeholders and aligned them with our internal strategies, gap analyses on our current sustainability position, benchmarking against other companies, forecasts of the 10-year development of sustainability, and consumer perception data on our sustainability performance – all in order to define what we consider to be our most relevant material topics. We then developed the structure and focus areas of our new sustainability strategy with clear focus areas, ambitions and strategic initiatives.



## VOLVO CARS MATERIAL TOPICS

**EMISSIONS**
Aspect boundary: Volvo Cars' products (the environmental performance of our cars), supply chain, energy consumption within operations

**ENERGY**
Aspect boundary: energy consumption within and outside the organisation

**MATERIALS**
Aspect boundary: recycled input materials

**WASTE**
Aspect boundary: waste by type and disposal method (reuse, recovery, recycling)

**DIVERSITY AND EQUAL OPPORTUNITIES**
Aspect boundary: own operations (Volvo Cars' employees)

**OCCUPATIONAL HEALTH AND SAFETY**
Aspect boundary: own operations (Volvo Cars' employees)

**ANTI-CORRUPTION**
Aspect boundary: own operations and partners

**RESPONSIBLE SOURCING**
Aspect boundary: own operations (procurement) and supply chain

## VOLVO CARS SUSTAINABILITY STRATEGY: FOCUS AREAS

**CLIMATE ACTION**
**Be a climate-neutral company by 2040**

Short term action (2018–2025) is aiming at reducing GHG emissions by 40 per cent per car, including reductions of:

- Tailpipe emissions by 50 per cent
- Supply chain emissions by 25 per cent
- Operational emissions (including transport) by 25 per cent

**CIRCULAR ECONOMY**
**Be a circular business by 2040**

Our ambition is to increase revenue and profit, and to create cost savings, while reducing $CO_2$ emissions substantially by:

- Using larger share of recycled and bio-based materials
- Increasing resource utilisation and minimising waste
- Efficient component value retention
- Developing new business opportunities

**ETHICAL AND RESPONSIBLE BUSINESS**
**Be a recognised leader in ethical and responsible business**

We intend to achieve this by:

- Becoming an Employer of Choice
- Further strengthening the ethical dimension of our culture and corporate governance
- Developing partnerships that potentially enable a positive impact on our brand
- Strengthening our supply chain by ensuring that sustainability performance has equal weight as cost and quality in the sourcing process

# Sustainability Scorecard

## ECONOMIC DIMENSION

| | 2019 | 2018 | 2017 | 2016 | 2015 |
|---|---|---|---|---|---|
| Retail sales (vehicles) | 705,452 | 642,253 | 571,577 | 534,332 | 503,127 |
| Manufactured vehicles[1] | 705,036 | 667,754 | 602,164 | 533,039 | 510,679 |
| Revenue (MSEK) | 274,117 | 252,653 | 208,646 | 180,902 | 164,043 |

1) Factory completed vehicles.

## ENVIRONMENTAL DIMENSION

| Carbon Footprint[1] (t $CO_2e$) | | 2019 | 2018 |
|---|---|---|---|
| Total emissions | | 38,159,000 | 37,307,000 |
| Total emissions per vehicle[2] | | 54.1 | 55.9 |
| Scope 1 (Direct GHG emissions) | Company facilities | 84,000 | 80,000 |
| | Company vehicles | 12,000 | 12,000 |
| | **Total** | **96,000** | **92,000** |
| Scope 2 (Indirect GHG emissions) | Purchased electricity, steam, heating and cooling for own use | 191,000 | 159,000 |
| | **Total** | **191,000** | **159,000** |
| Scope 3 (Upstream indirect GHG emissions) | Purchased goods and services | 11,902,000 | 11,286,000 |
| | Transportation and distribution | 680,000 | 596,000 |
| | Waste generated in operations | 7,000 | 7,000 |
| | Business travel | 75,000 | 100,000 |
| | Employee commuting | 39,000 | 39,000 |
| | **Total** | **12,703,000** | **12,028,000** |
| Scope 3 (Downstream indirect GHG emissions) | Transportation and distribution | 221,000 | 296,000 |
| | Use of sold products | 24,295,000 | 24,114,000 |
| | End of life treatment of sold products | 458,000 | 434,000 |
| | Retailers | 195,000 | 184,000 |
| | **Total** | **25,169,000** | **25,028,000** |
| Tailpipe emissions per car[2] | | 34.5 | 36.1 |
| Supply chain emissions per car[2] | | 16.9 | 16.9 |
| Operations emissions per car[2] | | 2.8 | 2.9 |

1) Emissions are calculated based on the guidance of the Green House Gas protocol including emissions within our financial control. The following categories have been excluded; Capital goods, Fuel & energy related activities, Leased assets upstream, Leased assets downstream, Processing of sold products and Investments. Due to new input data from an external service provider as well as an updated methodology, the figures for 2018 are adjusted compared to prior communication to ensure accuracy, completeness and comparability.

**Company facilities:** GHG emissions from our global manufacturing plants include the energy used, multiplied with an emission factor for each different energy type.

**Company vehicles:** GHG emissions from company vehicles are related to the fuel consumed by our test cars, estimated using external emission factors from DEFRA and global procured volume of fuels for test cars. Emissions related to the production and end of life treatment of test cars are reported in Scope 3.

**Purchased electricity, steam, heating and cooling for own use:** Indirect GHG emissions are estimated based on purchased energy and supplier specific emission factors, where such are available. In cases where a location based approach is taken, the energy mix per location is used. Emissions from non-manufacturing facilities are calculated using global average energy consumption per square meter, and regional average emission factors per energy source from IEA.

**Purchased goods and services:** Emissions from purchased materials are derived from material compositions of representative vehicles and $CO_2e$ emissions factors from Thinkstep's LCA tool Gabi (including the climate-relevant gases $CO_2$, CH4, N20, HFC, PFC and SF6, among others), multiplied with the total number of manufactured vehicles during respective years. Additional upstream GHG emissions related to supplier activities not already captured in the generic emissions factors mentioned above, e.g. from the production and logistics of the components at suppliers, are added based on internal analysis. Emissions added are calculated based on the suppliers share of the added value, as well as their share of the total logistics transportation work performed, using Volvo Cars emissions as a proxy. GHG emissions relating to material scrapped in Volvo Cars production are also added. GHG emissions caused by materials and services not directly relating to the car are calculated on a spend-based approach using an extended environmental input-output life cycle assessment model developed by CIRAIG, deemed to have enough accuracy for selected emissions.

**Transportation & distribution:** GHG emissions from logistics include inbound and outbound transports managed and paid for by Volvo Cars as well as emission factors derived from NTM. Radiative forcing is added for air freight for 2019. Emissions are calculated from 1 Dec 2018 to 30 Nov 2019.

**Waste generated in operations:** GHG emissions from waste generated in our operations are calculated by categorizing waste volumes into types and treatment methods, as well as using external generic emissions factors from DEFRA.

**Business travel:** GHG emissions from air travel are calculated by using the flight frequency per flight (extracted from our travel agencies) and calculated using flight distances between airports and emissions factors from NTM. Radiative forcing factors are used. Emissions caused by other modes of business travel are calculated on a spend-based approach, using emissions factors from external sources.
**Employee commuting:** GHG emissions from employee commuting are based on average global commuting distances and patterns, based on an internal Volvo Cars employee survey carried out in spring 2018, and the total number of employees in the end of each year, as well as using emission factors from external sources.
**Use of sold products:** Average GHG emissions from use of sold products are based on official data (WLTP) of Volvo Cars manufactured cars in Europe (EU28) applied on car types and the global number of manufactured cars. Volvo Cars product offer is global and EU data is therefore a fair estimate of similar products worldwide. Total GHG emissions from use of produced products are then calculated by multiplying the average $CO_2e$ emissions per km, mentioned above, with our global manufactured volume and an average mileage of 200,000 km per car. The accuracy of the calculation method can be influenced by real world factors not covered by the official data such as driving behaviour and different usage of auxiliary loads. Volvo Cars ambition is to increase knowledge and accuracy over time and to be as transparent as possible regarding our GHG emissions from the use of our products.
**End of life treatment of sold products:** GHG emissions caused by the end of life treatment of sold products are estimated based on emission factors from external research and our global manufactured volume.
**Retailers:** GHG emissions caused by retailers are based on an analysis of a selected Volvo Cars retailer, assumed to be representative for all global retailers, and broken down to emissions per car. These emissions per car are multiplied with the global manufactured volume. Emissions from retailers are outside of our financial control, but are included to increase transparency.

2) Based on manufactured vehicles.

**Manufacturing Operations**[1)2)]

| **Energy use (MWh)**[1)4)] | | **2019** | 2018 | 2017 | 2016 | 2015 |
|---|---|---|---|---|---|---|
| Total energy use (direct & indirect)[3)] | Europe | 726,500 | 778,000 | 770,000 | 766,000 | 751,000 |
| | Asia | 358,000 | 400,000 | 422,000 | 317,000 | 279,000 |
| | Americas | 131,800 | — | — | — | — |
| | **Total** | **1,216,300** | **1,178,000** | **1,192,000** | **1,083,000** | **1,030,000** |
| Energy use per manufactured vehicle (MWh/vehicle) | Europe | 1.5 | 1.6 | 1.6 | 1.7 | 1.7 |
| | Asia | 2.2 | 2.3 | 3.2 | 4.1 | 4.1 |
| | Americas | 3.8 | — | — | — | — |
| | **Total** | **1.8** | **1.8** | **2.0** | **2.0** | **2.0** |
| **$CO_2$ emissions (tonnes)**[4)] | | **2019** | 2018 | 2017 | 2016 | 2015 |
| Total $CO_2$ emissions | Europe | 30,820 | 35,900 | 35,600 | 43,300 | 47,800 |
| | Asia | 107,730 | 122,600 | 153,300 | 108,000 | 80,600 |
| | Americas | 59,150 | — | — | — | — |
| | **Total** | **197,700** | **158,500** | **188,900** | **151,300** | **128,400** |
| $CO_2$ emissions / manufactured vehicle (tonnes/vehicle) | Europe | 0.06 | 0.07 | 0.08 | 0.10 | 0.11 |
| | Asia | 0.65 | 0.71 | 1.18 | 1.39 | 1.18 |
| | Americas | 1.70 | — | — | — | — |
| | **Total** | **0.29** | **0.24** | **0.31** | **0.28** | **0.25** |
| **VOC emissions (tonnes)**[5)] | | **2019** | 2018 | 2017 | 2016 | 2015 |
| VOC emissions (tonnes) | Europe | 590 | 610 | 594 | 630 | 584 |
| | Asia | 220 | 300 | 400 | 270 | — |
| | Americas | 34 | — | — | — | — |
| | **Total** | **844** | **910** | **994** | **900** | **584** |
| **Water use, Operations ($m^3$)**[6)] | | **2019** | 2018 | 2017 | 2016 | 2015 |
| Total water use | Europe | 705,000 | 751,000 | 756,000 | 748,000 | 715,000 |
| | Asia | 1,047,000 | 1,190,000 | 1,133,000 | 789,000 | 696,000 |
| | Americas | 312,000 | — | — | — | — |
| | **Total** | **2,064,000** | **1,941,000** | **1,889,000** | **1,537,000** | **1,411,000** |
| Total water use / manufactured vehicle ($m^3$/vehicle) | Europe | 1.5 | 1.5 | 1.6 | 1.6 | 1.6 |
| | Asia | 6.3 | 6.9 | 8.7 | 10.2 | 10.2 |
| | Americas | 9.0 | — | — | — | — |
| | **Total** | **3.0** | **2.9** | **3.1** | **2.9** | **2.8** |

| Waste, Operations (tonnes) | | 2019 | 2018 | 2017 | 2016 | 2015 |
|---|---|---|---|---|---|---|
| Hazardous waste | Europe | 17,500 | 17,900 | 13,300 | 10,500 | 12,600 |
| | Asia | 2,100 | 2,700 | 2,300 | 1,500 | 1,200 |
| | Americas | 20 | — | — | — | — |
| | **Total** | **19,620** | **20,600** | **15,600** | **12,000** | **13,800** |
| Metal [7)] | Europe | 153,100 | 166,000 | 163,000 | 165,000 | 149,000 |
| | Asia | 67,400 | 72,000 | 58,000 | 37,000 | — |
| | Americas | 11,400 | — | — | — | — |
| | **Total** | **231,900** | **238,000** | **221,000** | **202,000** | **149,000** |
| Non-hazardous waste (including metal) | Europe | 229,900 | 235,000 | 228,000 | 212,000 | 208,000 |
| | Asia | 61,500 | 68,500 | 52,500 | 27,700 | 24,500 |
| | Americas | 9,300 | — | — | — | — |
| | **Total** | **300,700** | **303,500** | **280,500** | **239,700** | **232,500** |
| Total waste | Europe | 247,400 | 252,900 | 241,300 | 222,500 | 220,600 |
| | Asia | 63,600 | 71,200 | 54,800 | 29,200 | 25,700 |
| | Americas | 9,320 | — | — | — | — |
| | **Total** | **320,320** | **324,100** | **296,100** | **251,700** | **246,300** |
| Total waste / manufactured vehicle (kg/vehicle) | Europe | 511 | 515 | 511 | 489 | 498 |
| | Asia | 372 | 412 | 421 | 376 | 377 |
| | Americas | 264 | — | — | — | — |
| | **Total** | **468** | **488** | **492** | **472** | **482** |

1) Data for the year 2019 is based on 1 Dec 2018 to 30 Nov 2019 (therefore the number of manufactured vehicles for 2019 is also adjusted to 684,725), except the data for Americas and VOC emissions that are based on calender year 2019.
2) The Volvo Cars facilities included in the data for Europe are Volvo Cars Torslanda Plant (Gothenburg, Sweden), Volvo Cars Ghent Plant (Ghent, Belgium), Volvo Cars Skövde – Engines (Skövde, Sweden), and Volvo Cars Olofström – Body Components (Olofström, Sweden). Data for Volvo Cars Floby (Floby, Sweden) is included up to 2015. The Volvo Cars facilities included in Asia are Volvo Cars Malaysia – CKD (Kuala Lumpur, Malaysia), Volvo Cars Chengdu Plant (Chengdu, China), Volvo Cars Daqing Plant (Daqing, China), and Volvo Cars Zhangjiakou – Engines (Zhangjiakou, China). The Volvo Cars facilities included in the data for Americas is Volvo Cars Charleston Plant (Charleston, South Carolina, USA), first reporting year 2019.
3) Direct = energy produced on site for own consumption (this includes compressed air for all facilities except Volvo Cars Torslanda Plant), Indirect = purchased electricity and heating (excluding compressed air for the Volvo Cars Torslanda Plant where data is not currently available).
4) Indirect $CO_2$ emissions are estimated based on our assumptions for the primary energy sources for the countries in which we operate. The lower level of $CO_2$ emissions in Europe is explained by the fact that the primary energy source is climate-neutral hydro-power, whereas in Asia and Americas the use of climate-neutral energy sources is relatively lower. The primary energy source in Malaysia is coal (2019 emission factor 0.720 tonnes $CO_2$/MWh). In Chengdu: 2019 $CO_2$ emission factor 0.5257 tonnes $CO_2$/MWh (regional grid 2012), 70 % of the electricity is purchased hydropower. In Daqing: 2019 $CO_2$ emission factor: 0.7769 tonnes $CO_2$/MWh from NDRC 2012 Grid average. In Zhangjiakou: 2019 $CO_2$ emission factor: 0.8843 tonnes $CO_2$/MWh from NDRC 2012 Grid average. In Charleston: 2019 $CO_2$ emission factor:0.7081 tonnes $CO_2$/MWh from Santee Cooper electric utility (2018). District heating in Europe is climate neutral except from a small part (approx. 4%) in Volvo Cars Torslanda Plant (Gothenburg, Sweden) with a $CO_2$ factor of 0.0730 tonnes $CO_2$/MWh. Assumption for district heating in Volvo Cars Zhangjiakou – Engines (Zhangjiakou, China) 2018 is 331 kg $CO_2$/MWh (coal).
5) Calculations of VOC emissions are based mainly on the amount of solvents in materials used and on measurements of the degree of purification of the equipment. VOC data from APAC from 2016 and from US from 2019.
6) 2015 was the first year Volvo Cars started reporting figures for China. The figures exclude water used for cooling. The use of water in Asia and Americas is higher per car due to different issues in pretreatment, paintshop and cooling processes.
7) Metal scrap from Volvo Cars Skövde – Engines (Skövde, Sweden), and Volvo Cars Olofström – Body Components (Olofström, Sweden) and Volvo Cars Zhangjiakou – Engines (Zhangjiakou, China) is allocated on the car factories in Europe, Asia and Americas according to production since they deliver to all car plants. The facilities Volvo Cars Chengdu Plant (Chengdu, China) and Volvo Cars Daqing Plant (Daqing, China) have stamping operation wich means that they get more metalscrap than an ordinary car factory. This is not taking in to account for the metal data per vehicle.

| Emissions, Other | | 2019 | 2018 | 2017 | 2016 | 2015 |
|---|---|---|---|---|---|---|
| $CO_2$ emissions of products – EU fleet average ($CO_2$ g/km) | NEDC | 132 | 133 | 125 | 121 | 123 |
| | WLTP | 157 | — | — | — | — |
| Global transports total $CO_2$ emissions (tonnes)[1)] | | 901,000 | 892,000 | 650,000 | 447,267 | 333,971 |
| Global transports $CO_2$ emissions per sold vehicle (kg/sold vehicle)[1)] | | 1,277 | 1,389 | 1,136 | 882 | 826 |
| Electrified vehicles sold[2)] (accumulated figures) | | 149,655 | 103,722 | 68,936 | 46,129 | 26,153 |
| Electrified vehicles sold[2)] (%-age of sales) | | 7% | 6% | 4% | 4% | — |

1) Includes $CO_2$ emissions from inbound and outbound transports managed and paid for by Volvo Cars. The data is reported according to European Standard EN 16258:2012. Figures for 2015–2017 may differ from previous reports due to a change in denominator from delivered vehicles to sold vehicles.
2) Electrified vehicles is defined as Plug-in Hybrids and fully electric vehicles.

| Materials | | V40 CC | XC40 | V60 | XC60 | XC90 | T8 Twin Engine S60 | T8 Twin Engine S90L |
|---|---|---|---|---|---|---|---|---|
| Materials breakdown by car model (kg) | Steel and iron | 893 | 900 | 878 | 905 | 1,090 | 1,087 | 1,136 |
| | Aluminium | 187 | 185 | 236 | 266 | 304 | 295 | 323 |
| | Copper | 21 | 25 | 29 | 30 | 34 | 51 | 59 |
| | Magnesium | 2 | 1 | 8 | 11 | 10 | 7 | 10 |
| | Other metals | 25 | 22 | 29 | 28 | 30 | 26 | 34 |
| | Thermoplastics | 203 | 222 | 232 | 240 | 279 | 229 | 271 |
| | Elastomers | 61 | 62 | 59 | 91 | 98 | 74 | 84 |
| | Other polymers | 66 | 64 | 64 | 75 | 81 | 96 | 116 |
| | Glass and ceramics | 34 | 49 | 55 | 56 | 53 | 53 | 55 |
| | Fluids | 73 | 66 | 70 | 66 | 89 | 81 | 82 |
| | Others | 11 | 28 | 22 | 13 | 16 | 49 | 53 |
| | **Grand Total** | **1,577** | **1,622** | **1,682** | **1,781** | **2,083** | **2,047** | **2,226** |

| Remanufacturing | 2019 | 2018 | 2017 | 2016 | 2015 |
|---|---|---|---|---|---|
| Aluminium saved due to remanufacturing (kg) | 143,798 | 216,472 | 264,507 | 292,569 | 296,730 |
| Steel saved due to remanufacturing (kg) | 340,748 | 424,498 | 541,548 | 602,174 | 602,465 |
| $CO_2$ saved from reuse of aluminium and steel (kg) | 3,321,439 | 4,761,228 | 5,879,451 | 6,505,476 | 5,765,334 |
| No. of remanufactured parts | 49,408 | 67,276 | 88,590 | 90,828 | 105,236 |

## PEOPLE DIMENSION

| Total workforce by employees and supervised workers as a 2019 average | Employees | Supervised workers (consultants) | Total |
|---|---|---|---|
| Global Total (FTE) | 41,517 | 4,448 | 45,965 |

**Total number of employees by employment contract and gender as per December 31, 2019[1]**

| | Women | Men |
|---|---|---|
| Permanent contract | 24% | 76% |
| Temporary contract | 36% | 64% |
| **Total** | **24%** | **76%** |

1) The main employment form within Volvo Cars is permanent employments, but depending on the need and duration of assignment temporary solutions will be used such as consultants, agency and temporary employment contracts. Key positions should always be employed on a permanent basis. Depending on national labour regulations and market situation the approach may vary in Volvo Cars' different locations.

**Breakdown of permanent contract employees by gender and age group as per December 31, 2019**

| | Board Members[1] | | Executive Management Team | | All other permanent contract employees[2] | |
|---|---|---|---|---|---|---|
| | Women | Men | Women | Men | Women | Men |
| <25 | — | — | — | — | 25% | 75% |
| 25–29 | — | — | — | — | 25% | 75% |
| 30–34 | — | — | — | — | 26% | 74% |
| 35–39 | — | — | — | — | 26% | 74% |
| 40–44 | — | — | 8% | — | 28% | 72% |
| 45–49 | — | 10% | — | 17% | 23% | 77% |
| 50–54 | — | — | 17% | 17% | 23% | 77% |
| 55–59 | 10% | 20% | 8% | 25% | 19% | 81% |
| 60–65 | 10% | 30% | — | — | 13% | 87% |
| >65 | 10% | 10% | — | 8% | 11% | 89% |
| **Total** | **30%** | **70%** | **33%** | **67%** | **24%** | **76%** |

1) Only appointed Board Members are included in these figures. In addition to these, there are 3 representatives from the Unions on the Board of Directors. However, Volvo Cars does not have any influence of their appointment.
2) Breakdown by gender for the category "All other permanent contract employees" is reported within each age group and as a total for all age groups.

| Diversity Indicators | 2019 | 2018 | 2017 | 2016 | 2015 |
|---|---|---|---|---|---|
| Women in leading positions[1] | 29.1% (28.3%[2]) | 29.3% | 28.0% | 26.2% | 25.6% |
| Internationally diverse leaders | 34.0% | 33.0% | 28.0% | 27.0% | 25.0% |

1) The figures cover Sweden, Belgium and China.
2) This figure covers a broadened scope to now also include the USA and EMEA.

| Accidents and sick leave | 2019 | 2018 | 2017 | 2016 | 2015 |
|---|---|---|---|---|---|
| Injury rate (LTCR)[1] – employees | 0.13 | 0.24 | 0.19 | 0.22 | 0.34 |
| Injury rate (LTCR)[1] – supervised contractors | 0.11 | 0.47 | — | — | — |
| Serious injuries[2][3] | 13 | 26 | 18 | 9 | 16 |
| Fatalities[3] | 1 | 0 | 0 | 0 | 0 |
| Sick leave – employees[4] | 4.2% | 4.3% | 4.5% | 4.8% | 4.7% |

1) LTCR is defined as the number of work/occupational accidents reported with at least one day sick leave, divided by hours worked and multiplied by 200,000. Follow-up of LTCR for supervised contractors was initiated in 2018. Supervised contractors include consultants and agencies working under our supervision.
2) Defined as total number of injuries leading to fractures, lacerations and unconsciousness.
3) Includes all employees, supervised contractors and independent contractors at our sites. Independent contractors are defined as contractors involved in the construction/reconstruction of Volvo Cars' factories. Injuries and fatalities among contractors are only reported for projects in which Volvo Cars is the developer. 1 non-employee fatality occurred in 2019.
4) Figures for employees in Sweden only.

# GRI Index

This report has been prepared in accordance with the GRI Standards: Core option. In addition, Volvo Cars sustainability risks are described in the Management Report under Enterprise Risk Management pages 65-67, as well as in the chapter The World Around Us. The publication year of all GRI standards used for this report is 2016.

## GRI 101: Foundation 2016 (does not include disclosures)
## GRI 102: General Disclosures 2016 (core)

| Number of disclosure | Disclosure | Comments/Omissions | Page number(s) |
|---|---|---|---|
| **Organisational profile** | | | |
| 102-1 | Name of the organisation | | Front page, all pages |
| 102-2 | Activities, brands, products and services | | 1–2, 10–13, 61–63 |
| 102-3 | Location of headquarters | | 46 |
| 102-4 | Location of operations | | 46 |
| 102-5 | Ownership and legal form | | 61 |
| 102-6 | Markets served | | 46 |
| 102-7 | Scale of the organisation | | 1, 42–43, 46, 87, 75–79 |
| 102-8 | Information on employees and other workers | Information regarding employment type (full-time, part-time) is not disclosed as data is not available on a global basis. | 87, 141 |
| 102-9 | Supply chain | | 38–41 |
| 102-10 | Significant changes to the organisation and its supply chain | | 71 |
| 102-11 | Precautionary principle or approach | | 134 |
| 102-12 | External initiatives | | 58–59, 134 |
| 102-13 | Membership of associations | | 40–41, 59 |
| **Strategy** | | | |
| 102-14 | Statement from senior decision maker | | 5 |
| **Ethics and integrity** | | | |
| 102-16 | Values, principles, standards and norms of behaviour | | 18–23, 52–57 |
| **Governance** | | | |
| 102-18 | Governance structure | | 67–72, 134–135 |
| **Stakeholder engagement** | | | |
| 102-40 | List of stakeholder groups | Active stakeholder engagement is a vital part of Volvo Cars' daily operations and sustainability management. The prioritised stakeholders in relation to specific strategic focus areas and processes, as well as the outputs of our engagement with these stakeholders, are described throughout the report. | 135 |
| 102-41 | Collective bargaining agreements | | 55 |
| 102-42 | Identifying and selecting stakeholders | | 135–136 |
| 102-43 | Approach to stakeholder engagement | | 135 |
| 102-44 | Key topics and concerns raised | | 135–137 |
| **Reporting practice** | | | |
| 102-45 | Entities included in the consolidated financial statements | | 80, 124–125 |
| 102-46 | Defining report content and topic boundaries | | 135–136 |
| 102-47 | List of material topics | Also see list of material topics in GRI Index. | 136–137 |
| 102-48 | Restatements of information | Any restatements of information have been included in the footnotes of the Sustainability Scorecard. | 138–142 |
| 102-49 | Changes in reporting | GRI 301 Materials and GRI 306 Effluents & Waste have been added as a consequence of adding Circular Economy as a new focus area. Additionally, GRI 416 Customer Health and Safety has been removed from the sustainability part as a consequence of the topic being fully integrated in the core business. | 71 |
| 102-50 | Reporting period | | 71 |
| 102-51 | Date of most recent report | | 71 |
| 102-52 | Reporting cycle | | 71 |
| 102-53 | Contact point for questions regarding the report | | 147 |
| 102-54 | Claims of reporting in accordance with the GRI Standards | | 71 |
| 102-56 | External assurance | | 145 |

## MATERIAL TOPICS

| Number of disclosure | Disclosure | Comments/Omissions | Page number(s) |
|---|---|---|---|
| **Anti-corruption** | | | |
| 103-1 – 103-3 | Management approach | | 56–57 |
| 205-3 | Confirmed incidents of corruption and actions taken | Possible corruption incidents are included in the reported code of conduct violations. | 56 |
| **Materials** | | | |
| 103-1 – 103-3 | Management Approach | | 26, 44–45 |
| 301-2 | Recycled input materials used | We only report on remanufacturing as other data is currently not available. | 45, 141 |
| **Energy** | | | |
| 103-1 – 103-3 | Management approach | | 48–49 |
| 302-1 | Energy consumption within the organisation | | 46, 48–49, 139 |
| 302-3 | Energy intensity | | 139 |
| **Emissions** | | | |
| 103-1 – 103-3 | Management approach | | 25 |
| 305-1 | Direct (Scope 1) GHG emissions | | 138 |
| 305-2 | Energy indirect (Scope 2) GHG emissions | | 138 |
| 305-3 | Other indirect (Scope 3) GHG emissions | | 138 |
| 305-4 | GHG emissions intensity | | 139 |
| 305-7 | Nitrogen Oxides (NOx), Sulphur Oxides (SOx) and other significant air emissions | We only report on VOC emissions as others are not significant. | 49, 139 |
| Own disclo-sure/KPI | Electrified vehicle sales | | 140 |
| Own disclo-sure/KPI | EU Fleet Average | | 140 |
| **Effluents and Waste** | | | |
| 103-1 – 103-3 | Management Approach | | 26, 49 |
| 306-2 | Waste by type and disposal method | | 140 |
| **Occupational health and safety** | | | |
| 103-1 – 103-3 | Management approach | | 53 |
| 403-2 | Type of injury and rates of injury, occupational diseases, lost days and absenteeism and total number of work related fatalities | 1) Data per gender – not applicable. Volvo Cars does not differentiate health and safety issues on the basis of gender.<br>2) Data per region – not applicable. Figures are presented on an aggregated level.<br>3) Sick leave, absenteeism for contractors – information unavailable. | 53, 142 |
| **Diversity and equal opportunity** | | | |
| 103-1 – 103-3 | Management approach | | 54–55 |
| 405-1 | Diversity of governance bodies and employees | | 141–142 |
| **Supplier social assessment and supplier environmental assessment (Responsible Sourcing)** | | | |
| 103-1 – 103-3 | Management approach | | 38–41 |
| 308-1 | New suppliers that were screened using environmental criteria | | 39–40 |
| 414-1 | New suppliers that were screened using social criteria | | 39–40 |

# Auditor’s Limited Assurance Report on Volvo Car AB’s Sustainability Report and statement regarding the Statutory Sustainability Report

This is the translation of the auditor’s report in Swedish.

**To Volvo Car AB (publ.),**
**corporate identity number 556810–8988**

*Introduction*
We have been engaged by the Board of Directors of Volvo Car AB to undertake a limited assurance engagement of the Volvo Car AB’s Sustainability Report for the year 2019. The Company has defined the scope of the Sustainability Report and the Statutory Sustainability Report on page 71.

*Responsibilities of the Board of Directors and the Executive Management*
The Board of Directors and the Executive Management are responsible for the preparation of the Sustainability Report including the Statutory Sustainability Report in accordance with the applicable criteria and the Annual Accounts Act respectively. The criteria are defined on page 71 in the Sustainability Report, and are part of the Sustainability Reporting Guidelines published by GRI (Global Reporting Initiative), which are applicable to the Sustainability Report, as well as the accounting and calculation principles that the Company has developed. This responsibility also includes the internal control relevant to the preparation of a Sustainability Report that is free from material misstatements, whether due to fraud or error.

*Responsibilities of the auditor*
Our responsibility is to express a conclusion on the Sustainability Report based on the limited assurance procedures we have performed and to express an opinion regarding the Statutory Sustainability Report. Our engagement is limited to historical information presented and does therefore not cover future-oriented information.

We conducted our limited assurance engagement in accordance with ISAE 3000 Assurance Engagements Other than Audits or Reviews of Historical Financial Information. A limited assurance engagement consists of making inquiries, primarily of persons responsible for the preparation of the Sustainability Report, and applying analytical and other limited assurance procedures. Our examination regarding the Statutory Sustainability Report has been conducted in accordance with FAR’s accounting standard RevR 12 The auditor’s opinion regarding the Statutory Sustainability Report.

A limited assurance engagement and an examination according to RevR 12 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.

The firm applies ISQC 1 (International Standard on Quality Control) and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements. We are independent of Volvo Car AB in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements.

The limited assurance procedures performed and the examination according to RevR 12 do not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. The conclusion based on a limited assurance engagement and an examination according to RevR 12 does not provide the same level of assurance as a conclusion based on an audit.

Our procedures are based on the criteria defined by the Board of Directors and the Executive Management as described above. We consider these criteria suitable for the preparation of the Sustainability Report.

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

*Conclusion*
Based on the limited assurance procedures we have performed, nothing has come to our attention that causes us to believe that the Sustainability Report, is not prepared, in all material respects, in accordance with the criteria defined by the Board of Directors and Executive Management.

A Statutory Sustainability Report has been prepared.

Göteborg 26 March 2020

Deloitte AB

Jan Nilsson
Authorized Public Accountant

Lennart Nordqvist
Expert Member of FAR

# Looking Back Helps Us Look Forward

## 1927


Volvo was founded by
Assar Gabrielsson and Gustaf Larson

## 1959

Volvo engineer Nils Bohlin invented
the three-point safety belt

## 70's

**1972** Environment was added to our existing core values Safety and Quality. Volvo invented the rearward-facing child safety seat

**1976** Volvo 240 and 260 were nominated as The Standard for Safety in the US. Volvo presented the world-first catalytic, exhaust control with the Lambda Sond, reducing harmful exhaust emissions by about 90 per cent

## 80's and 90's

**1984** The sales of Volvo 740 and 760 was a great success

**1991** Volvo presented Volvo 850 – the largest product investment since Volvo introduced the Side Impact Protection System

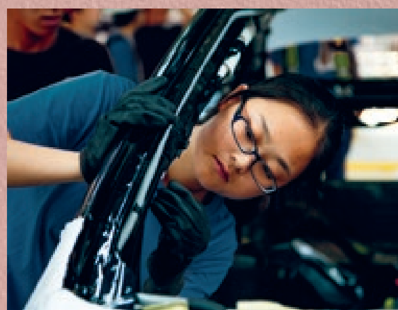
**1998** Volvo developed the Inflatable Curtain

**1999** Volvo Cars was acquired by Ford Motor Company

## 2010

Volvo Cars was acquired by
Zhejiang Geely Holding Group

## 2013



Industrial entities in China
established

## DEFINITIONS

**Volvo Car Group / Volvo Cars**
Any of the expressions refers to Volvo Car AB (publ.), Volvo Car Corporation and all its subsidiaries.

**Joint venture companies**
Joint ventures refer to companies in which Volvo Car Group, through contractual cooperation together with one or more parties, has a joint control over the operational and financial management.

**Retail sales**
Retail sales refers to sales to end customers (including a portion of cars used as customer loan and demo cars) and is a measure of the demand for Volvo cars from an end customer perspective.

**Wholesales**
Wholesales refers to new Volvo car sales to dealers and other customers including rentals.

**Europe**
Europe is defined as EU28 + EFTA.

**Passenger cars**
Passenger cars are vehicles with at least four wheels, used for the transport of passengers, and comprising no more than eight seats in addition to the driver's seat.

## 2014

First car developed on the SPA platform unveiled – the all-new XC90

## 2016

Volvo Cars accessed the capital market

## 2017

Electrification strategy announced

## 2018

First US manufacturing plant inaugurated

## 2019

First fully electric car introduced – the XC40 Recharge



**Rechargeable vehicles**
Rechargeable vehicles are defined as plug-in hybrids and fully electric vehicles.

**Agency personnel**
Agency personnel is referred to as specific competence that is sourced externally and assigned to meet fluctuating business resource needs.

## INFORMATION AND CONTACT

**Investor Relations**
Therése Odén Jandér
Head of Investor Relations
investors@volvocars.com

**Media Relations**
Nikki Rooke
Head of Corporate Communications
media@volvocars.com

**Volvo Car Group Headquarters**
SE-405 31 Gothenburg, Sweden
www.volvocars.com


VOLVO