VOLVO CAR GROUP
ANNUAL REPORT 2020

Freedom to move
in a personal, sustainable and safe way

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 developing and building 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 in mobility 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.

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2020 Highlights

2020 was a unique year in many aspects. While the first half was challenging due to the pandemic, we saw a substantial recovery in the second half. The decisive actions we took to mitigate the impact of the pandemic on our business were effective. They allowed us to quickly resume operations and recover. We reported the strongest second half year in the company's history and ended 2020 on a strong note, both operationally as well as financially.

Accelerated commercial transformation

We intensified our focus on a seamless interaction between our online and offline business as we create a modern, personalised customer experience together with our retail partners. We increased our ongoing investments in online business and rolled out our subscription service Care by Volvo in more markets.

Strong employee engagement

According to the most recent Employee Survey, our employees rewarded us with a 75 per cent engagement score which is above global benchmark. The survey showed they were especially happy with their closest colleagues, the freedom to be themselves at work and their contribution to the company's overall success.

Investments in designing, developing and producing electric motors in-house

We opened a new e-motor lab in Shanghai for the development and testing of electric car components. We will also assemble e-motors at our powertrain plant in Skövde, Sweden and plan to establish a complete in-house e-motor production by mid-decade.

Delivering on our sustainability ambitions

We continued to deliver on our ambitious climate plan, now approved by the Science Based Targets Initiative, through reducing our value chain carbon emissions by 3 per cent. We also exceeded the EU CO_2 emissions target. The integration of circular economic processes into our operations increased, with a strengthened focus on resource efficiency, recycled materials and remanufacturing.
We made good progress towards ethical and responsible business leadership, including through protecting our people during the pandemic and issuing our first ever green bond.

Our first fully electric car delivered to customers

With our plants in Ghent, Belgium and Luqiao, China being prepared for start of production of the XC40 Recharge in October, our first fully electric car reached its European customers shortly thereafter.

Continued good results within health and safety

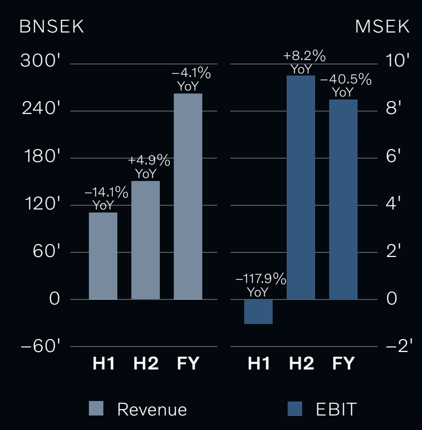
Work with health and safety continued to be successful, including mitigating the impact of the global pandemic. For example, the number of injuries with sick leave (measured as Lost Time Case Rate) decreased by 23.0 per cent to 0.10 for employees and 0.20 for supervised contractors.

150%
INCREASE IN SALES OF RECHARGE CAR MODELS

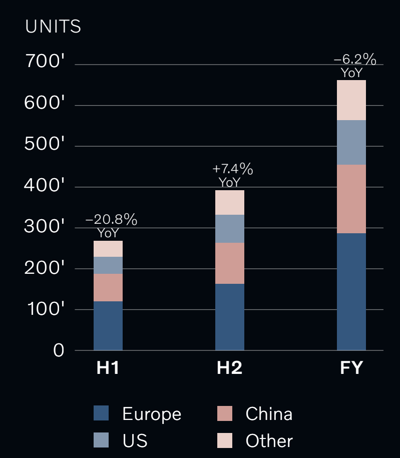
XC40
LAUNCH OF THE FULLY ELECTRIC XC40 RECHARGE

EUR 500 M
SUCCESSFUL ISSUANCE OF THE FIRST GREEN BOND

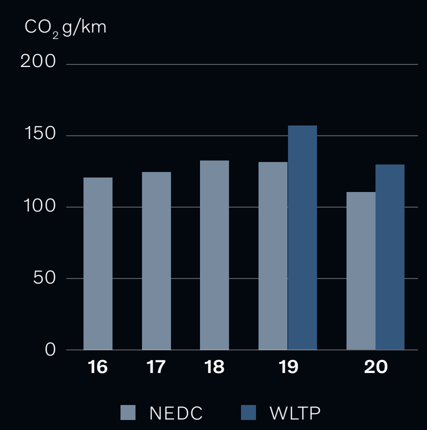
REVENUE AND EBIT



RETAIL SALES



CO_2 EMISSIONS
EU FLEET AVERAGE VOLVO CARS



CEO Comment

2020 has undoubtedly been a year of challenges. The Covid-19 pandemic has had a significant impact on people, societies and businesses globally. Volvo Cars experienced the most significant effects during the first half of the year, while the second delivered a strong recovery, both in terms of retail sales and financial performance.

In the first half, all our manufacturing plants were shut down for a brief period, while showroom traffic dropped. We acted decisively to limit the impact of the pandemic on our plants, offices and retailers as much as possible. We were responsible and prepared to quickly resume operations in a safe way, safeguarding people's health and their jobs. In several markets, we launched a Stay Home Store online concept, allowing customers to order a new Volvo from the safety of their own home. Our team in China in particular used social media in their sales process, helping the excellent performance in the region.

We also adjusted our cost structure where possible and made sure we are well-structured for the future from a resource and competence perspective.

Our successful approach allowed us to quickly resume operations and embark on a strong recovery in the second half of the year. China led the way, followed by the US, and in both markets – our largest – we managed to report sales growth for the full year. We also increased market share in most markets.

Our sales performance in the second half of the year was the best in the company's history. We achieved a year-on-year sales increase of 7.4 per cent for the period, which translated into an equally record-setting financial performance in the second half.

A fundamental factor was the fast-growing demand for the Recharge line-up cars. The share of Recharge models more than doubled, and in Europe it reached over 30 per cent of total sales. That positions us as one of the leading brands, in the fast-growing electric segment.

Our strong product range also allowed Volvo Cars and our sister company Polestar to overachieve on our joint EU CO_2 emissions target. This proves our electrification strategy is the right one both for our business and for society.

In coming years, we will build on these achievements. The fully electric XC40 Recharge is the first of a family of fully electric models. Also, we recently launched the C40 BEV, which is the next model to be produced on the same platform as the XC40 and Polestar 2 – another proof point of synergies created through the collaboration with our strategic affiliates.

Our direction is clear. In the long term, we are leaving the internal combustion engine behind. To support our electrification strategy, we are heavily investing in expanding our electric car production capacity around the globe, starting with our Ghent factory in Belgium. In 2020, we also announced investments in the in-house design, development and assembly of electric motors in Shanghai and Skövde.

Our ongoing transformation towards becoming a fully electric car company is an example of how sustainability is now a fully incorporated part of our business. It is as important and as crucial to our company as safety and our commitment to conduct business in a responsible manner remains strong – and so does our engagement in the UN Global Compact.

In the near term, we aim to constantly reduce our carbon footprint across our operations and bring down our CO_2 emissions per car by 40 per cent by 2025. We are also making good progress in areas such as the use of sustainable materials in our cars and our plans for electric car battery recycling.

"Sales of our Recharge models more than doubled."

Our credible sustainability strategy also allowed us to issue the company's first green bond worth MEUR 500. It was heavily oversubscribed, which illustrates the financial community's strong confidence in our strategy. The proceeds will be used for further investments, supporting our ambition to sell 100 per cent fully electric cars by 2030.

Another clear trend following the pandemic was the acceleration of online sales, a development that we expect to continue in 2021 as we invest in our ongoing commercial transformation. We will improve our offer, provide our customers with a better experience and more transparency in pricing, and position the company for continued growth.

For 2021, we anticipate continued growth in sales volume and revenue, as we benefit from a strong product offering and further increases in online sales. This growth, as well as continued cost management are anticipated to improve profitability to pre-pandemic levels. With ongoing investments in new technologies and new products, we foresee a similar level of capital expenditure as in 2020. Cash flow is expected to remain strong.

I would like to thank all employees for their commitment and support during a tough and challenging 2020 and look forward to a continued engagement in 2021. It will be an exciting year of new electrified product offerings and commercial opportunities.

Håkan Samuelsson
Chief Executive

Our Strengths

We are one of the fastest growing car makers in the world as we continue to gain market share and gene-rate strong cash flow. To many, our brand is synonymous with safety and we have one of the most ambitious climate plans in the industry.

As a leader in electrification, connectivity and autonomous drive, we are teaming up with some of the world's leading tech companies as well as our sister companies within the Geely Group.

We are investing in online sales and actively explore new ways of giving our customers access to a car. All of this is enabled by our global and diverse workforce – a group of highly-skilled people demonstrating unique competences within the areas of safety and autonomous driving technology, electrification and connectivity, as well as wide-ranging experience in manufacturing and selling our cars.

SUPERIOR GROWTH

The continued strengthening of our brand has had a clear and positive effect on our products and market position as well as our operations and financial development.

- One of the fastest growing global OEMs with a strong track record of superior growth and market share gains
- Strong revenue per car development
- Progressive margin improvements to be realised through fixed and variable cost efficiencies and revenue management
- Volvo Cars and Geely intend to merge existing combustion engine operations to maximise economies of scale and reduce the fixed cost base as well as capital employed

STRONG REVENUE PER CAR DEVELOPMENT

↑18%

SINCE 2016

STRONG BRAND LEADING THE WAY IN SAFETY AND SUSTAINABILITY

When it comes to safety we are an undisputable leader in the industry, and we commit to the highest standards in sustainable mobility.

- Leading position within active and passive safety
- Ambition to be a recognised leader in ethical and responsible business
- On our way to being climate neutral by 2040
- Green financing framework established with third party (Cicero) confirmation of the highest possible rating: dark green

CLIMATE NEUTRAL BY

2040

FRONTRUNNER IN COMMERCIAL TRANSFORMATION

We are actively implementing new ways to go to market: we will change what we sell, how we sell and where we sell.

- Ongoing investments in online sales channels, developed together with our existing retailer network
- Developing new business models for subscription services and convenient access to a car

MOVING TOWARDS DIRECT CONSUMER BUSINESS

ONLINE SALES

CARE BY **VOLVO**

M

DELIVERING ON OUR ELECTRIFICATION STRATEGY

The future is electric and we continue to deliver highly competitive electrified products based on advanced technology shared with the progressive performance brand Polestar. We will roll out a whole family of new, fully electric cars in coming years.

- Clear leadership in plug-in hybrid sales, excess credits for sale
- Strong model launch pipeline of only all-electric and hybrid cars
- Responsive ramp-up and rapidly increased BEV and PHEV capacity
- Approximately 80 per cent of total capitalised expenditures in electrification by 2025

GLOBAL RECHARGE LINE-UP RETAIL SALES

17%

CREATING VALUE WITH STRONG PARTNERSHIPS

Together with Geely, as well as with companies outside the broader Geely Group, we continue to explore new areas of cooperation and ways to achieve synergies and deliver long-term value.

- Strategic affiliates Polestar and Lynk & Co to create competitiveness and strong synergies
- Joint development and investments in next-generation scalable platforms and manufacturing
- Partnerships within the areas of charging infrastructure, connectivity, safety and autonomous driving

VALUE CREATING PARTNERSHIPS

VOLVO

Polestar

LYNK&CO

GEELY

STRONG CASH FLOW AND SOLID FINANCIAL POSITION

Our business generates strong cash flow and a solid financial position, funding investments, profitable growth and dividend distribution.

- Track-record of delivering according to guidance
- Strong cash flow generation
- Strong balance sheet:
  - Capital efficiency: 8.4 per cent ROIC
  - Capital structure: 153.5 per cent net cash/EBITDA
- Strong liquidity: SEK 94.4bn
- Dividend track-record

STRONG BALANCE SHEET

8.4%

ROIC

The Volvo Car Group

The car industry is changing and so are customer expectations. Rather than just selling cars, customers now also expect us to provide a variety of mobility services and new ways of accessing a car. The brands under the Volvo Car Group deliver on these expectations with new and exciting products and services.

EVOLVING THE TRADITIONAL CAR SALES BUSINESS

Volvo Cars was founded in 1927. Since then, we have been a world-leader in safety technology and innovation. Today, it is one of the most well-known and respected car brands in the world. Our head office, product development, marketing and administration functions are mainly located in Gothenburg, Sweden. The head office for APAC is located in Shanghai. The main car production plants are located in Gothenburg (Sweden), Ghent (Belgium), South Carolina (US), Chengdu and Daqing (China), while engines are manufactured in Skövde (Sweden) and Zhangjiakou (China) and body components in Olofström (Sweden). We furthermore operate assembly plants in Kuala Lumpur (Malaysia) and Bengaluru (India), as well as research and development centres in Shanghai, Stockholm, Lund (both Sweden) and Sunnyvale (USA). We also have design centres in Gothenburg, Camarillo (USA) and Shanghai.

Our cars are marketed and sold by regional market companies and national sales companies through approximately 2,300 local dealers in about 100 countries. Our retailer network is an important route to market. In collaboration with our retail partners around the world, we are developing our business model to embrace digitalisation and online sales. Since our retail partners deliver and service cars, they will continue to play a crucial role.

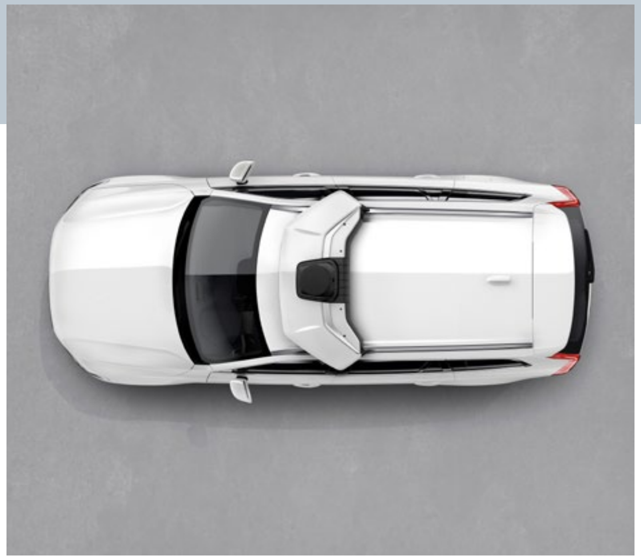
CREATING DIRECT CUSTOMER RELATIONSHIPS THROUGH NEW BUSINESSES

The transition to an integrated online-offline sales approach, whereby we create direct customer relationships through online sales, builds on the strengths of both our retail partners and ourselves. The continued collaboration is a prerequisite for this to be successful, capturing business opportunities together.

Consumers around the globe are rethinking traditional car ownership. Instead of buying and owning a car, some prefer temporary access to a car whenever they want it. Others like to subscribe to a car the way they already subscribe to music, films and smartphones. Our new direct business models like Care by Volvo and M add to our traditional sales model and allow customers to access a car whenever they want and wherever they want, in an easy and transparent way. By the middle of this decade, we aim to have established millions of direct consumer relationships.

Subscription
One of the world's first subscription services for cars, Care by Volvo does away with price negotiations and down payments. Instead a national, ready-negotiated monthly subscription fee covers everything involved in having a car, such as taxes, service and insurance. Since 2017 it has been launched in several key markets in Europe as well as the US. Care by Volvo also provides new ways of income for us and our retail partners.

Easy access on-demand
Established in 2017, M – Volvo Car Mobility is a mobility brand that offers consumers in cities on-demand access to a car for shorter periods, as an alternative to ownership. Launched in several Swedish cities, M has continuously increased on-demand easy access to Volvo cars, building direct relationships with new consumer groups.



CONTINUED LEADERSHIP WITHIN SAFETY

Safety is at the core of everything we do. Since our inception in 1927, we have earned a reputation as one of the leaders in automotive safety. The forthcoming technology for autonomous driving also offers an opportunity to radically improve traffic safety for society as a whole. To make this future vision a reality and reinforce our position as a safety leader, we have a number of partnerships in the area of autonomous technology, including Waymo and Luminar.

Autonomous driving technology
Zenseact was formed during 2020 as a new company following the split of Volvo Cars' and Veoneer's joint venture company Zenuity. Zenseact is focusing on developing autonomous driving and active safety software, further strengthening our position as a leader within safety. We believe that autonomous driving will revolutionise road safety and are committed to introducing the technology in our next generation cars.

Our Strategic Affiliates

Our strategic affiliates Polestar and Lynk & Co are non-consolidated, independent joint venture companies. They are important affiliates enabling us to deliver on our strategic ambitions. By cooperating with the different brands, we improve our overall competitiveness through synergies in the development of next-generation technologies, as well as shared procurement and other economies of scale.

LYNK & CO

CAPTURING NEW CONSUMER GROUPS

Lynk & Co is offering its consumers in-car connectivity, vehicle sharing, online sales and a subscription model. During the year, Lynk & Co launched two new models (05 and 06) and the Chinese consumers can now chose between five different models through the company's dealer network. In Europe, the first Lynk & Co model (01) was revealed, and is planned to reach the market during the second quarter of 2021. The consumers get access to their cars through an online and subscription business model. The commercial launch is a cooperation between Volvo Cars and Lynk & Co, which includes workshop networks, technical support, aftermarket as well as vehicle and parts logistics. Lynk & Co is owned by Volvo Cars (30 per cent) and Geely.

Polestar

ELECTRIC PERFORMANCE BRAND

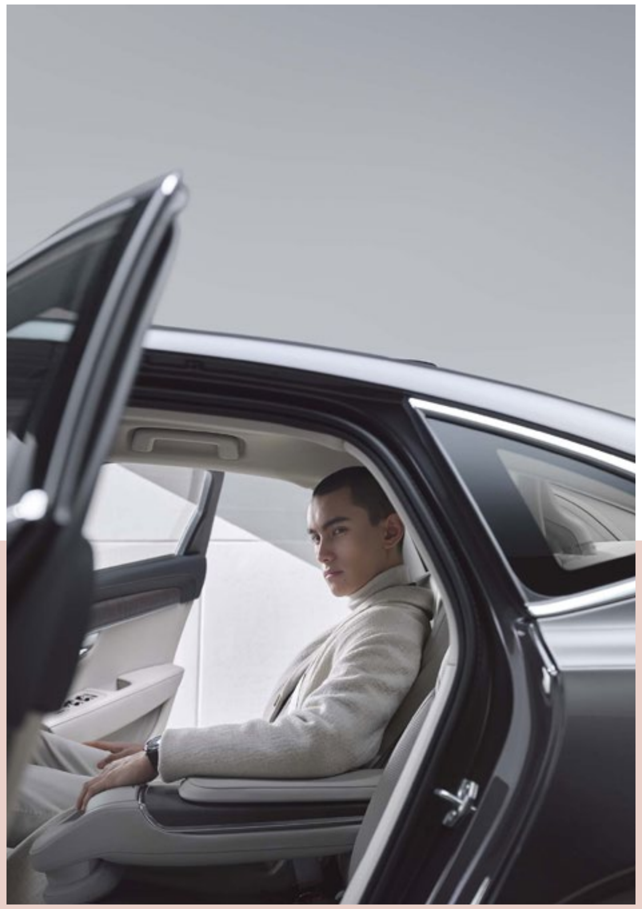
With sustainability high on the agenda, Polestar is offering its customers progressive, electrified performance cars combined with convenient ownership and comprehensive customer experience. With the Polestar 1 and 2 models, the company serves a consumer segment not currently served by Volvo Cars. Polestar's roots in China, through the production base and the understanding of the market, place it in a unique position to take meaningful share of the fast-growing Chinese EV-market. Polestar is 50/50 owned by Volvo Cars and Geely.

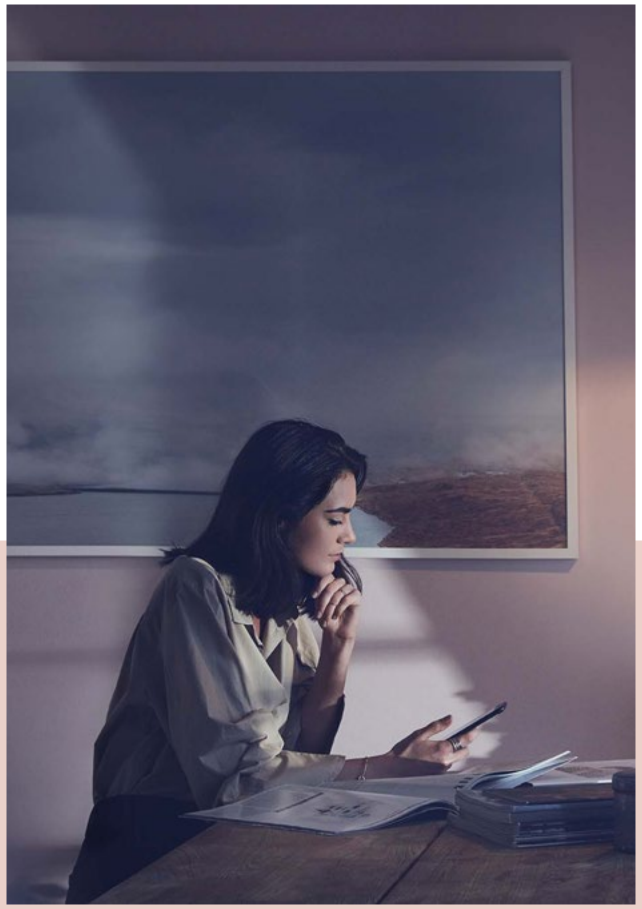
The world around us

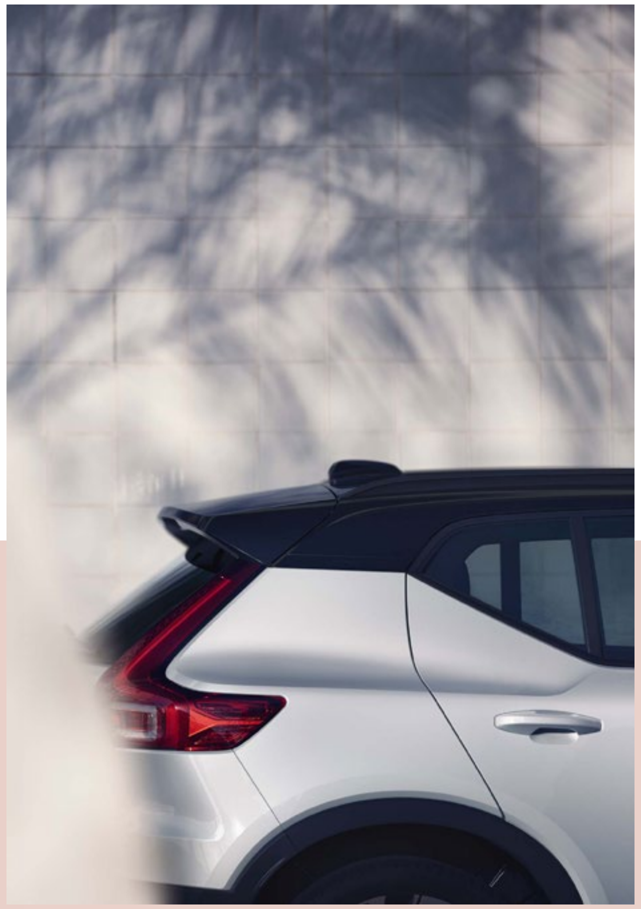
We do not exist in a vacuum. Our industry is undergoing a shift as technology, consumer preferences and trends are changing, and 2020 reminded us of the fragility of life on our planet. To remain successful as a company, we must evolve and find new business opportunities that provide an answer to the questions of today.

Consumer Trends

Consumer preferences are changing rapidly. People's decisions and behaviours are driven by factors such as convenience, digital access, environmental and social responsibility as well as ongoing urbanisation.







CONVENIENT MOBILITY

Convenience is an important factor for today's consumers as many people are primarily interested in just getting from A to B. Even though the interest in shared mobility has decreased during the pandemic, the demand for just having access to a car, rather than owning it, has increased. This continuing shift makes cars more a pay for use product, rather than a fully owned product. We also know that consumers expect transparency in terms of pricing and terms and conditions before signing up for a car or mobility service. The pandemic has shown us that in uncertain times, consumers are increasingly interested in flexible solutions and less willing to tie up capital by owning a car.

SEAMLESS CONNECTION

Today's increasingly digital lifestyle means that people expect a seamless connection between their smartphone or other devices and their car as they go about their daily lives. Consumers expect to have an ongoing digital relationship directly with car brands. That includes 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.

CLIMATE CHANGE

The automotive industry is moving towards electrification, driven by environmental concerns and regulatory restrictions. These aim to tackle the emissions that come from the full lifecycle of a car – manufacturing, logistics and tailpipe emissions. Yet car makers also need to consider the electricity mix used for charging, the second life of lithium-ion batteries as well as responsible supply chains. This is relevant for business-to-business consumers as well – sustainability is an ever-growing factor in the purchasing decisions of fleet and company car buyers.

URBAN MOBILITY

In an increasingly urbanising world, cities are facing numerous 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 business models emerge, and that support the demand for sustainable products and services.

Technology Shift

The ever-changing consumer expectations also shape technology developments in the automotive industry. Continued success requires investments in electrification, autonomous driving, connectivity and shared mobility, in order to capture emerging business opportunities.

ELECTRIFICATION
SUSTAINABLE MOBILITY IN FOCUS

A successful transformation from traditional combustion engines to hybrids to fully electric drivelines depends on total cost of ownership, as well as charging availability. As battery prices drop and charging infrastructure improves, consumer demand for fully electric cars is accelerating.

AUTONOMOUS DRIVING
SAFETY IS KEY

Autonomous driving has the potential to unlock numerous benefits for our customer. The technology has the potential to create a much safer traffic environment, enable a more efficient use of vehicles and to free up time. Yet many hurdles still need to be overcome, including legislative and technological challenges. However, both tech companies and car manufacturers are investing heavily in developing this potentially revolutionary technology.

"In the future, all cars will be connected."

CONNECTIVITY
THE MOBILITY ENABLER

In the future, all cars will 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 cars via their smartphones and new mobility services will increasingly connect drivers and passengers with rides in real time.

SHARED MOBILITY
NEW CONSUMER SEGMENTS

Shared mobility complements private car ownership and public transport by enabling subscription to a car as well as car/ride sharing. A couple of mega-players have gained strong positions in these areas; some are car manufacturers or mobility provider spin-offs, others are tech start-ups. Shared mobility is expected to increase going forward as outright ownership of a car becomes less important to certain customer groups.

Our strategic frame-work

Our strategy is guided by our company purpose of providing Freedom to move in a personal, sustainable and safe way. It is the foundation for reaching our ambitions; premium profitability and superior growth.

OUR PURPOSE

Freedom to move in a personal, sustainable and safe way

PERSONAL

We commit to developing and building 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.

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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

Our strategy supports our ambition to continue our profitable growth journey, being a global leader in the future electric premium segment with access to the international capital markets.

PERSONAL

WE DEVELOP AND BUILD THE **PERSONAL** RELATIONSHIPS WITH OUR CUSTOMERS

INITIATIVES AND OBJECTIVES

- Open architecture Android based in-car infotainment services → 34
- Convenient connected services provided via Volvo Cars' mobile app → 32
- Simplified online product offering with care package as standard → 42

SUSTAINABLE

WE COMMIT TO THE HIGHEST STANDARDS OF **SUSTAINABILITY IN MOBILITY**

INITIATIVES AND OBJECTIVES

- Pure electric car company by 2030, with inhouse competence of key components → 129
- 40% reduction of lifecycle carbon footprint for vehicles delivered 2025 → 129
- Circular business by 2040 including energy efficiencies and material recycling → 133
- Leader in ethical and responsible business → 134

SAFE

WE PIONEER THE **SAFEST**, MOST INTELLIGENT SOLUTIONS IN MOBILITY

INITIATIVES AND OBJECTIVES

- Our vision is that no one should be killed or seriously injured in a new Volvo car → 32
- Safe AD implementation → 32
- Leadership in human behavior safety → 32

TECHNOLOGY AND INDUSTRIAL STRUCTURE

WE LEAD SYNERGIES THROUGH COMMON SOURCING AND PLATFORMS

INITIATIVES AND OBJECTIVES

- New scalable BEV architectures for all Volvo models as of 2025 → 38
- Preferred partner to leading tech companies → 32
- Optimised end to end value chain → 38

COMMERCIAL STRUCTURE

WE STRENGTHEN OUR CUSTOMER EXPERIENCE THROUGH **DIRECT RELATIONSHIPS**

INITIATIVES AND OBJECTIVES

- Direct customer relationships built together with our retail partners → 42
- Online sales and subscriptions, with integrated offline experiences → 42

PURPOSE-DRIVEN CULTURE

WE PUT PEOPLE IN FOCUS AND DRIVE PERFORMANCE AND ENGAGEMENT THROUGH OUR PURPOSE

INITIATIVES AND OBJECTIVES

- Attract and retain the right talent to deliver on our strategy → 30
- High engagement for all our people → 30
- Continuous competence shift and lean organisation → 30, 36

CORPORATE PERFORMANCE AND MID-TERM AMBITIONS

WE FOCUS ON **PROFITABLE GROWTH**

- Premium profitability
- Superior growth

How we create value

Based on our purpose-driven culture, we create sustainable value and growth by investing in and utilising our resources with concern for our shareholders, employees, customers, business partners and the society in which we operate.

FROM THE CAMPAIGN "ONE MILLION MORE"

HOW WE CREATE VALUE

Our Stakeholders

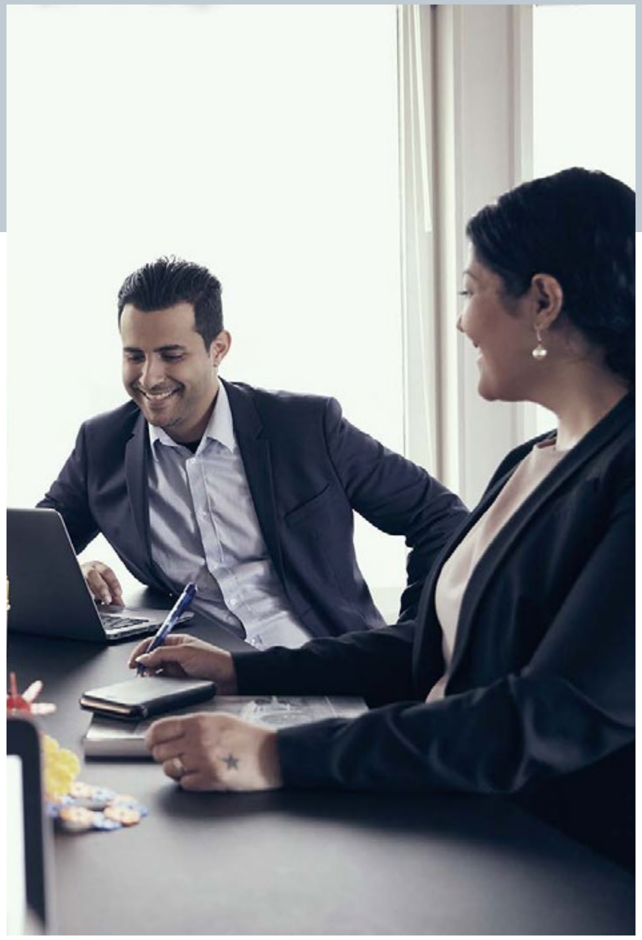
Creating value is a core tenet of our company and key to everything we do. Our purpose, to provide customers with the Freedom to move in a personal, sustainable and safe way, is rooted in a deep focus on creating value for each of our stakeholders. Yet what that means in practice differs depending on who you ask.

SHAREHOLDERS

For our **shareholders**, we want to create financial value. They have invested in our company and support our strategy, in the expectation that we as a company will successfully execute our strategy and deliver a return on that investment. We need to ensure superior growth as a company, because only then we can deliver on our ambition of premium profitability and have a capital-lean organisation that is able to fund its strategic investments. We have a strong track record in the premium segment in terms of growth and gaining market share, and we want to continue that trajectory.

EMPLOYEES

For our **employees**, creating value takes a different shape. Profitability is important for them as well, since a profitable company provides a secure job environment and creates pride. But it also means creating a work environment and company culture that gives employees satisfaction from their daily work and the confidence to perform to the best of their abilities and to contribute to our shared success. It also means showing our people that they contribute to, and are part of, something greater than themselves. Through our commitment to safety and sustainability, and our focus on making lives easier for our customers, we do exactly that.



CUSTOMERS

As for making lifes easier for our **customers**: that is how we aim to create value for the millions of people around the world driving a Volvo. We operate in a vibrant marketplace against strong competitors, but we believe we have something unique to offer. Our success in recent years proves that we are on the right track and that customers like what they see. By choosing a Volvo, they get a car that offers beautiful Scandinavian design, the highest possible safety standards, intuitive technology and a wide range of convenient services.

SOCIETIES

We also aim to create value for the **societies** we operate in. Both in Sweden and around the world, we support societies and governments by providing jobs, boosting the local economy and paying taxes. At the same time, no company exists in a vacuum and we are very much aware of the impact we have on the world around us. Being a car maker, that impact is not always a positive one, but we aim to be a part of the solution when it comes to areas like improving road safety, creating cleaner, more enjoyable cities to live and work in, and constantly decrease the carbon footprint of our operations.

BUSINESS PARTNERS

Finally, we work closely with various **business partners** to create value. Our success is their success; whether we talk about our dealerships and retail partners around the globe, or the thousands of companies in our global supply chain, there is a clear symbiosis between us and our partners. When we sell more cars, that translates into more demand for their services and products. In other words, our success as Volvo Cars has a positive ripple effect on the shareholders, employees and other stakeholders of our business partners as well.

In the end, our overarching aim is to create sustainable value and growth for **all stakeholders** in our company. In the following sections we will go into more detail about how exactly we create value through the different parts of our company and through the different products we offer.

Our People and Culture

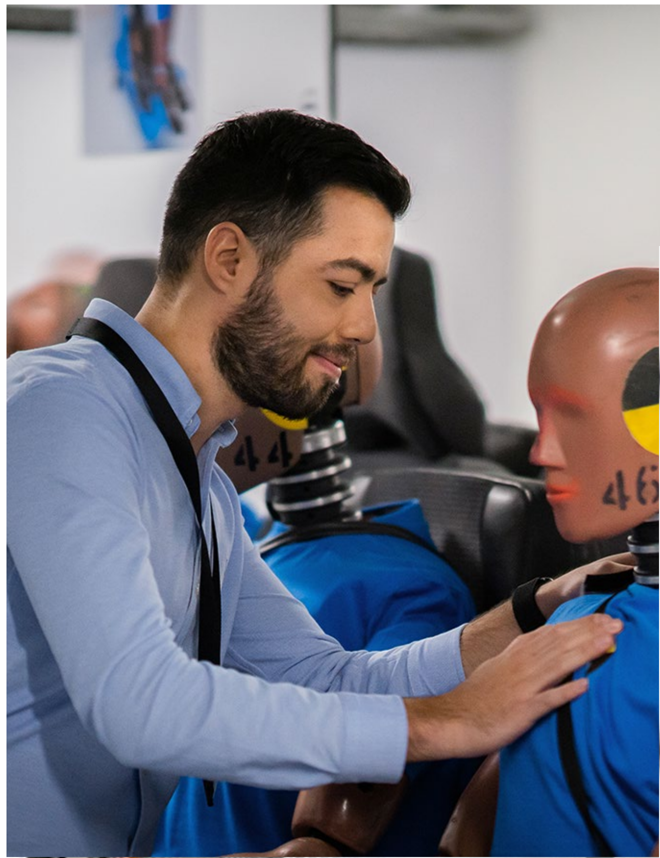
Our culture and our diverse workforce is central to our success. Attracting and retaining talent from all over the world is crucial, and so is bringing out the best in our people to deliver on our growth plans. By doing so, we will remain a leading player in the highly competitive premium car and mobility industry.

Only then can we meet both current and future needs, from production and engineering to commercial operations, and make our transformation towards becoming a premium electric car maker a reality. We aim to be an employer of choice for people who want to make a difference, allowing them to continuously grow and develop to be the best versions of themselves.

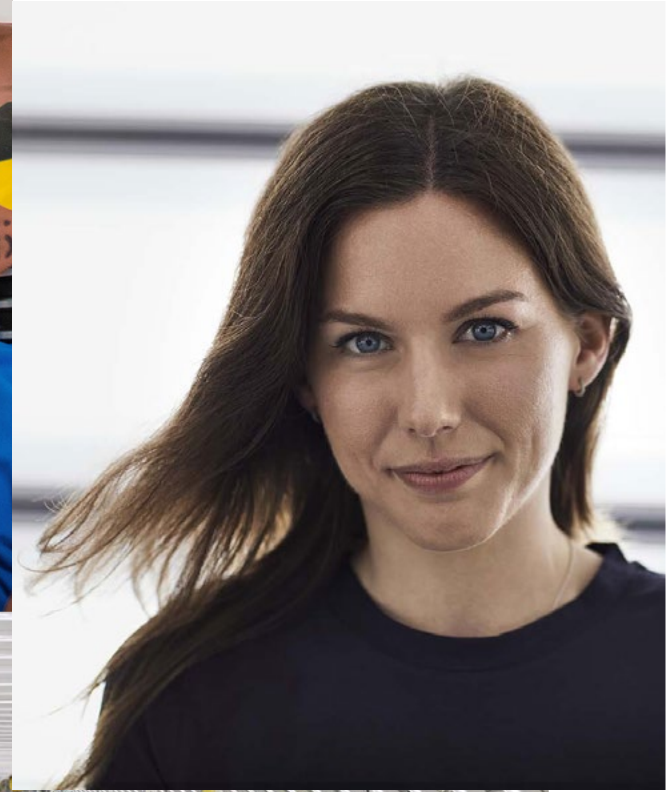
We want our people to feel that they can be their authentic self at work and ensure that everyone has equal opportunities based on their competence, experience and performance. Our collaborative culture values an open and curious mindset and embraces learning from each other, allowing everyone to constantly deliver the best performance possible.

Our recent Employee Survey demonstrated our strength. Our employees rewarded us with a 75 per cent engagement score, which is above global benchmark. The survey showed they were especially happy with their closest colleagues, their ability to be themselves at work and their contribution to the company's overall success. We also scored well on accountability and our open culture.

We actively work towards making our potential talent pool as large as possible by identifying potential talents in underrepresented groups. We actively address unconscious bias, aim to increase diversity in recruitment and to inspire the next generation of innovators and leaders – for example, we have made a commitment to gender diversity in leadership by applying a 50/50 approach in recruitments.



"WE create together, are curious, make the difference."



Through a working culture that encourages and welcomes different perspectives, we can unlock every person's full potential. By making room for creativity, innovation and better decision-making, we create the best prerequisites for high performance and engagement.

Our leaders have the task to create clarity for all employees with regards to their priorities and their contribution to the company's overall ambitions. We aim for a flat and purpose-driven organisation throughout the company to set the structure for delivering on these ambitions swiftly and effectively.

Responsible business is a fundamental part of our culture and our approach, which we constantly promote 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 and supports better employee engagement, as our latest survey also demonstrates.

Finally, to be the attractive employer we strive for, we also focus on supporting our employees outside their job. Our ambition is to be a parental-friendly employer around the globe and support all our employees to spend quality time with their children and family.

Product Creation

For over a century, the internal combustion engine was the dominant force in the auto industry. But as we enter a new era for the automotive industry and the world, we believe that the internal combustion engine has served its course and we need to change gears – literally.

That is why, in 2017, we were the first traditional car maker to announce a shift to all-out electrification. It would be a gradual shift, driven by customer demand, but we ceased investing in new diesel engines and planned for a gradual phase-out of cars purely powered by combustion engines. In 2020 we continued to make good progress on our transformation towards becoming a premium electric car brand.

In coming years, we will continue in that direction. And while we firmly aim towards an electric and more sustainable future, we will continue to push the envelope in automotive safety. Autonomous drive will play an important role in advancing safety. We also aim to lead in convenient connected services, by partnering with some of the best tech firms in the world.

"We will continue to aim towards an electric and more sustainable future and automotive safety."

ELECTRIFICATION

For Volvo Cars the future is electric. Some years ago, we made a decision on where we wanted to take our company and our brand: we want to become a global premium electric car maker. In fact, we aim to be a leader in the future premium electric segment. While there is still a lot of work to do, we are well on our way to making that ambition a reality.

For us, there is no doubt: the premium segment is going electric. Driven by changes in customer preferences, national legislation and the need to address climate change, electrification is on the march. We believe electrification is the only way to create truly sustainable mobility and help combat climate change effectively.

2020 marked the beginning of our journey towards full electrification of our model portfolio. The XC40 Recharge is the first of several fully electric Volvos to be introduced in coming years. Electric Volvos deliver on everything that customers expect from a Volvo, with the bonus of zero tailpipe emissions.

By investing in electrification, we are investing in growth. Whereas other parts of the market are in decline or show very limited growth, demand for electrified cars is strong in the premium segment. That demand growth applies to both fully electric cars as well as plug-in hybrid models, or as we prefer to call them: part-time electric cars. This is also borne out by user data, which shows that on average, Volvo drivers use their plug-in hybrid in fully electric mode around 40 per cent of the time.

We are well positioned to benefit from the demand growth in coming years, as the only car maker on the market that offers a plug-in hybrid variant on every model in its portfolio. We also offer mild hybrid variants, which reduce fuel consumption and emissions by recovering kinetic energy during braking. We continue to invest in more fully electric models, new vehicle platforms designed for electrification, as well as in-house electric motor, design development and production.

Our EU fleet average CO_2 emissions fell from 132 g/km in 2019 to 111 g/km in 2020, mainly due to increased sales of our plug-in hybrids. That also helped us to exceed our individual EU emissions target in 2020. With our electrification strategy, we expect to fulfil our 2021 EU emissions target.

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PRODUCT CREATION HIGHLIGHTS

Actions for improved charging infrastructure

Volvo Cars has chosen Plugsurfing as its charging partner of choice so that drivers of fully electric Volvo Recharge models in Europe will have easy access to over 200,000 charging points. This will allow drivers to easily charge their electric Volvo, regardless of where they are on the continent, without the need for countless national subscriptions. Plugsurfing is one of the largest and rapidly growing charging network aggregators in Europe. Our intent is that all our vehicles can be charged wherever there is electricity, anytime.

CONNECTIVITY

Together with Google, we are fundamentally rethinking infotainment and the user experience inside the car. We were the first company to team up with Google on an infotainment system powered by Android Automotive, with popular Google services built-in. While the system made its debut in the XC40 Recharge, it will over time be rolled out into other models in our line-up.

One of the best features of Android Automotive is that it is an operating system familiar to millions of developers, tailored to run in the car. Technology and services created by both Volvo Cars and Google developers are embedded in the car, while additional music and media apps optimised and adapted for cars are available through the Google Play Store.

From a safety point of view, the voice assistant is an important feature. It allows customers to get things done using just their voice for in-car functions such as controlling temperature, setting a destination, playing their favourite music and podcasts, and keeping in touch by for example sending messages. This integration contributes to reducing driver distraction, helping drivers keep their hands on the wheel and eyes on the road.

Our infotainment systems are provided by and co-developed with Google and other service providers depending on market: in China and South Korea for example, Volvo Cars works together with local tech companies such as Huawei, Alibaba and SK Telecom to offer customers an attractive package of digital services.

The infotainment systems are also closely connected with our digital services platform, where available. For example, Volvo Cars' mobile app offers features such as monitoring battery status, charging levels and electric driving patterns.

At the same time, it retains classics such as pre-heating your car on a cold winter's day, finding your car in a large parking lot, and remote locking and unlocking via a digital key. Volvo Cars' mobile app functionality is planned to be available for the XC40 Recharge later this year, with features introduced over time.

The XC40 Recharge is also the first Volvo designed to receive larger software and operating system updates over the air, placing us at the forefront of automotive connected services. This means the car can keep evolving and improving over time, rather than it being at its peak when it leaves the factory. It will also allow us to continuously develop and roll out software and connected services, using our growing force of software engineers.

What this all adds up to is that new Volvo cars will provide drivers the same experience in their car that they are used to on their smartphone, but adapted for safe interaction while driving. Once available, over-the-air updates, meanwhile, will keep the car as fresh as customers' other digital products, always with the latest and greatest features. We believe this will put us in a very strong position in the marketplace in coming years.

PRODUCT CREATION HIGHLIGHTS

Rethinking infotainment and the user experience inside the car

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HOW WE CREATE VALUE: **PRODUCT CREATION**

LIDAR SENSOR INTEGRATED INTO THE ROOF

SAFETY AND AUTONOMOUS DRIVE

Safety is core to what our brand and our company stand for, and we believe that safety should be central to everything we do. Throughout 2020, we continued to push safety boundaries towards our vision of zero casualties or serious injuries and all our models are among the safest cars available on the market.

Our XC40 Recharge serves as a blueprint for designing safe, fully electric cars, as our safety engineers performed a comprehensive review of requirements for a car without an internal combustion engine and with a lithium-ion battery. The result is still one of the safest cars on the market, but with safety technology adapted to a new powertrain.

In coming years we will continue to develop new safety technologies, focusing on three main areas: advanced driver assistance systems, autonomous driving and driver behavior. These areas offer great possibilities to further advance safety and reduce injuries and fatalities in traffic. We believe that when introduced gradually, safely and responsibly, autonomous driving technology can revolutionise road safety and be one of the most life-saving technologies in history.

That is why we plan to introduce an autonomous driving feature called Highway Pilot in our next generation of cars based on the SPA2 modular vehicle architecture. Those cars will be available as hardware-ready for autonomous drive from production start and have a LiDAR sensor seamlessly integrated into the roof. That LiDAR sensor, supplied by our technology partner Luminar, is key in creating cars that can navigate safely in autonomous mode.

PRODUCT CREATION HIGHLIGHTS

Autonomous drive and ride-hailing services

Autonomous drive will also play an increasingly important role in ride-haling services. We have the ambition to be the supplier of choice to leading ride-hailing firms around the globe, and we are keen on boosting ride-hailing as a potential solution to congestion and better air quality in cities. Our ongoing partnerships with companies like Waymo are tangible proof points of that ambition and present exciting business opportunities.

SAFETY AND HUMAN BEHAVIOUR

While we are excited about the prospects for our Highway Pilot feature, it will still take some time before full autonomy becomes widespread. Legislation and technology still have some catching up to do, while customer acceptation of full autonomy is another important factor. So we continue to develop safety systems in other areas as well, protecting and supporting people. The 180 km/h speed cap on new Volvos and the Care Key, both introduced in 2020, are examples of this approach.

To really live up to our safety vision, we believe we need to address human behaviour and use technology as a support to make people better and safer drivers. In recent years, for example, the rise of smartphones and touch screens inside cars has sparked a growing debate around the dangers of distraction behind the wheel. But our safety experts say that distraction is a fact of life, and that technology should be used to support people in their daily commute.

For example, our various active safety systems with autobrake and steer assist are designed to be on guard at all times and help drivers if they lose concentration or are distracted for a split-second. As such, they can act as an extra pair of eyes watching over the driver. The advanced voice control feature on our new Android-powered infotainment system allows drivers to control key features on their car, all while keeping their hands on the wheel and eyes on the road.

We also believe that distraction and intoxication should be addressed with the help of in-car cameras and other sensors that help ensure the driver is engaged in the driving. With such technologies, if a clearly distracted (or intoxicated) driver does not respond to warning signals and risks a serious, potentially lethal accident, the car could intervene as a last resort by actively slowing down and stopping the car. We plan to introduce these cameras on the next generation of Volvo cars based on SPA2.

ORGANISATIONAL CHANGE

To lead the transformation in online business, electrification, autonomous drive and new mobility models, we need to invest heavily in these areas and we continued to do so in 2020. At the same time, we decided to deprioritise and reduce investments in non-focus areas to support further growth longer-term. A reshaping process led to the company reducing 1,300 positions including consultants in its Swedish operations as part of realigning the operations and long-term ambitions for competence shift and structural cost reductions. The structural transformation resulted in 650 employees leaving Volvo Cars. At the same time we continue to recruit actively in prioritised areas. An important area of investment in 2020, and going forward, has been software development. Cars have become increasingly like smartphones on wheels in recent years, which means they require more investments in software development compared to previous car generations. This means that we are increasingly focused on attracting the best software engineering and coding talent available, while creating an organisation that is well-equipped to an environment of constant improvement and innovation, rather than the more traditional automotive way of bi-annual product updates.

One way to achieve this is to create focus in our organisation and spin out operations where it makes sense. In 2020, Volvo Cars' part of Zenuity was transferred to a new stand-alone company called Zenseact which is wholly-owned by Volvo Cars. Zenseact incorporates our ongoing development of software for autonomous drive. Led by our former chief digital officer, Zenseact is a prime example of how we design our organisation to be most effective and illustrates the importance we place on development of safe autonomous technology.

HOW WE CREATE VALUE

Industrial Operations

Our industrial operations are organised around a clear principle: We do all we can to build where we sell and source where we build. With car plants in Europe, China and the United States we are a truly global company in terms of manufacturing footprint, which allows us to quickly adjust to changes in customer demand or market conditions.

This global network, with clear roots in our home markets, also allows us to constantly take steps forward in terms of sustainability by consistently reducing our carbon emission levels. We set similar requirements on our suppliers. And as we roll out a new commercial strategy, we will also continue to transform and optimise our industrial operations, while retaining our focus on quality throughout our value chain.

"We do all we can to build where we sell and source where we build."

2020 HIGHLIGHTS

In many ways 2020 was an unprecedented year for our industrial operations. Faced with a global pandemic, we had to mitigate the impact on our manufacturing plants, supply chains, logistics operations and the health and safety of our employees.

Apart from managing the impact of the pandemic, a major focus area for our industrial operations this year was the company's ongoing transformation towards becoming a premium electric car maker. Following the launch of the XC40 Recharge, the plants in Ghent, Belgium and Luqiao, China were prepared for the start of production of that model, which started in the autumn.

Already in March, we revealed a new battery pack assembly line in Ghent. Over the coming years battery pack assembly will become an important part of our global manufacturing operations, as we continue to electrify our entire line-up. The Ghent plant will provide important learnings to other manufacturing sites in terms of process optimisation and efficiency. The company also has state-of-the-art battery labs in China and Sweden.

Our manufacturing network continued to provide an important contribution to our ambitious climate plan, communicated in 2019. In coming years, we will focus on short term actions aiming to reduce emissions by 40 per cent per car by 2025, towards our long-term ambition of becoming a climate neutral company by 2040. We aim to achieve this by reducing tailpipe emissions by 50 per cent through electrification (see Product Creation) and reducing supply chain emissions and operational emissions (including transports) by 25 per cent each.

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We are constantly reducing the carbon footprint of our manufacturing network and our aim is to have climate-neutral manufacturing by 2025. Already in recent years we reached several milestones: all our European plants have had a climate neutral electricity supply since 2008, while the engine plant in Skövde, Sweden was the first in our network to become completely climate neutral in 2018.

On a more holistic level, we believe in a learning organisation in our industrial operations. Through a focus on continuous improvements in our day to day work, we have created more compact processes in our plants, resulting in improved operational efficiencies, including gains in terms of energy use and other sustainability-related areas.

While a lot of work went into dealing with the impact of the coronavirus pandemic, we also kept a focus on overall well-being and safety in our facilities around the globe. Risk observations and a focus on safe behaviour continue to be an integral part of our daily work, and we made big progress in 2020 in eliminating accidents in our manufacturing plants. Work with health and safety continued to be successful, (including mitigating the impact of the global pandemic). For example, the number of injuries with sick leave (measured as Lost Time Case Rate) decreased by 23.0 per cent to 0.10 for employees and 0.20 for supervised. Ongoing renovations to plant areas, offices and restaurants around the globe were designed to boost overall well-being.

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INDUSTRIAL OPERATIONS HIGHLIGHTS

100% renewable electricity mix in the Chengdu site

In 2020, our Chengdu manufacturing site in China took a concrete step forward as it signed a new supply contract securing a 100 per cent renewable electricity mix. By reaching this milestone at our largest plant in China, renewable electricity now amounts to approximately 80 per cent of the total electricity mix in our global manufacturing network.

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, XC60

LUQIAO
CAR PRODUCTION XC40

BANGALORE
ASSEMBLY FACTORY S90, XC60, XC90

KUALA LUMPUR
ASSEMBLY FACTORY S60, V60, S90, XC60, XC90

PROCUREMENT AND LOGISTICS

While the coronavirus pandemic provided an unfortunate interruption for our procurement teams, we continued our work to make our supply chain and logistics operations increasingly sustainable. We also expect outstanding sustainability standards from our suppliers if they want to build a long-lasting business relationship with our company.

We hold ourselves to the highest standards in terms of responsible business, but we believe we also have a responsibility to empower and support companies that share our ambitions. Through our selection of and collaboration with partners, we can make a positive influence and leave our customers with the confidence that they buy products from a responsible company.

For example, our suppliers are regularly subjected to sustainability assessments and audits, with the aim of both checking whether they meet our requirements but also to identify areas where they can further improve. Specifically, our list of requirements includes areas such as energy supply used by suppliers, how they deal with business ethics, human rights, environmental management, working conditions and responsible sourcing.

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Another area of attention is the circular economy, a philosophy that aims to reduce waste and keep products and materials in use for a longer period. We are actively pursuing more sustainable materials in our cars, together with selected suppliers, while we have a clear plan for dealing with electric car batteries after their first use inside a car to minimise their impact on the environment.

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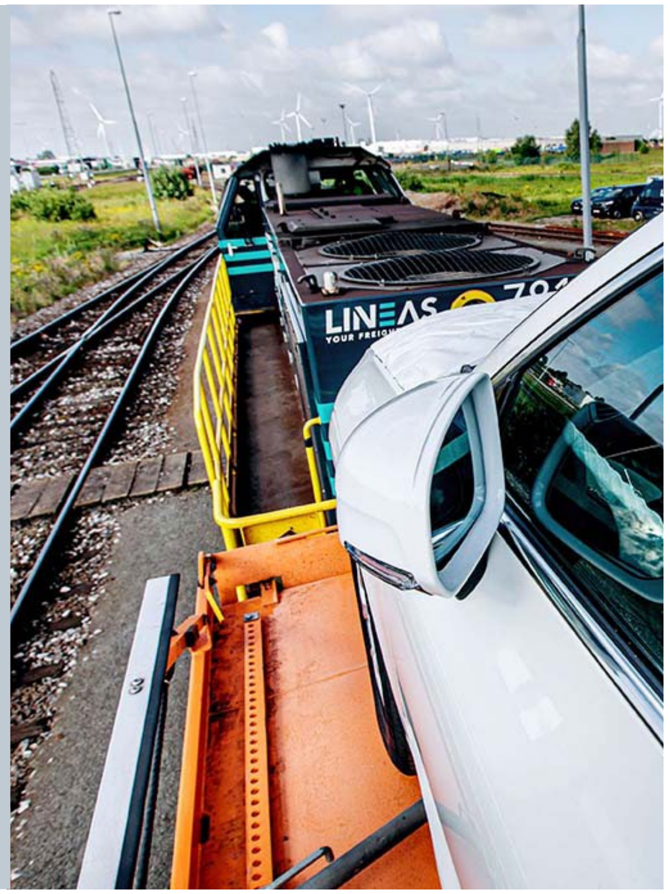
"We are actively pursuing more sustainable materials in our cars."

INDUSTRIAL OPERATIONS HIGHLIGHTS

A shift to less energy intense modes of transport

As for our logistics operations, we have managed to considerably reduce related CO_2 emissions per car. An important factor has been the shift to less energy intense modes of transport such as rail and sea freight. In early 2020 we made a major change in our European transport network by changing from a purely road-based network to a mixed concept. This allowed us to halve CO_2 emissions and replace thousands of diesel-powered trucks with rail transport.



INDUSTRIAL OPERATIONS HIGHLIGHTS

A constant focus on preventive quality and a customer-first mindset

Through a constant focus on preventive quality, we make sure that our suppliers and our own plants manufacture to the highest quality possible and limit the risk of defects. That customer-first mindset also applies to our sales and service processes. If a customer finds a problem, we strive for a quick resolution of the problem, and to understand and tackle the root cause in order to avoid reoccurrences.

LOOKING AHEAD

In coming years we will continue to develop our operations to support our new commercial strategy (see next section). In terms of production capacity, we are well prepared to meet our future ambition of selling as much as 1.2 million cars per year with limited additional investments. Yet to transform this into actual installed capacity, it will place additional demands on our operations in terms of process optimisation and efficiency.

Flexibility is an important focus area in coming years. By increasing the volume and model flexibility in a plant, we will be able to produce more models per plant, on the same production line, with minimal investment. This allows us to tackle fluctuations in demand and production requirements, and we will also continue to focus on sharing of technology, architectures and platforms to increase industrial flexibility and reduce cost.

This also means there is a need to constantly identify and implement synergies between Volvo Cars and other Geely Group brands in all industrial areas as well as in procurement. Higher utilisation of our existing capacities within our shared manufacturing and supplier network, will increase resource efficiency and significant economies of scale will be achieved.

In line with our new commercial strategy (see next section) which includes increased online sales, we need to reduce complexity, hence this is another important focus area. The current model offer allows for many thousands of different variations of each model in our portfolio, depending on how a customer specifies a car. As we switch to offering more pre-configured cars available for instant delivery, this provides plenty of scope for efficiency and cost savings, through a more streamlined supply chain and lower stock levels.

By synchronising each step of the manufacturing process, from the sourcing of raw material to delivery of the finished car, we reduce costly waste and complexity. Through an optimised end-to-end value chain, we not only take action to reach our sustainability ambitions, we ensure we can move towards new business models and make the shift to electrification and online sales effectively, allowing for fast delivery to our customers.

Reducing complexity also offers great opportunities to increase reliability and improve quality. Our work with quality is crucial to ensure the highest possible customer satisfaction. To this end, we work in a number of areas around quality assurance, which starts already in the product planning and creation phase. By incorporating feedback from customers in product development, we can constantly improve our cars and products and deliver on customer expectations.

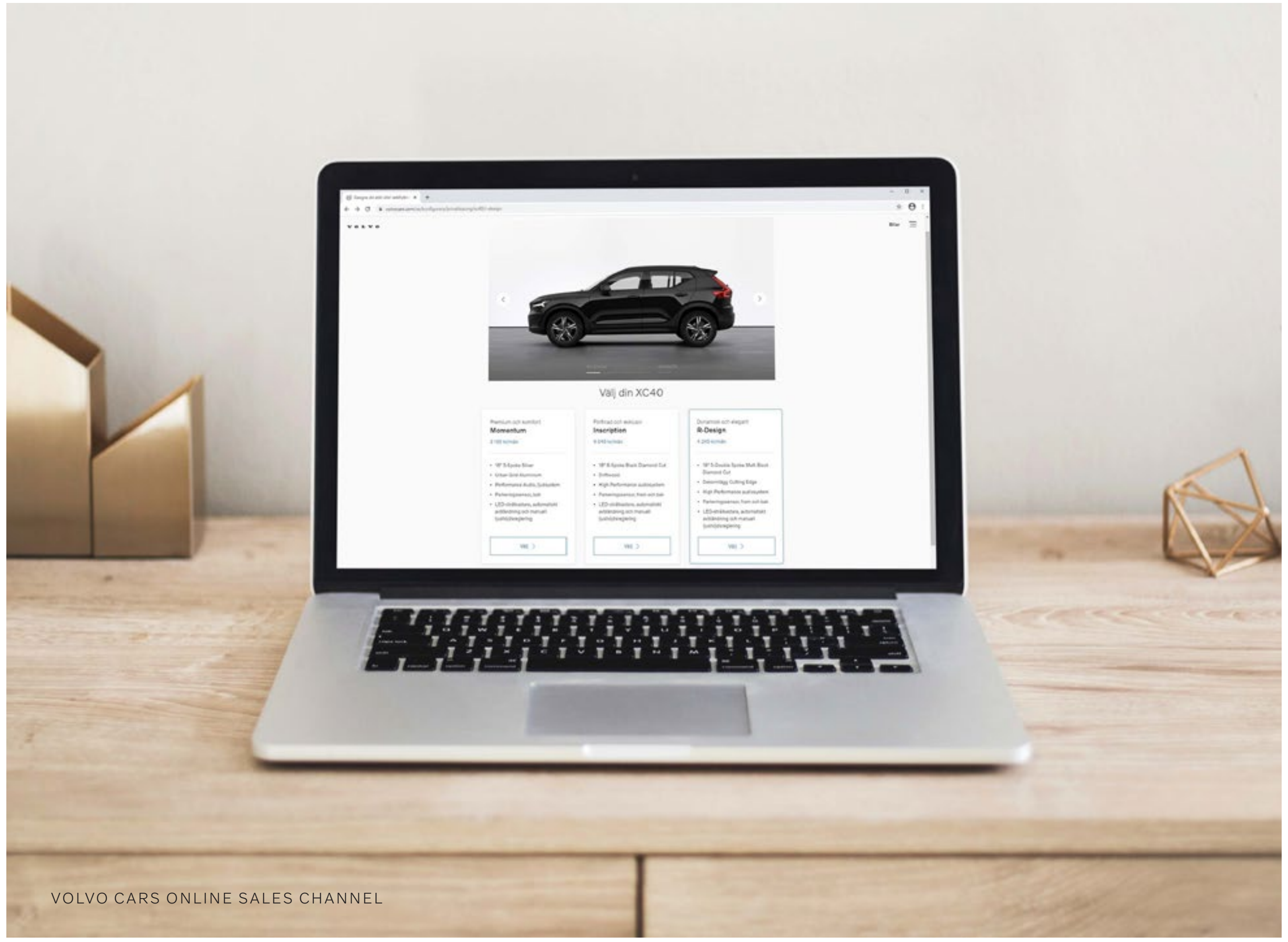
Commercial Operations

"We are on the verge of a fundamental shift in our entire business model. One that will change what we sell, how we sell and where we sell."

This shift is deeply rooted in market and customer research, helping our ambition of becoming a leading premium electric car maker globally.

Starting in 2021, all our fully electric cars will be offered online only, through a completely revamped online sales channel. A renewed volvocars.com will be an addition to our other sales channels such as retail partners and inner-city studio concepts, making sure that customers can access a Volvo where and how they want.

At the same time, we will reduce the complexity of our offer and make more cars available for quick delivery. And for those buying online, we will enhance the offer to add convenience and include insurance and service – all for a nationally, pre-negotiated price where legally possible.



VOLVO CARS ONLINE SALES CHANNEL

COMMERCIAL OPERATIONS HIGHLIGHTS

Premium subscription by Care by Volvo

Care by Volvo, our premium car subscription service has been successful in Germany and the US, two early adopter markets for subscription, and has proven to be an effective way of winning over customers from other brands. Rollouts of Care by Volvo in the UK, Norway and the Netherlands have proven equally successful and more markets will follow.

2020 HIGHLIGHTS

The pandemic had an impact on our commercial network as well. As countries, regions and cities implemented restrictions on movement and social interactions, or even locked down completely for some time, floor traffic in the showrooms of our retail partners slowed down considerably.

To help mitigate the impact, our online business team launched a new initiative: the Stay Home Store concept. Leveraging our existing online sales tool, the Stay Home Store allowed customers to buy or lease a new Volvo from the safety of their own home. It provided them with a transparent and easy-to-use platform to interact with us and our retail partners, without the need to meet in person.

Elsewhere, we also launched several new services for customers aimed at alleviating the impact of the pandemic. In the United States, for example, we introduced the Volvo Valet Service whereby Volvo owners in the U.S. could have their cars serviced without leaving their home. In China, a similar premium valet service for car maintenance was offered to Volvo drivers via WeChat.

The Stay Home Store represents a good example of how Volvo Cars increasingly employs the power of online. Another example is the continuing rollout of Care by Volvo, our premium car subscription service.

COMMERCIAL TRANSFORMATION

The lessons drawn from products like Care by Volvo and initiatives such as the Stay Home Store will help during the ongoing commercial transformation we mentioned at the beginning of this section. While new insights are constantly used in ongoing product development, some stand out more than others. One example is the benefit of reducing complexity in our offer, which is demonstrated by customer feedback and usage data in our online car configurator.

Clearly, some customers still prefer the ability to specify every single option on their new Volvo. But adding the option of choosing from a selection of pre-configured, yet well-equipped models has proven to be a great success. In several markets, conversion rates increased when adding more pre-configured cars and simplifying the configurator on volvocars.com. The same adjustments will now be rolled out on a much broader scale.

That allows us to offer many of our models on 'instant' delivery, whereby waiting times amount to a few weeks rather than several months for a car built to order. Making this change requires considerable adjustments to our commercial and industrial operations (see previous section). On the other hand, it will allow the company to be more efficient in its operations and deliver on customer expectations in a much better way.

Our commercial transformation also entails changes to the relation with the customer and the role of our retail partners around the world. As customers are becoming more used to buying online, they want more convenience and transparency, and they want less complexity. This new commercial era will happen together with our retail partners, but their role will change.

Our retail partners will continue to be important to us and our customers when delivering a world class customer experience. The end game is to offer consumers a premium, convenient and seamless experience, regardless of where they interact with our brand and company.

Finally, we will invest more in our permanent Volvo Studios and temporary pop-up studios. City centres, train stations and airports are still an enormously important showcase for companies and brands. Permanent Volvo Studios and eye-catching pop-up studios in these locations provide us with another outlet to display our newest products and win new customers.

As mentioned in the Product Creation section, we are increasingly focused on attracting the best software engineering and coding talent available, while creating an organisation that is well-equipped to an environment of constant improvement and innovation, rather than the more traditional automotive way of bi-annual product updates. These ambitions are very important for our commercial transformation and our online sales plans as well.

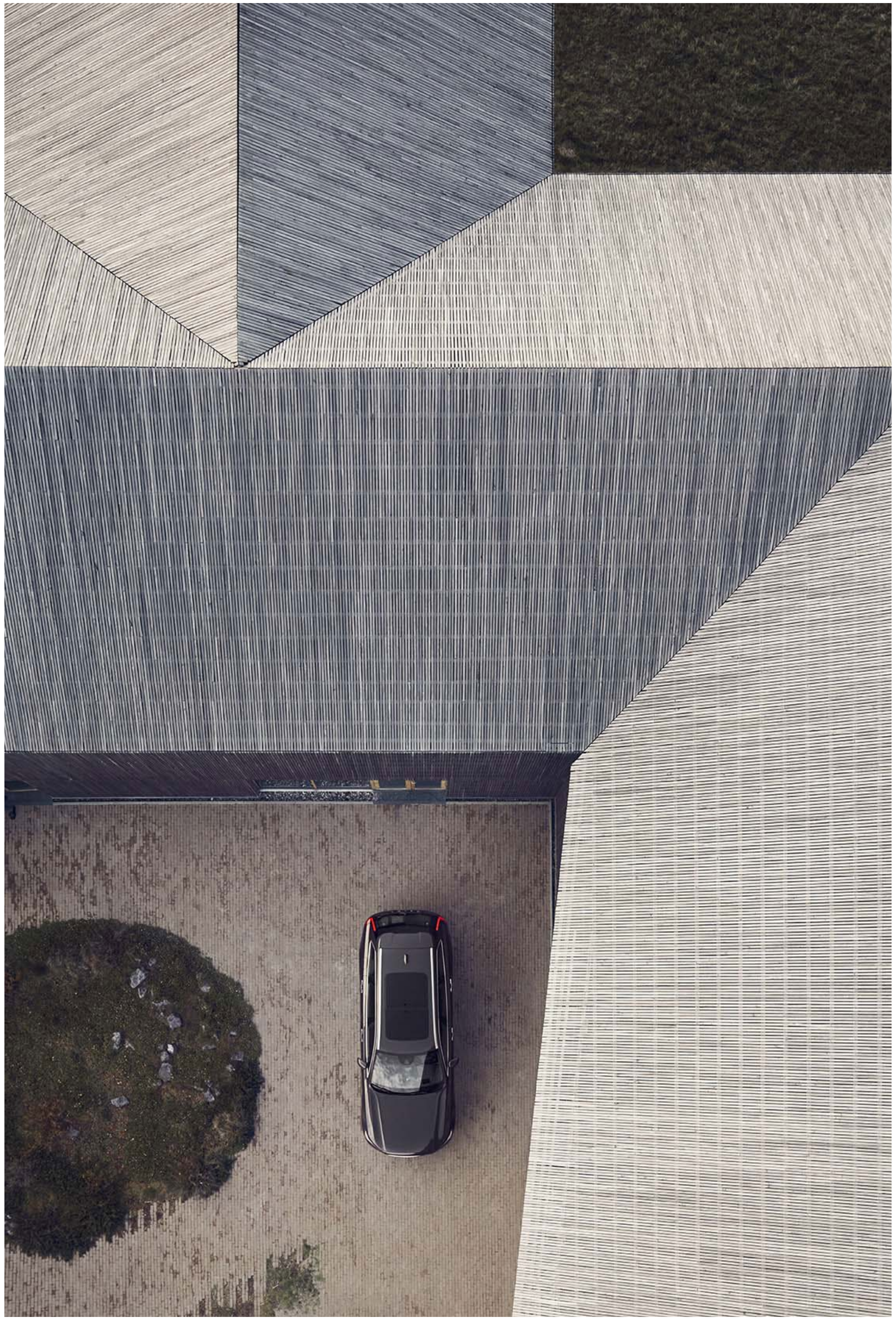
Our new Commercial Operations organisation consists of three main sales regions, a global online business as well as central commercial functions, altogether executing on our new strategy. This set-up provides a flexible, online-focused and allows for a more personal and direct approach to selling cars, as we aim to establish a direct relationship with millions of customers in coming years.

COMMERCIAL OPERATIONS HIGHLIGHTS

Volvo Studios and pop-up studios

We will invest more in our permanent Volvo Studios and temporary pop-up studios. City centres, train stations and airports are still an enormously important showcase for companies and brands.

"Our retail partners will continue to be important to us and our customers when delivering a world class customer experience."



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 and other services. 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 "Volvo Car Group".

Volvo Cars sales development

On an overall level, Volvo Cars outperformed its competitors and gained market share in most markets. Sales development of the year contained two parts: an outstanding second half after a tough first six months. Despite the strong recovery during the second half, the decline related to Covid-19 during the first half was not fully recovered, resulting in full year sales of 661,713 (705,452) units, a decrease of 6.2 per cent.

In Volvo Cars' two largest markets; China and the United States, sales increased despite pandemic-related losses during the first six months.

In China, Volvo Cars were up 7.5 per cent fueled by the overall outperforming premium car market during the recovery. The increase was mainly driven by the S60, XC40 and V60.

In the US, Volvo Cars recorded an increase of 1.8 per cent, mainly driven by the XC40 and V60, and with the Recharge models starting to gain strong sales momentum.

Europe was hit more heavily by a weakened market and pandemic-related restrictions, and Volvo Cars' sales declined by 15.5 per cent. However, sales were fueled by accelerating demand for electrified vehicles and the Recharge model line-up represented almost one third of sales in Europe.

Despite a drop of 6.5 per cent to 191,696 (204,981) units, the XC60 remained the best selling car during the year, closely followed by the XC40 which increased 32.6 per cent to 185,406 (139,847) units. Sales of the XC90 decreased 8.2 per cent to 92,458 (100,729) units, mainly as an effect of the Covid-19 situation.

Following strong demand in China, the S60 sold 52,251 (42,795) units, an increase of 22.1 per cent. Sales of the V60 and V90, popular models in the northern European markets, dropped and the decrease in S90 sales was mainly related to an overall decline in the sedan segment outside of China.

Volvo Cars continued its transition towards an online business model and the Care by Volvo business increased in total sales. As an example, in Germany 6.1 per cent of retail sales was attributable to Care by Volvo, whereof 97 per cent of the customers were new to the Volvo brand and its flexible online offer.

Globally, the share of Recharge models as a percentage of total sales more than double, reaching 115,436 (45,933) cars sold. The increase in plug-in vehicle sales and the launch of the first fully electric model led to an overperformance in terms of the company's EU CO_2 emission targets for 2020.

Key ratios, MSEK	2020	2019	2018	2017[1]	2016[1]
Revenue	262,833	274,117	252,653	208,646	178,586
Operating income, EBIT	8,516	14,303	14,185	14,061	11,014
Net income	7,788	9,603	9,781	10,225	7,460
EBITDA	22,965	29,851	27,398	26,159	21,541
Operating and investing cash flow	13,282	11,573	4,705	–3,800	6,515
EBIT margin, %	3.2	5.2	5.6	6.7	6.2
EBITDA margin, %	8.7	10.9	10.8	12.5	11.9
Equity ratio, %	26.8	26.2	29.0	28.7	26.8
Net cash	35,241	25,214	18,029	12,513	18,873
Retail sales, units	661,713	705,452	642,253	571,577	534,332

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

Retail sales (units)	2020	2019	Change %
Europe	288,325	341,200	–15.5
China	166,617	154,961	7.5
US	110,129	108,234	1.8
Other	96,642	101,057	–4.4
Total	**661,713**	**705,452**	**–6.2**

Retail sales by model (units)	2020	2019
XC60/XC60 Classic	191,696	204,981
XC40	185,406	139,847
XC90	92,458	100,729
V60/V60 Cross Country	64,912	68,577
S60/S60 Cross Country	52,251	42,795
S90	46,027	56,355
V90/V90 Cross Country	25,569	40,621
V40/V40 Cross Country	3,394	51,542
Total	**661,713**	**705,452**

Top 10 Retail sales by market (units)	2020	2019
China	166,617	154,961
US	110,129	108,234
Sweden	53,701	64,290
Germany	46,871	52,954
UK	46,508	56,316
Belgium	17,706	23,547
Italy	17,700	22,101
France	16,526	20,818
Netherlands	16,164	16,325
Japan	15,542	18,573

Events during the year

Covid-19

During the year, the Covid-19 pandemic has had a significant impact on people, societies and businesses. The pandemic has continued to spread globally, and the situation is still severe in many countries. It has affected Volvo Cars' business in many ways. Early in the year, Volvo Cars implemented a series of measures ranging from temporary plant closures, to adapting work environments in the factories and offices, as well as introducing the possibility to work from home. Altogether, the health and safety of the employees were safeguarded. The company was affected by lower demand during the first half of 2020 as well as supply chain disruptions, and consequently sales volumes, profit and cash flow were severely impacted during that period.

The mitigating measures taken during the year included a temporary closure of the Chinese manufacturing plants after the Chinese New Year. The plants in Belgium and Sweden were also temporary closed, as well as the plant in the US. All resumed production after a relatively short period, as soon as the safety measures were in place and supply was ensured.

Volvo Cars has taken further measures in order to reduce costs going forward. A reshaping process led to the company reducing 1,300 positions including consultants in its Swedish operations as part of realigning the operations and long-term ambitions for competence shift and structural cost reductions. The structural transformation resulted in 650 employees leaving Volvo Cars.

The decisive actions have allowed Volvo Cars to bounce back quickly. Our staff, suppliers and retail partners have shown remarkable resilience and ingenuity in these difficult times – introducing new ways of working and ensuring that our customers can receive the deliveries and maintenance that they need. Altogether, and on the back of increased demand, Volvo Cars reported the strongest second half year sales numbers in the company's history. For the full year, the volume losses from Covid-19 shut downs were fully recovered in China and the US, the two largest individual markets for Volvo Cars.

The recovery in sales, strong liquidity at the end of year 2020, and the cost measures taken, serve as a good foundation going forward. Volvo Cars continues to monitor the development of the Covid-19 situation. With several vaccines being distributed, Volvo Cars hopes that the effect of the pandemic on people and societies around the world will be considerably lower than in year 2020. Meanwhile the primary focus is still the health and safety of Volvo Cars' employees and actions are taken continuously to adhere to requirements from authorities.

Increased value of Volvo Cars' investment in Luminar

Luminar Technologies, Inc, an autonomous vehicle sensor and software company, in which Volvo Cars holds shares, was in December listed on the Nasdaq stock exchange, through a merger with Gores Metropoulus, Inc, a Special Purpose Acquisition Company (SPAC). As an effect, Volvo Cars shares in Luminar have been transferred to shares in the listed entity. The value of Volvo Cars investment increased by MSEK 1,964 and has been recognised as financial income.

Luminar's technology LiDAR will be included in future car models.

Investment in designing, developing and production of electric motors in-house

Volvo Cars opened a brand new electric motor lab in Shanghai, for the development and testing of electric car components. Volvo Cars will assemble electric motors at its powertrain plant in Skövde, Sweden, and plans to establish a complete in-house e-motor production by mid-decade. The company will invest MSEK 700 to this end in coming years.

Volvo Cars to transform its retail business

Volvo Cars announced its acquisition of Upplands Motor, the Stockholm-based dealership, and full takeover of the retailer Bra Bil, with the aim to merge the two operations with Volvo Bil, its own dealership. The acquisition of Upplands Motor has been finalised during January 2021. The acquisition of Bra Bil has not yet been finalised.

Volvo Cars' and Veoneer's split of Zenuity completed

Volvo Cars' part of Zenuity was transferred into Zenseact AB, a new company, wholly-owned by Volvo Cars. It will initially focus on the development of assisted and autonomous drive technology for Volvo Cars' next generation modular scalable architecture SPA2.

Acceleration of structural transformation

Volvo Cars gave notice for a reduction of 1,300 white-collar position in its Swedish operations as part of the realignment of the operations and long-term ambitions for competence shift and structural cost reductions. When the process was finalised a total of 650 employees left Volvo Cars, of which the main part through voluntary termination packages.

MEUR 500 green bond issued

Volvo Cars successfully issued its first green bond. The proceeds are being used to fund the design, development and manufacturing of fully electric cars in line with the company's established Green Finance Framework.

Volvo Cars and Polestar overperformed on 2020 EU CO_2 emissions target

Volvo Cars has been successful in selling electrified cars and has fullfilled its EU emission targets with a significant margin. Together with Polestar, Volvo Cars entered into a pooling arrangement with Ford offering its surplus CO_2 emissions, which is in line with the pooling system implemented by the European Commission. As part of the pooling agreement Volvo Cars has received a compensation from Ford accounted for as a part of revenue.

Science Based Targets initiative approval for climate action plan

The climate plan, under which Volvo Cars strives to become a climate neutral company by 2040, was scientifically verified by the Science Based Targets initiative (SBTi), a collaboration that provides companies with a clear pathway to support the Paris Agreement.

Governmental support received in several countries

Due to the Covid-19 pandemic, Volvo Cars reduced the working time during the second quarter for a major part of its employees and applied for governmental support in several countries. The grants related to Covid-19 amounted to MSEK 1,013.

SEK 10.7bn Revolving Credit Facility and SEK 4.0bn Credit Facility signed

A new revolving credit facility of SEK 10.7bn, has been signed in addition to Volvo Cars' undrawn EUR 1.3bn facility. Furthermore, the SEK 1.5bn facility was refinanced with a new SEK 4.0bn credit facility with the same financing partner, Swedish Export Credit Corporation.

Both facilities are partly guaranteed by the Swedish Export Credit Agency (EKN).

Chengdu plant powered by 100 per cent renewable electricity

As of June 2020, and In line with Volvo Cars' ambition to have climate neutral manufacturing by 2025, the company's largest manufacturing plant in China is powered by renewable electricity. It is taking Volvo Cars' global renewable electricity mix in its manufacturing network to 80 per cent, and will reduce the Chengdu plant's CO_2 emissions by over 11,000 tonnes per year.

Volvo Cars partners with Waymo

Volvo Cars and its strategic affiliates Polestar and Lynk & Co International, are establishing a strategic partnership with Waymo, a subsidiary of Alphabet, the parent company of Google. Waymo is a world leader in self-driving technology development and the exclusive partner for Volvo Cars in advanced autonomous driving technology. The companies will first work together with the intention to integrate Waymo's fully self-driving technology – the Waymo Driver – into an all-new mobility-focused electric vehicle platform for ride-hailing services.

Changes in Board of Directors and the Executive Management Team

Changes to the Board of Directors

- Effective from September 2020, Volvo Cars appointed Jonas Samuelson as a member of its Board of Directors, further strengthening the Board's experience and competence.

Changes to the Executive Management Team

- Volvo Cars' Executive Management Team was during 2020 been restructured into four areas – Commercial Operations, Industrial Operations and Quality, Product Creation and Corporate Functions. Finance as well as Group Legal & Corporate Governance remain unchanged parts of the EMT.

Significant events after the reporting period

A closer collaboration with Geely Auto

Volvo Car AB (publ.) and Geely Automobile Holdings Limited (Hong Kong 0175) announced in February 2020 that they are considering combining their businesses to create a strong global group, which would accelerate financial and technological synergies between the two companies. During February 2021 it was announced that the two companies will continue as two stand-alone companies, with a

BOARD OF DIRECTORS REPORT

deepened collaboration in a range of areas such as powertrains, electrification, autonomous drive and procurement. By doing so, two stronger, fast-growing companies will be created that can benefit from further synergies and efficiencies. Building on our strengths, being more cost-efficient and faster in technology development.

Volvo Cars launched the brand new, pure electric C40 Recharge

In March, Volvo Cars launched the C40 Recharge, the first Volvo model ever to be designed to be pure electric from the start and sold online only. The car is based on the CMA platform and is planned to be produced in Ghent, starting autumn 2021.

Volvo Cars plans to be fully electric by 2030

In March, Volvo Cars announced the plan to become a fully electric premium car maker by 2030 and by then have phased out cars with an internal combustion engine from the line-up – including hybrids. The plan is also that all fully electric models will be available online only. These plans are a step towards becoming a climate neutral company by 2040.

Tripling production capacity at the Ghent plant

Volvo Cars announced its intention of tripling the electric car manufacturing capacity at the Ghent plant in Belgium as the company is preparing to meet the fast growing demand for its Recharge line-up of chargeable cars.

Joined forces with the City of Gothenburg

With the aim of achieving a climate-neutral city by 2030, Volvo Cars is teaming up with the City of Gothenburg in Sweden for the creation of new urban zones that will be used as testbeds for future sustainable technologies. The initiative, called Gothenburg Green City Zone, will start during spring 2021 and will gradually scale up going forward.

MEUR 1,300 sustainability-linked revolving credit facility signed

Volvo Cars has signed a EUR 1.3bn sustainability-linked revolving credit facility, replacing the undrawn EUR 1.3bn credit facility signed in 2017. The successful transaction underlines the growing confidence in the company's financial and operational transformation.

Upplands Motor

After the acquisition of Upplands Motor was approved by relevant competition authorities the transaction was closed as of January 13, 2021. The total acquisition price amounted to MSEK 493. For further information, see Note 31 - Business combinations.

Research and development

Organisation

Volvo Car's Product Creation includes all core product development functions (Research and Development, Digital, Design as well as Strategy and Business Ownership). It ensures that the company's product development is organised, managed and financed from an end-to-end perspective. Investments are made continuously to strengthen the product portfolio, including developing new technologies.

Electrification

Product Creation is one of the clusters delivering on Volvo Cars' electrification strategy and longer term ambition that by year 2025, 50 per cent of global retail sales is expected to be fully electric cars, the rest being hybrids. By the same year, the company aims to reduce its CO_2 footprint per car by 40 per cent, a short-term step towards becoming a climate neutral company by 2040. In addition to offering a hybrid option for every car model in the product portfolio, the October production start of Volvo Cars' first fully electric vehicle, the XC40 Recharge, was a significant milestone in the company's electrification strategy. The XC40 Recharge reached Europe and the first customers shortly thereafter. Furthermore, Volvo Cars' strategic affiliate Polestar rolled out its first fully electric car, the Polestar 2, to its customers. It is based on technology shared between Volvo Cars and Polestar, and is produced on the Compact Modular Architecture (CMA) platform which was developed in collaboration with CEVT and Geely Automotive. Moreover, models with the 'B' badged mild hybrid power-train represented part of the company's retail sales. This powertrain was introduced in 2019 and is electrified via a brake-by-wire energy recovery, offering drivers up to 15 per cent fuel savings and emission reductions when driving. In the coming years, Volvo Cars will launch a fully electric car every year. The next generation of the Scalable Platform Architecture (SPA), SPA2, is being developed for a new range of electrified cars, with the XC90 first to be launched, and battery supply for all future SPA2 models is secured.

Safety and Autonomous Driving

Volvo Cars continues to develop new safety technologies, focusing on three main areas: driver assistance technology, autonomous driving and driver behaviour. These areas offer possibilities to further advance safety and reduce injuries and fatalities in traffic. Volvo Cars believes that when introduced gradually, safely and responsibly, autonomous driving technology can revolutionise road safety and be one of the most life-saving technologies in history. Hence, Volvo Cars plans to introduce an autonomous driving feature called Highway Pilot in its next generation of cars based on the SPA2. Those cars will be available as hardware-ready for autonomous driving from production start and have a LiDAR sensor seamlessly integrated into the roof. That LiDAR sensor, supplied by the company's technology partner Luminar, is key in creating cars that can navigate safely in autonomous mode. Autonomous driving will also play an increasingly important role in ride-hailing services. Volvo Cars' ambition is to be the supplier of choice to leading ride-hailing firms around the globe, and is keen on boosting ride-hailing as a potential solution to congestion and better air quality in cities.

Connectivity

Volvo Cars has teamed up with Google on an infotainment system powered by Android Automotive, with Google services built-in. While the system made its Volvo Car debut in the XC40 Recharge, it will over time be rolled out into other models. Android Automotive is an operating system familiar to millions of developers, tailored to run in the car. Technology and services created by both Volvo Cars and Google developers are embedded in the car, while additional music and media apps optimised and adapted for cars are available through the Google Play Store. From a safety point of view, the voice assistant is an important feature. It allows customers to get things done using just their voice for in-car functions such as controlling temperature, setting a destination, playing their favourite music and podcasts, and keeping in touch by for example sending messages. This integration contributes to reducing driver distraction, helping drivers keep their hands on the wheel and eyes on the road. Volvo Cars' infotainment systems provided by and co-developed with Google and other service providers (depending on market) are closely connected with Volvo Cars' digital services platform Volvo On Call (where available) which offers features such as monitoring battery status, charging levels, electric driving patterns and remote locking and unlocking via a digital key. Volvo Cars' mobile app functionality is planned to be available for the XC40 later this year, with features introduced over time. The XC40 Recharge is the first Volvo car designed to receive larger software and operating system updates over the air, placing Volvo Cars at the forefront of automotive connected services. This means the car can keep evolving and improving over time, rather than it being at its peak when it leaves the factory. It will also allow Volvo Cars to continuously develop and roll out software and connected services, using its growing force of software engineers.

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 has been prepared to meet the statutory requirements in accordance with the Swedish Annual Accounts Act 6 chapter 11§. The scope and content of the Sustainability Report is defined by the GRI Index presented on page 144 in this report. Volvo Cars aims to reduce the CO_2 emissions per car by 40 per cent between year 2018 and 2025, a first tangible step towards the company's long-term goal of becoming climate neutral by year 2040.

Employees

Following the competence shift, Volvo Cars' headcount decreased to 40,131 (41,439) and 3,331 (3,794) agency personnel as of end of December 2020. Volvo Cars employed on average 38,343 (41,517) employees (full time equivalents) and 3,389 (4,448) agency personnel. The decrease in full time equivalents is mainly a result of temporary lay-offs during the second quarter, and to some extent cost efficiency activities related to the competence shift which was finalised in the third quarter of 2020.

Proposed distribution of non-restricted equity

The parent company

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

Share premium reserve	SEK	11,497,086,934
Retained earnings brought forward	SEK	4,329,588,574
Net income for the year	SEK	–4,265,445
At the disposal of the AGM	**SEK**	**15,822,410,063**

The Board proposes the following allocations of funds:

To the preference shareholders, a dividend of SEK 138.78 per share	SEK	158,041,831
Carried forward	SEK	15,664,368,232
Total	**SEK**	**15,822,410,063**

Enterprise Risk Management

The purpose of Enterprise Risk Management (ERM) is to protect Volvo Car Group´s value creation and find proactive and preventive measures to balance risks and opportunities. This to ensure successful strategies towards the fulfilment of Volvo Car Group's purpose. ERM creates awareness and preparedness regarding risks and their potential impact on the business.

2020 has been a year demonstrating that a seemingly harmless incident can grow into a global disruption. The total effects from the Covid-19 outbreak on countries, people and the economy, are far from understood. By utilising the resources provided by Volvo Car Group's crisis management, the company quickly coordinated a team with focus on health and safety for its employees as well as supplier chain disruptions. As the world slowly adjusts to the long-term effects of Covid-19, we are considering this as a driver of/trigger to several of our reported ERM risks.

The automotive industry and Volvo Cars are continuing to transition towards electrification, advanced driver assistance systems and direct consumer contact. This shift depends on several factors: consumer preferences and acceptance, technical progress, legal and political development. Based on the complexity and uncertainties of the above in combination with the investments in digitalisation and competence 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. As an organisation we need to ensure we can protect and manage data collected from customers. And with the expansion of digitalisation also comes the escalation of potential cybercrime.

The automotive industry becomes increasingly regulated, not only with regards to our products but also our supply chain processes and our customer interactions. Local and regional legislation impact our business regarding trade, tax, emissions, business models etc.

As a sustainability responsible company, we have climate change and our sustainability commitment high on the agenda. We have chosen to follow the guidelines of the "Task Force on Climate-related Financial Disclosures" (TCFD) where ERM and sustainability joined forces.

The risk descriptions on the following pages, reflect the areas that are considered, potentially, to have the most significant impact on Volvo Car Group's business and the its longer-term ambitions. The mitigation activities explain what is done to reduce the possible impact of a risk materialisation.

Enterprise Risk Management Governance

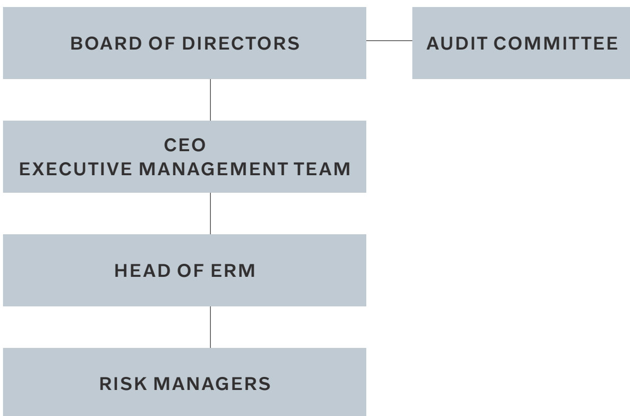
The Board of Directors is ultimately responsible for ensuring that the risks of Volvo Car Group are handled, although certain thereto related tasks have been delegated to the Audit Committee. The Chief Executive Officer is responsible for ensuring there is an appropriate level of risk management in place 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 a year. The level of risk acceptance is decided for individual risks and for the overall risk situation. The Head of ERM presents the top risk report, based on input from the organisation. The CEO and Executive Management Team iterate and finally approve the risk level. The ERM governance structure is illustrated below.

Risks are identified and approached in three main categories: Business and Strategic Risks, External Risks and Internal Risks.

- Business and Strategic Risks are risks vs. our strategies and objectives. The ERM function will challenge current strategy and vision from a risk point of view to ensure successfull performance.
- External Risks are risks were we as an organisation can only control our preparedness to respond to and work with risk mitigating activities.
- Internal Risks are about the ability to comply with external and internal boundries. Here the effectiveness and efficiencies of our internal processes are key.

For all identified risks, Risk Owners are appointed and the owner will ensure we have defined our risk appetite and that a risk response is developed.

Volvo Car Group ERM Governance



RISKS	MITIGATION
BUSINESS/STRATEGIC RISKS	
ELECTRIFICATION	
The timing of a broader consumer demand for electrification is difficult to predict. 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 effect market roll-out 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 have a competitive finding and paying offer for our electric vehicles 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. To further enable the organisation to focus on the electrification offer, Volvo Car is currently in the process of separating the traditional combustion engine operations into a separate business unit.
DIRECT CONSUMER BUSINESS	
The speed of change into business models that are new to Volvo Cars. Direct consumer interaction is increasing in the industry and consumer expectations are predicted to change very quickly with many new market offerings emerging. We see the online sales channel 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. This challenges the traditional sales processes as well as the organisational structure both globally and locally.	All our new online sales models are continuously including our retail partners in the interaction with the customer to ensure consistency and an integrated customer experience. Volvo Car Group is also investing substantially in capabilities to support the online sales such as digital tools, organisational development and new competences.
EXTERNAL RISKS	
LAWS AND REGULATION	
New or changing laws, regulations and government policies will affect our business. The number and extent of legal and regulatory requirements affecting our business are expected to increase in the future. Volvo Car Group's products, services and operations are subject to comprehensive and constantly changing laws, regulations and policies throughout the world. The group has to fulfil corporate fleet requirements regarding emissions. Changes in corporate and other taxation policies as well as changes in export/import policies and other restrictions/incentives given by various governments, could also affect Volvo Cars' results of operations and financial condition. The Covid-19 outbreak is in addition impacting local regulations with regards to peoples' ability to move. This in itself will further impact the way we can do business.	We are closely monitoring legislation and regulations to ensure we comply, and that our policies and directives have zero tolerance towards deviations. Other examples of ongoing mitigations are: • The tax team are working with global tax legislation to be on top of the developement of Base Erosion and Profit Shifting (BEPS) regulations. • The Customs Team is proactively working with trade developments to foresee and mitigate coming and potential changes and to take advantage of any new simplifications and/or Free Trade Agreements coming in place. Volvo Car Group is working towards "Designed for Customs" to ensure that product development as well as sourcing and industrial decisions are made with trade development in focus. • The developement of our direct consumer business is considerate of different local competition laws. • The online sales capability offers availability to consumers without having to leave their homes.
CLIMATE CHANGE AND SUSTAINABILITY	
From a world economic point of view, climate change is a top risk both in terms of impact and likelihood. It affects our company and our industry in many different ways. Climate-related risks can be divided into two major categories: 1. Transitional Risks – related to the transition to a lower-carbon economy with extensive policy, legal, technology, and market changes to address mitigation and adaptation requirements related to climate change. 2. Physical Risks – related to the physical impacts of climate change and can be event driven (acute, like hurricanes and floodings) or longer-term shifts (chronic, like rise of sea levels) in climate patterns.	Volvo Car Group has developed a sustainability strategy with clear targets and ambitions both short-, mid- and long-term. The organisational focus as well as the managment commitment will secure that we follow the developement, both physical and transitional. The intention with our sustainability commitments and our sustainability strategy is to address these climate related risks and contribute to the pathway to below two degrees of the Paris agreement, as verified by Science Based Targets initiative (SBTi). We have identified several transitional and physical risks, but also opportunities, affecting our company and we are analysing these risk in terms of impact and likelihood, as well as simulating different global warming scenarios. Read more about our sustainability strategy, climate related risks and global warming scenarios in the Sustainability Information section.

RISKS	MITIGATION
CONSUMER BEHAVIOUR AND TECHNICAL DISRUPTION	
Different innovations are competing to becoming the new disruptive technology empowered by customers curiosity and changed behaviors. The globalisation and digitalisation enable a rapidly changing environment for our business. These parameters also increase the uncertainty of knowing the next innovation breakthrough for customer excitement. The volatility of researching, developing and offering next technology as a relatively small player in the automotive industry is challenging. In some cases, what customers thought would be disruptive technology yesterday, is today considered common attribute due to societal changes. We need to ensure that we can be resilient to technical changes as well as changes in customer behaviors driven by factors outside our control.	Part of the shift is related to autonomous driving (AD) and advanced driver assistance system (ADAS) technology. Volvo Car Group intends to maintain the world leading focus on ADAS systems and through separate business units drive the development of the AD technology software for the automotive industry. Our electrification strategy demands high specification batteries in correct amount which has been secured through multi-year agreements with key suppliers to secure the roll-out of our ambitious electrification strategy. For the sourcing and supply of rare earth metals we have introduced blockchains to secure the corporate social responsibility from the source to customer usage. To further be ahead in the industry our Advanced Engineering Team as well as our Market Intelligence Team are following developement closely.
CYBER SECURITY	
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. Cyber crime 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. A growing number of malicious activities with regards to cyber security have been identified during the year, even though the efforts in the area have been increased. In general the increased remote way of working due to Covid-19 restrictions increases the risk for cyber security incidents.	Resources and competence dedicated to the cyber security area have increased during the year and a new Chief Information Security Officer has been appointed. Implementation of a Security Operations Center and enhanced authentication is being implemented globally. This improves the incident management and monitoring capabilities. Work is ongoing to make sure that proper governance, risk and compliance work are introduced.
INTERNAL RISKS	
DATA PRIVACY	
Volvo Cars comprises a multitude of entities with operations all over the globe. The regulatory landscape concerning protection of personal data is ever 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. 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 rather than not at all (e.g. the NCAP roadmap provides for in-car driver drowsiness monitoring, which means processing of biometric personal data).	Volvo Cars' global data protection program has already passed the stage of focusing on the EU General Data Protection Regulation. In 2020, 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.

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 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 its 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. Further, the Volvo Cars Board has decided to establish a Commercial Transformation Committee, which will commence its work in Q1 2021. 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. Reference is made to the table under 'The Volvo Cars Board' regarding relevant remuneration for 2020.

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 Fønss Schrøder and Carl-Peter Forster 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 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, an ambition not yet fully reached. 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 2020, the Board (excluding the employee representatives) consisted of eleven 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 program to learn about the Volvo Car Group and the Board's intention is to visit at least once every year a Volvo Car Group site other than the headquarters – this was not possible during 2020 though due to the Covid situation.

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 2020, 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 occasionally holds non-executive meetings. The CFO and the General Counsel, who is the secretary of the Board, are also present at the Board meetings. The table below shows the Board members' attendance to the Board 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.

Sustainability is an integrated part of Volvo Cars' strategy and the Board monitors Volvo Cars' sustainability efforts in that area. Certain matters that have not been expressly reserved to the Board are delegated to the Board's Committees or to the CEO as set out in the Regulations for the work of the Volvo Cars Board.

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, there to, 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 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. The Audit Committee has held seven meetings during 2020, whereof four ordinary and three extraordinary interim meetings. 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], SEK
Li Shufu (Chairman of the Board)	N	N	7/10	n/a	N/A
Lone Fønss Schrøder (Vice Chairman of the Board)	Y	N[3]	10/10	7/7	2,600,000
Winnie K.W. Fok	Y	Y	9/10	7/7	900,000
Håkan Samuelsson (CEO)	N	Y	10/10	4/5	N/A
Li Donghui	Y	N	10/10	4/7	N/A
Jonas Samuelson[2]	Y	Y	2/2	n/a	750,000
Thomas Johnstone	Y	Y	10/10	12/12	1,025,000
Betsy Atkins	Y	Y	10/10	11/12	1,000,000
Michael Jackson	Y	Y	10/10	7/7	900,000
Xingsheng (Jim) Zhang	Y	Y	9/10	6/7	875,000
Winfried Vahland	Y	Y	10/10	5/5	900,000

1) Remuneration for Board and Committees on a yearly basis as agreed at the Annual Shareholders' Meeting 2020 and at an Extra Shareholders' Meeting in September 2020 in relation to Jonas Samuelsson.
2) Member of the Volvo Cars Board from September 21, 2020.
3) Lone Fønss Schrøder is as of 2020 a director in the board of Geely Sweden Holdings AB, the main owner of Volvo Cars.

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 and various other people and remuneration matters. The Committee is also responsible for supervising and providing guidance with regards to the People strategy. The Company's performance in the sustainability area, including Volvo Cars' progress in delivering on its ambitions outlined in the sustainability strategy is also on the agenda for the People and Sustainability Committee twice a year. The People and Sustainability Committee has held seven meetings during 2020, whereof five ordinary and two extraordinary. 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 purpose of the Product Strategy and Investment Committee is to review Volvo Cars' product strategy, cycle plan and product programs to confirm that the strategy and the plans as well as programs 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 Product Strategy and Investment Committee has held five meetings during 2020, whereof four ordinary and one extraordinary. Winfried Vahland (Chairman), Thomas Johnstone, Betsy Atkins together with Håkan Samuelsson are members of the Product Strategy and Investment Committee.

Commercial Transformation Committee

In December the Board decided to establish a new temporary Commercial Transformation Committee with effect from January 1, 2021. The Board has assigned to the Commercial Transformation Committee to oversee the implementation of Volvo Cars Commercial Strategy involving aspects as Care by Volvo, Global Online sales and the retailer collaboration in the new operational model as well as the financial implications of the transformation. Michael Jackson (Chairman) and Jonas Samuelson and Jim Zhang will be members of the Commercial Transformation Committee.

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.

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 Program focusing on the areas anti-corruption, data protection, trade sanction & export control and competition law. This Program consists of ten elements designed on the basis of guidelines describing "effective compliance program" 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: tone from the top, a regular risk assessment that leads to identification and prioritisations of the main risk fields to which Volvo Cars is exposed, so as to tailor the program; implementation of a Compliance and Ethics framework (Code of Conduct and Corporate Policies, Directives and Guidelines); training, awareness and communication; Internal reporting and investigations; and monitoring and assessment with a view to continuously improve the Compliance and Ethics Program. 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 ensures that compliance training is provided 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 2021 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 June 30 and present the result of the work to Audit Committee. 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 (publ) 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 Board and the Audit Committee are kept updated on the discussions and decisions by the Disclosure Committee via summary reports and sharing of the minutes kept at the meetings of the Committee. The members of the Disclosure Committee are the General 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 Disclosure Committee has been established to i.e. 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 Organizations 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 are responsible for identifying risks, which are then consolidated and reported according to the Enterprise Risk Management Directive, see page 52. Additionally, on a yearly to bi-yearly basis, the functions of Internal Control, Compliance and Ethics office, 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 include 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.

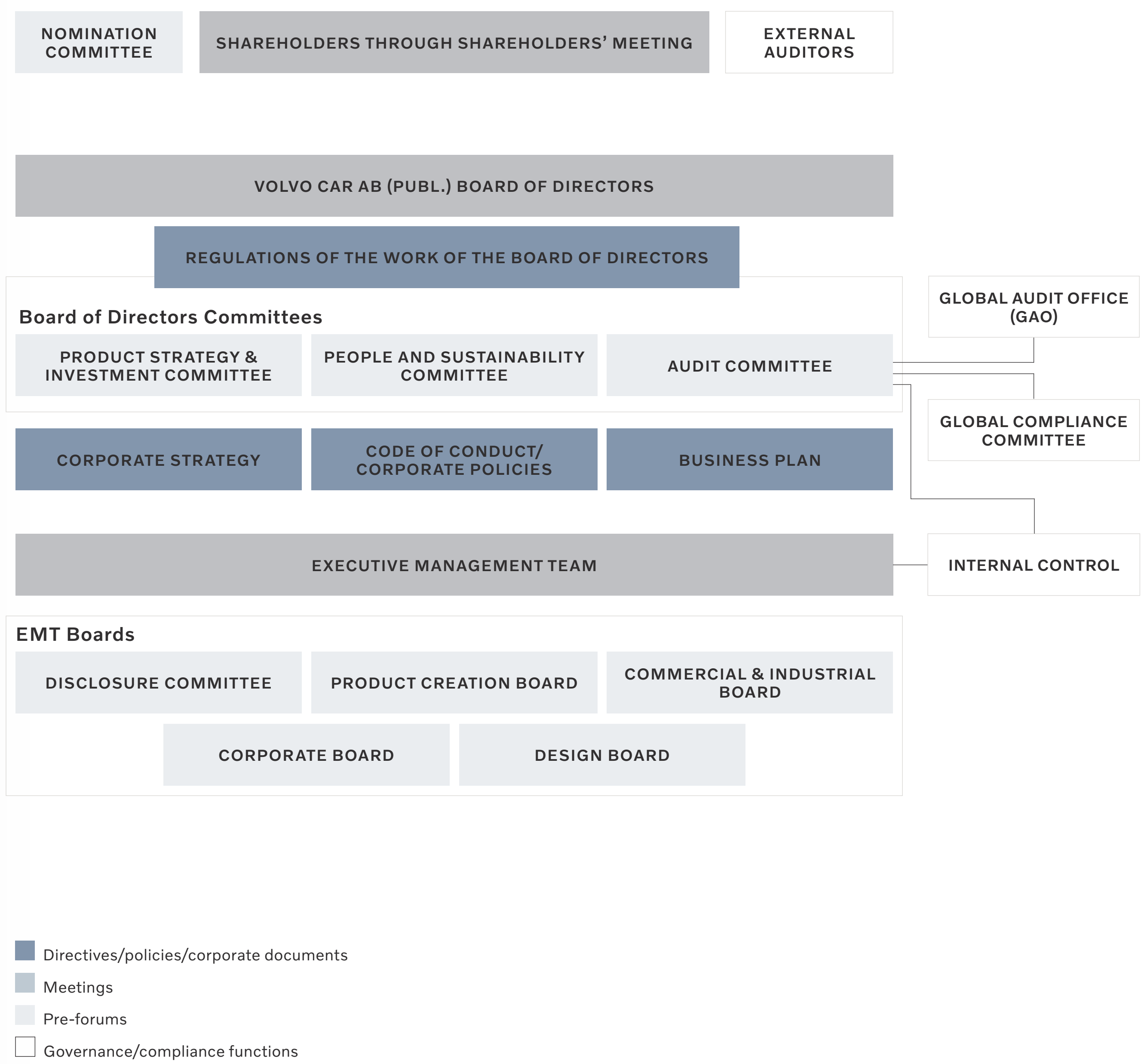
Monitoring

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 program. This assessment program focuses on management and transaction levels as well as self-assessments of IT general controls through the Internal Control digital team. When control deficiencies are identified through self assessments, 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 published its first Environmental Report in 1992. It was expanded to a Sustainability Report in 2003 in line with the guideline of the Global Reporting Initiative (GRI). The 2020 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 1st to December 31st, 2020 (except where otherwise stated). Volvo Cars' Sustainability Report has been prepared to meet the statutory requirements in accordance with the Swedish Annual Accounts Act 6 chapter 11§. The scope and content of the Sustainability Report is defined by the GRI Index presented on page 144 in this report. 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 147. As a signatory to the UN Global Compact, the Sustainability Report is also our Communication on Progress. Additionally, Volvo Cars continuously analyses, identifies and selects 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 whose eleven recommended disclosures have been incorporated in this year's Annual Report (see page 146 for further information).

CORPORATE GOVERNANCE STRUCTURE



Contents Financial Report

Consolidated Income Statements

MSEK	Note	2020	2019
Revenue	2	262,833	274,117
Cost of sales	3	–216,813	–222,047
Gross income		**46,020**	**52,070**
Research and development expenses	3, 15	–11,362	–11,446
Selling expenses	3	–15,710	–17,287
Administrative expenses	3	–8,539	–9,489
Other operating income	6	2,362	3,868
Other operating expenses	6	–3,903	–3,245
Share of income in joint ventures and associates	13	–352	–168
Operating income	4, 5, 7, 8, 9, 10	**8,516**	**14,303**
Financial income	11	2,618	575
Financial expenses	12	–1,588	–1,710
Income before tax		**9,546**	**13,168**
Income tax	14	–1,758	–3,565
Net income		**7,788**	**9,603**
Net income attributable to			
Owners of the parent company		5,834	7,115
Non-controlling interests		1,954	2,488
		7,788	**9,603**

INCOME AND RESULT

Volvo Cars wholesales decreased 5.8 per cent to 662,625 (703,534) cars as a consequence of t the Covid-19 pandemic. The sales mix was strong with a continuously increasing share of SUVs and XC40s in particular. Despite a negative exchange rate effect in revenue of MSEK –6,660, due to the strengthened SEK, revenue decreased less than volumes by 4.1 per cent to MSEK 262,833 (274,117). Other revenue, such as rentals, used car sales, as well as parts and accessories, increased by MSEK 1,545, mainly related to used car sales. Furthermore, the increasing share of Recharge cars resulted in excess CO_2 credits, for which the compensation has been recognised as revenue.

Gross income amounted to MSEK 46,020 (52,070), resulting in a gross margin of 17.5 (19.0) per cent. The decrease in gross margin was largely related to Covid-19 effects, with lower sales volumes and a negative net effect of foreign exchange rate of MSEK –4,460. The negative effects were partly offset by reduced material cost as an effect of the continuous focus on cost reductions. In total, cost of sales decreased by 2.4 per cent to MSEK –216,813 (–222,047). The foreign exchange rate effect in cost of sales amounted to MSEK 2,201.

In order to mitigate the negative effects from Covid-19, early measures were taken to adapt the cost structure. Disciplined cost efficiency activities were implemented to meet both short- and longer-term challenges. Short-term, plants were temporarily closed in all regions and lay-offs with governmental support were implemented in several European markets, as well as in the US. Governmental support related to Covid-19 amounted to MSEK 1,013, mainly related to lay-offs in Sweden and tax subsidies in China. In other countries, such as Belgium and the US, support has been received through payments from governments directly to the employees. Furthermore, in order to realign our operations and reduce personnel cost long-term, a restructuring with the notice of approximately 650 white-collar positions was executed in Sweden. The short- and long-term measures partly mitigated the effect of decreased volumes.

In order to reach the ambition to reduce CO_2 emissions by 40 per cent by 2025, Volvo Cars continued investments in platform and electric motor technology, the new fully electric car model to be launched in 2021, as well as battery assembly and increased BEV capacity. Research and development expenses amounted to MSEK –11,362 (–11,446). For details regarding research and development expenses, see table on page 62.

Administrative expenses decreased to MSEK –8,539 (–9,489), mainly due to reduced manning. Selling expenses decreased to MSEK –15,710 (–17,287) as a result of cost efficiency programs as well as less events due to the Covid-19 situation.

Other operating income and expenses, net, decreased to MSEK –1,541 (623), affected by costs for early phase-out of certain components and government grants. The foreign exchange rate effect on operating assets and liabilities amounted to MSEK –1,010 (537). Share of income in joint ventures and associates decreased and amounted to MSEK –352 (–168), partly offset by a positive share of income in Zenuity. The negative share of income was related to companies in a development phase such as Polestar and was in accordance with plan.

The operating income (EBIT) decreased to MSEK 8,516 (14,303), resulting in an EBIT margin of 3.2 (5.2) per cent. The decreased EBIT margin was a result of Covid-19 effects, mainly volume drops, partly offset by cost reduction measures within cost of sales and admin- and selling expenses. Furthermore, it has been affected by non-recurring items including restructuring costs and costs for re-call of cars. The net effect of foreign exchange rate in EBIT amounted to MSEK –4,970.

Net financial items amounted to MSEK 1,030 (–1,135), mainly due to effects from the listing of Luminar, in which Volvo Cars has an investment, of MSEK 1,964, offset by interest expenses. The effective tax rate was 18.4 (27.1) per cent, due to a change of income tax rate in Sweden and increased tax credits related to emissions, mainly in the US. Net income amounted to MSEK 7,788 (9,603) and Net income in relation to revenue was 3.0 (3.5) per cent.

Volvo Cars' Return on invested capital (ROIC) decreased to 8.4 (14.5) per cent, mainly as a result of the decrease in EBIT.

Research and development spending, MSEK	2020	2019
Research and development spending	–14,828	–14,662
Capitalised development costs	7,517	8,088
Amortisation and depreciation of Research and development[1]	–4,051	–4,872
Research and development expenses	**–11,362**	**–11,446**

1) The amortisation expenses has decreased by MSEK 666 (—), due to adjustments of the useful life period to reflect updated assumptions and cycle plan changes.

Changes to revenue (MSEK)	
Revenue Full year 2019	**274,117**
Volume, sales mix and pricing	–6,165
Sale of licenses	420
Foreign exchange rates	–6,660
Used cars, parts and accessories	–98
Other[1]	1,219
Revenue Full year 2020	**262,833**
Change %	**–4.1**

1) Including effects of CO_2 credits and sold services.

Changes to Operating income (EBIT) (MSEK)	
EBIT Full year 2019	**14,303**
Volume, sales mix and pricing	–4,580
Sale of licenses	397
Foreign exchange rates	–4,970
Governmental support related to Covid-19	1,013
Other[1]	2,353
EBIT Full year 2020	**8,516**
Change %	**–40.5**

1) Including used cars, parts and accessories, effects from CO_2 credits and costs for restructuring and recalls.

Consolidated Comprehensive Income

MSEK	2020	2019
Net income	7,788	9,603
Other comprehensive income		
Items that will not be reclassified subsequently to income statement:		
Remeasurements of provisions for post-employment benefits	–992	–3,780
Tax on items that will not be reclassified to income statement	212	792
Items that may be reclassified subsequently to income statement:		
Translation difference on foreign operations	–3,401	947
Translation difference of hedge instruments of net investments in foreign operations	368	–139
Change in fair value of cash flow hedge related to currency and commodity price risks	2,862	–4,220
Currency and commodity risk hedge contracts recycled to income statement	3,156	1,003
Tax on items that may be reclassified to income statement	–1,318	691
Other comprehensive income, net of income tax	**887**	**–4,706**
Total comprehensive income	**8,675**	**4,897**
Total comprehensive income attributable to		
Owners of the parent company	7,430	2,182
Non–controlling interests	1,245	2,715
	8,675	**4,897**

NET FINANCIAL POSITION AND LIQUIDITY

Cash flow from operating and investing activities amounted to MSEK 13,282 (11,573).

Cash flow from operating activities amounted to MSEK 33,952 (32,374). The positive operating cash flow was mainly due to the operating income of MSEK 8,516 (14,303), adjusted for depreciation and amortisation of MSEK 14,449 (15,548), items not affecting cash flow of MSEK 3,989 (–2,415) related to items negatively affecting EBIT that has not yet generated cash flow, together with tax paid of MSEK –2,856 (–4,089), and a positive working capital development of MSEK 11,009 (9,916).

The positive cash flow from working capital was mainly an effect of the rapid recovery during the second half year and the ramp up of the production. The higher production volume resulted in increased accounts payable of MSEK 5,183 (1,969), partly offset by increased accounts receivable of MSEK –2,137 (694). The development of other working capital assets and liabilities, net, had a positive effect of MSEK 4,848 (2,890), mainly due to accruals of VAT and payroll related taxes, whereof almost MSEK 4,000 is prolonged credits on payments to tax authorities. Further, the positive cash flow from contract liabilities of MSEK 3,872 (6,503) was mainly driven by increased sales generated obligations and prepayments from customers.

Cash flow from investing activities amounted to MSEK –20,670 (–20,801). Investments in property, plant and equipment amounted to MSEK –9,986 (–11,807) and was mainly related to investments in car and engine production capacity, as well as tooling. Investments in intangible assets amounted to MSEK –8,574 (–9,176) as a result of continuous investments in new and upcoming car models and new technology. Investments in strategic affiliates, net, amounted to MSEK –2,874 (–235) and were mainly related to Polestar.

Cash flow from financing activities amounted to MSEK –834 (–831) and was mainly related to proceeds from the green bond issuance of MSEK 5,209 (8,221), proceeds from loans of MSEK 5,011 (1,361), offset by repayments of loans and other interest bearing liabilities of MSEK –5,962 (–4,909) and investments in marketable securities, net, of MSEK –4,692 (–1,985).

Total cash and cash equivalents including marketable securities have increased to MSEK 69,679 (55,516). Net cash increased to MSEK 35,241 (25,214). Including undrawn credit facilities of MSEK 24,700 (13,593), liquidity was at MSEK 94,379 (69,108).

EQUITY

Total equity increased to MSEK 70,418 (63,648), resulting in an equity ratio of 26.8 (26.2) per cent. The change is attributable to the positive net income of MSEK 7,788 and a positive net effect in other comprehensive income of MSEK 887, partly offset by shareholder transactions related to the restructuring of Polestar. For further information, see Note 13 - Investments in joint ventures and associates.

The change in other comprehensive income is related to a positive change in the cash flow hedge reserve from unrealised hedge contracts of MSEK 4,779 (net of tax), whereof hedge contracts recycled to income statement amounted to MSEK 3,156.

The change in value of cash flow hedges is mainly due to a strengthened SEK against USD and GBP. This was partly offset by a negative foreign exchange translation effect, including hedges of net investments in foreign operations of MSEK –3,112 (net of tax).

Remeasurements of provisions for post-employment benefits gave an effect of MSEK –780 (net of tax), due to changes in actuarial assumptions, whereof MSEK –473 is an adjustment due to changes in the actuarial calculation method related to the Swedish ITP2 plan.

Consolidated Balance Sheets

MSEK	Note	Dec 31, 2020	Dec 31, 2019
ASSETS			
Non-current assets			
Intangible assets	15	37,168	32,786
Property, plant and equipment	7, 16	57,453	69,738
Assets held under operating leases	7, 16	4,490	3,243
Receivables on parent company		—	54
Investments in joint ventures and associates[1]	13	9,997	9,211
Other long-term securities holdings	20	2,449	296
Deferred tax assets	14	7,164	7,275
Other non-current assets	17	4,758	3,253
Total non-current assets		**123,479**	**125,856**
Current assets			
Inventories	18	35,513	38,911
Accounts receivable	4, 19	14,776	13,243
Current tax assets		886	987
Other current assets	19	10,130	8,855
Marketable securities	21	8,087	3,518
Cash and cash equivalents	21	61,592	51,997
Assets held for sale	33	7,849	—
Total current assets		**138,833**	**117,511**
TOTAL ASSETS		**262,312**	**243,367**
EQUITY & LIABILITIES			
Equity	22		
Equity attributable to owners of the parent company		59,412	53,883
Non-controlling interests		11,006	9,765
Total equity		**70,418**	**63,648**
Non-current liabilities			
Provisions for post-employment benefits	23	14,187	12,583
Deferred tax liabilities	14	1,044	975
Other non-current provisions	24	8,155	7,291
Liabilities to credit institutions	20	5,882	4,489
Bonds, non-current	20	20,950	21,643
Non-current contract liabilities to customers	25	5,630	5,210
Other non-current interest bearing liabilities	7	4,815	5,076
Other non-current liabilities[1]	4, 26	4,877	6,471
Total non-current liabilities		**65,540**	**63,738**
Current liabilities			
Current provisions	24	8,530	8,357
Liabilities to credit institutions	20	2,512	4,105
Bonds, current	20	5,017	—
Current contract liabilities to customers	25	21,842	20,478
Accounts payable	4	46,635	44,876
Current tax liabilities		1,486	1,302
Other current interest bearing liabilities	7	1,160	1,073
Other current liabilities[1]	27	37,423	35,790
Liabilities held for sale	33	1,749	—
Total current liabilities		**126,354**	**115,981**
TOTAL EQUITY & LIABILITIES		**262,312**	**243,367**

1) During 2020, the internal profit elimination related to sale of licenses and technology to Polestar was reclassified and the comparative figures have been adjusted accordingly. The effect in prior year was MSEK 1,803 on Investments in joint ventures and associates, MSEK 1,558 on Other non-current liabilities and MSEK 245 on Other current liabilities.

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 December 31, 2019	**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[2]	1	4,988	—	—	—	—	4,989	—	4,989
Redemption of preference shares[2]	–1	–4,896	—	—	—	–848	–5,745	—	–5,745
Transactions with non-controlling interests	—	—	—	—	—	–57	–57	57	—
Capital injection into joint venture under common control[3]	—	—	—	—	—	1,153	1,153	—	1,153
Dividend to shareholders[4]	—	—	—	—	—	–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**
Net income	**—**	**—**	**—**	**—**	**—**	**5,834**	**5,834**	**1,954**	**7,788**
Other comprehensive income									
Remeasurements of provisions for post-employment benefits[5]	—	—	—	—	—	–992	–992	—	–992
Translation difference on foreign operations	—	—	—	–2,691	—	—	–2,691	–710	–3,401
Translation difference of hedge instruments of net investments in foreign operations	—	—	—	368	—	—	368	—	368
Change in fair value of cash flow hedge related to currency and commodity price risks	—	—	—	—	2,862	—	2,862	—	2,862
Currency and commodity risk hedge contracts recycled to income statement	—	—	—	—	3,155	—	3,155	1	3,156
Tax attributable to items recognised in other comprehensive income	—	—	—	–79	–1,239	212	–1,106	—	–1,106
Other comprehensive income	**—**	**—**	**—**	**–2,402**	**4,778**	**–780**	**1,596**	**–709**	**887**
Total comprehensive income	**—**	**—**	**—**	**–2,402**	**4,778**	**5,054**	**7,430**	**1,245**	**8,675**
Transactions with owners									
Shareholder transaction in joint venture under common control[3]	—	—	—	—	—	–1,901	–1,901	—	–1,901
Dividend to shareholders[6]	—	—	—	—	—	—	—	–4	–4
Transactions with owners	**—**	**—**	**—**	**—**	**—**	**–1,901**	**–1,901**	**–4**	**–1,905**
Balance at December 31, 2020	**51**	**11,497**	**8,452**	**–1,379**	**468**	**40,323**	**59,412**	**11,006**	**70,418**

1) Share capital amounted to SEK 51,138,794 (51,138,794).
2) For further information, see Note 22 – Equity.
3) For further information, see Note 13 – Investments in joint venture and associates.
4) For further information, see Note 4 – Related parties.
5) Included in the change of provisions for post-employment benefits is an adjustment due to changes in actuarial calculation method related to the Swedish ITP2 plan amounting to MSEK –473 (—), see Note 23 – Post Employment Benefits.
6) The proposed distribution of the non-restricted equity in the Annual report 2019 has been revised and all funds are carried forward.

Consolidated Statement of Cash Flows

MSEK	Note	2020	2019
OPERATING ACTIVITIES			
Operating income		8,516	14,303
Depreciation and amortisation of non-current assets	9	14,449	15,548
Interest and similar items received		550	572
Interest and similar items paid		–1,268	–854
Other financial items		–437	–607
Income tax paid		–2,856	–4,089
Adjustments for items not affecting cash flow	30	3,989	–2,415
		22,943	**22,458**
Movements in working capital			
Change in inventories		–454	–3,066
Change in accounts receivable		–2,137	694
Change in accounts payable		5,183	1,969
Change in provisions		–303	926
Change in contract liabilities to customers		3,872	6,503
Change in other working capital assets/liabilities		4,848	2,890
Cash flow from movements in working capital		**11,009**	**9,916**
Cash flow from operating activities		**33,952**	**32,374**
INVESTING ACTIVITIES			
Investments in shares and participations, net[1]	13, 31	–4,125	–235
Repayment of loans from affiliated companies		1,251	—
Dividends received from joint ventures and associates	13	333	64
Investments in intangible assets		–8,574	–9,176
Investments in tangible assets		–9,986	–11,807
Disposal of tangible assets		431	353
Cash flow from investing activities		**–20,670**	**–20,801**
Cash flow from operating and investing activities		**13,282**	**11,573**
FINANCING ACTIVITIES			
Proceeds from credit institutions		5,011	1,361
Proceeds from bond issuance	20	5,209	8,221
Repayment of liabilities to credit institutions		–4,612	–3,553
Repayment of interest bearing liabilities		–1,350	–1,356
Proceeds from preference shares issuance	22	—	5,011
Redemption of preference shares	22	—	–5,745
Dividend paid to shareholders[2]	4	–4	–2,897
Investments in marketable securities, net[3]	21	–4,692	–1,985
Other[4]		–396	112
Cash flow from financing activities		**–834**	**–831**
Cash flow for the year		**12,448**	**10,742**
Cash and cash equivalents at beginning of year		**51,997**	**40,170**
Exchange difference on cash and cash equivalents		–2,853	1,085
Cash and cash equivalents at end of year	21	**61,592**	**51,997**

1) Investments amounted to MSEK –4,589 (–653) and capital repayments from Joint ventures amounted to MSEK 464 (418).
2) For further information, see Changes in Consolidated Equity on page 65.
3) Investments amounted to MSEK –8,805 (–8,888) and matured investments amounted to MSEK 4,113 (6,903).
4) Other is attributable to realised result from financial instruments MSEK –424 (226) and change in Other non-current liabilitities MSEK 28 (–114).

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 Volvo Car Group accounting directives and they have been applied consistently for all periods, unless otherwise stated.

All accounting principles considered material to Volvo Car Group are described in conjunction with each note. When a new accounting principle has been implemented or when there has been changes in disclosures this are 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. Estimates and judgements will affect the values of assets and liabilities. The actual outcome (value) may differ from these estimates and judgements and corrections may be 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.

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.

In order to avoid duplication of information, cross-references have been made between different parts of the annual report.

Basis of consolidation

The consolidated accounts include Volvo Car AB (publ.) and its subsidiaries. Subsidiaries are all entities over which Volvo Car Group has control. Volvo Car Group controls an entity when 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 and 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 Volvo Car 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 foreign currencies other than the functional currency 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 on 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	**2020**	2019	**2020**	2019
China	CNY	1.34	1.37	1.25	1.34
Euro zone	EUR	10.51	10.56	10.02	10.46
Great Britain	GBP	11.90	12.04	11.16	12.31
United States	USD	9.26	9.42	8.17	9.32
Japan	JPY	0.09	0.09	0.08	0.09

Classification of current and non-current assets and liabilities

An asset is classified as current 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 current 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.

When the criteria for being classified as a non-current asset held for sale are fulfilled and the asset or disposal group are of significant value, the asset or disposal group and the related liabilities are recognised on a separate line in the balance sheet, see Note 33 – Asset and liabilites held for sale.

NOTE 2 – REVENUE

ACCOUNTING PRINCIPLES

Revenue is defined as the sale price for goods or services net of variable considerations and consideration payables.

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 sometimes give rise to 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 contracts, 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. If the customer contracts include variable considerations or consideration payables 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 in Volvo Car Group is 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, see 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 customers. Revenue from these sales is deferred and revenue recognised on a straight-line basis over the contract period. The deferred revenue is recognised as contract liabilities to customers, since the customers payment is made before the service is performed. 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.

CO_2 emission credits

During the year, Volvo Car Group fulfilled and overachieved its emission targets, set by the EU. Volvo Cars has been able to enter into a pooling arrangement with Ford offering its surplus CO_2 emissions in line with the pooling system implemented by the European Commission. The pooling arrangement also includes CO_2 emission credits from Volvo Car's joint venture Polestar. The compensation received by Ford has been accounted for as revenue, and an additional part is received through the share of income from Polestar. The classification as revenue is based on that it is directly related to Volvo Cars' core business.

CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

Variable consideration

The inherent risk with regard 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. 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. A variable consideration 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 sales 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.

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 Commitments

Cars sold with a repurchase obligation are recognised in the balance sheet as assets under operating leases or inventories depending on the contract period. During the contract period there is risk for a potential loss for Volvo Car Group if the estimated value of the car is 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.

Consideration payables

When the customer as part of a sale transaction will receive cash or goods with a monetary value, revenue will be recognised net of the consideration paid to the customer.

Revenue allocated to geographical regions:	2020	2019
China	61,236	60,530
US	40,581	40,110
Europe[1]	121,904	130,983
of which Sweden	*25,546*	*26,092*
of which Germany	*18,319*	*20,343*
of which United Kingdom	*15,866*	*16,911*
Other markets	39,112	42,494
of which Japan	*7,345*	*7,937*
of which South Korea	*5,059*	*4,623*
Total	**262,833**	**274,117**

Revenue allocated to category:	2020	2019
Sale of products and related goods and services	239,563	251,107
Sale of used cars	16,288	15,840
Revenue from subscription, leasing and rental business	2,706	4,177
Sale of licences	2,068	1,648
Other revenue[2]	2,208	1,345
Total	**262,833**	**274,117**

1) Europe is defined as EU28+EFTA.
2) Including effects of CO_2 credits and sold services.

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 contract liabilities are classified as current and will most likely be recognised as revenue during the coming year.

NOTE 3 – EXPENSES BY NATURE

	2020	2019
Material cost incl. freight, distribution and warranty	–185,268	–186,126
Personnel	–34,695	–36,997
Amortisation/depreciation[1]	–14,449	–15,548
Other	–18,012	–21,598
Total	**–252,424**	**–260,269**

1) The amortisation expenses has decreased by MSEK 666 (—), due to adjustments of the useful life period to reflect updated assumptions and cycle plan changes.

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 694 (376) all assets and liabilities are current.

	Sales of goods, services and other		Purchases of goods, services and other	
	2020	2019	**2020**	2019
Related companies[1) 2)]	5,131	4,364	–7,085	–4,952
Joint ventures and associated companies[1)]	1,303	1,320	–2,363	–2,603

	Receivables		Payables	
	Dec 31, 2020	Dec 31, 2019	**Dec 31, 2020**	Dec 31, 2019
Related companies[1)]	9,248	7,209	5,486	2,927
Joint ventures and associated companies[1)]	518	733	1,202	408

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) Revenue from sale of licenses and technology represent a value of MSEK 1,774 (1,410).

During 2020, a legal restructuring of the Polestar Group has been performed. The restructuring of Polestar as such, has not had any effect on Volvo Car Group's interest in Polestar's underlying operational activities. During the restructuring in mid September 2020, the holding company Polestar Automotive (Shanghai) Co., Ltd sold its subsidiaries (i.e. the operational entities) to a newly formed holding company; Polestar Automotive (Singapore) Pte. Ltd., registered in Singapore, a subsidiary to the new parent company Polestar Automotive Holding Ltd, registered in Hong Kong, in which Volvo Car Group owns 50 per cent. Transactions with Polestar up until mid September 2020 are therefore presented below as transactions with the Polestar Shanghai Group and transactions thereafter are presented below as transactions with the Polestar Automotive Holding Ltd Group. For further information regarding the restructuring and the two different joint ventures, see Note 13 – Investments in joint ventures and associates.

Transactions with the Polestar Shanghai Group

During 2020, Volvo Car Group recognised revenue of MSEK 1,098 (1,320) related to the sale of technology licenses and development of technology to the Polestar Shanghai Group. The sale of other services, recognised as other income, amounted to MSEK 349 (731).

Volvo Car Group's purchases amounted to MSEK 210 (472) and are related to a performance enhancement product provided to the end customers. The purchases have been recognised as cost of sales.

Transactions with the Polestar Automotive Holding Ltd Group
During 2020, Volvo Car Group recognised revenue of MSEK 442 (—) related to the sale of technology licenses and development of technology to the Polestar Automotive Holding Ltd Group. The sale of other services, recognised as other income, amounted to MSEK 83 (—).

Volvo Car Group's purchases amounted to MSEK 96 (—) and are related to a performance enhancement product provided to the end customers. The purchases have been recognised as cost of sales. As of year-end, Volvo Car Group has a payable to the Polestar Automotive Holding Ltd Group of MSEK 959 (—), related to warranty expenses.

Transactions with Asia-Europe Automobile Manufacturing (Taizhou) Co., Ltd, "the Luqiao plant"
Since 2016, Volvo Car Group has an agreement with Asia-Europe Automobile Manufacturing (Taizhou) Co., Ltd, "the Luqiao plant", related to the production of the new range of smaller 40-series CMA-based cars, like the XC40. The Luqiao plant is owned by Zhejiang Geely Holding Group Co., Ltd, but is operated by Volvo Car Group. The support service for operating the plant has resulted in other income of MSEK 424 (356). Volvo Car Group has also sold engines to the plant for its production of Lynk&Co CX11 vehicles. The sales has been recognised as revenue of MSEK 922 (856).

Volvo Car Group's purchases of cars from the Luqiao plant amounted to MSEK –4,426 (–3,465) and have been recognised as cost of sales.

Furthermore, Volvo Car Group has since 2019, provided machinery to the plant through a leasing agreement, which has resulted in a non-current asset of MSEK 694 (376). For further information, see Note 7 – Leasing

Transactions with other related Parties
During 2020, Volvo Car Group entered into an agreement with Ningbo UMD Automobile Transmission Co., Ltd. to deliver gearboxes for PHEV XC40 plug-in hybrid cars. The purchase of the gearboxes has been recognised as cost of sales of MSEK –716 (—). Since 2019, Volvo Car Group is selling fleet cars to Ningbo Fuhong Auto Sales Co Ltd., which generated revenue of MSEK 747 (251).

During 2020, Volvo Car Group bought a license to Background IP from Zenuity AB of MSEK 1,067 (—). The license has been recognised as an intangible asset. For further information, see Note 13 – Investments in joint ventures and associates and Note 15 – Intangible assets.

Dividends
In 2019, Volvo Car AB (publ.) paid dividend to its preference shareholders of MSEK 125 and to its shareholder Geely Sweden Holdings AB of MSEK 1,387. Furthermore, Daqing Volvo Car Manufacturing Co., Ltd paid dividend last year of MSEK 1,381 to its shareholder Zhejiang Geely Holding Group Co., Ltd.

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

NOTE 5 – AUDIT FEES

	2020	2019
Deloitte		
Audit fees	–49	–37
Audit-related fees	–8	–5
Tax services	–2	–4
Other services	–2	–5
Total	**–61**	**–51**

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

	2020	2019
Other operating income		
Foreign exchange rate gains[1]	—	537
Sold services	971	1,379
Government grants[2]	234	633
Other	1,157	1,319
Total	**2,362**	**3,868**

	2020	2019
Other operating expenses		
Amortisation and depreciation of intangible and tangible assets	–248	–244
Foreign exchange rate loss[3]	–1,010	—
Royalty	–772	–916
Property tax	–118	–109
Other	–1,755	–1,976
Total	**–3,903**	**–3,245**

1) The gross foreign exchange rate gain on operating assets and liabilities amounted to MSEK 1,036 (1,155).
2) The major part of the government grants in 2020 are related to governmental support for Covid-19, in the form of tax subsidies in China.
3) The gross foreign exchange rate loss on operating assets and liabilities amounted to MSEK –2,046 (–618).

NOTE 7 – LEASING

ACCOUNTING PRINCIPLES

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 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 12 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, 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 of the right-of-use asset is presented on the same line item/items with similar expenses. Interest expense on the lease liability is presented as part of finance expenses. In the statement of cash flows, amortisation on the lease liability is 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 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 12 months are recognised as inventory, see Note 18 – Inventories. Operating lease contracts with a maturity more than 12 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.

Sub-leases and sale and leaseback transactions are not considered material for Volvo Car Group.

CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

Complex contracts requires Volvo Car Group to make judgemental 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 Group's operations.

Lease term
When determining the lease term, management is considering all facts and circumstances that create an economic incentive to exercise an extension option, or not to exercise a termination option. The assessment is reviewed if a significant event or a significant change in circumstances occurs that may affect the assessment.

Discount rate
When determining the disount rate, Volvo Car Group uses an applicable industrial yield curve and takes into consideration for example credit risk, adjustment for currency, lease term and economic environment.

Volvo Car Group as lessee
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**
Additions	704	545	1,249
Divestments and disposals	–147	–196	–343
Reclassifications	–16	0	–16
Effect of foreign currency exchange rate differences	–279	–20	–299
Balance at December 31, 2020	**6,900**	**1,108**	**8,008**
Accumulated depreciation			
Balance at January 1, 2019	—	—	—
Depreciation expense	–981	–221	–1,202
Balance at December 31, 2019	**–981**	**–221**	**–1,202**
Depreciation expense	–994	–277	–1,271
Divestments and disposals	180	187	367
Reclassifications	1	0	1
Effect of foreign currency exchange rate differences	46	19	65
Balance at December 31, 2020	**–1,748**	**–292**	**–2,040**
Net balance at December 31, 2019	**5,657**	**558**	**6,215**
Net balance at December 31, 2020	**5,152**	**816**	**5,968**

Lease liabilities	2020	2019
Non-current lease liabilities	4,815	5,076
Current lease liabilities	1,175	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 maturity analysis of lease liabilities is presented in Note 20 – Financial risks and financial instruments.

Amounts recognised in profit and loss	2020	2019
Deprecation expenses on right-of-use	–1,271	–1,225
Interest expense on lease liabilities	–219	–236
Expense relating to short-term leases	–123	–156
Expense relating to leases of low value assets	–29	–27
Expense relating to variable lease payments not included in the measurement of the lease liability	–29	–23
Income from sub-leasing right-of-use assets	46	26

The total cash outflow for leases amounts to MSEK 1,625 (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 and contracts under the name of Care by Volvo.

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 sheet day.

Future lease income of operating lease contracts, undiscounted.	2020	2019
No later than 1 year	1,217	934
Later than 1 year but no later than 2 years	466	194
Later than 2 year but no later than 3 years	8	104
Later than 3 year but no later than 4 years	7	9
Later than 4 year but no later than 5 years	7	8
Later than 5 years	83	
Total	**1,788**	**1,249**

Finance lease contracts

Volvo Car Group are into finance leasing arrangements as a lessor for certain equipment.

Amounts receivable under finance leases	2020	2019
No later than 1 year	125	59
Later than 1 year but no later than 2 years	125	59
Later than 2 year but no later than 3 years	125	59
Later than 3 year but no later than 4 years	125	59
Later than 4 year but no later than 5 years	125	59
Later than 5 years	338	139
Undiscounted lease payments	**963**	**434**
Less unearned finance income	146	58
Net investment in the lease	**817**	**376**

The following table presents the amounts included in income statement

	2020	2019
Finance income on the net investment in finance leases	29	10

The selling profit for financial lease amounts to MSEK – (–).

NOTE 8 – EMPLOYEES AND REMUNERATION

ACCOUNTING PRINCIPLES

Incentive programmes

Volvo Car Group manages in total five different global incentive programmes:

- The Short Term Variable Pay Programme for Senior Leaders (STVP for Senior Leaders)
- The Volvo Bonus programme
- The Long Term Variable Pay (LTVP) programme
- The Volvo Car AB share-based programme
- The Polestar share-based programme

The design and payout of all programmes are subject to approval of the Board of Directors. Certain decisions related to the share-based programmes are subject to decision by the Annual General Meeting.

Short-term incentive programmes

For the short-term incentive programmes a liability is recognised if all prerequisites are met.

Long-term incentive programme

The LTVP is a cash-settled share based programme.

The fair value of the cash-settled programme is determined at the grant date, and revalued at each balance sheet date, and is recognised as an operating 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 valuation 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

The Volvo Car AB share-based incentive programme is cash-settled. The fair value of the warrants acquired by the participants 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.

The programme will not render any recognition of personnel cost as it is based on fair values.

Polestar programme

The programme is recognised as a share-based incentive programme that will be cash-settled based on the participants option to receive cash at fair value for the shares under certain circumstances and during predetermined periods. Based on this a liability is recognised in Volvo Car Group´s balance sheet.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

Average number of employees by region:	2020	Of whom women	2019	Of whom women
Sweden	21,071	27%	23,005	28%
Nordic countries other than Sweden	587	33%	736	34%
Belgium	4,789	14%	5,109	15%
Europe other than the Nordic countries and Belgium	1,316	35%	1,237	32%
North and South America	1,850	35%	2,036	33%
China	7,709	17%	8,404	16%
Asia other than China	899	20%	878	17%
Other countries	122	43%	112	32%
Total	**38,343**[1]	**24%**	**41,517**	**24%**

Number of Board members and senior executives[2]	Dec 31, 2020	Of whom women	Dec 31, 2019	Of whom women
	Board members (Chief Executive Officers and senior executives)		Board members (Chief Executive Officers and senior executives)	
Parent company	11	27%	10	30%
Subsidiaries	111 (300)	23% (29%)	111 (301)	19% (26%)
Total	**122 (300)**	**23% (29%)**	**121 (301)**	**20% (26%)**

	2020		2019	
Salaries and other remunerations	Wages and salaries, other remunerations	Social security expenses (of which pension expenses)	Wages and salaries, other remunerations	Social security expenses (of which pension expenses)
Parent company	9	3(—)	9	3(—)
Subsidiaries	21,305	8,895 (4,644)	22,727	8,819 (4,232)
Total	**21,314**	**8,988 (4,644)**	**22,736**	**8,822 (4,232)**

	2020		2019	
Salaries and other remuneration to the Board[3], CEO, Executive Management Team (EMT)[4] and other employees	Wages and salaries, other remunerations (of which variable salaries)	Social security expenses (of which pension expenses)	Wages and salaries, other remunerations (of which variable salaries)	Social security expenses (of which pension expenses)
Board, Chief Executive Officers and EMT	310 (89)	116 (43)	296 (81)	117 (41)
Other employees	21,004	8,872 (4,601)	22,440	8,705 (4,191)
Total	**21,314 (89)**	**8,988 (4,644)**	**22,736 (81)**	**8,822 (4,232)**

1) The decrease in average number of employees is mainly a result of temporary lay-offs during the second quarter, and to some extent cost efficiency activities related to the competence shift which was finalised in the third quarter of 2020.
2) Senior executives are defined as key personnel within the subsidiaries.
3) The Board includes all board members in the subsidiaries within Volvo Car Group.
4) The Executive Management Team (EMT) consists of the CEO in Volvo Car Corporation and key management personnel other than Board members, in total 10 (12). Up until November 2020 EMT consisted of 12 members.

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 2020 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 Group´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	2020 Ordinary compensation, TSEK	2019 Ordinary compensation, TSEK
Li Shufu, Chairman	—	—
Håkan Samuelsson	—	—
Li Donghui	—	—
Carl Peter Forster (until March 2019)	—	—
Winfried Vahland (from March 2019)	900	690
Winnie K. W. Fok	900	869
Lone Fønss Schrøder	2,600	2,550
Thomas Johnstone	1,025	1,006
Betsy Atkins	1,000	969
Michael Jackson	900	831
Jim Zhang	875	813
Jonas Samuelsson (from September 2020)	189	—
Total	**8,389**	**7,728**

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 2020, 2 (3) members of EMT left their positions. For EMT members leaving Volvo Car Group, remuneration during the notice period and severance pay amounted to MSEK 8 (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 52 (59).

In March, the EMT and the CEO decided to reduce their salaries with 15 per cent for the second quarter, when many of the employees were working part-time due to the Covid-19 situation.

Other long-term benefits

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

Incentive programmes

Short-term incentive programmes

Volvo Bonus

The Volvo Bonus programme is a programme that includes all Volvo Car employees. 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.

The financials for the first half year 2020 were severely impacted by the Covid-19 pandemic. The Board decided to cancel the Volvo Bonus targets for Full Year 2020 and to establish new financial targets for H2 2020. The bonus amounts were adjusted accordingly to only 50 per cent of the full year amount. The corresponding change was done for the profit target (EBIT) included as an element in the STVP as the same principles are applied in the two programmes.

STVP for Senior Leaders

The STVP for Senior Leaders is an incentive programme for the CEO, EMT and certain senior executives. The purpose of the STVP for Senior Leaders is to support the corporate strategy and the transformation of Volvo Cars. To reach maximum pay-out a number of performance targets must be reached. Targets include Volvo Car Group profit target (EBIT), but also other targets related to quality and transformation activitites. The STVP for Senior Leaders is based on a percentage of annual base salary and the remuneration is paid in cash.

Liability and cost

The cost for the Volvo Bonus and STVP programmes amounted to MSEK 1,105 (1,402) including social security expenses, of which MSEK 56 (52) was related to EMT.

Long-term incentive programmes

LTVP

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 and the achievment of financial performance factors. From 2020, the LTVP includes two performance factors related to profit (EBIT) and revenue growth which can increase or decrease the payment, depending on target achievement.

The programme is capped to a maximum of 300 per cent of the value of the award at grant. To be eligible for pay-out, the employee must remain within Volvo Car Group on the pay-out date.

Other long term incentives

In addition to the LTVP program there are individual agreements with members of management that are classified as long term. These agreements also refer to performance for periods prior to 2020.

Liability and cost

The cost for the LTVP-programme amounted to MSEK 110 (130) including social security expenses, of which MSEK 34 (36) was related to EMT. The total liability amounted to MSEK 180 (214).

Share-based incentive programmes

Volvo Car AB 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 Volvo Car AB (publ.).

The terms of the agreement is from year 2016 to 2021. 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 271,194 as per December 31, 2020.
- The duration for the warrants has been determined to six years.
- The volatility has been determined as 40 per cent.
- Assessed risk free interest has been determined to –0.38 per cent.

Considering a weighted assessment of the conditions in the agreement the programme is accounted for as a share-based programme 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 recognised 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	567	121,777
Used/redeemed	—	—
Sold during the year	—	—
Change in valuation	—	31,990
At the end of the year	**567**	**153,767**

As the accounting is made at fair value, there is no difference between book value and fair value. The fair value is based on a valuation by an external party.

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

Liability and cost

During the duration of the programme the participants, at certain predetermined periods, between year 2016–2021, have an option to sell the received warrants at fair value to Volvo Car AB (publ.). The warrants have been acquired by the participants at fair value, why the programme will not render any personnel cost.

Polestar programme

During 2019, Volvo Car AB (publ.), through its subsidiary Volvo Car Corporation launched a share based incentive programme to certain members of the Executive management of Volvo Car Group and Polestar Group. Each participant was offered to purchase shares in Volvo Car Group´s subsidiary PSINV AB, which in turn owns shares in Volvo Car Group´s joint venture Polestar Automotive Holding Limited and hence the participants are indirectly minority owners of the Polestar Group. The investment was made at fair market value in accordance with an external valuation. In case a participant is no longer employed, and during other specified certain predetermined periods, the participants (i.e the shareholders) have an option to sell the shares at fair market value to Volvo Cars and at the same time Volvo Cars has an option to repurchase the shares from the participants. At the time of the transaction, the fair value of each share was determined to SEK 1,000. In total 38,125 number of shares have been acquired by the participants, which corresponds to an indirect ownership in the Polestar Group of 0.17 per cent.

The programme runs until 30 June 2029 and will thereafter be prolonged as long as none of the parties terminates the agreement. The shares have been valued at fair market value by an external party.

TSEK	Number of shares	Assessed fair market value
Total number sold to participants	38,125	38,125
Redeemed during the year	—	—
Sold during the year	—	—
Change in valuation	—	—
At the end of the year	**38,125**	**38,125**

As the accounting is made at fair value, there is no difference between book value and fair value. The fair value is based on a valuation by an external party.

Specification of share programme	Number of shares
CEO and Board of Directors in Volvo Car Group	12,500
Other members of EMT in Volvo Car Group	8,375
Members of Polestar Board and management	17,250
Total	**38,125**

Compensation to Executive Management Team (EMT), TSEK	2020				2019			
	Salary[5]	Variable pay[6]	Long term variable pay[6]	Social security expenses (of which pension expenses)	Salary[5]	Variable pay[6]	Long term variable pay[6]	Social security expenses (of which pension expenses)
Håkan Samuelsson, CEO in Volvo Car Corporation	13,835	14,250	21,704	13,944 (8,861)	14,440	14,250	7,040	12,954 (8,862)
Other members of EMT	69,355	27,947	18,563	60,307 (21,167)	76,525	27,543	20,036	58,520 (17,817)
Total	**83,190**	**42,197**	**40,267**	**74,251 (30,028)**	**90,965**	**41,793**	**27,076**	**71,474 (26,679)**

5) Includes benefits such as housing and company car.
6) Includes STVP and LTVP respectively, and also other additional short and long term variable pay in accordance with individual agreements. Long term variable pay also includes payments related to performance in previous periods.

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
Capitalised 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 cost 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 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. 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.

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 losses are reversed, with the exception of goodwill, if reasons for the previously made 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 recognised if no impairment loss had been recognised.

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:	2020	2019
Software	–288	–287
Capitalised development costs[3]	–4,051	–4,872
Other intangible assets	–514	–472
Buildings and land improvements[1)2)]	–1,858	–1,839
Machinery and equipment[1)2)]	–7,394	–7,673
Assets under operating leases	–344	–405
Total	**–14,449**	**–15,548**

Depreciation and amortisation according to plan by function:	2020	2019
Cost of sales[1)2)]	–8,060	–8,550
Research and development expenses[3)]	–4,635	–5,357
Selling expenses[1)2)]	–507	–496
Administrative expenses	–999	–808
Other income and expense	–248	–337
Total	**–14,449**	**–15,548**

1) Depreciation expense related to Buildings and land improvements include Right-of-use asset of MSEK –994 (–981) and Machinery and equipment Right-of-use-asset of MSEK –277 (–221).
2) Of which impairment loss MSEK –22 (–10).
3) The amortisation expenses has decreased by MSEK 666 (—), due to adjustments of the useful life period to reflect updated assumptions and cycle plan changes.

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 as a reduction of the carrying amount of the asset. Government grants recognised 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 recognised 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's 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, mainly from the Swedish, American, Chinese and Belgian Governments as well as from the European Union. During 2020, as an effect of the ongoing Covid-19 pandemic, governmental support has also been received from several other Governments worldwide. In 2020, the government grants received amounted to MSEK 1,340 (1,177) and the government grants realised in the income statement amounted to MSEK 1,811 (741). Of the government grants realised in the income statement, MSEK 1,013 (—) was recognised as an effect of the Covid-19 pandemic, mainly related to support for temporary lay-offs in Sweden and tax subsidies in China. In other countries where Volvo Car Group has many employees, such as Belgium and the US, employees have received the support directly. Furthermore, grants of MSEK 625 (138) related to support of production facilities of new car models has reduced the carrying amount of the related machinery and equipment, of which MSEK — (138) has been received.

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

ACCOUNTING PRINCIPLES

Financial income consist of interest income on interest bearing assets in accordance to the effective interest method, fair value changes on equity holdings and fair value changes on financial derivatives categorised as both level 2 and level 3 instruments and finally received dividends. Information with regards to the classification of financial instruments, see Note 20 Financial risks and Financial instruments.

	2020	2019
Interest income on bank deposits	541	511
Interest income from related parties	134	61
Fair value through profit and loss[1)]	1,943	3
Total	**2,618**	**575**

1) Including fair value changes related to shares, warrants and earn-out shares in Luminar.

NOTE 12 – FINANCIAL EXPENSES

	2020	2019
Net foreign exchange rate losses on financing activities	–55	–77
Interest effect from the measurement of repurchase obligations	–175	–187
Interest expenses related to provisions for post-employment benefits	–208	–216
Expenses for credit facilities	–52	–77
Interest expenses to related parties	–1	–2
Interest expenses	–756	–796
Interest expenses related to lease liabilities	–209	–242
Other financial expenses	–132	–113
Total	**–1,588**	**–1,710**

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 have joint control and rights to the net assets of the arrangements.

Associated companies are companies in which Volvo Car Group has got 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 facts and circumstances.

Investments in joint ventures and associated companies are recognised in accordance with the equity method and are initially valued at acquisition cost. Volvo Car 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 Volvo Car Group's share of losses in an associate equals or exceeds its interest in the associate, Volvo Cars 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 got a 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 joint control really exists when other facts and circumstances are taken into consideration.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

	2020	2019
Share of income in joint ventures	–355	–171
Share of income in associates	3	3
Total	**–352**	**–168**

Share of income in joint ventures and associates is specified below:	2020	2019
V2 Plug-In Hybrid Vehicle Partnership HB[1]	365	454
Volvofinans Bank AB[2]	222	210
Zenuity AB[3]	297	–657
Lynk & Co Investment Co., Ltd[4]	160	237
Polestar Automotive (Shanghai) Co., Ltd[5]	1,129	–414
Polestar Automotive Holding Ltd[6]	–2,521	—
Other companies	–4	2
Total	**–352**	**–168**

Investments in joint ventures and associates	Dec 31, 2020	Dec 31, 2019
At beginning of the year/acquired acquisition value	9,211	8,256
Share of net income	–352	–168
Investment in Zenuity AB[3]	240	550
Investment in Polestar Automotive Holding Ltd[6]	3,773	—
Investment in World of Volvo AB[8]	125	—
Investment in Volvo Car Financial Services UK Ltd[9]	388	—
Reversal internal profit elimination[5] [6]	–213	–341
Capital injection into joint venture under common control[5]	—	1,153
Shareholder transaction in joint venture under common control[5]	–1,901	—
Obligation to cover accumulated losses classified as Non-current liabilities[3]	–210	107
Capital repayment V2 Plug-In Hybrid Vehicle Partnership HB[1]	–464	–418
Dividends	–333	–67
Translation difference	–267	139
Total[10]	**9,997**	**9,211**

Volvo Car Group's carrying amount on investments in joint ventures and associates:	Corp. ID no.	Country of incorporation	% interest held	Dec 31, 2020	Dec 31, 2019
Joint ventures					
Volvo Trademark Holding AB	556567-0428	Sweden	50	6	6
V2 Plug-In Hybrid Vehicle Partnership HB[1]	969741-9175	Sweden	50	132	232
Volvofinans Bank AB[2]	556069-0967	Sweden	50	2,649	2,427
VH Systems AB	556820-9455	Sweden	50	38	37
Zenuity AB[3]	559073-6871	Sweden	50	—	—
World of Volvo AB[8]	559233-9849	Sweden	50	113	—
VCFS Germany GmbH	HRB 85091	Germany	50	2	1
VCIS Germany GmbH	HRB 86800	Germany	50	4	5
Volvo Car Financial Services UK Ltd[9]	12718441	United Kingdom	50	388	—
Polestar Automotive (Shanghai) Co., Ltd[5]	91310000MA1FL17P99	China	50	1,817	2,998
Polestar Automotive Holding Ltd[6]	2942747	Hong Kong, China	50	1,406	—
GV Automobile Technology (Ningbo) Co., Ltd[7]	91330201MA2AGKLQ8E	China	50	36	34
Lynk & Co Investment Co., Ltd[4]	91330200MA2AF25Y7B	China	30	3,380	3,446
Associated companies					
VCC Tjänstebilar KB	969673-1950	Sweden	50	3	4
VCC Försäljnings KB	969712-0153	Sweden	50	2	2
Volvohandelns PV Försäljnings KB	916839-7009	Sweden	50	4	4
Volvohandelns PV Försäljnings AB	556430-4748	Sweden	50	12	11
Trio Bilservice AB	556199-1059	Sweden	33	—	—
Göteborgs Tekniska College AB	556570-6768	Sweden	26	4	4
Leiebilservice AS	879 548 632	Norway	20	1	—
Carrying amount, participation in joint ventures and associates				**9,997**	**9,211**

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 2020, V2 Plug-In Hybrid Vehicle Partnership HB provided a repayment of MSEK 464 (418) 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 was until June 30, 2020 a joint venture between Volvo Car Corporation and Veoneer Sweden AB. On July 1, Zenuity AB became a joint venture between the wholly-owned subsidiary Zenseact AB and Veoneer Sweden AB. The purpose of the company was to develop software for autonomous driving and driver assistance systems. In April 2020 the business was divided into two parts in order for the owners Volvo Car Group and Veoneer, to focus more effectively on their respective strategies. On July 1, the two companies signed and implemented the final agreement whereby Volvo Car Group acquired, through a wholly-owned stand-alone subsidiary Zenseact AB, certain assets and liabilities of Zenuity AB. The purpose of Zenuity AB, after the final agreement is to hold ownership of IP-rights and will have no other operations since all product development and personnel have been transferred to Volvo Car Group and Veoneer. Due to the fact that Volvo Car Group, together with the other investor, was obligated to cover the accumulated losses in Zenuity AB that was larger than the accumulated investment, a non-current liability was recognised in prior year, 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 Shanghai Group, resulting in Polestar Shanghai 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 Shanghai Group. In 2019 and 2018, subsequent to the initial investment, 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).

In mid September 2020, according to a restructuring plan, Polestar Automotive (Shanghai) Co., Ltd ceased its business operation and transfered all its subsidiaries to a newly created holding company registered in Singapore. Since September 2020, Polestar Automotive (Shanghai) Co., Ltd is a stand-alone company jointly owned by Volvo Cars (China) Investment Co., Ltd and Zhejiang Geely Holding Group Co., Ltd. During the autumn Polestar Automotive (Shanghai) Co., Ltd have also transferred all its non-cash assets and liabilities and personnel to the newly formed Polestar Holding Group with only assets being cash remaining on its balance sheet. In December 2020, Zhejiang Geely Holding Group Co., Ltd and Volvo Cars (China) Investment Co., Ltd signed a capital reduction agreement where Geely Group have in view to withdraw its investment from Polestar Automotive (Shanghai) Co., Ltd. As a result of the capital reduction, Geely Group ceased to be a shareholder of Polestar Automotive (Shanghai) Co., Ltd and the joint venture company was in January 2021 converted into a wholly-owned subsidiary of Volvo Cars (China) Investment Co., Ltd. It is the agreement between Zhejiang Geely Holding Group Co., Ltd and Volvo Cars (China) Investment Co., Ltd that the capital reduction and potential liquidation would altogether allow the two shareholders to achieve a return of their respective initial investment. As a consequence of the capital reduction agreement, Volvo Car Group's share value has been reflected accordingly through equity as a shareholder transaction.

6) In May 2020, the joint venture company Polestar Automotive Holding Ltd was established between Volvo Car Group's wholly owned subsidiary Snita Holding B.V. 50 per cent shareholding and PSD Investment Ltd. The purpose of the establishment of Polestar Automotive Holding Ltd is to be the parent company in the new Polestar Automotive Holding Group. In mid September 2020, Polestar Automotive Holding Ltd's new established wholly-owned subsidiary, Polestar Automotive (Singapore) Pte. Ltd, acquired all the shares in Polestar Performance AB including its subsidiaries, Polestar Holding AB and Polestar Automotive Shanghai Co., Ltd including its subsidiaries from Polestar Automotive (Shanghai) Co., Ltd. According to the restructuring plan, the business operation in the underlying subsidiaries were also transfered to Polestar Automotive (Singapore) Pte. Ltd. The restructuring of the Polestar Group as such, has not had any effect on Volvo Car Groups' interest in Polestar Group's underlying operational activities. In November 2020, Snita Holding B.V. sold 0.86 per cent of its shares in Polestar Automotive Holding Ltd to PSINV AB, another subsidiary within Volvo Car Group.

7) 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.

8) World of Volvo AB is a joint venture between Volvo Car Corporation and AB Volvo (publ.). The purpose of the company is to reinforce the Volvo brand position and the Volvo trademark by creating a new centrally-located premium brand experience center, which will include the Volvo Museum, in Gothenburg, Sweden

9) In November 2020, the joint venture company Volvo Car Financial Services UK Ltd was established between Volvo Car Corporation and Santander Consumer (UK) Plc. The purpose of the company is to provide financial services in the UK market and improve dealer and customer satisfaction.

10) During 2020, the internal profit elimination related to sale of licenses and technology to the Polestar Shanghai Group, was reclassified and the comparative figures have been adjusted accordingly. The effect in prior year was MSEK 1,803 (1,253) on investments in joint ventures and associates, MSEK 1,558 (1,253) on Other non-current liabilities and MSEK 245 (—) on Current liabilities.

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

	Volvofinans Bank AB[2) 17)]		Zenuity AB[3) 18)]		Lynk & Co Investment Co., Ltd[4) 19)]		Polestar Automotive (Shanghai) Co., Ltd[5) 20)]		Polestar Automotive Holding Ltd [6) 21)]	
Summarised balance sheets	**2020**	2019	**2020**	2019	**2020**	2019	**2020**	2019	**2020**	2019
Percentage voting/ownership	50	50	50	50	30	30	50	50	50	—
Non-current assets	37,390	37,162	—	456	14,093	13,126	7	10,094	12,743	—
Cash and cash equivalents	2,357	2,622	232	326	826	2,134	7,429	2,178	6,627	—
Other current assets	4,352	4,474	2,139	176	15,058	9,165	—	2,723	2,995	—
Total assets	**44,099**	**44,258**	**2,371**	**958**	**29,977**	**24,425**	**7,436**	**14,995**	**22,365**	—
Equity[11)]	4,546	4,103	2,364	697	11,230	11,448	7,436	6,075	6,144	—
Non-current liabilities[11) 12) 13)]	37,084	37,659	—	40	4,609	3,377	—	145	651	—
Current liabilities[14) 15) 16)]	2,469	2,496	7	221	14,138	9,600	—	8,775	15,570	—
Total equity and liabilities	**44,099**	**44,258**	**2,371**	**958**	**29,977**	**24,425**	**7,436**	**14,995**	**22,365**	—

11) Equity and non-current liabilities are adjusted with the portion of untaxed reserves where appropriate.
12) In Volvofinans Bank AB, the non-current liabilities include financial liabilities of MSEK 36,093 (36,775).
13) In Lynk & Co Investment Co., Ltd, the non-current liabilities include financial liabilities of MSEK 1,251 (—).
14) In Polestar Automotive (Shanghai) Co.,Ltd, the current liabilities include financial liabilities of MSEK — (4,980).
15) In Polestar Automotive Holding Ltd, the current liabilities include financial liabilities of MSEK 2,921 (—).
16) In Lynk & Co Investment Co., Ltd, the current liabilities include financial liabilities of MSEK 1,251 (—).
17) Volvofinans Bank AB's equity share in the Volvo Car Group is included with a time lag of a quarter.
18) The figures include the consolidated figures from Zenuity AB and its subsidiaries Zenuity GmbH, Zenuity Inc and Zenuity Software Technology Co., Ltd up until 30 June 2020. Thereafter Zenuity AB is a stand alone company.
19) 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 Automobile(Taizhou) Co., Ltd, Lynk & Co International AB, Lynk & Co Hong Kong International Co., Ltd, Lynk & Co Europe AB, Yuyao Lynk &Co Automobile Part Co., Ltd, Chengdu Lynk & Co Automobile Co., Ltd , Lynk & Co Automobile (Zhang Jiakou) Co., Ltd, Lynk & Co Sales Belgium Ltd, Lynk & Co Sales Sweden AB, Lynk & Co Sales Italy S.R.L, Lynk & Co Sales France SAS, Lynk & Co Sales Germany GmbH and Lynk & Co Sales Spain S.L.
20) The figures include the consolidated figures from Polestar Automotive (Shanghai) Co., Ltd and its subsidiaries, Polestar Holding AB, Polestar Performance AB, Polestar Automotive Sweden AB, Polestar Automotive USA Inc, Polestar Automotive UK Ltd, Polestar Automotive Canada Inc, Polestar Automotive Norway AS, Polestar Automotive Netherlands B.V., Polestar Automotive Germany GmbH, Polestar Automotive Belgium BV, Polestar Automotive Switzerland AG, Polestar Automotive Shanghai Co., Ltd, Polestar Consulting Service (Shanghai) Co., Ltd, Polestar Automotive China Distribution Co., Ltd, Polestar Automotive China Distribution Co., Ltd (Taizhou) and Polestar New Energy Vehicle Co., Ltd up until mid September 2020. Thereafter Polestar Automotive (Shanghai) Co., Ltd is a stand alone company.
21) The figures include the consolidated figures from Polestar Automotive Holding Ltd and its subsidiaries Polestar Automotive (Singapore) Pte. Ltd, Polestar Holding AB, Polestar Performance AB, Polestar Automotive Sweden AB, Polestar Automotive USA Inc, Polestar Automotive UK Ltd, Polestar Automotive Canada Inc, Polestar Automotive Norway AS, Polestar Automotive Netherlands B.V., Polestar Automotive Germany GmbH, Polestar Automotive Belgium BV, Polestar Automotive Switzerland AG, Polestar Automotive Shanghai Co., Ltd, Polestar Consulting Service (Shanghai) Co., Ltd, Polestar Automotive China Distribution Co., Ltd, Polestar Automotive China Distribution Co., Ltd (Taizhou) and Polestar New Energy Vehicle Co., Ltd from mid September 2020.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

	Volvofinans Bank AB[2) 17)]		Zenuity AB[3) 18)]		Lynk & Co Investment Co., Ltd[4) 19)]		Polestar Automotive (Shanghai) Co., Ltd[5) 20)]		Polestar Automotive Holding Ltd [6) 21)]	
Summarised income statements	**2020**	2019	**2020**	2019	**2020**	2019	**2020**	2019	**2020**	2019
Revenue	4,861	4,729	2,595	35	31,708	23,673	1,492	721	4,048	—
Profit/loss from continuing operations[22) 23) 24) 25) 26)]	364	325	1,894	–1,316	607	694	–2,380	–1,511	–1,180	—
Profit (loss) for the year	**364**	**325**	**1,894**	**–1,316**	**607**	**694**	**–2,380**	**–1,511**	**–1,180**	—
Other comprehensive income for the year	**—**	**—**	**–3**	**3**	**9**	**–9**	**–116**	**85**	**10**	—
Total comprehensive income for the year	**364**	**325**	**1,891**	**–1,313**	**616**	**685**	**–2,496**	**–1,426**	**–1,170**	—
Dividends received from joint ventures during the year	—	49	326	—	—	—	—	—	—	—

22) In Volvofinans Bank AB the profit for the year includes depreciation and amortisation of MSEK –8 (–6).
23) In Zenuity AB the profit (loss) for the year includes depreciation and amortisation of MSEK –67 (–113), interest income of MSEK — (5) and interest expenses of MSEK — (–5).
24) In Lynk & Co Investment Co., Ltd the profit for the year includes depreciation and amortisation of MSEK –2,114 (–1,268), interest income of MSEK 38 (14) and interest expenses of MSEK –79 (—).
25) In Polestar Automotive (Shanghai) Co., Ltd the loss for the year includes depreciation and amortisation of MSEK –1,248 (–276), interest income of MSEK 38 (124) and interest expenses of MSEK –143 (–174).
26) In Polestar Automotive Holding Ltd the loss for the year includes depreciation and amortisation of MSEK –632 (—), interest income of MSEK 4 (—) and interest expenses of MSEK –84 (—).

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

	Volvofinans Bank AB[2) 17)]		Zenuity AB[3) 18)]		Lynk & Co Investment Co., Ltd[4) 19)]		Polestar Automotive (Shanghai) Co., Ltd[5) 20)]		Polestar Automotive Holding Ltd [6) 21)]	
Reconciliation of summarised financial information	**2020**	2019	**2020**	2019	**2020**	2019	**2020**	2019	**2020**	2019
Net asset of the joint venture	4,546	4,103	2,364	697	11,230	11,448	7,436	6,075	6,144	—
Proportion of Volvo Car Group's ownership in the joint venture	50%	50%	50%	50%	30%	30%	50%	50%	50%	—
Adjustments for differences in accounting principles	—	—	1	1	—	—	—	—	—	—
Goodwill	376	376	—	—	—	—	—	—	—	—
Adjustments for Common control transaction	—	—	—	—	11	11	—	—	—	—
Elimination of intra-group profit	—	—	–736	–112	—	—	—	—	—	—
Capital injection from investors other than Volvo Car Group	—	—	–447	–447	—	—	—	—	–1,834	—
Obligation to cover accumulated losses classified as Non-current liabilities	—	—	—	210	—	—	—	—	—	—
Shareholder transaction in joint venture under common control[5)]	—	—	—	—	—	—	–1,901	—	—	—
Net foreign exchange rate effect	—	—	—	—	—	—	—	–40	168	—
Carrying amount of Volvo Car Group's interest in joint ventures	**2,649**	**2,427**	**—**	**—**	**3,380**	**3,446**	**1,817**	**2,998**	**1,406**	**—**

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 (including witholding tax on license sale to China) 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	2020	2019
Current income tax for the year	–3,221	–3,100
Current income tax for previous years	20	–41
Deferred taxes	1,180	–300
Withholding taxes [1]	54	–193
Other taxes	209	69
Total	**–1,758**	**–3,565**

1) Withholding tax on royalty and license sales to China

Information regarding current year tax expense compared to tax expense based on the applicable Swedish tax rate	2020	2019
Income before tax for the year	9,546	13,168
Tax according to applicable Swedish tax rate, 21.4% (21.4%)	–2,043	–2,818
Operating income/costs, non-taxable	56	62
Witholding taxes	54	–193
Other taxes, non-taxable	209	69
Capital gains or losses, non-taxable	–241	–184
Effect of different tax rates	–44	–216
Tax effect on deferred tax due to change of tax rate	238	–62
Revaluation of previously non-valued losses and other temporary differences	61	–215
Other	–48	–8
Total	**–1,758**	**–3,565**

Income tax recognised in other comprehensive income	2020	2019
Deferred tax		
Tax effects on cash flow hedge reserve	1,239	–661
Tax effect of remeasurement of provisions for post-employment benefits	–212	–792
Tax effects on translation difference of hedge instruments of net investments in foreign operations	79	–30
Total	**1,106**	**–1,483**

Specification of deferred tax assets	Dec 31, 2020	Dec 31, 2019
Goodwill arising from the purchase of the net assets of a business	125	161
Provision for employee benefits	2,848	2,489
Unutilised tax loss carry-forwards	5,630	5,441
Reserve for unrealised income in inventory	20	78
Provision for warranty	1,275	1,382
Fair value of financial instruments	—	1,074
Other temporary differences	6,885	6,370
Total deferred tax assets	**16,783**	**16,995**
Netting of assets/liabilities	–9,619	–9,720
Total deferred tax assets, net	**7,164**	**7,275**

Specification of deferred tax liabilities	Dec 31, 2020	Dec 31, 2019
Fixed assets	8,260	7,771
Untaxed reserves	44	219
Auto lease portfolio	1,984	2,664
Fair value of financial instruments	202	—
Other temporary differences	173	41
Total deferred tax liabilities	**10,663**	**10,695**
Netting of assets/liabilities	–9,619	–9,720
Total deferred tax liabilities, net	**1,044**	**975**

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 the US. Of the total MSEK 5,630 (5,441) recognised deferred tax assets related to tax loss carry-forwards, MSEK 5,054 (4,109) relates to Sweden with indefinite periods of utilisation. MSEK 440 (1,230) 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, 2020	Dec 31, 2019
Net book value of deferred taxes at January 1	6,300	4,898
Deferred tax income/expense recognised through income statement	1,180	–300
Change in deferred taxes recognised directly in other comprehensive income	–1,106	1,483
Reclassification[2]	–17	—
Exchange rate impact	–237	219
Net book value of deferred taxes at December 31	**6,120**	**6,300**

2) MSEK –17(–) of deferred tax assets have been reclassified to assets held for sale. For more information, see Note 33 – Assets and liabilities held for sale.

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 2020 and as of December 31, 2020, the recognised tax loss carry-forwards amounted to MSEK 26,804 (25,093). 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, 2020	Dec 31, 2019
Due date		
2021	91	—
2022	—	—
2023	—	17
2024	33	64
2025	17	—
2026–	26,663	25,012
Total	**26,804**	**25,093**

NOTE 15 – INTANGIBLE ASSETS

ACCOUNTING PRINCIPLES

An intangible asset is recognised when it is identifiable, Volvo Car Group controls the asset, the cost can be measured reliably 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.

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 give rise to future economic benefit. All other subsequent expenditure is expensed in the period in which it 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 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 recognised as intangible assets, reflecting the relevant proportion of Volvo Car Group interests.

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. See 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 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 useful life 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 valid at the date of preparation of the impairment test. The planning is based on expectations regarding future market share, the market growth as well as the products' profitability.

	Capitalised development cost[1)]	Software	Trademark and goodwill[2)]	Other intangible assets[3)]	Total
Aquisition cost					
Balance at January 1, 2019	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 rate differences	—	–6	—	38	32
Balance at December 31, 2019	**46,043**	**4,063**	**3,738**	**5,513**	**59,357**
Additions	7,517	554	—	1,256	9,327
Acquired through business combinations	—	3	447	22	472
Divestments and disposals	–377	–178	—	–2	–557
Reclassifications[4)]	—	–117	—	–71	–188
Effect of foreign currency exchange rate differences	—	3	—	–101	–98
Balance at December 31, 2020	**53,183**	**4,328**	**4,185**	**6,617**	**68,313**
Accumulated amortisation and impairment					
Balance at January 1, 2019	–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 rate differences	—	6	—	–21	–15
Balance at December 31, 2019	**–21,710**	**–1,909**	**–4**	**–2,948**	**–26,571**
Amortisation expense[5)]	–4,051	–287	—	–508	–4,846
Acquired through business combinations	—	–1	—	–6	–7
Divestments and disposals	—	61	—	2	63
Reclassifications[4)]	—	104	—	43	147
Effect of foreign currency exchange rate differences	—	–16	—	85	69
Balance at December 31, 2020	**–25,761**	**–2,048**	**–4**	**–3,332**	**–31,145**
Net balance at December 31, 2019	**24,333**	**2,154**	**3,734**	**2,565**	**32,786**
Net balance at December 31, 2020	**27,422**	**2,280**	**4,181**	**3,285**	**37,168**

1) Volvo Car Group has capitalised borrowing costs related to product development of MSEK 142 (133). A capitalisation rate of 2.4 (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, 2020, Goodwill amounted to MSEK 583 (136).
3) Other intangible assets refers to licences, dealer network and patents.
4) Gross intangible assets of MSEK –297 (—) and depreciation of MSEK 147 (—) with a net value of MSEK –150 (—) have been reclassified to assets held for sale. For more information, see Note 33 – Assets and liabilities held for sale.
5) The amortisation expenses has decreased by MSEK 666 (—), due to adjustments of the useful life period to reflect updated assumptions and cycle plan changes.

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 2021–2023 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 2020, 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 (11.5) 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 12 months to get it ready for its intended use or sale.

Repair and maintenance expenditures are recognised in 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 useful life and are based on internal business plans or forecasts. Future cash flows are determined on the basis of long-term planning, valid at the date of preparation of the impairment test, and is approved by Management. The 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, 2019	**21,374**	**103,769**	**5,787**	**2,973**	**133,903**
Adjustment on transition to IFRS 16	6,330	648	—	—	6,978
Additions	749	4,860	6,325	2,301	14,235
Divestments and disposals	–169	–3,086	–1	–1,535	–4,791
Reclassification[5)]	2,119	4,777	–7,452	—	–556
Effect of foreign currency exchange rate differences	321	729	100	—	1,150
Balance at December 31, 2019	**30,724**	**111,697**	**4,759**	**3,739**	**150,919**
Additions	992	3,827	3,015	2,885	10,719
Acquired through business combinations	2	211	6	—	219
Divestments and disposals	–305	–3,022	–36	–1,690	–5,053
Reclassification[5)]	437	–8,060	–4,680	—	–12,303
Effect of foreign currency exchange rate differences	–1,296	–2,234	–191	–43	–3,764
Balance at December 31, 2020	**30,554**	**102,419**	**2,873**	**4,891**	**140,737**
Accumulated depreciation and impairment					
Balance at January 1, 2019	–9,531	–60,191	—	–450	–70,172
Depreciation expense[6)]	–1,839	–7,673	—	–405	–9,917
Divestments and disposals	137	2,163	—	359	2,659
Reclassification[5)]	–90	–110	—	—	–200
Effect of foreign currency exchange rate differences	–88	–220	—	—	–308
Balance at December 31, 2019	**–11,411**	**–66,031**	**—**	**–496**	**–77,938**
Depreciation expense[6)]	–1,858	–7,394	—	–344	–9,596
Acquired through business combinations	–1	–92	—	—	–93
Divestments and disposals	266	1,913	—	436	2,615
Reclassification[5)]	135	4,832	—	—	4,967
Effect of foreign currency exchange rate differences	315	933	—	3	1,251
Balance at December 31, 2020	**–12,554**	**–65,839**	**—**	**–401**	**–78,794**
Net balance at December 31, 2019	**19,313**	**45,666**	**4,759**	**3,243**	**72,981**
Net balance at December 31, 2020	**18,000**	**36,580**	**2,873**	**4,490**	**61,943**

1) Buildings and land include Right-of-use asset of MSEK 5,152 (5,657) , Machinery and equipment include Right-of-use asset of MSEK 816 (558) and Construction in progress include Right-of-use asset of MSEK — (23). For further information regarding leases, see Note 7 – Leasing.
2) Depreciation expense includes an impairment loss of MSEK –22 (–10). 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 2 (5) and Buildings of MSEK — (8).
5) Gross tangible assets of MSEK –11,618 (—) and depreciation of MSEK 5,024 (—) with a net value of MSEK –6,594 (—) has been reclassified to assets held for sale. For more information, see Note 33 – Assets and liabilities held for sale.
6) Depreciation expense related to Buildings and Land include right-of-use asset of MSEK –994 (–981) and Machinery and equipment Right-of-use-asset of MSEK –277 (–221).

NOTE 17 – OTHER NON-CURRENT ASSETS

	Dec 31, 2020	Dec 31, 2019
Restricted cash	133	145
Endowment insurance for pensions	379	381
Rental deposition	50	60
Derivative assets, non-current	1,277	214
Other receivables, non-current	607	654
Other non-current assets	2,312	1,799
Total	**4,758**	**3,253**

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 12 months, are also recognised 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, 2020	Dec 31, 2019
Raw materials and consumables	106	112
Work in progress	7,565	8,359
Current assets held under operating lease	8,186	8,735
Finished goods and goods for resale	19,656	21,705
Total	**35,513**	**38,911**
Of which value adjustment reserve:	–858	–693

1) MSEK 968 (—)of recognised inventories have been reclassified to asset held for sale. For more information, see Note 33 – Assets and liabilities held for sale.

The cost of inventories recognised as an expense and included in cost of sales amounted to MSEK 208,121 (212,945). Current assets held under operating lease consists of a sale of vehicles combined with a repurchase commitment with a maturity less or equal to 12 months.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

NOTE 19 – ACCOUNTS RECEIVABLE AND OTHER CURRENT ASSETS

ACCOUNTING PRINCIPLES

Accounts receivables are recognised at amortised cost. An expected credit loss reserve is recognised when the receivable is initially recognised. The recognised credit loss reserve is consisting of incurred as well as 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, 2020	Dec 31, 2019
Accounts receivable, non-group companies	6,182	7,818
Accounts receivable, related companies	8,594	5,425
VAT receivables	1,827	2,207
Prepaid expenses and accrued income	2,305	2,141
Other financial receivables	990	281
Restricted cash	103	185
Other receivables	4,905	4,041
Total[1)]	**24,906**	**22,098**

1) MSEK 23 (—) of recognised other current assets have been reclassified to assets held for sale. For more information, see Note 33 – Assets and liabilities held for sale.

Accounts receivable amounted to MSEK 14,776 (13,243) including a general credit reserve of MSEK 113 (128) as well as provision for expected credit losses of MSEK 16 (18). As of December 31, 2020 the general and expected credit loss reserve amounted to 0.86 (1.09) per cent of total accounts receivable.

The size and geographical spread of the accounts receivable are closely linked to the distribution of Volvo Car 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:	2020	2019
Balance at January 1	128	86
Additions	57	57
Reversals	–22	–5
Write-offs	–46	–12
Translation difference	–4	2
Balance at December 31	**113**	**128**

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
2020					
Accounts receivable gross	13,742	314	84	749	14,889
Provision doubtful accounts receivable	–87	—	–1	–25	–113
Accounts receivable net	**13,655**	**314**	**83**	**724**	**14,776**
2019					
Accounts receivable gross	11,732	454	356	829	13,371
Provision doubtful accounts receivable	–66	–4	–34	–24	–128
Accounts receivable net	**11,666**	**450**	**322**	**805**	**13,243**

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. In this case transaction costs are expensed.

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, warrants 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 the Black-Scholes model. This is the case also for unlisted warrants.

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 using the Default Probability of Volvo Car AB credit default swaps.

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.

Financial assets in the form of interest-bearing instruments are categorised as either an asset;
- carried at fair value through the income statement, or
- carried at amortised cost

The classification depends on the entity's applied business model and the contractual cash flow characteristics of the financial asset. 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.

Volvo Car Group classifies its financial liabilities as either:
- financial liabilities carried at fair value through the income statement, or
- 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, warrants on equity instruments, 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
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 applied when derivative instruments 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, Volvo Car Group documents the relationship between hedging instruments and hedged items, as well as its risk management strategy and objectives for undertaking various hedging transactions. Volvo Cars 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.

Volvo Car Group designates certain derivatives and financial liabilities as either a:
a) Fair value hedge
b) Net investment hedge, or
c) Cash flow hedge

A hedge instrument is classified as a non-current asset or liability when the maturity of the hedged item is more than 12 months, and as a current asset or liability when the maturity is less than 12 months.

a) Fair value hedge
The purpose of a fair value hedge is to hedge the variability in the fair value of a fixed-rate debt (issued bond) from changes in the relevant benchmark yield curve for its entire term by converting fixed interest rate 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 recognised 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 hedge effect is 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.

IBOR transition
Where interest rate hedge accounting is applied, Volvo Car Group is in its hedged instruments together with its hedging instruments exposed to EURIBOR. There will be a change of certain floating interest benchmark rates (IBORs) to alternative risk free (ARR) derived rates due to the forthcoming IBOR transition. Since EURIBOR is expected to continue (as it has been fully reformed), all hedges are expected to continue to be 100 percent effective and no net interest impact is expected.

In terms of its hedge accounting relationships, exposure is to the EURIBOR interest rate benchmark as mentioned above. There is a single EUR bond/swap fair-value hedge which expires in 2021 and so no post-IBOR transition impact is envisaged.

Volvo Car Group is however exposed to (outside of fair value hedge accounting) interest rate risk from both EURIBOR and STIBOR.

- EURIBOR: This benchmark has been fully reformed and not scheduled for discontinuation.
- STIBOR: Also expected to continue.

Volvo Cars understands that while there is an industry effort to formalize fallback risk-free versions of these benchmarks (e.g. E$TR for EURIBOR), the benchmarks are expected to continue in their current form for the foreseeable future.

In terms of floating debt, this has been issued in SEK only (FRNs - floating rate notes) and the relevant benchmark (STIBOR) is expected to continue and so no impact is expected. These FRNs, maturing after 2021, have not been hedged with interest rate derivatives.

For Volvo Car Group's derivatives, there is only one EURIBOR based interest rate swap which is part of a fair-value hedge relationship with a corresponding fixed rate EUR bond. Both bond and swap mature in 2021 (as mentioned above) and so no impact. Volvo Cars has, in addition, EURIBOR based interest rate swaps which hedge EUR fixed rate bonds maturing after 2021. Neither of the sets of bonds/swaps are part of fair-value hedge relationships. Regardless, Volvo Car Group expects no impact from any potential future change of the benchmark, as the fixed cash outflows from the bond are matched 1:1 by the fixed cash inflows from the swap receive leg, leaving exposure only in the pay floating leg of the swap.

Volvo Car Group will monitor the development of the IBOR transition.

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.
- **Other long term securities holdings - recognition of fair value changes:** Volvo Car Group has got holdings of listed and unlisted equity instruments as well as unlisted warrants and so called earn out shares. The valuation of the unlisted warrants is valued in accordance with the Black-Scholes model and the most relevant fact is whether Volvo Car Group will fulfill the vesting criteria and when they would do so, the risk-free interest rate and volatility of the underlying share price. It is difficult to fair value the unlisted securities on a regularly basis as there is not available information. Therefore these holdings are revalued each time a transaction is performed and makes a current value available to Volvo Car Group. The earn out shares are valued based on the probability that Volvo Car Group will fulfill the vesting criteria.

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 Volvo Cars 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 review every other year or when required. The policy is focused on minimising the effects from fluctuating financial markets on Volvo Car Group's financial earnings. Policy compliance is reported to the CFO on monthly basis; policy compliance is also a part of the general treasury reporting to the BoD. There is an alert function in place safeguarding mandate limits on a daily basis.

Currency risk
The currency exposure arises from 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 purchases 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 Volvo Car 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 24 months and up to 60 per cent of the future expected cash flows in the coming 25 to 48 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 48 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, FX rates, market volatility and correlations.

The steering model for hedging of transaction risk is stipulated in the Volvo Car 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 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	
	2020	2019	**2020**	2019
CNY	27%	24%	27%	25%
EUR	25%	28%	48%	50%
GBP	7%	7%	1%	1%
JPY	3%	3%	8%	7%
USD	19%	19%	11%	12%
Other	19%	19%	5%	5%

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 in the Chinese industrial entities can be made onshore in China.

The CFaR at year end for the cash flows in one year for the Group, excluding hedges, was approximately SEK 4 (4)bn. The table below shows the percentage of the forecasted cash flows that were hedged expressed both in nominal terms and in CFaR.

	0–12 months		13–24 months		25–48 months	
	2020	2019	**2020**	2019	**2020**	2019
Nominal hedge, %	50	44	19	19	1	6
CFaR hedge %	41	49	13	22	1	11

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

Maturity	AUD	CAD	CHF	CNH	DKK	EUR	GBP	JPY	KRW	NOK	TWD	RUB	USD
1–12 months	–340	–378	–240	300	–480	2,291	–819	58,550	–398,639	–1,734	–6,174	–2,000	–1,472
13–24 months	–94	–101	–148	—	–280	514	–539	21,800	–81,102	–50	–1,597	—	–870
25–36 months	—	—	–48	—	—	11	–110	—	—	—	—	—	–80
37–48 months	—	—	—	—	—	—	—	—	—	—	—	—	—

The average duration of the portfolio was 10 (13) months. The fair value of the outstanding currency derivatives as at December 31, 2020 amounted to MSEK 578 (–5,458).

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, 2020 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.

As of December 31, 2020, the cash flow hedge reserve related to currency hedges amounts to MSEK 578 (–5,458) before tax. The fluctuation from December 31, 2019 to December 31, 2020 within the hedge reserve that has had an impact on other comprehensive income in 2020 is MSEK 6,036 (–3,140) before tax. The balance of MSEK 578 (–5,458) represents the fair value of derivatives used for cash flow hedging per December 31, 2020. Along with cross currency options, recorded in the income statement, this builds up the total fair value of MSEK 577 (–5,458).

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	**2020**	2019
Hedge reserve	578	–5,458
Recognised in other comprehensive income	**578**	**–5,458**
Time value in options and cross currency options	–1	—
Recognised in other operating income and expenses	**–1**	**—**
Total fair value	**577**	**–5,458**

Status at year end

The table below shows the translation exposure of net investments in foreign operations as of December 31, 2020.

	CNY	EUR	USD	JPY	MYR	Other	Total
Investments in foreign operations (MSEK)	30,815	9,115	1,026	936	698	2,407	44,997
Translation exposure	**30,815**	**9,115**	**1,026**	**936**	**698**	**2,407**	**44,997**

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 and translation risk of assets and liabilities in foreign currencies related to the operations. The translation of net investments in foreign operations can generate a positive or negative impact on other comprehensive income. Translation 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 450 (423). 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 –3,401 (947). 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 of December 31, 2020 amounts to MSEK –252 (–620) before tax. No ineffectiveness has affected net income for 2020 or 2019.

Fair value of financial instruments for hedging of net investment in foreign operations	**2020**	2019
Hedge reserve	–252	–620
Recognised in other comprehensive income	**–252**	**–620**
Total fair value	**–252**	**–620**

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, 2020 is 26.8 (26.2) per cent, whereof shareholders' equity amounted to MSEK 70,418 (63,648).

Funding risk management

Volvo Car Group Financial Policy Framework

Funding risk is the risk that the Volvo Car 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 12 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 12 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

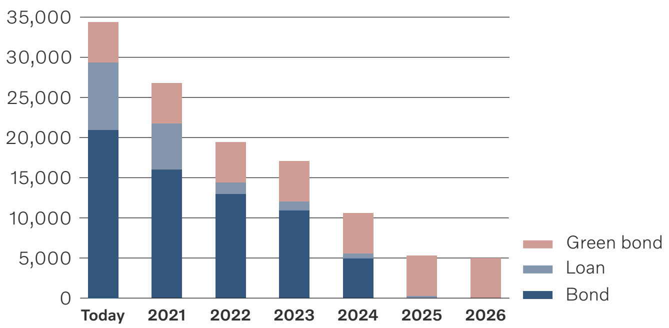
In October 2020, Volvo Car Group issued its first Green bond on the capital markets amounting to MEUR 500 nominally. A new, fully drawn, 2-year credit facility amounting to MSEK 4,000, with a 1-year extension option, was signed with the Swedish Export Credit Corporation in May.

As of December 31, 2020, 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 2020 was MSEK 34,453 (30,359). Remaining credit duration of the outstanding facilities was 2.8 (3.0) years. Debt maturing over the next 12 months was at year end 22 per cent. 51 per cent of the Volvo Car Group's long term debt is refinanceable within three years. Mitigating actions are ongoing in this regard.

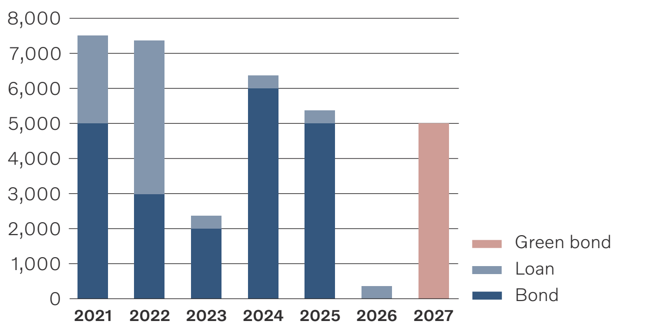
Outstanding debt is shown below.

Funding	Currency	Nominal amount in respective currency (million)	MSEK
Bank loan	USD	443	3,620
Bank loan	SEK	4,200	4,200
Bond	EUR	1,600	16,038
Bond	SEK	5,000	5,000
Green bond	EUR	500	5,012
Other	SEK	583	583
Total			**34,453**

Outstanding bonds and liabilities to credit institutions (at successive year end)



Bank 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, 2020 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 12 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, 2020	Dec 31, 2019
– Expiring after one year but within five years	23,698	13,593
– Expiring after five years	1,002	—
Total	**24,700**	**13,593**

Status at year end

As of December 31, 2020, Volvo Car Group had committed credit facilities and cash and marketable securities available of MSEK 94,379 (69,109) approximately 36 (25) per cent of Revenue. The liquidity of Volvo Cars is strong considering the maturity profile of the external borrowings, the balance of cash and cash equivalents, marketable securities and available credit facilities from banks.

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

	2020				2019			
Dec 31, 2020	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	—
Other long-term securities holdings	—	—	243	464	—	—	—	—
Derivative assets	—	—	1,261	16	—	—	214	—
Other non-current assets[1]	—	—	2,809	483	—	—	2,285	558
Total non-current financial assets	**—**	**—**	**4,313**	**963**	**—**	**—**	**2,553**	**558**
Accounts receivable	13,957	819	—	—	12,100	1,143	—	—
Derivative assets	210	508	—	—	51	70	—	—
Other current assets[1]	1,982	3,035	—	—	993	3,108	—	—
Marketable securities	2,639	5,448	—	—	1,134	2,384	—	—
Cash and cash equivalents	61,592	—	—	—	51,997	—	—	—
Total current financial assets	**80,380**	**9,810**	**—**	**—**	**66,275**	**6,705**	**—**	**—**
Total financial assets	**80,380**	**9,810**	**4,313**	**963**	**66,275**	**6,705**	**2,553**	**558**
Liabilities								
Bonds[2]	138	319	12,308	10,228	134	402	17,682	5,318
Liabilities to credit institutions[2]	—	—	5,758	223	—	—	4,137	642
Derivative liabilities	—	—	300	—	—	—	2,455	—
Other non-current interest bearing liabilities[3]	—	—	2,975	1,756	—	—	3,050	1,942
Other non-current liabilities[1]	—	—	4,657	5	—	—	2,535	6
Total non-current financial liabilities	**138**	**319**	**25,998**	**12,212**	**134**	**402**	**29,859**	**7,908**
Bonds[2]	—	5,086	—	—	—	—	—	—
Liabilities to credit institutions[2]	357	2,294	—	—	446	3,903	—	—
Accounts payable	45,451	1,184	—	—	43,369	1,507	—	—
Derivative liabilities	1,076	629	—	—	1,143	2,311	—	—
Other current interest bearing liabilities[3]	281	879	—	—	258	815	—	—
Other current liabilities[1]	4,681	7,529	—	—	5,499	8,440	—	—
Total current financial liabilities	**51,846**	**17,601**	**—**	**—**	**50,715**	**16,976**	**—**	**—**
Total financial liabilities	**51,984**	**17,920**	**25,998**	**12,212**	**50,849**	**17,378**	**29,859**	**7,908**

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 12 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 of December 31, 2020, 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 24 months. At year end the duration of the net debt position was 22 (21) months. The average cost of borrowing was 2.5 (2.9) per cent.

To manage interest rate risk, the Volvo Car Group uses interest rate swaps.

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	2020	2019
Market rate +1%	–22	–69
Market rate –1%	17	54

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 5,017 (5,229). 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 7 (20).

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 48 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 2020, Volvo Car Group had cost for raw materials of approximately MSEK 17,369 (15,699). A one per cent change in the prices of raw materials has an impact on operating income of approximately MSEK 105 (157).

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 European factories and is managed under an advisory contract. The highly probable forecast transactions in electricity consumption that are hedged are expected to occur in any chosen calendar quarter during the next 48 months.

The hedging instruments used are bilateral OTC contracts.

A one per cent change in the electricity spot price has an impact on other comprehensive income of MSEK 2 (3).

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 in which the hedged forecast transaction affects the income statement. Any ineffectiveness in a hedge relationship is recognised in the income statement.

As of December 31, 2020 the cash flow hedge reserve related to commodity hedges, included in other reserves in shareholders' equity, amounts to MSEK 12 (31) before tax. Ineffectiveness has affected net income for 2020 and amounts to –1 (—).

Fair value of derivatives for commodity hedging	2020	2019
Hedge reserve	12	31
Recognised in other comprehensive income	**12**	**31**
Non hedge accounting	—	—
Recognised in other operating income and expenses	**—**	**—**
Total fair value	**12**	**31**

Credit risk management

Volvo Car Group's credit risk can be divided into 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 Volvo Car 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. Subsidiary bank balances are diversified in order to limit credit risk.

Status at year end

As of December 31, 2020, the maximum amount exposed to financial credit risk amounts to 71,674 (55,850) this encompass cash and cash equivalents MSEK 61,592 (51,997), investments in marketable securities MSEK 8,087 (3,518) and fair value of outstanding derivative assets MSEK 1,995 (335). 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 or 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 agreements	Net position
December 31, 2020					
Derivative assets	1,995	—	1,995	–1,384	611
Derivative liabilities	2,005	—	2,005	–1,384	621
December 31, 2019					
Derivative assets	335	—	335	–250	85
Derivative liabilities	5,909	—	5,909	–250	5,659

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 operational credit risk is the carrying amount of accounts receivables, 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.

Most derivative, financial instruments and commercial papers that Volvo Car Group holds as of December 31, 2020 belong to level 2. Amounts invested in other long-term securities amounts to MSEK 2,449 (296) whereof MSEK 1,208 (—) is holdings categorised as level 1 financial instruments and MSEK 1,241 (296) is categorised as level 3 financial instruments. The most substantial level 3 investment is that of unlisted share warrants in the listed company Luminar and so called earn-out share rights in the same company, a financial investment received as part of the listing of the company. The valuation of these instruments is based on:

- The probability of whether Volvo Car Group will fulfill contractual terms and when in time we would do this
- The risk-free interest rate
- Volatility of the underlying share price

There are also traditional holdings of equity instruments in Luminar. The Luminar stock became listed in December 2020. Before the listing, the equity holdings in Luminar were categorised as a level 3 instrument but have now become a level 1 instrument. No other transfers between the levels of the fair value hierarchy have occurred during the period. The fair value for share warrants and earn-out share rights in the level 3 category financial instruments as per December 31, 2020 amounts to MSEK 874 (—) and the financial income of the same instruments recognised in the income statement is MSEK 874 (—). The share warrants as of December 31, 2020 were deep in the money with a strike price well under the current list price. The total fair value change amounted to the recognised value. There are also other holdings of non-listed equity instruments that are categorised as level 3 and they are valued at fair value when there is information available indicating that the value has changed, for example if there has been a transaction in the instrument during the period.

Sensitivity analysis for warrants (MSEK)

	Likelihood of triggering event				
Volatility	**–10%**	**–5%**	**0%**	**5%**	**10%**
70%	605	654	703	752	801
75%	607	656	705	754	803
80%	608	658	707	757	806
85%	611	660	710	759	809
90%	613	662	712	762	811

Fair value estimation

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

December 31, 2020	Level 1	Level 2	Level 3	Total
Derivative instruments for hedging of currency risk in future commercial cash flows	—	1,907	—	1,907
Derivative instruments for hedging of currency risk related to financial assets and liabilities	—	4	—	4
Derivative instruments for hedging of interest rate risk	—	42	—	42
Commodity derivatives	—	42	—	42
Commercial papers[1)]	—	1,526	—	1,526
Other long-term securities holdings	1,208	—	1,241	2,449
Total assets	**1,208**	**3,521**	**1,241**	**5,970**
Derivative instruments for hedging of currency risk in future commercial cash flows	—	1,341	—	1,341
Derivative instruments for hedging of currency risk related to financial assets and liabilities	—	634	—	634
Commodity derivatives	—	30	—	30
Total liabilities	**—**	**2,005**	**—**	**2,005**

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**

1) Whereof MSEK 750 (1,101) are reported as marketable securities in the balance sheet and MSEK 776 (6,220) are reported as cash and cash equivalents.

	Financial instruments at fair value through the income statement						
Financial assets and liabilities by category	Instruments held for trading	Derivatives used in hedge accounting	Financial liabilities	Financial assets carried at amortised cost	Other liabilities	Total	Fair value
December 31, 2020							
Receivables on parent company	—	—	—	—	—	—	—
Other long-term securities holdings	2,449	—	—	—	—	2,449	2,449
Other non-current assets[1)]	—	—	—	3,292	—	3,292	3,292
Accounts receivable	—	—	—	14,776	—	14,776	14,776
Derivative assets	181	1,814	—	—	—	1,995	1,995
Other current assets[1)]	—	—	—	5,017	—	5,017	5,017
Marketable securities	750	—	—	7,337	—	8,087	8,087
Cash and cash equivalents	776	—	—	60,816	—	61,592	61,592
Total financial assets	**4,156**	**1,814**	—	**91,238**	—	**97,208**	**97,208**
Bonds and liabilities to credit institutions[2)]	—	—	—	—	34,361	34,361	35,252
Other non-current liabilities[1)]	—	—	154	—	4,508	4,662	4,662
Accounts payable	—	—	—	—	46,635	46,635	46,635
Derivative liabilities	782	1,223	—	—	—	2,005	2,005
Other current liabilities[1)]	—	—	—	—	12,210	12,210	12,210
Total financial liabilities	**782**	**1,223**	**154**	—	**97,714**	**99,873**	**100,764**
December 31, 2019							
Receivables on parent company	—	—	—	54	—	54	54
Other long-term securities holdings	296	—	—	—	—	296	296
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	**7,687**	**264**	—	**68,438**	—	**76,389**	**76,389**
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**

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 7 (20), 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, 2020 Nominal amount	Dec 31, 2020 Fair value	Dec 31, 2019 Nominal amount	Dec 31, 2019 Fair value
Derivative instruments for hedging of currency risk related to financial assets and liabilities				
Foreign exchange swaps and forward contracts				
– receivable position1)	1,152	5	5,931	38
– payable position2)	30,272	–634	16,999	–211
Subtotal	**31,424**	**–629**	**22,930**	**–173**
Derivative instruments for hedging of currency risk in future commercial cash flows				
Foreign exchange swaps and forward contracts				
– receivable position1)	39,660	1,785	14,409	221
– payable position2)	32,094	–1,194	64,763	–5,679
Currency options				
– receivable position1)	4,297	121	732	3
– payable position2)	6,220	–147	1,465	–8
Subtotal	**82,271**	**565**	**81,369**	**–5,463**
Derivative instruments for hedging of interest rate risk				
Interest rate swaps				
– receivable position1)	7,518	42	7,774	31
– payable position2)	—	—	—	—
Subtotal	**7,518**	**42**	**7,774**	**31**
Derivative instruments for hedging of commodity price risk				
Forward contracts				
– receivable position1)	157	42	494	42
– payable position2)	184	–30	127	–11
Subtotal	**341**	**12**	**621**	**31**
Total	**121,554**	**–10**	**112,694**	**–5,574**

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	2020			2019		
Recognised in operating income	Gains/ losses	Interest income	Interest expenses	Gains/ losses	Interest income	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	–3,335	—	—	–3,537	—	—
Electricity derivatives	—	—	—	—	—	—
Financial assets carried at amortised cost, other financial liabilities						
Accounts receivable/accounts payable1),2)	–1,001	—	—	540	—	—
Effect on operating income	**–4,336**			**–2,997**	**—**	**—**
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	–880	—	—	94	—	—
Derivative instruments for hedging of interest rate risk	24	17	—	8	15	—
Financial liabilities at fair value through profit and loss	–32	—	—	17	—	—
Financial assets at fair value through profit and loss3)	1,948	—	—	—	—	—
Marketable securities	–133	37	—	24	41	—
Financial assets carried at amortised cost, other financial liabilities						
Financial assets carried at amortised cost	–384	—	—	241	—	—
Cash and cash equivalents1)	–1,126	377	—	507	466	—
Other financial liabilities including currency effects1)	2,462	—	–806	–941	—	–928
Effect on financial items	**1,879**	**431**	**–806**	**–50**	**522**	**–928**

1) The total income and expenses from items that are not measured at fair value through income statement amounts to MSEK 2,839 (1,754) and MSEK –3,317 (–1,869) respectively.
2) Unrealised and realised foreign exchange effect on accounts receivable and accounts payable.
3) Including fair value changes related to warrants and earn-out shares in Luminar.

NOTE 21 – MARKETABLE SECURITIES AND CASH AND CASH EQUIVALENTS

ACCOUNTING PRINCIPLES

Marketable securities
Marketable securities are financial instruments that can be quickly converted into cash. 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, 2020	Dec 31, 2019
Commercial papers	750	1,101
Time deposits in banks	7,337	2,417
Total	**8,087**	**3,518**

Cash and cash equivalents	Dec 31, 2020	Dec 31, 2019
Cash in banks	41,168	29,858
Time deposits in banks	19,648	15,919
Commercial papers	776	6,220
Total1)	**61,592**	**51,997**

1) MSEK 96 (—) have been reclassified to asset held for sale. For more information, please see Note 33 – Assets and liabilities held for sale.

Cash and Cash equivalents includes MSEK 2,458 (2,537) 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 Volvo Car 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 that there is no unconditional obligation for Volvo Car Group to make any payments to the investors during the contract period, 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 is fixed, 1:1. A conversion of preference shares to ordinary shares is subject to a decision by the annual general meeting.

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

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 were 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 premium 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 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. In 2019, the non-controlling interest decreased 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.

At year end 2020, non-controlling interests amounted to MSEK 11,006 (9,765).

Total equity consists of the equity attributable to the owners of the parent company and non-controlling interests. At year end 2020, the Volvo Car Group's total equity amounted to MSEK 70,418 (63,648).

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. 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 bonds, or when these are 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 Volvo Car Group before the normal retirement date, or whenever an employee accepts voluntary redundancy in exchange for these benefits. Volvo Cars recognises termination benefits at the earlier of the following dates: (a) when Volvo Cars 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 Volvo Car 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 2020, 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. Volvo Cars estimates it will pay premiums of about MSEK 150 to Alecta in 2021. Volvo Car Group's share of the total saving premiums for ITP2 in Alecta as at December 31, 2020 amounted to 0.14 (0.28) per cent and Volvo Car Group's share of the total number of active policy holders amounted to 1.46 (1.47) 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 2020, the consolidation level amounted to 148 (148) 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 recognised in the balance sheet as follows:

	Dec 31, 2020	Dec 31, 2019
Post-employment benefits	14,187	12,583
Other provisions (Note 24)	379	381
Closing balance	**14,566**	**12,964**

The tables below show Volvo Car 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. Volvo Car Group's reported pension provision amounts to MSEK 14,566 (12,964) in total, which includes endowment insurances and similar undertakings amounting to MSEK 379 (381) in respect of defined premium pension plans in Sweden.

Financial year ending on	Total Dec 31, 2020	of which Sweden Dec 31, 2020	of which Belgium Dec 31, 2020	Total Dec 31, 2019	of which Sweden Dec 31, 2019	of which Belgium Dec 31, 2019
Amounts recognised in the statement of financial position						
Defined benefit obligation	29,093	20,912	4,297	27,345	19,145	4,227
Fair value of plan assets	14,906	9,239	3,116	14,762	8,873	3,046
Funded status	**14,187**	**11,673**	**1,181**	**12,583**	**10,272**	**1,181**
Net provision (asset) as recorded in the balance sheets	**14,187**	**11,673**	**1,181**	**12,583**	**10,272**	**1,181**
Principal actuarial assumptions						
Weighted average assumptions to determine benefit obligations						
Discount rate, %	1.34	1.45	0.73	1.60	1.70	0.85
Rate of salary increase, %	2.98	3.00	2.91	2.97	3.00	2.91
Rate of price inflation, %	1.72	1.60	1.75	1.73	1.60	1.75
Rate of pension indexation, %	1.73	1.60	N/A	1.73	1.60	N/A

The actuarial assumptions are the most significant assumptions applied when calculating the value of a defined benefit pension plan. Volvo Car 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, 2020	of which Sweden Dec 31, 2020	of which Belgium Dec 31, 2020	Total Dec 31, 2019	of which Sweden Dec 31, 2019	of which Belgium Dec 31, 2019
Change in defined benefit obligation						
Defined benefit obligation at end of prior year	27,345	19,145	4,227	22,146	15,064	3,784
Service cost	1,030	793	183	670	688	–58
Interest expense	430	323	35	542	373	70
Cash flows	–626	–310	–119	–571	–291	–129
Remeasurements	1,469	961	158	4,284	3,311	490
Effect of changes in foreign exchange rates	–555		–187	274	—	70
Defined benefit obligation at end of year	**29,093**	**20,912**	**4,297**	**27,345**	**19,145**	**4,227**
Change in fair value of plan assets						
Fair value of plan assets at end of prior year	14,762	8,873	3,046	13,721	8,455	2,749
Interest income	236	151	27	346	211	53
Cash flows	–57	—	67	–21	—	61
Remeasurements	383	215	112	477	207	132
Effect of changes in foreign exchange rates	–418	—	–136	239	—	51
Fair value of plan assets at end of year	**14,906**	**9,239**	**3,116**	**14,762**	**8,873**	**3,046**
Components of defined pension cost						
Service cost	1,030	793	183	670	688	–58
Net interest cost	194	172	8	196	162	17
Remeasurements of Other long term benefits	95	—	94	28	—	25
Administrative expenses and taxes	25	—	21	24	—	21
Total pension cost for defined benefit plans	**1,344**	**965**	**306**	**918**	**850**	**5**
Pension cost for defined contribution plans	3,299	2,784	272	3,315	2,748	271
Total pension cost recognised in P&L	**4,643**	**3,749**	**578**	**4,233**	**3,598**	**276**
Remeasurements (recognised in other comprehensive income)	992	745	–47	3,780	3,105	333
Effect of changes in demographic assumptions	–12	—	—	13	—	—
Effect of changes in financial assumptions	1,422	1,009	40	3,617	2,756	388
Effect of experience adjustments	–36	–49	24	625	555	76
Return on plan assets (excluding interest income)	–382	–215	–111	–475	–206	–131
Total defined benefit cost recognised in P&L and OCI	**2,336**	**1,710**	**259**	**4,698**	**3,955**	**338**

Financial year ending on	Total Dec 31, 2020	of which Sweden Dec 31, 2020	of which Belgium Dec 31, 2020	Total Dec 31, 2019	of which Sweden Dec 31, 2019	of which Belgium Dec 31, 2019
Net defined benefit provision (asset) reconciliation						
Net defined benefit provision (asset)	12,583	10,272	1,181	8,425	6,609	1,035
Defined benefit cost included in the income statement	1,344	965	306	918	850	5
Total remeasurements included in OCI	992	745[1]	–47	3,780	3,105	333
Cash flows	–595	–309	–208	–576	–292	–211
Employer contributions	–227	—	–187	–225	—	–180
Employer direct benefit payments	–368	–309	–21	–331	–292	–31
Effect of changes in foreign exchange rates	–137	—	–51	36	—	19
Net defined benefit provision (asset) as of end of year	**14,187**	**11,673**	**1,181**	**12,583**	**10,272**	**1,181**
Defined benefit obligation by participant status						
Actives	16,124	11,684	3,586	16,982	11,807	3,589
Vested deferreds	6,793	4,756	502	4,854	3,391	458
Retirees	6,176	4,472	209	5,509	3,947	180
Total	**29,093**	**20,912**	**4,297**	**27,345**	**19,145**	**4,227**

1) Whereof MSEK 596 is an adjustment due to changes in the acturial calculation method related to the Swedish ITP2 plan.

Plan assets

Fair value of plan assets	2020	2019	Of which with a quoted market price 2020	Of which with a quoted market price 2019
Cash and cash equivalents	2,481	479	2,481	479
Equity instruments	2,114	1,949	2,011	1,949
Debt instruments	5,423	2,793	4,780	2,793
Real estate	9	138	9	9
Investment funds	3,077	7,824	3,072	7,343
Other	1,802	1,579	1,622	1,562
Total	**14,906**	**14,762**	**13,975**	**14,135**

Responsibility for the management of several pension plans rest with Volvo Car Group and therefore pension trusts have been set up in different countries. The assets are held by long-term employee benefit trusts that are legally separated from Volvo Car Group.

The assets are available to fund employee benefits only. Sweden, Belgium and United Kingdom have the largest pension trusts. The pension trusts are managed in accordance with a capital preservation strategy where the risk exposure is adjusted accordingly. The investment strategies are long term and the distribution of assets ensures that investment portfolios are well diversified. The capital is managed in accordance with the investment policies of each pension trust. Continuous monitoring is performed by the trustees to ensure that capital is allocated and managed according to the investment policies. In Sweden the minimum funding level is decided by PRI Pensionsgaranti.

Volvo Car Group has a wholly-owned subsidiary, Volvo Car Pension Management AB ("VCPM") to monitor and review Volvo Car Group's pension fund assets.

The actual return on plan assets amounts to MSEK 619 (824).

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%	–2,200	–233
Discount rate –0.5%	2,521	262
Inflation rate +0.5 %	2,522	149
Inflation rate –0.5%	–2,200	–140

The weighted average duration of the obligation is 22.5 years for Sweden and 11.5 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 Volvo Car 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 of estimated cash flows (both amount and likelihood) are recognised 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 coverage 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 2019	**10,125**	**3,000**	**13,125**
Provided for during the year	9,039	4,992	**14,031**
Utilised during the year	–7,283	–3,265	**–10,548**
Reversal of unutilised amounts	–752	–511	**–1,263**
Translation differences and other	264	39	**303**
Balance at December 31, 2019	**11,393**	**4,255**	**15,648**
Of which current[1]	4,972	3,385	**8,357**
Of which non-current[1]	6,421	870	**7,291**

	Warranties	Other provisions	Total
Balance at 1 January 2020	**11,393**	**4,255**	**15,648**
Provided for during the year	9,335	4,003	**13,338**
Utilised during the year	–7,035	–3,157	**–10,192**
Reversal of unutilised amounts	–962	–288	**–1,250**
Translation differences and other	–709	–150	**–859**
Balance at December 31, 2020	**12,022**	**4,663**	**16,685**
Of which current[1]	4,721	3,809	**8,530**
Of which non-current[1]	7,301	854	**8,155**

1) MSEK 117 (—) of recognised current provisions and MSEK 2 (—) of recognised other non-current provisions have been reclassified to liabilities held for sale. For more information, please see Note 33 – Assets and liabilities held for sale.

NOTE 25 – CURRENT AND NON–CURRENT CONTRACT LIABILITIES TO CUSTOMERS

ACCOUNTING PRINCIPLES

Contract liabilities to customers are obligations related to contracts with customers. Changes to these obligations are recognised as Revenue. The amounts include transactions where Volvo Cars either;

- Has an obligation to transfer goods or services to the customer for which Volvo Car Group has received consideration (or an amount of consideration is due). This applies to sales with repurchase commitment (recognised as an operating lease), sales related to extended service 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 Volvo Cars.

	Sales generated obligations	Deferred revenue – extended service business	Deferred revenue – sale with repurchase commitment	Advance payments from customers	Total
Balance at 1 January 2019	**14,723**	**3,952**	**1,414**	**1,606**	**21,695**
Provided for during the year[1]	37,742	3,924	2,833	87,436	**131,935**
Utilised during the year[1]	–34,860	–3,155	–3,336	–87,332	**–128,683**
Translation differences and other	509	195	12	25	**741**
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
Balance at 1 January 2020	**18,114**	**4,916**	**923**	**1,735**	**25,688**
Provided for during the year	48,559	2,788	2,700	85,383	**139,430**
Utilised during the year	–47,045	–2,544	–1,867	–84,454	**–135,910**
Translation differences and other	–1,268	–380	–36	–52	**–1,736**
Balance at 31 December 2020	**18,360**	**4,780**	**1,720**	**2,612**	**27,472**
Of which current	17,195	1,675	1,434	1,538	21,842
Of which non-current	1,165	3,105	286	1,074	5,630

1) Gross values have been updated for the comparative year, without any effect on the balance sheet line item.

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, normally referred to Extended Service Business where the customer signs up for regular services paid for upfront.

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, 2020	Dec 31, 2019
Liabilities related to repurchase commitments	1,537	977
Derivative liabilities	300	2,455
Participation in joint venture company[1]	—	210
Other liabilities[2)3)]	3,040	2,829
Total	**4,877**	**6,471**

1) For further information, see Note 13 – Investments in joint ventures and associates.
2) During 2020, the internal profit elimination related to sale of licenses and technology to Polestar was reclassified and the comparative figures have been adjusted accordingly. The effect in 2019 was MSEK 1,558 on Other non-current liabilities.
3) MSEK 6 (—) of recognised Other non-current liabilities have been reclassified to liabilities held for sale. For more information, see Note 33 – Assets and liabilities held for sale.

NOTE 27 – OTHER CURRENT LIABILITIES

	Dec 31, 2020	Dec 31, 2019
Accrued expenses and prepaid income[2]	10,765	10,233
Liabilities related to repurchase commitments	8,843	10,552
Personnel related liabilities[2]	8,047	5,643
VAT liabilities	4,991	2,590
Derivative liabilities	1,705	3,454
Other liabilities[1)2)]	3,072	3,318
Total	**37,423**	**35,790**

1) During 2020, the internal profit elimination related to sale of licenses and technology to Polestar was reclassified and the comparative figures have been adjusted accordingly. The effect in 2019 was MSEK 245 on Other current liabilities.
2) MSEK 406 (—) of recognised other current liabilities have been reclassified to liabilities held for sale. For more information, see Note 33 – Assets and liabilities held for sale.

NOTE 28 – PLEDGED ASSETS

	Dec 31, 2020	Dec 31, 2019
Restricted cash	236	330
Inventory	304	374
Real estate mortgages	175	168
Floating charges	251	205
Other pledged assets	632	679
Total	**1,598**	**1,756**

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 a liability.

Other processes

Volvo Car Group is as well, like other global companies, from time to time involved in processes of varying scope and in various stages with regards to for instance import duties and transfer prices. These processes are evaluated regularly and provisions are made when it is more likely than not that additional fees must be paid and the outcome can be reliably estimated. If it is not probable that the additional fees will be paid but the risk is more than remote, such amounts are disclosed as contingent liabilities.

	Dec 31, 2020	Dec 31, 2019
Guarantees to insurance company FPG	173	164
Legal claims	61	48
Other claims	410	423
Guarantee commitments	59	76
Other contingent liabilities[1]	314	162
Total	**1,017**	**873**

1) 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

	2020	2019
Adjustments for items not affecting cash flow consist of:		
Capital gains/losses on sale of tangible and intangible assets	1,249	388
Share of income in joint ventures and associates	352	168
Interest effect from the measurement of repurchase obligations	–175	–187
Provision for variable pay	1,025	1,035
Provision for repurchase commitments	20	–23
Other provisions	2,704	—
Deferred income	–1,246	–3,011
Inventory impairment	169	171
Elimination of intra-group profit	1,132	891
IFRS 16 Adjustments	–1,416	–1,354
Other non-cash items[1]	175	–493
Total	**3,989**	**–2,415**

1) Including CO_2 credits and changes in non-current assets and liabilities.

		Cash flows	Non-cash changes				
Change in net cash	**Jan 1, 2019**		Reclassifications	Foreign exchange movement	Fair value changes	Other non-cash changes	**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	—	24	–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	—	12	–4,105
Net cash	**18,029**	**6,699**	**—**	**452**	**–3**	**37**	**25,214**

Change in net cash	**Jan 1, 2020**						**Dec 31, 2020**
Cash and cash equivalents[3]	51,997	12,544	–96	–2,853	—	—	61,592
Marketable securities	3,518	4,692	—	–94	–5	–24	8,087
Liabilities to credit institutions (non-current)	–4,489	–4,009	2,017	604	—	–5	–5,882
Bonds, non-current[2]	–21,623	–5,209	5,254	674	—	–46	–20,950
Bonds, current[2]	—	—	–5,254	241	13	–10	–5,010
Other interest-bearing non-current liabilities	–84	—	—	—	—	—	–84
Liabilities to credit institutions (current)	–4,105	3,610	–2,017	–8	—	7	–2,512
Net cash	**25,214**	**11,628**	**–96**	**–1,435**	**8**	**–78**	**35,241**

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 7 (20) and the remaining part is valued at amortised cost.
3) MSEK 96 (—) of cash and cash equivalents have been reclassified to assets held for sale. For more information, see Note 33 – Assets and liabilities held for sale.

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 acquiree) 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.

Zenuity AB, the 50/50 joint venture company that focused on the development of assisted and autonomous driving software, was in April 2020 divided into two parts in order for the owners Volvo Car Corporation and Veoneer Sweden AB, to focus more effectively on their respective strategies. On July 1, 2020 the two shareholder companies signed and implemented the final agreement whereby Volvo Car Group acquired, through a wholly-owned stand-alone subsidiary, Zenseact AB, certain assets and liabilities from the joint venture company Zenuity AB. The initial focus of Zenseact AB will be the development of technology for Volvo Cars' next generation Scalable Platform Architecture, the SPA 2, which over time will fundamentally improve road safety around the world.

Purchase price	2020
Purchase consideration	536
Total cost of the combination	**536**

Acquired assets and liabilities at fair value	
Intangible asset	18
Tangible assets	126
Current assets	36
Current liabilities	–82
Total fair value of net assets	**98**
Goodwill	**438**

Cash effect on business combination	
Purchase consideration	–536
Change in cash and cash equivalents due to acquisitions	**–536**

Goodwill attributed to the acquisition is explained by the know-how developed by the workforce that were transferred to Zenseact AB as part of the acquisition and the future value to Volvo Car Group for which this knowledge will generate.

Acquisition-related cost upon the release of this report amounts to MSEK 4 and have been recognised as administration costs in the income statement. There were no contingent liabilities assumed or collateral pledges arising from the acquisition.

The acquired business contributed revenues of MSEK 4 and net loss of MSEK –141 to Volvo Car Group for the period from July 1 to December 31, 2020. The total cost of combination and fair values have been determined provisionally, thus, the acquisition analyses may be subject to adjustment during a 12 months period.

On July 1st 2020, Zenseact AB also acquired Zenuity AB's wholly-owned subsidiary Zenuity Software Technology (Shanghai) Co., Ltd. Purchase consideration amounted MSEK 12 whereof MSEK 9 relates to goodwill and MSEK 3 to net assets.

Acquisition after the balance sheet date

Upplands Motor

On January 13, 2021, after approval from competition authorities, Volvo Car Group, through one of its wholly owned subsidiaries, Volvo Personvagnar Norden AB finalised the acquisition of Upplands Motor.

The acquisition consists of 100 per cent of the shares in Upplands Motor AB, Upplands Motor Kronåsen AB, Bilpark i Hufvudstaden AB, Upplands Motor Hyrbilar AB, Upplands Motor Personvagnar AB and 10 per cent of the shareholding in Upplands Motor Mark KB and Upplands Motor Fastigheter i Märsta KB. The acquisition of Upplands Motor, the Stockholm-based dealership, is a vital part of Volvo Cars aim to transform its retail business into a modern customer experience with a seamless interaction between online and offline sales.

Purchase consideration amounted to MSEK 493, including repayment of debt amounting to MSEK 290, and the acquired net assets amounted to MSEK 365, resulting in goodwill of MSEK 128. Goodwill attributable to the acquisition is explained by estimated synergies with Volvo Cars current retail operation in the Swedish market and increased income over time from the acquired business.

Acquisition-related cost amounts to MSEK 12 and have been recognised as administration costs in the income statement.

The total cost of combination and fair values have been determined provisionally, thus, the acquisition analyses may be subject to adjustment during a 12 months period.

NOTE 32 – SEGMENT REPORTING

ACCOUNTING PRINCIPLES

Operating segments are defined as parts of Volvo Car 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 Volvo Cars derives its revenues. Volvo Car Group is managed by the Executive management team (EMT) with 10 (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 Volvo Car 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 Volvo Car 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, 2020			
Non-current assets	69%	11%	20%
Dec 31, 2019			
Non-current assets	65%	15%	20%

NOTE 33 – ASSET AND LIABILITIES HELD FOR SALE

ACCOUNTING PRINCIPLES

For a non-current asset or disposal group to be classified as held for sale it needs to be available for immediate sale in its present condition and the sale needs to be highly probable. For the sale to be highly probable, management needs to be committed to a plan to locate a buyer and sell the non-current asset or disposal group. The sales price has to be reasonable in relation to its current fair value and the sale should be completed within one year from the date of classification.

When the criteria for being classified as a non-current asset or a disposal group held for sale are fulfilled, the asset or disposal group is presented separately in the balance sheet. The related liabilities of a non-current asset or disposal group are also recognised separately in the balance sheet. The asset or disposal group is recognised at the lower end of its carrying amount and fair value after deduction of selling expenses.

On October 7th 2019, Volvo Car Group announced the plan to separate the existing combustion engine operations into a stand-alone business, with the intention to, in a second step, merge these activities with those of Geely, in order to establish a new global supplier which will seek to develop next generation combustion and hybrid powertrains. The proposed new business would enable Volvo Car Group to focus on the development of its all-electric range of premium cars.

As of December 31, 2020, assets and liabilities related to the combustion engine operations, have been classified as held for sale with a net value of MSEK 6,100. The proceeds from the sale transaction is expected to exceed the carrying amount of the net assets. No translation difference was recognised in other comprehensive income related to the reclassified assets and liabilities held for sale.

The major categories of assets and liabilities classified as held for sale are:

	2020
Intangible assets	150
Property, plant and equipment	6,594
Deferred tax assets	17
Inventories	968
Other current assets	24
Cash and cash equivalents	96
Total assets	**7,849**
Other non-current provisions	2
Other non-current liabilities	6
Current provisions	117
Accounts payable	1,198
Current tax liabilities	20
Other current liabilities	406
Total liabilities	**1,749**

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 generates from its operations without effect from previous periods capitalisation levels.

EBITDA margin
EBITDA margin is EBITDA in percentage of revenue.

Return on invested capital, ROIC
Return on invested capital ratio indicates how efficient Volvo Car Group is at allocating capital to profitable investments.
ROIC = EBIT / Invested capital

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 consists 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	2020	2019
Gross income in % of revenue	**17.5**	**19.0**

EBIT Margin	2020	2019
Operating income (EBIT) in % of revenue	**3.2**	**5.2**

EBITDA/EBITDA Margin	2020	2019
Operating income	8,516	14,303
Depreciation and amortisation of non-current assets	14,449	15,548
EBITDA	**22,965**	**29,851**
EBITDA in % of revenue	**8.7**	**10.9**

Operating cash	2020	2019
Average two year revenue * 10%	26,848	26,339

Invested capital[1]	Full year 2020	Full year 2019
Total assets	252,840	227,301
Receivables on parent company	–27	–54
Other long term securities holding	–1,373	–243
Cash and cash equivalents	–56,795	–46,084
Marketable securities	–5,803	–2,548
Operating cash	26,848	26,339
Total current liabilites	–121,168	–109,698
Current liabilties to parent	—	—
Total current interest bearing liabilities	6,934	3,677
Total invested capital	**101,457**	**98,690**

1) Calculated on two years average figures.

Return on invested capital, ROIC, %	Full year 2020	Full year 2019
EBIT	8,516	14,303
Invested capital	101,457	98,690
Return on invested capital, ROIC, %	**8.4**	**14.5**

Equity ratio	Dec 31, 2020	Dec 31, 2019
Total equity	70,418	63,648
Total assets	262,312	243,367
Equity in % total assets	**26.8**	**26.2**

Net cash	Dec 31, 2020	Dec 31, 2019
Cash and cash equivalents	61,592	51,997
Marketable securities	8,087	3,518
Liabilities to credit institutions (non-current)	–5,882	–4,489
Bonds (non-current)	–20,950	–21,623
Other interest-bearing non-current liabilities	–84	–84
Liabilities to credit institutions (current)	–2,512	–4,105
Bonds (current) [1]	–5,010	—
Net cash[2]	**35,241**	**25,214**

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 7 (20) and the remaining part is valued at amortised cost.
2) The net cash calculation excludes financial liabilities related to IFRS 16 amounting to MSEK –5,891 (–6,065).

Liquidity	Dec 31, 2020	Dec 31, 2019
Cash and cash equivalents	61,592	51,997
Marketable securities	8,087	3,518
Undrawn credit facilities	24,700	13,593
Liquidity	**94,379**	**69,108**

Income Statements and Comprehensive Income – Parent Company

MSEK	Note	2020	2019
Administrative expenses	3, 4, 5	–17	–19
Operating income		**–17**	**–19**
Income from participation in subsidiaries	3	—	11,280
Financial income	3, 6	730	555
Financial expenses	3, 4, 6	–707	–599
Income before tax		**6**	**11,217**
Income tax	7	–11	14
Net income		**–5**	**11,231**

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, 2020	Dec 31, 2019
ASSETS			
Non-current assets			
Participation in subsidiaries	8	13,267	10,267
Deferred tax assets	7	2,071	2,082
Receivables from group companies	3	24,976	21,662
Total non-current assets		**40,314**	**34,011**
Current assets			
Receivables from group companies	3	5,909	3,852
Other current assets		45	35
Cash and cash equivalents		2	3
Total current assets		**5,956**	**3,890**
TOTAL ASSETS		**46,270**	**37,901**
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	11,497
Retained earnings		4,330	–6,901
Net income		–5	11,231
		15,822	**15,827**
Total equity		**15,873**	**15,878**
Non-current liabilities			
Bonds	10	20,953	21,638
Liabilities to credit institutions	10	3,997	—
Other non-current liabilities		—	122
Total non-current liabilities		**24,950**	**21,760**
Current liabilities			
Bonds		5,012	—
Liabilities to group companies	3	1	2
Other current liabilities		154	—
Accrued expenses and prepaid income		280	261
Total current liabilities		**5,447**	**263**
TOTAL EQUITY & LIABILITIES		**46,270**	**37,901**

Changes in Equity – Parent Company

	Restricted equity	Non-restricted equity			
MSEK	Share capital[1]	Share premium reserve	Other contributed capital	Retained earnings	Total
Balance at January 1, 2019	**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**
Net income for the year	**—**	**—**	**—**	**–5**	**–5**
Balance at December 31, 2020	**51**	**11,497**	**–3,500**	**7,825**	**15,873**

1) Share capital amounts to SEK 51,138,794 (51,138,794)

Statement of Cash Flows – Parent Company

MSEK	Note	2020	2019
OPERATING ACTIVITIES			
Operating income		–17	–19
Interest received		665	428
Interest paid		–611	–492
Other financial items		—	–14
		37	**–97**
Movements in working capital			
Change in current receivables group companies	3	–1,992	905
Change in current receivables		–10	—
Change in current liabilities group companies	3	–1	–4
Change in liabilities		–10	–190
Cash flow from movements in working capital		**–2,013**	**711**
Cash flow from operating activities		**–1,976**	**614**
Investments in shares and participations		–3,000	—
Cash flow from investing activities		**–3,000**	**—**
Cash flow from operating and investing activities		**–4,976**	**614**
FINANCING ACTIVITIES			
Proceeds from bond issuance	10	5,206	8,221
Proceeds from credit institutions	10	4,000	—
Change in non-current receivables group companies	3	–4,207	–8,221
Amortisation of non-current liabilities group companies		—	–9,645
Dividend received from subsidiary		—	11,280
Dividend paid to shareholders		—	–1,512
Proceeds from preference shares issuance	9	—	5,011
Redemption of preference shares	9	—	–5,745
Other		–24	—
Cash flow from financing activities		**4,975**	**–611**
Cash flow for the year		**–1**	**3**
Cash and cash equivalents at beginning of year		**3**	**—**
Cash and cash equivalents at end of year		**2**	**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, 2020, 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	
	2020	2019	**2020**	2019
Companies within the Volvo Car Group	100%	100%	1%	10%

	Receivables		Payables	
	Dec 31, 2020	Dec 31, 2019	**Dec 31, 2020**	Dec 31, 2019
Companies within the Volvo Car Group	30,819	25,449	—	2
whereof short-term	*5,843*	*3,787*	—	*2*
Companies within the Geely Sweden Holdings Group	66	65	1	—
whereof short-term	*66*	*65*	*1*	—

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 2020, Volvo Car AB (publ.) has received group contribution from subsidiaries of MSEK — (15). 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) 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	2020	2019
Deloitte		
Audit fees	–129	–155
Audit-related fees	–350	–436
Other services	—	—
Total	**–479**	**–591**

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

	2020	2019
Financial income		
Group contribution from subsidiaries	—	15
Interest income from subsidiaries	730	523
Other	—	17
Total	**730**	**555**
Financial expenses		
Interest expenses to subsidiaries	—	–53
Interest expenses[1]	–640	–511
Other	–67	–35
Total	**–707**	**–599**

1) Net foreign exchange rate losses on financial activities constitutes of MSEK 918 (211) in foregin exchange gains and MSEK –918 (–211) in foreign exchange losses.

NOTE 7 – TAXES

Income tax recognised in income statement	2020	2019
Deferred taxes	–11	14
Total	**–11**	**14**
Information regarding current year tax expense compared to tax expense based on the applicable Swedish tax rate		
Income before tax for the year	6	11,217
Tax according to applicable Swedish tax rate, 21.4 % (21.4%)	–1	–2,400
Costs non-deductable	–8	–7
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
Deferred taxes related to previous year	–2	—
Total	**–11**	**14**

Total deferred tax assets of MSEK 2,071 (2,082) 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.

NOTE 8 – PARTICIPATION IN SUBSIDIARIES

	Dec 31, 2020	Dec 31, 2019
At beginning of the year/acquired acquisition value	10,267	10,267
Shareholder's contribution	3,000	—
Total	**13,267**	**10,267**

Volvo Car AB's (publ.) investments in subsidiaries:	Corp. ID no.	Registered office	No. of shares	% interest held	Book value Dec 31, 2020	Book value Dec 31, 2019
Volvo Personvagnar AB[1)2)]	556074-3089	Gothenburg / Sweden	723,530	100	13,267	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[3)]	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 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 Pension Management AB[4)]	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 9 AB	559228-9366	Gothenburg / Sweden	100
Volvo Car Services Sweden AB	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
Zenseact AB[5)]	559228-9358	Gothenburg / 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[6)]		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

NOTES TO THE PARENT COMPANY FINANCIAL STATEMENTS

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.[7)]	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 Singapore PTE Ltd	Singapore	100
Volvo Car South Africa Pty Ltd	South Africa	100
Volvo Car Taiwan Ltd	Taiwan	100
Volvo Car Turkey Otomobil Ltd Sirketi	Turkey	100
Volvo Car RDC Middle East FZE	United Arab Emirates	100

1) Refered to as Volvo Car Corporation
2) Volvo Car Overseas Corporation AB, Volvo Car Uddevalla AB, effective as from May 20, 2020 and Volvo Car Center Uddevalla AB, effective as from November 20, 2020, were merged into Volvo Car Corporation.
3) To be name changed to: PECL AB
4) Prior name: Volvo Car Services 4 AB
5) Prior name: Volvo Car Services 8 AB
6) 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.

Details of non-wholly owned subsidiaries that have material non-controlling interests[7)]

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 28, 2020 Volvo Car Group, through one of its wholly owned subsidiaries First Rent Invest AB, exercised a call option and entered into negotiations to acquire the remaining 50 per cent of the shares in the car retail company Bra Bil Sverige AB. The transaction is estimated to be finalised during 2021. Volvo Car Group is assessed to have the power of control over Bra Bil Group, through its 50 per cent ownership in combination with a shareholder agreement. As a result, Bra Bil Group is classified as subsidiary and fully consolidated into Volvo Car Group with a non-controlling interest of 50 per cent.

The table on the next page shows details of non-wholly owned subsidiaries of the Group that have material non-controlling interests.

	Registered office	% interest held		Profit allocated to non-controlling interests		Accumulated non-controlling interests	
Legal entity:		Dec 31, 2020	Dec 31, 2019	Dec 31, 2020	Dec 31, 2019	Dec 31, 2020	Dec 31, 2019
Daqing Volvo Car Manufacturing Co., Ltd.[8)]	China	50	50	1,844	2,318	9,441	8,218
Zhangjiakou Volvo Car Engine Manufacturing Co., Ltd.[8)]	China	50	50	74	142	1,207	1,214
Shanghai Volvo Car Research and Development Co., Ltd.[8)]	China	50	50	1	–1	102	108
Bra Bil Sverige AB	Sweden	50	50	35	29	218	186
Total non-controlling interests				**1,954**	**2,488**	**10,968**	**9,726**

8) 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. The 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 AND LIABILITIES TO CREDIT INSTITUTIONS

Bonds

In October 2020 Volvo Car AB (publ.) issued its first Green bond on the capital markets amounting to MEUR 500 nominally, it is a seven-year bond with a fixed coupon rate. During 2019 two bonds were issued, in February a four year bond, MSEK 2,000 with a floating coupon rate and in April a five year bond, MEUR 600 with a fixed coupon rate of 2.13 per cent.

Liabilities to credit institutions

In May 2020 a new, fully drawn, two-year credit facility amounting to MSEK 4,000 with a one-year extension option, was signed with the Swedish Export Credit Corporation.

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	11,497,086,934
Retained earnings brought forward	SEK	4,329,588,574
Net income for the year	SEK	−4,265,445
At the disposal of the AGM	**SEK**	**15,822,410,063**

The Board proposes the following allocations of funds:

To the preference shareholders, a dividend of SEK 138.78 per share	SEK	158,041,831
Carried forward	SEK	15,664,368,232
Total	**SEK**	**15,822,410,063**

In view of the Board of Directors' proposal to the Annual General Meeting to be held March 18, 2021 to decide on the distribution of a dividend of SEK 138.78 per preference 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 record date for determining who is entitled to receive dividend is proposed to be on March 22, 2021.

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 18, 2021

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

Jonas Samuelson
Board member

Marko Peltonen
Employee representative

Jörgen Olsson
Employee representative

Glenn Bergström
Employee representative

Our audit report was submitted on March 18, 2021
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 2020-01-01–2020-12-31 except for the corporate governance statement on pages 55–59. The annual accounts and consolidated accounts of the company are included on pages 47–117 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 2020 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 2020 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 55–59. 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 Managing Director are responsible for the other information. The other information comprises on pages 1–46 and 120–152 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 Managing Director

The Board of Directors and the Managing Director are responsible for the preparation of the annual accounts and consolidated accounts and that they give a fair presentation in accordance with the Annual Accounts Act and, concerning the consolidated accounts, in accordance with IFRS as adopted by the EU. The Board of Directors and the Managing Director are also responsible for such internal control as they determine is necessary to enable the preparation of annual accounts and consolidated accounts that are free from material misstatement, whether due to fraud or error.

In preparing the annual accounts and consolidated accounts, The Board of Directors and the Managing Director are responsible for the assessment of the company's and the group's ability to continue as a going concern. They disclose, as applicable, matters related to going concern and using the going concern basis of accounting. The going concern basis of accounting is however not applied if the Board of Directors and the Managing Director 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 Managing Director.
- Conclude on the appropriateness of the Board of Directors' and the Managing Director's use of the going concern basis of accounting in preparing the annual accounts and consolidated accounts. We also draw a conclusion, based on the audit evidence obtained, as to whether any material uncertainty exists related to events or conditions that may cast significant doubt on the company's and the group´s ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the annual accounts and consolidated accounts or, if such disclosures are inadequate, to modify our opinion about the annual accounts and consolidated accounts. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause a company and a group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the annual accounts and consolidated accounts, including the disclosures, and whether the annual accounts and consolidated accounts represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient and appropriate audit evidence regarding the financial information of the entities or business activities within the group to express an opinion on the consolidated accounts. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our opinions.

We must inform the Board of Directors of, among other matters, the planned scope and timing of the audit. We must also inform of significant audit findings during our audit, including any significant deficiencies in internal control that we identified.

Report on other legal and regulatory requirements

Opinions

In addition to our audit of the annual accounts and consolidated accounts, we have also audited the administration of the Board of Directors and the Managing Director of Volvo Car AB (publ) for the financial year 2020-01-01 –2020-12-31 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 Managing Director be discharged from liability for the financial year.

Basis for Opinions

We conducted the audit in accordance with generally accepted auditing standards in Sweden. Our responsibilities under those standards are further described in the Auditor's Responsibilities section. We are independent of the parent company and the group in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements.

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

Responsibilities of the Board of Directors and the Managing Director

The Board of Directors is responsible for the proposal for appropriations of the company's profit or loss. At the proposal of a dividend, this includes an assessment of whether the dividend is justifiable considering the requirements which the company's and the group's type of operations, size and risks place on the size of the parent company's and the group's equity, consolidation requirements, liquidity and position in general.

The Board of Directors is responsible for the company's organization and the administration of the company's affairs. This includes among other things continuous assessment of the company's and the group´s financial situation and ensuring that the company's organization is designed so that the accounting, management of assets and the company's financial affairs otherwise are controlled in a reassuring manner. The Managing Director shall manage the ongoing administration according to the Board of Directors' guidelines and instructions and among other matters take measures that are necessary to fulfill the company's accounting in accordance with law and handle the management of assets in a reassuring manner.

Auditor's responsibility

Our objective concerning the audit of the administration, and thereby our opinion about discharge from liability, is to obtain audit evidence to assess with a reasonable degree of assurance whether any member of the Board of Directors or the Managing Director in any material respect:

- has undertaken any action or been guilty of any omission which can give rise to liability to the company, or
- in any other way has acted in contravention of the Companies Act, the Annual Accounts Act or the Articles of Association.

Our objective concerning the audit of the proposed appropriations of the company's profit or loss, and thereby our opinion about this, is to assess with reasonable degree of assurance whether the proposal is in accordance with the Companies Act.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with generally accepted auditing standards in Sweden will always detect actions or omissions that can give rise to liability to the company, or that the proposed appropriations of the company's profit or loss are not in accordance with the Companies Act.

As part of an audit in accordance with generally accepted auditing standards in Sweden, we exercise professional judgment and maintain professional scepticism throughout the audit. The examination of the administration and the proposed appropriations of the company's profit or loss is based primarily on the audit of the accounts. Additional audit procedures performed are based on our professional judgment with starting point in risk and materiality. This means that we focus the examination on such actions, areas and relationships that are material for the operations and where deviations and violations would have particular importance for the company's situation. We examine and test decisions undertaken, support for decisions, actions taken and other circumstances that are relevant to our opinion concerning discharge from liability. As a basis for our opinion on the Board of Directors' proposed appropriations of the company's profit or loss we examined the Board of Directors' reasoned statement and a selection of supporting evidence in order to be able to assess whether the proposal is in accordance with the Companies Act.

Gothenburg 18th of March 2021
Deloitte AB

Signature on Swedish original

Jan Nilsson
Authorized public accountant

AUDITOR'S REPORT

Board of Directors Volvo Car AB (publ.)

Volvo Car AB (publ.) is the parent company of Volvo Car Group.

CLICK TO READ MORE

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 in other entities within the Zhejiang Geely Holding Group and affiliated companies

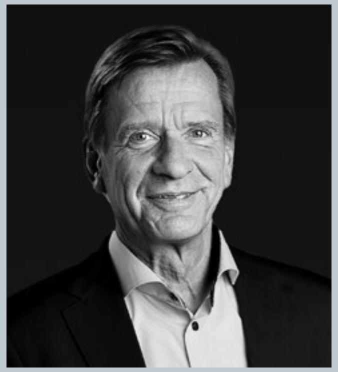
Previous positions:
Founder Geely Holding Group

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:
Vice Chairman of the Board and Chairman of the Audit Committee Akastor ASA; Member of the Board and Chairman of the Audit Committee AKSO ASA; Member of the Board and Audit Committee INGKA Holding BV; Member of the Board Geely Sweden Holdings AB, Queen's Gambit Growth Capital SPAC; CEO Concordium AG

Previous positions:
Chairman of the Board Nustay A/S; Member of the Board and Chairman of the Audit Committee Kværner ASA; Several senior management positions at A.P. Möller Maersk A/S; President and CEO Wallenius Lines; Positions at Aker ASA, Handelsbanken, Saxo Bank



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 Holding Ltd.; Member of the Board Teknikföretagen, Lynk & Co Investment Co. Ltd., Volvo Trademark Holding AB

Previous positions:
Member of the Board Lynk & Co Europe AB, Polestar Performance AB, Polestar Holding AB; Chairman and CEO MAN AG; Several leading technical positions at 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. and affiliated companies, Geely Sweden Holdings AB, Proton Holdings Berhad and YTO Express (International) Holdings Ltd.

Previous positions:
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 Skandinaviska Enskilda Banken AB; Senior Advisor Wallenberg Foundation

Previous positions:
Member of the Board G4S Plc.; Member of the Investment Committee HOPU Investments Co. Ltd.; 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.

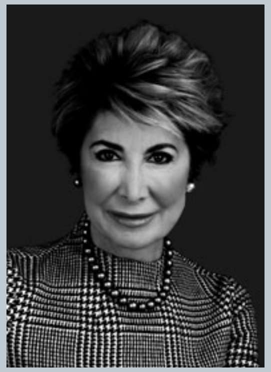
BOARD OF DIRECTORS

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 Re-sorts, SL Green, JAMF

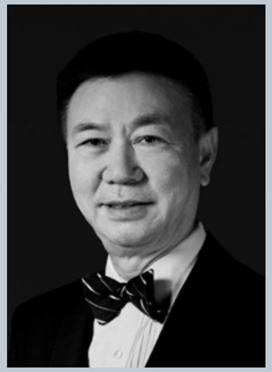
Previous positions:
Member of the Board Ascend, Schneider Electric; CEO Clear Standards Inc., Baja Ventures; Chairman BT Global Services Advisory Board; Co-founder and President Global Go to Market

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, Wärtsila; Member of the Board Investor AB, NorthVolt AB

Previous positions:
President and CEO and other senior positions AB SKF

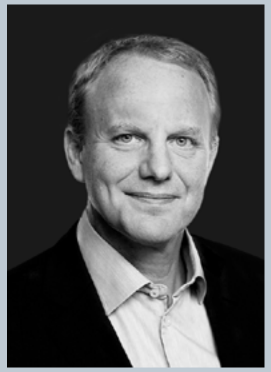


Xingsheng (Jim) Zhang

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

Previous positions:
Chairman of the Board Forever Natural Capital Foundation, Link Capital (Asia) Co. Ltd.; 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



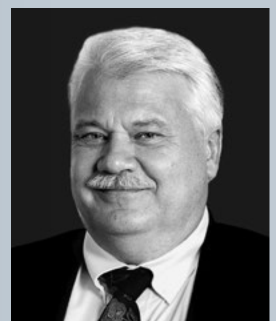
Jonas Samuelson

Member of the Board
Since: September 2020
Born: 1968
Education: MSc in BA and Economics

Other assignments:
Member of the Board Polygon AB, Axel Johnson AB; President and CEO Electrolux AB

Previous positions:
CEO Electrolux Major Appliances EMEA; Chief Operating Officer Electrolux Group; Chief Financial Officer Electrolux Group, Munters AB; Various senior positions General Motors North America; Treasurer Saab Automobile AB

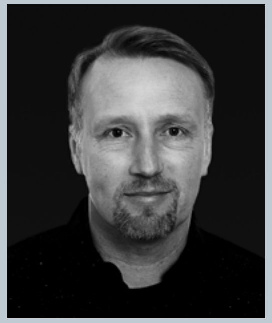
EMPLOYEE REPRESENTATIVES



Glenn Bergström

Employee Representative of the Board
Since: August 2010
Appointed by: IF Metall
Born: 1955
Employed by Volvo Cars: 1974

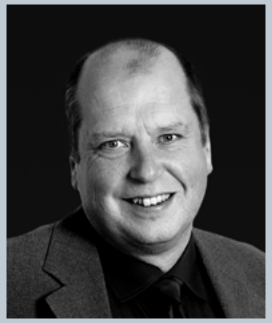
Other assignments: Chairman of the Board VFF Pension Fund



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

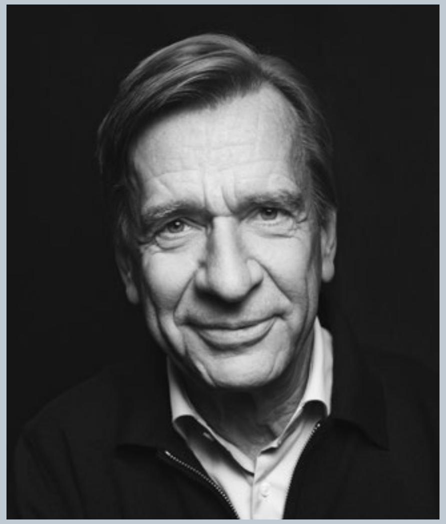
Deputy Employee Representative of the Board
Since: 2009
Appointed by: IF Metall
Born: 1963
Employed by Volvo Cars: 1981

Other assignments:
—

Executive Management Team 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.

→ CLICK TO READ MORE



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 Degree in Economic and Financial Sciences

Henrik Green

Chief Technology Officer
Since: December 2016
Born: 1973
Education: MSc in Computer Engineering

Björn Annwall

EMEA
Since: October 2015
Born: 1975
Education: MSc in BA and Economics

Anders Gustafsson

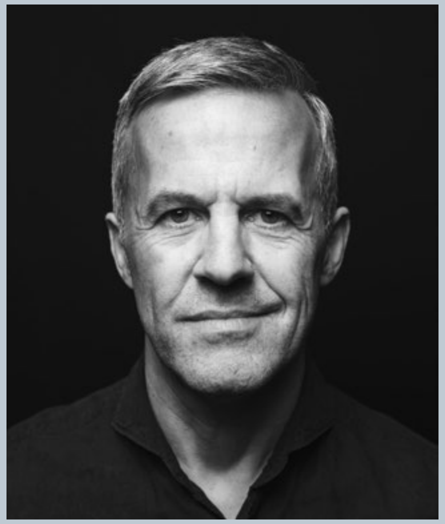
Americas
Since: August 2017
Born: 1968

Xiaolin Yuan

APAC
Since: March 2017
Born: 1969
Education: Master Degree

Lex Kerssemakers

Commercial Operations
Since: August 2004
Born: 1960
Education: Degree in Automotive Business Management



Javier Varela

Industrial Operations and Quality
Since: November 2016
Born: 1964
Education: Industrial Engineering

Hanna Fager

Corporate Functions
Since: October 2016
Born: 1975
Education: BSc in Human Resource Development and Labour Relations

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
Central to our business and key to our future success – sustainability – is as important to the company as safety. Volvo Cars is committed to protecting and improving the environment and wider society, as well as the lives of our customers and employees. Volvo Cars' sustainability strategy is fully integrated into the corporate strategy and provides guidance to strategic and operational decisions. Our sustainability strategy is also challenged frequently by regular analysis, that includes climate-related risks and opportunities.

International commitments
Volvo Cars is proud to be 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 United Nations Sustainable Development Goals (SDGs). The SDGs act as our guide, where we focus on and address 5 of the 17 goals through our sustainability strategy. The SDGs relevant to our business are:

In addition to the UN Global Compact, our own Code of Conduct (Our Code – How We Act) 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), and 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 reporting
Volvo Cars published its first Environmental Report in 1992. It was expanded to a Sustainability Report in 2003 in line with the guideline of the Global Reporting Initiative (GRI). The 2020 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 1st to December 31st, 2020 (except where otherwise stated). Volvo Cars' Sustainability Report has been prepared to meet the statutory requirements in accordance with the Swedish Annual Accounts Act 6 chapter 11§. The scope and content of the Sustainability Report is defined by the GRI Index presented on pages 144-145 in this report. 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 147. As a signatory to the UN Global Compact, the Sustainability Report is also our Communication on Progress.

Additionally, Volvo Cars continuously analyses, identifies and selects 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 whose eleven recommended disclosures have been incorporated in this year's Annual Report (see page 146 for further information).

Stakeholder engagement
Our stakeholder involvement provides guidance on how we should develop and communicate our sustainability work. 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 2020, 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 2021.

SUSTAINABILITY GOVERNANCE
As outlined in the chart on page 117, Volvo Cars has put in place a governance structure to monitor the progress of its sustainability strategy, ambitions and initiatives.

Board of Directors (BoD) – People and Sustainability Committee (PSC)
The BoD sets the strategic direction and approves our strategy, including sustainability. It follows up progress in the PSC. Our climate action plan with its risks and opportunities is discussed at least twice a year. PSC also brings a diverse and outside perspective to sustainability issues for the company.

Executive Management Team (EMT)
The EMT is responsible for the overall governance, execution and implementation of the sustainability strategy and regularly monitors progress through a number of KPIs. The climate action plan with risks and opportunities is reviewed quarterly.

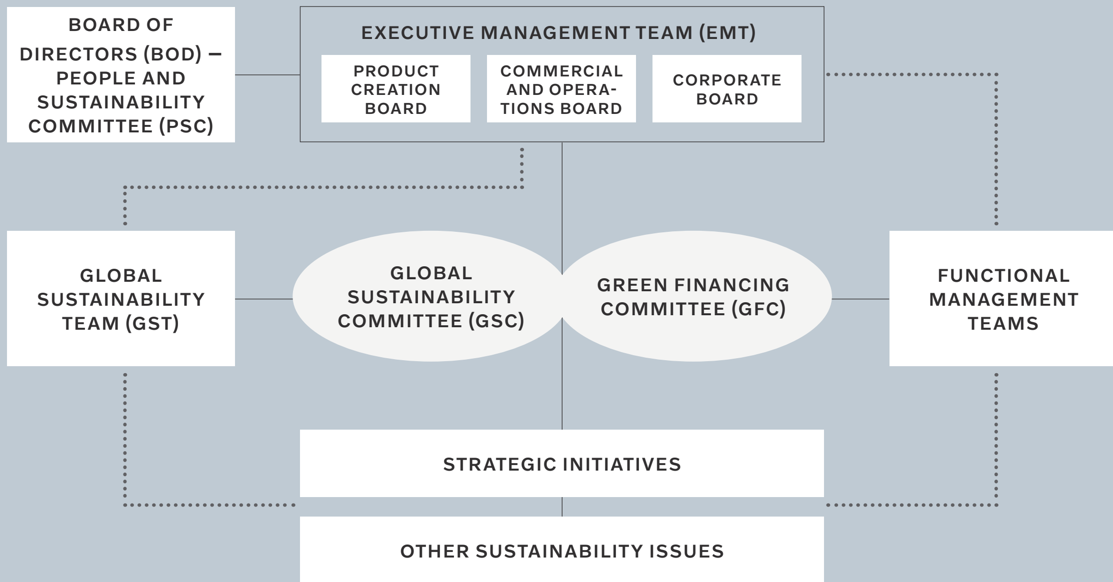
Global Sustainability Committee (GSC)
The GSC is chaired by the Head of Global Sustainability and consists of members that are authorised line organisation representatives with the mandate to take decisions, provide guidance and support initiatives to drive the strategy and performance forward. The purpose is to improve cross-departmental collaboration and understanding as well as act on major sustainability issues and risks. The GSC regularly updates and reports to relevant EMT Boards for decision. Climate related risks and opportunities are discussed and fed into the Enterprise Risk Management process, where the Head of Global Sustainability is one of the Corporate Risk Managers, see page 52.

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 Team (GST)
The GST is centrally responsible for the day-to-day governance and coordination of sustainability. It develops and refines the sustainability strategy, leads and supports the strategic initiatives and follows up the progress of our KPIs. It also gathers business intelligence on sustainability matters.

Green Finance Committee (GFC)
The GFC reviews and validates the selection of the Eligible Green Projects (see Green Financing Report on page 148 for further information).

SUSTAINABILITY AT VOLVO CARS IS CENTRALLY GOVERNED AND COORDINATED



Materiality analysis

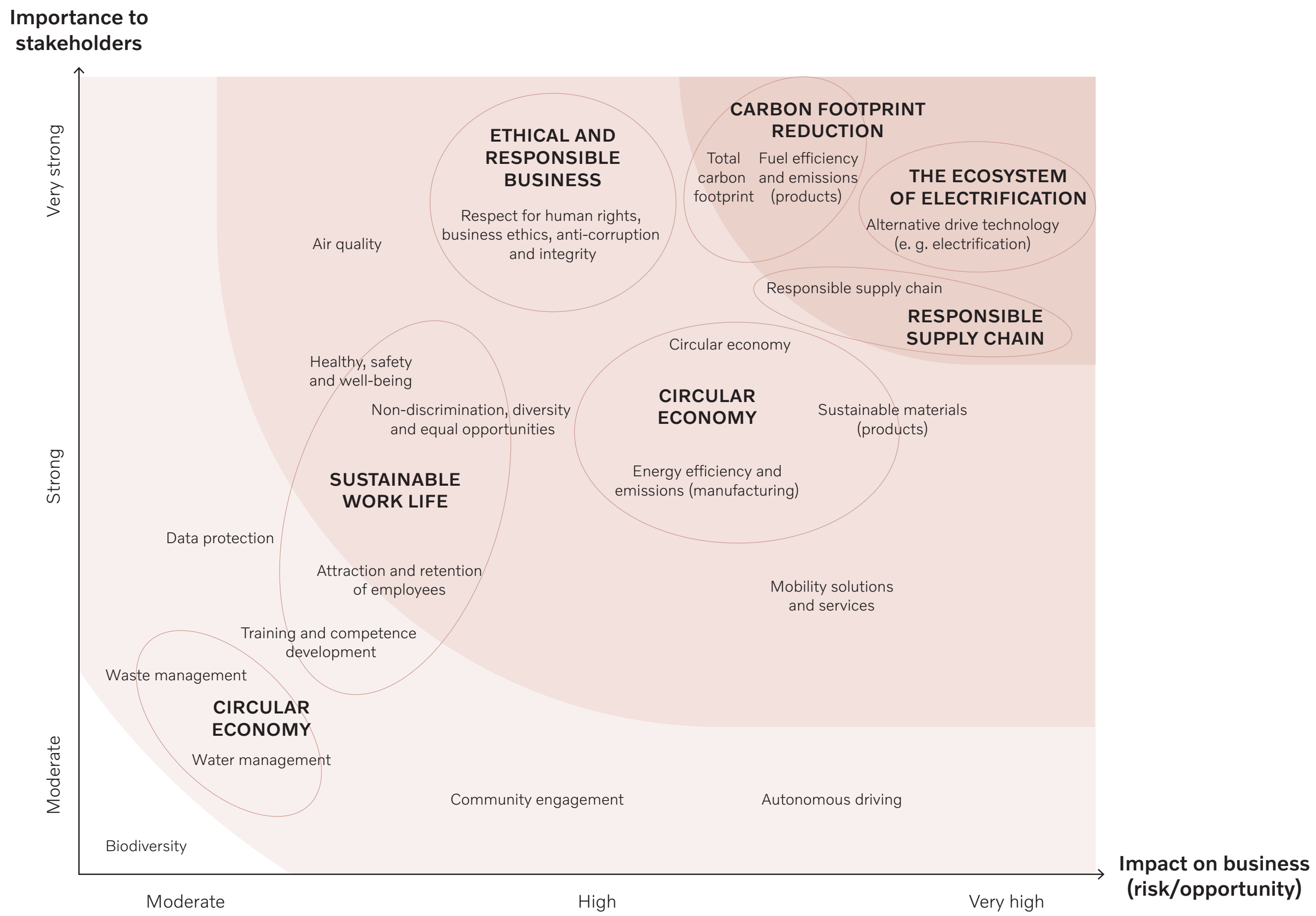
In 2019, we carried out an international survey where external and internal stakeholders were asked to indicate which sustainability areas they considered to be of greatest relevance to Volvo Cars. The stakeholders were selected based on relevance and previous contacts. Based on importance to stakeholders 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

Climate-related risks and global warming Scenarios

From a world economic point of view, climate change is a top risk both in terms of impact and likelihood. It affects our company and our industry in many ways. Climate-related risks can be divided into two major categories:

1. Transitional Risks – related to the transition to a lower-carbon economy with extensive policy, legal, technology, and market changes to address mitigation and adaptation requirements related to climate change.



2. Physical Risks – related to the physical impacts of climate change and can be event driven (such as hurricanes and flooding) or longer-term shifts in climate patterns (such as sea level rise).

In 2020, we started analysing different global warming scenarios in accordance with TCFD recommendations to verify the resilience of our strategy. We used IEA's Stated Policies Scenario (4DS) and Sustainability Development Scenario (<2DS) for analysing Transitional Risks and IPCC's 8.5 Scenario for analysing Physical Risks. By analysing impact and likelihood in these different scenarios, we not only identified risks that affect our company, but also opportunities.

Initial scenario analysis of Transitional Risks shows differences in estimated costs in reaching our long-term ambition of becoming climate neutral. For example, potential offsetting costs that could be relevant for any remaining carbon emissions in 2040 are three times higher in a 2DS scenario than a 4DS scenario. This is a further incentive to increase the prioritisation of carbon emission reduction actions. Another example is a possible shift in consumer preferences and behaviours that may happen faster than predicted (see Electrification as well as Climate Change and Sustainability in Enterprise Risk Management on page 52 for further information). It could result in a higher demand for pure electrified cars, less demand for larger vehicles like SUVs, a higher demand of other mobility services or less car ownership demand. However, in total, our current sustainability strategy shows resilience towards the different scenarios since it addresses all the three critical parts of CO_2 reductions; tailpipe, supply chain and operations. Our ambitions are in line with a well below 2-degree scenario (as verified by the Science-Based Targets initiative (SBTi)), and our product and mobility services offers are designed to mitigate potential transitional risks, for instance with an aggressive transition into electric vehicles well ahead of communicated or potential regulatory bans on combustion engines. The biggest remaining challenge is to deliver on our high ambitions.

Our physical assets will be affected by climate change in different ways and severity and have been assessed for Property and Machinery, Logistics and Raw Material Supply and Tools. We see that both our own sites and those within our supply chain have risks of, for example, earthquakes, lightning, flooding, storm surges, windstorms, as well as a longer-term sea-level rise. In a high climate change scenario, we see an impact on our properties with more frequent and longer plant closures and subsequently higher costs for repairs and interruptions. This, in turn, causes higher insurance costs. In the longer term, high risk areas may not be insurable at all. This is also valid for our supply chain, which could increase the cost of parts and services. Our industrial and supply chain setup is dimensioned for the current natural disaster impact and frequency. However, further analysis is needed due to uncertainties on the impact of material supply.

Volvo Cars' sustainability strategy

The materiality analysis and input from our stakeholders have been aligned with our internal strategies, scenario and gap analyses, risk assessments, benchmarking, forecasts and consumer perception data in order to define what we consider to be our most relevant material topics. We then developed the structure of our sustainability strategy with clear focus areas, ambitions and strategic initiatives.

We commit to the highest standard of sustainability in mobility. We believe that by working towards climate neutrality, embracing the circular economy and conducting business responsibly, we will help 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.

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

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, recover, recycle)

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:
- Being 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

Performance 2020

Climate Action – Be a climate-neutral company by 2040

Action to reduce our carbon emissions has the highest priority in our sustainability strategy. We are a contributor to climate change. We are part of the problem, but we are also part of the solution. Therefore, we are taking actions across our whole value chain. We have the ambition to be a climate neutral company by 2040, in line with the 2015 Paris Agreement which seeks to limit global warming to 1.5°C above pre-industrial levels, 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.

However, we must act now. So, we are aiming to reduce our lifecycle carbon footprint per car by 40 per cent between 2018 and 2025. We plan to achieve this through the following carbon reductions (per car) across our value chain:
- 50 per cent reduction in tailpipe emissions
- 25 per cent reduction in supply chain emissions
- 25 per cent reduction in operational emissions (including from logistics and manufacturing)

In 2020, our total CO_2 emissions amounted to 34.3 million tonnes, or 52.1 tonnes/car, which is a 6.2 per cent per car reduction between 2018 and 2020. This reduction is mainly due to increased sales of electrified vehicles, but also due to decreased emissions from downstream transportation and distribution, as well as business travel and commuting. See Sustainability Scorecard page 139 for more details.

Volvo Cars has submitted carbon reduction targets to the Science-Based Targets Initiative (SBTi). These have been approved as in line with the reductions necessary to meet the goals of the Paris Agreement to limit global warming to well below 2°C above pre-industrial levels. We have also shared our full carbon emissions data with CDP, the world's foremost environmental disclosure organisation, and received a C score.

The lifecycle performance of our products

We have a long history of carrying out environmental assessments with a holistic perspective. We carry out simplified Life Cycle Assessments (LCAs) on all our models and we continuously develop and improve our methods. This work has intensified in recent years and we feel that we should be open about the full carbon impact of our electric vehicles. So, we have produced a comprehensive LCA of the carbon footprint of our first BEV, the XC40 Recharge, and compared it to an XC40 ICE. We will produce similar LCAs for all future fully electric Volvo cars. You can find further details and the full report on https://group.volvocars.com/news.

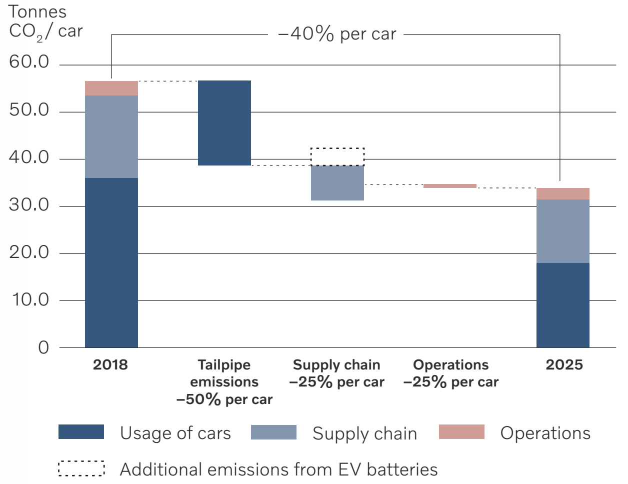
Producing fully electric vehicles (such as the XC40 Recharge) alone will not address the car industry's impact on the climate. Electric vehicle production is currently more carbon intensive than producing an ICE-engine vehicle. And the distance they need to be driven to have a lower carbon impact than an ICE vehicle is dependent on how the electricity is generated to power them. However, over their lifetime the carbon footprint of a fully electric vehicle is less than an ICE, irrespective of the electricity source.

LCAs also enable us to work within our own operations and supply chain to target carbon intensive materials and processes.

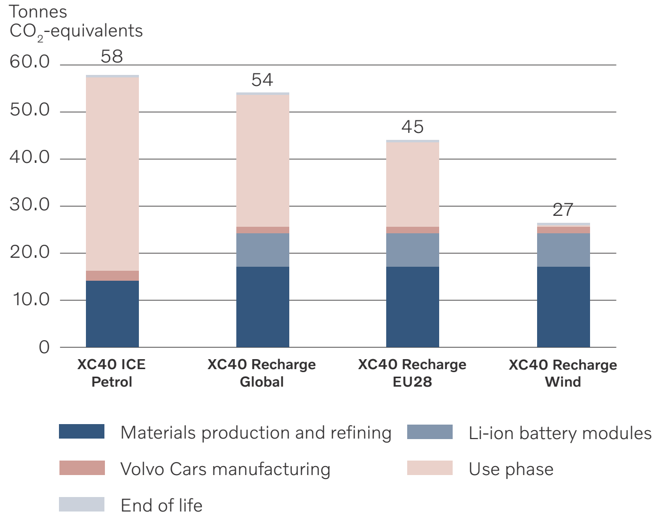
Tailpipe emissions

Tailpipe emissions will be reduced through our electrification strategy. Volvo Cars was the first conventional carmaker to commit to all-out electrification and phasing out cars powered

CO_2 EMISSION AMBITIONS PER CAR 2018–2025



LCA EMISSIONS



Carbon footprint for XC40 ICE and XC40 Recharge, with different electricity-mixes in the use phase for the XC40 Recharge. Results are shown in tonnes CO_2-equivalents per functional unit (200,000 km lifetime range).

only by an internal combustion engine. We are aiming for 50 per cent of our sales to come from fully electric vehicles by 2025, with the rest being hybrids. We already have plug-in variants for all of our car models and our first fully electric car, the XC40 Recharge, was successfully rolled out this autumn.

However, an attractive electric carline alone will not make the electrification strategy a success. It equally needs support from an ecosystem of new services and capabilities to make the electric drive as convenient as possible and to support our customers in their transition into electrification. We need to understand what services and offerings the customers need and expect. The following four focus areas are of biggest interest for our customers:

1. Market and Retailer Readiness – training and preparing retailers and workshops
2. Charging – ease and convenience with a consistent user experience
3. Battery strategy – securing an environmental, ethical and safe process from mining to recycling
4. Financial impact – educating customers on the total cost of ownership and residual value

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) decreased from 132 g/km in 2019 to 111 g/km in 2020. This was due to increased sales of our electrified vehicles. With our electrification strategy, we fulfil the EU's 2020 emissions target and we also expect to fulfil the Volvo Cars 2021 EU targets. Volvo Cars has officially entered a CO_2 pooling agreement with Ford for 2020 which will create an income that can be invested in the further development of green technology.

Worldwide Harmonised Light Vehicles Test Procedure (WLTP) has replaced the former NEDC in Europe. All our European carlines are homologated according to the new procedure. NEDC and WLTP figures can be presented to consumers and dealers already during configuration by showing the CO_2 impact in every configuration step. The WLTP fleet average figure for Europe in 2020 was 130 g CO_2/ km. See Sustainability Scorecard page 139 for more details.

Supplier emissions

As we reduce our tailpipe emissions, our supply chain will become an even greater source of our overall emissions. So, we are working closely with our suppliers to reduce their emissions, including using renewable energy, more recycled and bio-based material, and limiting wastage. We aim to reduce supply chain emissions by 25 per cent per car 2018–2025, including an ambition to achieve 100 per cent renewable energy at our tier 1 suppliers by 2025. To become a climate neutral company, the importance of collaborating with our business partners and drive impact across the value chain is more important than ever before.

First, we must require suppliers to disclose data on emissions and use of energy specific to each manufacturing site and location. For this reason, Volvo Cars is now a member of CDP Supply Chain and this year we introduced data collection via the CDP climate questionnaire for our top 95 strategic suppliers based on emission intense product categories as well as spend. The results of the initial input shows that these suppliers, in total, used 6.0 per cent renewable energy in 2020 for their global operations (including business units that do not deliver to Volvo Cars). We will continue to collect relevant supplier data and focus on improvements where it could impact the most e.g. increased share of renewable energy and CO_2 emission reduction targets. It also helps to standardise sustainability measurements in the industry and increase the level of transparency.

Climate data disclosure is required ahead of a sourcing decision in order to enable us to select business partners that share our strategic ambitions and can deliver on our targets. Our roadmap towards 100 per cent renewable energy among tier 1 suppliers by 2025 has been broken down into yearly targets and adapted to the availability of renewable energy in different regions.

Building on the achievement of securing 100 per cent renewable electricity for our Chengdu plant, we launched a corresponding target for suppliers in Chengdu. During the annual Volvo Car Asia Pacific Supplier Convention held in Chengdu in November 2020, representatives of 25 direct procurement suppliers located in Chengdu joined us on stage to demonstrate their commitment to securing 100 cent renewable electricity by 2021. In July 2020, we also hosted a Sustainability Tech Show in Shanghai with representatives from 85 key suppliers displaying more than 100 sustainable product solutions. The collaboration with business partners to inspire development is important both to drive performance and promote change in our industry.

PERFORMANCE 2020

Operational emissions

We will also continue to address our total operational emissions. We are making good progress towards our ambition of having climate neutral manufacturing operations. However, emissions from manufacturing represents a small part of our operational emissions. Hence, we also work to reduce emissions from our offices and business travel, as well as from our logistical operations (which currently represents the largest part of our operational emissions).

Logistical Operations (Transport)

Between 2018 and 2019, Volvo Cars succeeded in reducing CO_2 emissions from transports by 8.0 per cent per car. During 2020, the journey continued to further cap the CO_2 emissions. However, due to re-balancing of the industrial structure, the CO_2 emissions per produced car increased by 4.0 per cent in 2020 compared to 2019. An important tool to mitigate the increased carbon footprint has been to increase the filling degree of transported goods. In 2020, we achieved a global average of approximately 77 per cent. Also, we continued to actively change transport mode to the most efficient possible, such as rail and sea freight. In the beginning of 2020, a major change in our European transport network was implemented. This change from a point-to-point road network to a truly intermodal concept using rail, sea transports and road transports with trucks running on renewable fuels, has proven its capability of being flexible and stable, even under challenging pandemic conditions. Each week, 5 trains leave the Czech Republic for the Port of Rostock where the trailers are shipped on sea vessels to the Port of Trelleborg. From there, trucks running on sustainable renewable HVO diesel transport the trailers to the plant in Torslanda. The set-up is calculated to cut the CO_2 emissions in half compared to the previous set-up and remove about 3,400 trucks from the roads in central Europe every year. Since the opening in March 2020, our new intermodal V6 has transmitted over 46,000 cars by rail, of which 30,000 intercontinentally. In addition to the environmental benefits of distributing more of the cars by train, this also means they reach their final destination faster. Using various transport modes can reduce the time from factory to final destination by up to 30 per cent. Furthermore, production materials are transported by rail between Ghent and Sweden on a daily basis.

Towards climate neutral manufacturing operations

In our quest to having climate neutral manufacturing operations by 2025, our global plants are, to date, run on 56.0 per cent climate neutral energy (including 84.0 per cent climate neutral electricity). The total CO_2 emissions of Volvo Cars' production sites amounted to 156,700 tonnes in 2020.

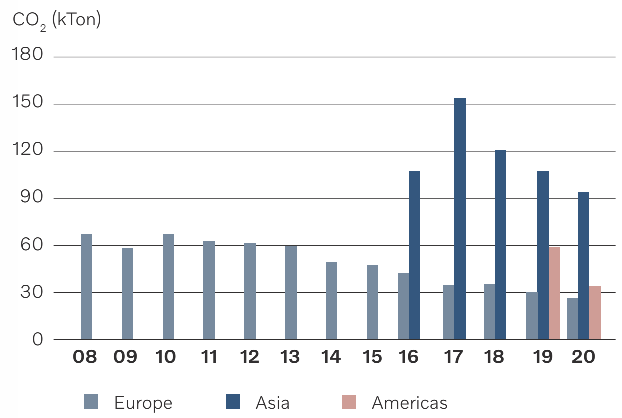
Our climate neutral ambition includes emissions derived from electricity and heating (natural gas, LPG, fuel oil and district heating). Our approach is based on three general activities:

1. Reduce energy usage through efficiency improvements and energy recovery
2. Implement on-site generation/extraction of renewable energy
3. Buy climate neutral energy from energy/utility suppliers

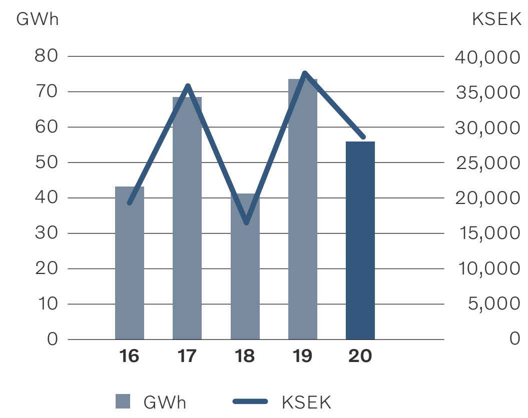
Reduce energy usage through efficiency improvements and energy recovery

Energy efficiency actions in our production plants during 2020 resulted in a yearly energy use reduction of 56 GWh. Volvo Cars has worked systematically with energy saving projects since 2010. During 2020, this has resulted in direct and indirect savings of nearly MSEK 29. Some examples of the most significant energy conservation measures completed in 2020 are shutting down certain sealer ovens and air handling units, as well as optimising hot water circuits, air temperatures and air flows.

NET CO_2 EMISSIONS FROM ENERGY – MANUFACTURING OPERATIONS –



ENERGY EFFICIENCY SAVINGS



Implement on-site generation/extraction of renewable energy
To date, we have installed 15,000 solar panels and three wind turbines at our Ghent plant, which together cover about 13–14 per cent of the plant's electricity demand. Also, the installation of a solar power system at our Charleston plant was completed in 2020. The solar panels generate approximately 12,000 MWh annually, or nearly 20 per cent of the Charleston plant's electricity usage. We continue to actively investigate additional opportunities for on-site generation.

Buy climate neutral energy from energy/utility suppliers
In Europe, we have successfully reduced our CO_2 emissions over the years and have stabilised at a low level. In Asia, we took a big step forward by securing 100 per cent renewable electricity for our Chengdu plant, resulting in approximately a 40 per cent reduction of CO_2 emissions. We continuously engage with the market to find climate neutral energy opportunities.

Sustainability in the retailer network
During 2020 we have developed our guidance when it comes to how we design and build our retailers. We focus on using sustainable materials, using solar panels, heat and cooling recovery when it comes to the ventilation and how we take care of rainwater, we offer solutions to either reuse it or to allow the water to infiltrate locally. Retailers need to be evaluated individually since conditions vary depending on location. We also recommend all our retail partners to change to recyclable energy where possible. This initiative will be continuously supported and developed during 2021.

For EMEA, we aim for 25 per cent CO_2 reduction from 2020 to 2025. The plan is to roll it out globally.

Circular Economy – Be a circular business by 2040
We recognise the benefits of the circular economy in keeping our products and components in use for longer; minimising the need to extract finite resources, efficiently use resources, eliminating wastage and helping reduce our overall carbon emissions. We also acknowledge that the circular economy can help generate substantial savings, as well as create new revenue streams, including through greater material efficiency and component value retention.

We are moving away from the linear economic model and applying circular economic principles in order to meet our climate ambitions, secure future availability of materials, as well as ensure efficient raw material usage and waste management practices. This means that we are transforming the way our products are designed, produced and used, and that we support SDG 12 and SDG 13.

Volvo Cars has the ambition to be a Circular Business by 2040. From 2025, our aim is that our adoption of the circular economy generates annual cost savings of MSEK 1,000 and carbon emission reductions of 2.5 million tonnes (2018 baseline). This will be done 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 wool and wood
- Increasing resource utilisation and minimising waste, including through reducing production related waste by 20 per cent per produced unit between 2018 and 2025
- Retaining component value, including through reusing, refurbishing and remanufacturing parts
- Developing new business opportunities which optimise the efficient lifecycle of our products and components

Volvo Cars recently became a Member of the Ellen MacArthur Foundation (EMF), the world's leading organisation driving the transition to a circular economy. This will help both drive our internal adoption of the circular economy, as well as promote wider adoption within industry.

Closed loops with suppliers
In 2019, a closed loop system with one of our aluminium suppliers was initiated. 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. Currently, over 75 per cent of our aluminium sheet metal scrap is returned to the producer. This represents around 10 kg of aluminium weight per car (based on an average of 300 kg of aluminium per car).

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.

Recyclability at end-of-life
We design our cars to fulfil the EU End-of-Life Vehicle Directive so that about 95 per cent of the materials can be recovered, either reused or recycled.

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. We work closely with suppliers and the recycling industry, as well as take part in research projects in order to achieve this target and to push for a greater supply of recycled plastics within the automotive industry. We are currently working on an efficient way to measure and follow-up on our progress. To demonstrate the viability of the vision, we revealed a 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. Several components identified in the demo car have been launched in our products in 2020.

Sustainable steel and aluminium
Steel and aluminium represent a significant carbon footprint of the materials in our vehicles. Therefore, we have intensified our work to minimise their negative impacts. Our work includes both increasing the recycled content and decreasing the footprint of the production processes. For aluminium, the use of renewable energy in the aluminium smelting plays a very large role in reducing the carbon 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 an ongoing dialogue with suppliers to understand their roadmaps to reach carbon-neutral metal production.

Post-first life of 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 1,250 batteries that will be used as core material for our remanufacturing and reuse process.

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 2020, the programme saved approximately 271 tonnes of steel and 126 tonnes of aluminium. The energy saved corresponds to a carbon dioxide emission reduction of 4,116 tonnes per year, see Sustainability Scorecard page 139 for more details.

Water management

Since 2019, we have increased the scope for water savings to include all manufacturing sites. Our target is to reduce consumption per car by at least 15 per cent between 2018 and 2025. By the end of 2020, we reduced water consumption to 2.7 m^3/car, reaching a 7.0 per cent reduction since 2018. This is due to an increased focus on water consumption, but also due to plant shutdown during the pandemic.

Waste management

We work on reducing waste in all our operations. Our largest waste stream is metal from car production, which amounted to 209,700 tonnes in 2020 and is entirely recycled. Nevertheless, initiatives were launched to reduce the amount of waste by increasing the utilisation degree of metals within the body components plants.

Volvo Cars aims to increase the recycling rate of waste at our production sites and to decrease the amount of waste that is landfilled or incinerated. In 2020, we revised and updated our target to reducing production related waste by 20 per cent per produced car between 2018 and 2025. At the end of 2020, we have achieved a 9.0 per cent reduction since 2018. The reductions are mainly due to increased reuse of sheet metal and packaging material.

Our waste management aims to have new solutions for waste streams with the philosophy 'every single step counts'. In 2020, we achieved a material recycling rate of 94.5 (94.0) per cent and the amount of landfilled waste was 0.7 (1.0) per cent.

Car sharing for a circular economy

Our mobility solution, M, is a testament of how new business models can contribute to our circular economy strategy. As more progressive cities push to reduce emissions, car sharing will be critical in reducing the number of cars in the city. Each shared car can replace up to 8 privately owned cars which helps to free up space as well as achieve substantial resource and emission avoidances.

Ethical and Responsible Business – Be a recognised leader in ethical and responsible business

We aim to be a recognised leader in Ethical and Responsible Business. By acting ethically and responsibly, on both a corporate and individual level, we believe that this will not only enhance our brand appeal, attract investment and the best talent, and avoid reputational damage, but, importantly, help address global environmental and social challenges, including within our industry. Volvo Cars recognises that acting as a responsible company makes business sense and supports our profitability. We will work in partnership with others and aim to be an industry change-maker.

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, which we intend to do by:

- Setting a new global people standard for our industry
- Putting sustainability on a par with cost and quality in our sourcing decisions
- Engaging in sustainable financing
- Tackling corruption and unethical business practices

Setting a new global people standard for our industry

Our global and diverse workforce is central to our success and our strong culture. Our people are our competitive edge and the focus on being an Employer of Choice continues in order to attract and retain the right people.

A responsible business

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.

Our culture creates an environment of constant improvement; we share knowledge with each other, we give and ask for feedback, and we encourage our people to take a personal responsibility for continuous learning and development. With feedback and engagement, we can grow and innovate as a company. Our employees rewarded us with a 75 per cent engagement score, which is above global benchmark.

Our approach to wellbeing and safety

All our operations, employees and contractors are governed by our global standards for health, safety and wellbeing. In 2020, our focus has been on the global pandemic, and we have been determined to have as safe a workplace as possible. We have taken a lot of actions, created guidelines and communicated continuously about the situation.

Despite the ongoing pandemic our work with wellbeing and safety does not stop, and we have continued with risk observations as well as safe behavior. With the Contractor Safety and Safety Training Center we are making big progress to eliminate accidents, with all-time low results. The number of injuries with sick leave, which is measured as Lost Time Case Rate (LTCR), decreased by 23.0 per cent to 0.10 for employees and 0.20 for supervised contractors, see Sustainability Scorecard page 139 for more details.

In 2020, we have focused on workplace experience and wellbeing by optimising space and adapting to new ways of working and new demands. For example, in the production plants, we have rolled out interior guideline pilots by using daylight and environmental improvements. Also, we have addressed food waste and removal of palm oil from all restaurants in Sweden, as well as improved wellness through healthier options, increased vegetarian options and variety of choice.

Diversity and inclusion

We have an open 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 encourage and welcome different perspectives in order to make room for creativity, innovation and better decision making.

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.

During the year, our focus has been on preparing the roll-out of our Global Parental Friendly Employer initiative as well as on our 50/50 Gender Neutral Leadership Commitment. The Global Parental Friendly Employer is an initiative where we support all our employees – no matter hourly or monthly, father, mother or same sex parent or adoption with the possibility to spend time with their children. The initiative has been rolled out in Europe and will launch globally during the first quarter of 2021. To deliver on our 50/50 Gender Neutral Leadership Commitment in recruitment and promotion to leadership positions, we have focused our efforts on digital events, such as International Women's Day, our Global Inclusion Month in June and a Women Leader platform for sharing experiences.

As women remain underrepresented in the fields of STEM (Science, Technology, Engineering and Maths), we are committed to taking a proactive approach by engaging in activities and external partnerships to increase interest among youth. When the pandemic hit, we managed to focus our efforts in reaching out to women in STEM by introducing digital events.

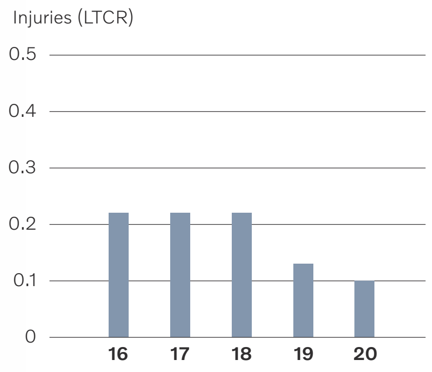
We are dedicated to creating a diverse and multi-cultural Top Management Team that brings international experience and global perspective with varied competencies, backgrounds and cultures, and that is valued in industry-leading, innovative and consumer-focused organisations. By the end of 2020, about 34 per cent of our top 475 managers were non-Swedish and females in leading positions remained stable at 28.3 per cent, see Sustainability Scorecard page 139 for more details.

Labour rights

Volvo Cars People Policy clearly states that all employees have the right to form or join labour organisations of their choice and to bargain collectively. Volvo Cars encourages dialogue with its employees, whether that is through cooperation with the unions, other employee representatives or employees directly. Approximately 79 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, creates value and contributes to the development of the company. Members of the unions are represented at every board meeting through their elected representatives.

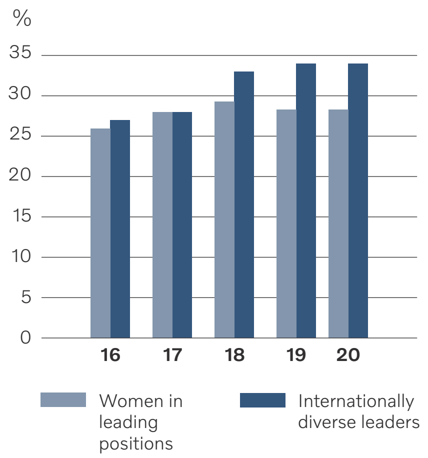
Also, we have zero tolerance towards harassment and discrimination as defined in the Volvo Cars People Policy. Training on Discrimination, Harassment and Bullying takes place throughout the organisation continuously. In 2020, 50 cases of discrimination and harassment were reported globally. All cases were investigated, and corrective and supportive actions were taken in all instances.

INJURIES (LOST TIME CASE RATE)

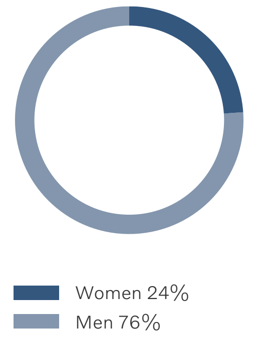


Injuries (LTCR) – Volvo Cars employees

DIVERSITY IN LEADERSHIP POSITIONS



GENDER DISTRIBUTION – ALL EMPLOYEES –



People Policy Assessment
We believe that the wellbeing of people is fundamental in all aspects of life and therefore we commit to providing a sustainable working environment to all employees through our People Policy. 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 impact 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 covering all our plants has been completed and improvement opportunities and the actions are closely monitored and followed up. Also, the project now focuses on raising awareness and building competence among leaders in the broader APAC region, e.g. through workshops with key internal stakeholders, based on lessons learned through previous assessments.

We are also working to secure that all our employees are compensated fairly using acknowledged principles for living wage which has been incorporated into our Policy.

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 in order to enhance social mobility and promote diversity. In 2020, Volvo Cars continued its projects aiming at reducing social segregation in its hometown regions 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

Putting sustainability on a par with cost and quality in our sourcing decisions
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.

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), meeting recycled content targets, reporting material content to the automotive International Material Data System (IMDS) and to be proactive in addressing issues and driving improvements.

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.

In 2020, 4,599 supplier sites were included in the risk scoring which corresponds to 100 per cent of active tier 1 supplier and directed sub-tier supplier sites that deliver parts, components and services to us.

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.

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 the supplier can be provided with recommendations on how to improve. We require all direct material suppliers to complete the SAQ and it is a mandatory element in the sourcing process of all suppliers providing production material since 2019. At the end of 2020, 663 supplier sites (89.0 per cent) had submitted a completed SAQ.

PERFORMANCE 2020

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 2020, we conducted 25 supplier audits prioritised from a list of suppliers receiving a high-risk score or for other commercial reasons. Since 2015, we have performed 153 sustainability audits amongst our tier 1 and directed sub-tier suppliers. As of 2020, we have addressed approximately 83 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.

Supply of minerals and metals
Volvo Cars is committed to ensure that we only use metals and minerals whose extraction, processing, trade and transportation have not directly or indirectly resulted in human rights abuses, unethical business conduct, severe environmental harm or provided funding to conflicts. As part of this commitment, we fully support the OECD Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas and strive to continuously improve our responsible sourcing practices. Our Procurement Position on Metal and Mineral Sourcing and Code of Conduct for Business Partners are examples of key policy documents expressing Volvo Cars' expectations and requirements towards suppliers.

To secure full transparency and traceability of 3TG materials (Tin, Tantalum, Tungsten and Gold), we conduct annual conflict mineral supply chain investigations. The data collected in this process is used to identify, assess and mitigate risks which in turn improves supply chain performance from a responsible sourcing perspective. We request 3TG suppliers to declare their due diligence measures and disclose the smelters used in their supply chain in a company level Conflict Minerals Reporting Template (CMRT) provided by the Responsible Minerals Initiative (RMI). As a member of the RMI, we also gain access to additional data on upstream actors' supply chain responsibility as well as tools to execute sourcing decisions that improve regulatory compliance and support responsible sourcing from conflict-affected and high-risk areas. By tracing the minerals in our supply chain and only buying material from smelters and refiners validated to be conformant with the Responsible Minerals Assurance Process (RMAP) – RMI's third-party verification of smelter and refiner management systems and sourcing practices – we can secure responsible sourcing in line with global standards. The aggregated information creates the foundation of our due diligence process for conflict minerals where we identify potential discrepancies, select suppliers for independent OECD-aligned audits and follow-up on risk mitigation action plans to address adverse impacts.

Volvo Cars' target is to have 100 per cent RMI approved 3TG smelters by the end of 2020. In 2017, we aligned with our suppliers and started to investigate smelter's conformance level with RMI requirements. 133 suppliers participated in this year's conflict mineral supply chain investigation. After evaluating the reported data, we conclude that the current level of conformant smelters in the supply chain is 71.0 per cent. Volvo Cars may not have achieved the ambition to become 'conflict free' yet, but we are strengthened in our conviction that we must continue to work closely together with suppliers and sub-suppliers to prevent human rights abuses and improve lifes upstream in the value chain. We recognise that due diligence is an ongoing, proactive and reactive process. Information, due diligence practices and risk monitoring systems will progressively be enhanced over time as a result of constructive engagement with suppliers and other stakeholders.

Volvo Cars has signed long-term agreements with leading battery makers CATL and LG Chem to ensure the global supply of lithium-ion batteries. 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. Circulor's blockchain technology is today used to achieve 100 per cent traceability of cobalt used in the XC40 Recharge. In 2020, Volvo Cars invested in Circulor through the Volvo Cars Tech Fund. The investment will allow both companies to expand their focus beyond cobalt, for example by looking at increasing traceability of other critical raw materials in batteries.

During the year, blockchain traceability has been expanded to include mica insulation sheets and we have decided to increase the traceability of all critical raw materials in batteries, as well as include CO_2 consumption for the battery production.

To support the continuous improvement of working conditions on artisanal and small-scale mining (ASM) sites, Volvo Cars collaborates with Better Mining. This ASM assurance and impact programme, led by RCS Global, translates digital sustainability and due diligence data into direct improvements on and around the sites. Trained monitoring agents are permanently deployed to mining sites, where they record information on risks and incidents. The information collected is verified by a team of experts who ensure completeness and follow up with agents on any red flags or data anomalies. Monthly corrective action plans (CAP) are issued through workshops with local stakeholders and implementation is overseen by the agents. Volvo Cars receives communication on CAP implementation progress every quarter. The monitoring programme, which at its peak this year included 16 sites, has so far been focused on Cobalt, Tin, Tantalum and Tungsten in the Democratic Republic of the Congo (DRC) and Rwanda. Volvo Cars engagement in Better Mining allows for upstream risk mitigation, greater market access for responsibly ASM-produced minerals as well as a tangible contribution to positive and quantifiable socio-economic impacts in mining communities.

Additionally, in 2020 Volvo Cars initiated work to identify raw materials that are not only of pivotal importance from a production perspective but are also associated with negative environmental, social and governance (ESG) impacts. These high-risk materials require enhanced due diligence and increased supply chain transparency and traceability. We have also started to review some of our responsible sourcing strategies, processes and management systems. Together with the ongoing work to define which raw materials are critical to Volvo Cars, this will ensure that we make the right prioritisations and use available resources in the best way possible.

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.

Engaging in sustainable financing
In 2020, we successfully issued our first Green Bond of MEUR 500. The bond attracted considerable investor interest. It established us as a serious player on the rapidly growing green bond market. See the Green Financing Report on page 148 for more information.

Tackling corruption and unethical business practices
Our Code – How We Act is our code of conduct and is the starting point for how Volvo Cars operates and expresses its strong commitment to responsible and ethical business. To support Our Code and to address the risks of corruption and unethical business practices, Volvo Cars has established a Compliance and Ethics Programme. Responsible and ethical business is obviously broader than our commitment to tackling anti-corruption. Therefore the Compliance and Ethics Programme, which is managed by the Compliance and Ethics Office, focuses not only on anti-corruption but also on the implementation of initiatives and controls that aim to prevent, detect and mitigate legal and ethical risks in the areas of anti-trust, data protection and trade sanctions and export control as further outlined in the Corporate Governance Report (see page 55). Another important part of our programme is the Code of Conduct for Business Partners. These two documents 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.

To create awareness and ensure that Volvo Cars, as an organisation, does what it is committed to, it continuously provide 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. In 2020, the planned training initiatives were partly hampered by the Covid-19 pandemic, but Volvo Cars' zero tolerance against corruption and its firm commitment to conduct business in a responsible manner remain as strong as ever. Despite the pandemic:

- The focus on our Responsible Business Discussions and Ethical Training for Leaders continued in 2020, and will increase even further in 2021.
- The training on Our code – How We Act for production employees was completed at our Charleston plant, but had to be postponed in Ghent, China and Malaysia. All production employees in Sweden received this training in 2019.
- The yearly mandatory e-learning launched at the end of 2020 focused on the main principles that apply when handling data as Data Protection is another important part of our Compliance and Ethics Programme.
- Leaders are trained, via the leadership programmes, to develop their ethical behaviours and culture of ethics. More than 1,600 leaders have been trained since the launch of the leadership programmes and we will continue to focus on these trainings in 2021.

In 2020, 126 suspected violations of Our Code and our policies were reported to the Compliance and Ethics Office. Following investigation, 25 of these reports were substantiated, and disciplinary actions were taken in 22 cases, including employee dismissals and termination of supplier contracts. Regular compliance risk assessments allow us to identify and understand the main risk fields to which we are exposed and the high-risk areas. These assessments also serve as the basis for identifying the appropriate improvement and mitigation measures and to ensure that our Programme is customised to address the areas where our main risks are to be found. From a continuous improvement point of view, our main focus in 2020 was our Data Protection compliance efforts.

Sustainability ratings
Volvo Cars acknowledges that external third-party validation of our sustainability performance is essential to gaining credibility and gives both internal and external stakeholders reassurance that our sustainability strategy and our ambitions support global goals, such as the UN SDGs and the Paris Agreement.

We actively engage with S&P Global SAM's Corporate Sustainability Assessment (CSA) and achieved a score of 71 in this year's assessment, giving us a percentile ranking of 87.

Also, we report to EcoVadis where we received a Platinum rating for 2020. This puts us in the top 1 percent in our industry.

Sustainability Scorecard

ECONOMIC DIMENSION

	2020	2019	2018	2017	2016
Retail sales (vehicles)	661,713	705,452	642,253	571,577	534,332
Manufactured vehicles[1]	658,525	705,036	667,754	602,164	533,039
Revenue (MSEK)	262,833	274,117	252,653	208,646	180,902

1) Factory completed vehicles.

ENVIRONMENTAL DIMENSION

Carbon Footprint[1] (t CO_2e)		2020	2019	2018
Total emissions		34,282,000	38,656,000	37,055,000
Total emissions per vehicle[2]		52.1 (–6.2%)[3]	54.8 (–1.2%)[3]	55.5
Scope 1 (Direct GHG emissions)	Company facilities	75,000	85,000	81,000
	Company vehicles	9,000	12,000	12,000
	Total	**84,000**	**97,000**	**93,000**
Scope 2 (Indirect GHG emissions)	Purchased electricity, steam, heating and cooling for own use	101,000	132,000	96,000
	Total	**101,000**	**132,000**	**96,000**
Scope 3 (Upstream indirect GHG emissions)	Purchased goods and services	11,370,000	11,640,000	10,722,000
	Transportation and distribution	639,000	680,000	596,000
	Waste generated in operations	7,000	7,000	7,000
	Business travel	15,000	75,000	100,000
	Employee commuting	40,000	70,000	70,000
	Leased assets upstream	19,000	14,000	0
	Total	**12,090,000**	**12,486,000**	**11,495,000**
Scope 3 (Downstream indirect GHG emissions)	Transportation and distribution	291,000	282,000	346,000
	Use of sold products	20,477,000	24,339,000	23,787,000
	Leased assets downstream	4,000	4,000	4,000
	End of life treatment of sold products	397,000	418,000	384,000
	Retailers	838,000	898,000	850,000
	Total	**22,007,000**	**25,876,000**	**25,317,000**
Tailpipe emissions per car[2]		31.1 (–12.7%)[3]	34.5 (–3.1%)[3]	35.6
Supply chain emissions per car[2]		17.3 (7.5%)[3]	16.5 (2.8%)[3]	16.1
Operations emissions per car[2]		3.7 (–3.0%)[3]	3.8 (–0.4%)[3]	3.8

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 and energy related activities, Processing of sold products and investments. Due to an updated methodology as well as new input data from an external service provider, the figures for 2018 and 2019 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. GHG emissions from our global offices are reported based on purchased energy and generic emission factors. Where emissions in offices are missing, accessible data is extrapolated to represent global emissions. Emissions are calculated using a market-based methodology.
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 for manufacturing facilities are calculated based on purchased energy and supplier specific emission factors, where such are available. Emissions from global offices as well as Volvo Cars owned warehouses are reported based on purchased energy and generic emission factors. In cases where a location-based approach is taken, the energy mix per location is used. Where emissions from energy in offices is missing, accessible data is extrapolated to represent global emissions. Emissions are calculated using a market-based methodology. If calculated using a location-based methodology, total emissions for purchased electricity, steam, heating and cooling for own use would be 228,000 tons CO_2.
Purchased goods and services: Emissions from purchased materials are derived from material compositions of representative vehicles and CO_2e emission factors from Sphera's LCA modelling software Gabi (including the greenhouse gases CO_2, CH4, N20, HFC, PFC and SF6, among others), multiplied with the global manufactured volume. 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. Emissions from parts packaging for spare parts not captured in the spend-based model is calculated based on kg materials and relevant emissions factors.
Transportation and distribution: GHG emissions from logistics is calculated by including inbound, outbound and parts supply logistics transports managed and paid for by Volvo Cars, as well as emission factors derived from NTM. Radiative forcing is added for air freight.
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 distance reported by our travel agency, as well as emissions factors from NTM. Radiative forcing factor for domestic flights of 1.0; for both continental and intercontinental flights, radiative forcing factor of 2.0 is used. Emissions caused by other modes of business travel are calculated on a spend-based approach, using relevant emissions factors from public sources.
Employee commuting: GHG emissions from employee commuting are based on global commuting distances and patterns for the reported years, based on a simulation conducted with 31,000 employees with travel choice taken into account for the different regions.
Leased assets upstream: Emissions from leased assets upstream includes emissions from the manufacturing plant in Luqiao, China, owned by Geely. Energy used is multiplied with an emission factor per energy type. Volvo Cars' share of Luqiao emissions is calculated based on the total number of produced Volvo cars in Luqiao compared to the total number of cars produced in Luqiao. Emissions from waste generated by the production of Volvo cars is added by categorizing waste volumes into types and treatment methods, as well as using external generic emissions factors from DEFRA.
Use of sold products: Average GHG emissions from use of sold products are based on official data Worldwide Harmonized Light Vehicle Test Procedure (WLTP) of Volvo sold 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 a fair estimate of similar products worldwide. Total GHG emissions from use of produced products are then calculated by applying the CO_2e emissions per km, mentioned above, on 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 behavior 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. Many markets have car variants that are not tested on WLTP. These variants have previous years been assigned a fuel consumption based on a manually selected similar WLTP tested variant. From this year this process have instead been rule-based, automated and applied on all years in this report to ensure consistency.
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 the Battery electric XC40 Recharge carbon footprint study and our global manufactured volume.
Leased assets downstream: Emissions from leased assets downstream is calculated by summarizing the Volvo Cars share of emissions reported by leased spare parts warehouses.
Retailers: GHG emissions caused by retailers are based on financial data of EMEA Volvo Cars retailers and a detailed analysis of seven selected retail sites and their CO_2 per sold car. This is multiplied with total number of sold cars globally.

2) Based on manufactured vehicles.
3) Percentage change versus 2018 baseline year. Note that figures may differ due to rounding.

Manufacturing Operations[1,2]

Energy use (MWh)		2020	2019	2018	2017	2016
Total energy use (direct and indirect)[3]	Europe	647,000	726,500	778,000	770,000	766,000
	Asia	332,000	358,000	400,000	422,000	317,000
	Americas	92,000	131,800	—	—	—
	Total	**1,071,000**	**1,216,300**	**1,178,000**	**1,192,000**	**1,083,000**
Energy use per manufactured vehicle (MWh/vehicle)	Europe	1.5	1.5	1.6	1.6	1.7
	Asia	2.0	2.2	2.3	3.2	4.1
	Americas	4.1	3.8	—	—	—
	Total	**1.7**	**1.8**	**1.8**	**2.0**	**2.0**

Water use, Operations (m³)[4]		2020	2019	2018	2017	2016
Total water use	Europe	655,000	705,000	751,000	756,000	748,000
	Asia	851,000	1,047,000	1,190,000	1,133,000	789,000
	Americas	175,000	312,000	—	—	—
	Total	**1,691,000**	**2,064,000**	**1,941,000**	**1,889,000**	**1,537,000**
Total water use per manufactured vehicle (m³/vehicle)	Europe	1.5	1.5	1.5	1.6	1.6
	Asia	5.0	6.3	6.9	8.7	10.2
	Americas	7.9	9.0	—	—	—
	Total	**2.7**	**3.0**	**2.9**	**3.1**	**2.9**

Waste, Operations (tonnes)		2020	2019	2018	2017	2016
Hazardous waste	Europe	13,800	17,500	17,900	13,300	10,500
	Asia	1,600	2,100	2,700	2,300	1,500
	Americas	15	20	—	—	—
	Total	**15,415**	**19,620**	**20,600**	**15,600**	**12,000**
Metal[5]	Europe	135,000	153,100	166,000	163,000	165,000
	Asia	68,000	67,400	72,000	58,000	37,000
	Americas	6,700	11,400	—	—	—
	Total	**209,700**	**231,900**	**238,000**	**221,000**	**202,000**
Non-hazardous waste (including metal)	Europe	220,300	232,000	235,000	228,000	212,000
	Asia	54,600	61,500	68,500	52,500	27,700
	Americas	5,500	9,300	—	—	—
	Total	**280,400**	**302,800**	**303,500**	**280,500**	**239,700**
Total waste	Europe	234,100	249,500	252,900	241,300	222,500
	Asia	56,200	63,600	71,200	54,800	29,200
	Americas	5,515	9,320	—	—	—
	Total	**295,815**	**322,420**	**324,100**	**296,100**	**251,700**
Total waste per manufactured vehicle (kg/vehicle)	Europe	531	514	515	511	489
	Asia	332	386	412	421	376
	Americas	250	264	—	—	—
	Total	**468**	**471**	**488**	**492**	**472**

1) Data for the year 2019 is based on 1 dec 2018 to 30 Nov 2019, except the data for Americas that is 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). The Volvo Cars facilities included in the data for US is Volvo Cars Charleston Plant (Charleston, South Carolina, USA), first reporting year 2019. Data for Volvo Cars Floby (Floby, Sweden) is included up to 2015. The Volvo Cars facilities included in APAC 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).
3) Direct = energy produced on site for own consumption. Indirect = purchased electricity and heating.
4) 2019 was the first year Volvo Cars started reporting figures for Americas. The figures exclude water used for cooling.
5) 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, APAC resp. US 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 which means that they get more metal scrap than an ordinary car factory.

Emissions, Other		2020	2019	2018	2017	2016
CO_2 emissions of products – EU fleet average (CO_2 g/km)	NEDC	111	132	133	125	121
	WLTP	130	157	—	—	—
Electrified vehicles sold[1] – accumulated figures		265,091	149,655	103,722	68,936	46,129
Electrified vehicles sold[1] – percentage of sales		17%	7%	6%	4%	4%
Fully electric vehicles (BEVs) sold – percentage of sales		0.7%	—	—	—	—
SBTi target[2] follow-up – Scope 1 and 2 (vs 2019 baseline)		–19.2%	Baseline	—	—	—
SBTi target[3] follow-up – Scope 3 Use of sold products (vs 2019 baseline)		–5.2%	Baseline	—	—	—

1) Electrified vehicles is defined as plug-in hybrids and fully electric vehicles.
2) Volvo Car Group commits to reduce absolute scope 1 and 2 GHG emissions 60% by 2030 from a 2019 base year.
3) Volvo Car Group commits to reduce scope 3 GHG emissions from use of sold products 52% per vehicle kilometer by 2030 from a 2019 base year (this includes Well-to-Tank emissions).

						T8 Twin Engine		BEV
Materials		V60	XC60	XC90	V90	S60	S90L	XC40
Materials breakdown by car model (kg)	Steel and iron	878	905	1,090	875	1,087	1,136	934
	Aluminium	236	266	304	255	295	323	404
	Copper	29	30	34	32	51	59	71
	Magnesium	8	11	10	7	7	10	4
	Other metals	29	28	30	30	26	34	28
	Thermoplastics	232	240	279	239	229	271	246
	Elastomers	59	91	98	75	74	84	73
	Other polymers	64	75	81	89	96	116	90
	Glass and ceramics	55	56	53	59	53	55	49
	Fluids	70	66	89	76	81	82	26
	Others	22	13	16	28	49	53	247
	Grand Total	**1,682**	**1,781**	**2,083**	**1,766**	**2,047**	**2,226**	**2,172**

SUSTAINABILITY SCORECARD

Remanufacturing	2020	2019	2018	2017	2016
Aluminium saved due to remanufacturing (kg)	126,181	143,798	216,472	264,507	292,569
Steel saved due to remanufacturing (kg)	270,606	340,748	424,498	541,548	602,174
CO_2 saved from reuse of aluminium and steel (kg)[1]	4,116,399	3,321,439	4,761,228	5,879,451	6,505,476
Number of remanufactured parts	39,828	49,408	67,276	88,590	90,828

1) The main reason for the increased CO_2 savings is due to changes in the CO_2e emission factors from Sphera's LCA modelling software Gabi.

PEOPLE DIMENSION

Total workforce by employees and supervised workers as per December 31, 2020	Employees	Supervised workers (consultants)	Total
Global Total (FTE)	40,131	3,332	43,463

Total number of employees by employment contract and gender as per December 31, 2020[1]	Women	Men
Permanent contract	24%	76%
Temporary contract	37%	63%
Total	**24%**	**76%**

1) The main employment form within Volvo Cars is permanent employment, 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, 2020	Board Members[1]		Executive Management Team		All other permanent contract employees[2]	
	Women	Men	Women	Men	Women	Men
<25	—	—	—	—	23%	77%
25–29	—	—	—	—	25%	75%
30–34	—	—	—	—	25%	75%
35–39	—	—	—	—	25%	75%
40–44	—	—	—	—	28%	72%
45–49	—	—	10%	20%	23%	77%
50–54	—	20%	10%	20%	23%	77%
55–59	—	20%	10%	10%	20%	80%
60–65	20%	30%	—	10%	16%	84%
>65	10%	—	—	10%	11%	89%
Total	**30%**	**70%**	**30%**	**70%**	**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	2020	2019	2018	2017	2016
Women in leading positions[1]	28.3%[2]	28.3%[2] (29.1%)	29.3%	28.0%	26.2%
Internationally diverse leaders	34.0%	34.0%	33.0%	28.0%	27.0%
50/50 in external recruitment and internal promotion	29.4%	—	—	—	—

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	2020	2019	2018	2017	2016
Injury rate (LTCR)[1] – employees	0.10	0.13	0.24	0.19	0.22
Injury rate (LTCR)[1] – supervised contractors	0.20	0.11	0.47	—	—
Fatalities[2]	0	1	0	0	0
Sick leave – employees[3]	4.3%	4.2%	4.3%	4.5%	4.8%

1) LTCR is defined as the number of work and 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) 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.
3) 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 52–54, as well as in the The World Around Us and Our Strategic Framework chapters pages 14–25. The publication year of all GRI standards used for this report is 2016, unless otherwise stated.

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		2–3, 10–13, 47–51
102-3	Location of headquarters		39
102-4	Location of operations		39
102-5	Ownership and legal form		47
102-6	Markets served		39
102-7	Scale of the organisation		5, 39, 48, 51, 61–66, 73
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.	73, 142
102-9	Supply chain		136–138
102-10	Significant changes to the organisation and its supply chain		58
102-11	Precautionary principle or approach		124
102-12	External initiatives		124, 136
102-13	Membership of associations		124, 130, 133, 137
Strategy			
102-14	Statement from senior decision maker		6-7
Ethics and integrity			
102-16	Values, principles, standards and norms of behaviour		23–25, 30-31, 57, 134–136
Governance			
102-18	Governance structure		55-59, 124–125
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.	28–29, 126
102-41	Collective bargaining agreements		135
102-42	Identifying and selecting stakeholders		125–126
102-43	Approach to stakeholder engagement		28–29, 125
102-44	Key topics and concerns raised		28–29, 126–128
Reporting practice			
102-45	Entities included in the consolidated financial statements		67, 114–115
102-46	Defining report content and topic boundaries		125–127
102-47	List of material topics	Also see list of material topics in GRI Index.	126–128
102-48	Restatements of information	Any restatements of information have been included in the footnotes of the Sustainability Scorecard.	139–143
102-49	Changes in reporting	GRI 305-7 Nitrogen Oxides (NOx), Sulphur Oxides (SOx) and other significant air emissions has been removed from the sustainability part as the VOC emissions have been reduced to a level that is not significant and therefore no longer material.	125
102-50	Reporting period		125
102-51	Date of most recent report		125
102-52	Reporting cycle		125
102-53	Contact point for questions regarding the report		151
102-54	Claims of reporting in accordance with the GRI Standards		58
102-56	External assurance		147

MATERIAL TOPICS

Number of disclosure	Disclosure	Comments/Omissions	Page number(s)
Anti-corruption			
103-1 – 103-3	Management approach		57, 138
205-3	Confirmed incidents of corruption and actions taken	Possible corruption incidents are included in the reported Code of Conduct violations.	138
Materials			
103-1 – 103-3	Management approach		133
301-2	Recycled input materials used	We only report on remanufacturing as other data is currently not available.	141–142
Energy			
103-1 – 103-3	Management approach		129–132
302-1	Energy consumption within the organisation		140
302-3	Energy intensity		140
Emissions			
103-1 – 103-3	Management approach		129–132
305-1	Direct (Scope 1) GHG emissions		139
305-2	Energy indirect (Scope 2) GHG emissions		139
305-3	Other indirect (Scope 3) GHG emissions		139–140
305-4	GHG emissions intensity		139–140
Own disclosure/KPI	Electrified vehicle sales		141
Own disclosure/KPI	EU fleet average		141
Waste (2020)			
103-1 – 103-3	Management approach		133–134
306-1 – 306-2	Management approach (topic specific)		133–134
306-3	Waste generated		140–141
Occupational health and safety (2018)			
103-1 – 103-3	Management approach		134–137
403-1 – 403-7	Management approach (topic specific)		134–137
403-9	Work-related injuries	[1] Figures are presented on an aggregated level for all work-related injuries. Data not available for high-consequence work-related injuries. [2] Data not available for main type of injuries.	134–137, 143
Diversity and equal opportunity			
103-1 – 103-3	Management approach		134–135
405-1	Diversity of governance bodies and employees		142
Supplier social assessment and supplier environmental assessment (Responsible Sourcing)			
103-1 – 103-3	Management approach		136–138
308-1	New suppliers that were screened using environmental criteria		136–137
414-1	New suppliers that were screened using social criteria		136–137

TCFD Index

For 2020, we have integrated the recommendations from the Task force on Climate-related Financial Disclosures (TCFD) into the annual report. The table below includes the TCFD recommendations and references to where to find the information in this report.

Key elements of TCFD	TCFD disclosure	Page number(s)
Governance		
Disclose the organisation's governance around climate-related risks and opportunities.	a) Describe the Board's oversight of climate-related risks and opportunities.	52-54 124-128
	b) Describe the Management's role in assessing and managing climate-related risks and opportunities.	52-54 124-128
Strategy		
Disclosure of actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy and financial planning where such information is material.	a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium and long-term.	52-54 124-128
	b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy and financial planning.	24 52-54 124-128
	c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	124-128
Risk management system		
Disclose how the organisation identifies, assesses and manages climate-related risks.	a) Describe the organisation's processes for identifying and assessing climate-related risks.	52-54
	b) Describe the organisation's processes for managing climate-related risks.	52-54
	c) Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organisation's overall risk management.	52-54
Metrics and targets		
Disclose the metrics and targets used to assess and manage climate-related risks and opportunities in line with its strategy where such information is material.	a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.	124-128
	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	139-140
	c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.	124-128

Auditor's Limited Assurance Report on Volvo Cars' Sustainability Report and statement regarding the Statutory Sustainability Report

To Volvo Car AB (publ.), corporate identity number 556810–8988

Introduction
We have been engaged by the Board of Directors of of Volvo Car AB (publ.) ("Volvo Cars") to undertake a limited assurance engagement of the Volvo Cars Sustainability Report for the year 2020. The Company has defined the scope of the Sustainability Report and the Statutory Sustainability Report on page 125.

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 125 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 Cars 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 18 March 2021

Deloitte AB

Jan Nilsson
Authorized Public Accountant

Lennart Nordqvist
Expert Member of FAR

Green Financing Report

Introduction

On October 7th, 2020, Volvo Car AB (publ.) ("Volvo Cars") issued its first green bond to finance the design, development and manufacturing of Zero Emission Vehicles, that is Battery Electric Vehicles (BEVs). The transaction is supporting Volvo Cars' sustainability strategy and longer ambition to be a climate neutral company by 2040. Several actions will be taken to reach that ambition: reducing the lifecycle carbon footprint per car by 40 per cent between 2018 and 2025 is one of them. Reducing tailpipe emissions by 50 per cent will be a large part of the delivery and to achieve this, Volvo Cars is aiming for 50 per cent of its sales to come from BEVs by 2025.

We have the ambition to be a climate neutral company by 2040, in line with the 2015 Paris Agreement which seeks to limit global warming to 1.5°C above pre-industrial levels 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.

The Green Financing Framework

The issuance of the Green Financing Framework is part of Volvo Cars' sustainability strategy. Its deliverables strengthens the company's focus on contributing to positive environmental impacts and more specifically on clean transportation, Zero Emission Vehicles. Volvo Cars' belief is that the transition to BEVs is part of the solution towards a sustainable society, which is also one of the cornerstones in the company's overall purpose: providing Freedom to move in a personal, sustainable and safe way. The Green Financing Framework is aligned with both the ICMA Green Bond Principles (GBP) and the LMA Green Loan Principles (GLP).

Cicero have provided a Second Party Opinion with a Dark Green shading of Volvo Cars' Green Financing Framework. Included in the overall shading is an assessment of the governance structure which is rated excellent. Deloitte has performed a limited assurance of the Green Financing Report, including the allocation and impact reporting, in line with ISAE 3000, see page 149 for the Limited Assurance Report.

For more information about the Green Financing Framework and Cicero's statement, please see https://investors.volvocars.com/en/debt-information/green-financing.

Terms and conditions of the bond

The bond of MEUR 500 has a tenor of seven years and a fixed coupon rate of 2.50 per cent. The bond is listed on the Luxemburg Stock Exchange.

Allocation Report

The total amount of net proceeds from the issuance of the Green Financing Instrument, was used to finance and refinance, in whole or in part, new or existing projects, assets and activities such as; new electric powertrain and platform technology for Zero Emission Vehicles, increased BEV production capacity and battery assembly, and investment into Polestar, all according to the Eligibility Criteria ("Eligible Green Projects") outlined in the Green Financing Framework.

Use of proceeds

December 31, 2020	MEUR
Total amount of green bond issued	500
Total amount used [1]	500
Net proceeds used for refinancing [1]	95.6%
Net proceeds used for financing	4.4%
Total amount of unallocated proceeds invested in cash and/or cash equivalents	0

1) 31.2 per cent was invested in Polestar. Volvo Cars owns 50 per cent in Polestar.

Impact Report

The environmental impacts and benefits of the Eligible Category Clean Transportation are evaluated with regards to the following impact indicators:

Indicator	Performance
Number of BEVs sold	4,659
Percentage of BEV cars sold in the overall fleet mix	0.7%
Absolute CO_2 tailpipe emissions avoided [1]	0.15 million tonnes
Percentage reduction in CO_2 tailpipe emissions per vehicle [2]	12.7%

1) Absolute CO_2 tailpipe emissions avoided is calculated by multiplying number of sold BEVs with the global average CO_2 emissions (WLTP) for all cars sold in 2020 excluding BEVs. For calculation purposes an assumed average mileage of 200,000 km per car has been applied.
2) Percentage reduction in CO_2 tailpipe emissions per vehicle is based on the average tailpipe emissions for all cars sold in 2020 compared to the baseline year 2018. For further calculation methodology applied, see page 139-140 regarding use of sold products.

2020 was the year that the XC40 recharge, Volvo Cars' first fully electric car, was available to our customers. The percentage of BEV cars sold in the overall fleet mix is in line with expectations for 2020. However, our ambition is that 50 per cent of Volvo Cars' sales should come from BEVs by 2025.

ESG aspects

Volvo Cars' ambition is to enable consumers to move and travel in a sustainable way, and we are aware that electric vehicles have environmental and social impact. An ESG assessment of potential controversies was performed regarding our transformation towards electrification. The battery production is a focus area of ours. For more detail see Sustainability Information, Performance 2020 (page 129 and onwards) and more specifically the Lifecycle Performance of Our Products (page 129) and Supply of Minerals and Metals (page 137).

Measure methodology

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. For more information on the reporting methodology and the assumptions applied, see page 140.

Auditor's Limited Assurance Report on Volvo Cars' Green Financing Report

To Volvo Car AB (publ.), corporate identity number 556810–8988

Introduction

We have been engaged by Volvo Car AB (publ.) ("Volvo Cars") to undertake a limited assurance engagement of the Green Financing Report ("Reporting") for the year 2020 set out on page 148.

Responsibilities of Management

Volvo Cars Management is responsible for the preparation of the Reporting in accordance with the applicable criteria, as explained in the Volvo Cars Green Financing Framework (available at https://investors.volvocars.com/en/debt-information/green-financing) 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 the Reporting 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 Reporting based on the limited assurance procedures we have performed. 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 Reporting, and applying analytical and other limited assurance procedures. The procedures performed in a limited assurance engagement vary in nature from, and are less in extent than for, a reasonable assurance engagement conducted in accordance with International Standards on Auditing and other 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 Cars in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements.

The procedures performed consequently do not enable us to obtain assurance that we would become aware of all significant matters that might be identified in a reasonable assurance engagement.

Accordingly, the conclusion of the procedures performed do not express a reasonable assurance conclusion.

Our procedures are based on the criteria defined by Volvo Cars Management as described above. We consider these criteria suitable for the preparation of the Reporting.

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 Reporting for the year 2020, is not prepared, in all material respects, in accordance with the applicable criteria, as explained in the Volvo Cars Green Financing Framework.

Göteborg 18 March 2021

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

The sales of Volvo 740 and 760 was a great success

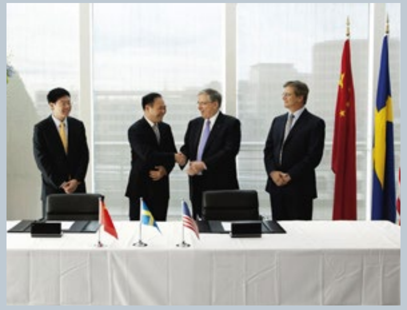
90's

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

2014

First car developed on the SPA platform unveiled – the all-new XC90

2016

Volvo Cars accessed the capital market

2017

Electrification strategy announced

2013

Industrial entities in China established

2018

First US manufacturing plant inaugurated

2020

First fully electric car launched – the XC40 Recharge

DEFINITIONS

Volvo Car Group / Volvo Cars
Any of the expressions refers to Volvo Car AB (publ.), Volvo Car Corporation including all its subsidiaries.

Associated companies
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.

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 refer to sales to end customers (including a portion of cars used as customer loaner and demo cars) and is a relevant measure of the demand for Volvo cars from an end customer point of view.

Wholesales
Wholesales refer to new car sales to dealers and other customers including rentals.

Europe
Europe is defined as EU+EFTA+UK.

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.

Rechargeable vehicles
Rechargeable vehicles are electrified vehicles and 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.

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