



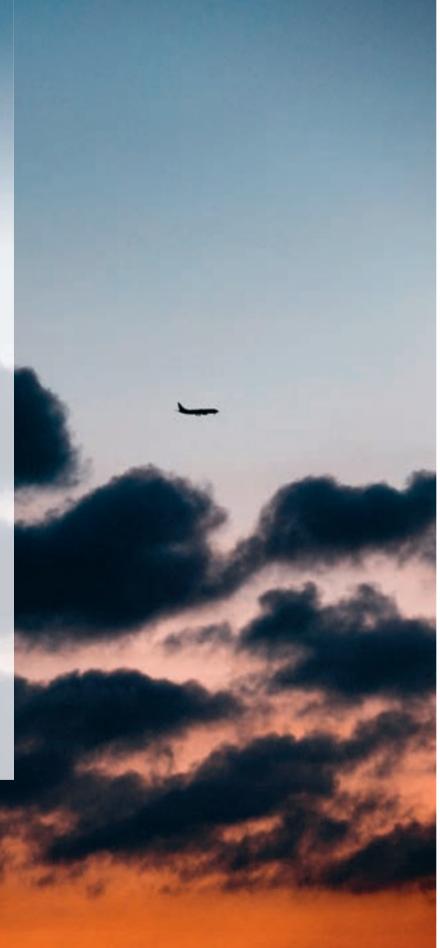








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LFV IS RESPONSIBLE FOR AIR TRAFFIC SERVICES FOR CIVIL AND MILITARY AVIATION

LFV is a state-owned enterprise that must provide a safe, efficient, and environmentally friendly air navigation service for civil and military aviation. LFV must also work to achieve the transport policy goals.

LFV is Sweden's leading provider of air traffic control and associated services for civil and military aviation. In a normal year, we manage around 2,000 aircrafts within Swedish airspace on a daily basis. In 2020, LFV in Sweden operated air traffic services at 17 airports from Kiruna in the north to Malmö in the south and four control centres. With around 1,100 employees, ongoing aviation safety work is carried out at all levels with LFV to maintain one of the world's highest levels of aviation safety and ensuring safe travel in Swedish airspace.

OPERATIONS

LFV operates nationally and internationally with four main areas of operation: air navigation services, other commercial activities, total defence and robust air navigation services, as well as research and innovation. 87 percent (89) of turnover are attributable to air navigation services, which include air traffic control and technical services at airports. Air navigation services are largely financed by En Route and terminal fees, which are regulated by performance plans established by the EU. The EU also decides on aviation safety, capacity, environmental and cost-efficiency goals.

LFV has block grants for special mission regarding total defence and robust air traffic service on standby. The grant is used for measures for emergency preparedness and civil defence and for investments in certain infrastructure, as well as for providing a robust air traffic service in accordance with the requirements imposed on LFV in all emergency situations – war included.

BUSINESS MODEL

The LFV Group consists of the state-owned enterprise, the wholly owned holding company LFV Holding AB, and the subsidiaries LFV Aviation Consulting AB, Aviseq Critical Communications AB (AVISEQ) and LFV Norway AS, as well as the associated companies Entry Point North AB (EPN) and Saab Digital Air Traffic Solutions AB (SDATS).

LFV Aviation Consulting AB is responsible for LFV's international consulting services in civil aviation. LFV Norway AS was formed in 2015 for the Norwegian market, but is dormant. AVISEQ was acquired in April 2020 and consists of the former Aviation & Security business area within the Eltel Group. They operate in critical communication and deliver services in aviation and security throughout Sweden, where LFV is the largest customer. LFV is a partner together with Danish Naviair and the Irish IAA in EPN, which delivers training in air navigation services. SDATS is jointly owned with Saab and offers overall solutions in remote air traffic management

through a combination of LFV's operational expertise and Saab's leading technology and global organisation.

CERTIFICATIONS

LFV is certified by the Swedish Transport Agency in accordance with EU regulations regarding the provision of air traffic and air traffic control services as well as the training of air traffic control personnel. LFV is also certified in accordance with the ISO standards relating to quality and environmental management.

ENVIRONMENT

LFV conducts long-term environmental work, both in its own operations by influencing the choice of electricity, heating of properties and by creating good conditions for customers to reduce their environmental impact.

INNOVATION

LFV's research and innovation activities are conducted based on a number of strategic development areas with a focus on future challenges. Research and innovation are conducted in-house, but also within the framework of collaborations with universities, other public authorities and organisations. LFV is involved in projects such as the development of digitisation, drones, electric aircrafts, remote air traffic control, and a modernised airspace.

COLLABORATIONS AND PARTNERSHIPS

LFV is involved in developing European airspace both within Sweden and in Europe through participation in organisations and alliances such as COOPANS, Borealis, and SESAR.





3.3

Turnover 2020 was SEK 3.3 billion. An increase of 7.8% compared to 2019.



785 774



1,142

Number of employees in LFV public enterprise 2020 was 1,142. An increase of 1.69 % compared to 2019.

A YEAR WITH MAJOR IMPACT ON AVIATION

2020 was the year that no one could have imagined. At the beginning of March, we first learned that a pandemic had begun to take hold in Sweden and the consequences of that just kept on coming.

From mid-March, the pandemic had dramatic consequences for travel in general and aviation in particular. Two days after the Ministry for Foreign Affairs' advice on 14 March against non-essential travel to all countries due to the COVID-19 pandemic, SAS decided to pause most of its operations. The crisis was a fact. In the second week of April, the number of movements in Swedish airspace reached its lowest level during the pandemic. After that, it slowly climbed to stabilise at about a third of last year's level.

This, of course, had consequences for our economy. LFV's total result after revaluation of the pension liability is SEK -122 million

With an air traffic at very low levels in the spring and the major uncertainty about what revenue we would receive, we gave notice on April 16 that included about 500 jobs, about 40 percent of the staff. At the end of June, the Sweden Parliament granted us additional appropriations of SEK 900 million for loss of revenue. During the autumn, it became somewhat clearer what revenue we could count on and, at the end of the year, we were able to withdraw the notice; but the risk of redundancies has not been averted as we continue to have large deficits to deal within the coming years.

We made the assessment that the traffic volume in the long run will be lower than before the pandemic and therefore adapted the business through a reduction of about 60 jobs. Following rigorous work, we managed it without having to lay off anyone, which was very gratifying. We also took a number of drastic austerity measures and also initiated extensive change management to adapt the operations to the financial situation that we believe will follow the pandemic.

In March, we began work on dealing with the pandemic, which then resulted in us establishing a team that dealt with the many concrete issues surrounding the pandemic, while Group management focused on working on the serious economic situation caused by the pandemic. Of course, we would have preferred to have gone without the pandemic, but the consequences of it have still given us a lot of experience in how to conduct effective crisis and staff work in the future.

THE AIRSPACE NEEDS TO BE MODERNISED

Swedish airspace is in need of modernisation. In May 2019, LFV presented the Government's assignment to carry out an in-depth study regarding the design of the Swedish airspace, where we identified, among other things, the need for modernisation and that the responsibility for the development of the lower airspace is currently unclear. A continued strong development of drone traffic is expected, which

is another factor that will affect LFV's operations. How the responsibility for handling this traffic is divided and to what extent LFV should engage as a service provider are important issues. Both in terms of airspace and the development of services for drone traffic, the financing of LFV's efforts is a decisive factor.

Development does not stop, despite the pandemic and reduced flying. Aviation infrastructure needs to be maintained at the same high level regardless of how many flights are made and it is necessary for us to invest in the future.

A new primary radar in southern Sweden is just one example of the former. In January 2017, the then Minister of Infrastructure Anna Johansson took the first step in transforming the radar owned by the Swedish Armed Forces into a state-of-the-art facility for civilian use. In spring 2021, the new radar will be put into operation and contribute to increased aviation safety in southern Sweden and across the Baltic Sea.

One investment for the future is RTC Stockholm, the new control centre for remote air traffic control at the four Swedavia airports Kiruna, Umeå, Östersund, and Malmö. When the control centre is put into operation, it is another step in the air navigation service's paradigm shift towards digitised air traffic control.

STRUCTURAL CHANGES TO BE EXPECTED

The sharply reduced traffic and the demands for cost reductions are of course clear to us. There is strong pressure from the industry and the EU Commission to reduce the costs of air navigation services, and all indications are that Sweden and LFV will have additional demands to streamline operations. The deep crisis is expected to lead to major structural changes in the aviation industry with a major impact on air traffic for a long time to come. At the same time, travel habits can change, both as a result of the COVID-19 crisis and based on environmental considerations, with lasting effects on demand.

The security policy situation has gradually worsened, with a stronger focus on defence, infrastructure, and cyber security, which will have a major impact on LFV with responsibility for delivering both civilian and military air navigation services in all emergency situations. The Swedish Armed Forces' and society's demands on the reliability of infrastructure have increased, which is the basis for our work with a robust air traffic service.

With respect to operational staff, it will be a great challenge to balance supply and needs against changes in demand, taking into account future retirements and long lead times in recruitment and training, so that we have the right resources and sufficient capacity both in the short and

The deep crisis is expected to lead to major structural changes in the aviation industry with a significant impact on air traffic for a long time to come.

long term. There are also challenges in the area of technology regarding human resources, where we have had a constant shortage of specific skills for several years.

STRENGTHENED ROLE FOR EUROCONTROL

At European level, there is dissatisfaction with the fact that Single European Sky, the purpose of which is to reform the European air traffic management system, has not led to the expected development towards more efficient aviation.

The EU wants to strengthen the role of Eurocontrol, which coordinates air traffic in Europe. This would mean reduced influence for the Member States and a centralisation and coordination of the infrastructure and information flows in the European air navigation service system. A development where services are centralised and provided by joint suppliers can have a major impact on LFV and Sweden as we have an integrated system for civil and military aviation. Other states have separate systems for their defence. At the same time, there may be opportunities for LFV to, alone or together with others, become a commercial provider of, for example, information services.

A CLEARER ORGANISATION

At the beginning of 2020, an organisational change was initiated within LFV, which had to be paused due to the pandemic, but which for the most part could still be implemented during the financial year. During the spring, the reorganisation will be fully implemented. The purpose of the new organisation is to create a management with more focus on strategic issues.

On 30 April 2020, the acquisition of Eltel Networks Infranet AB's business area Aviation & Security was completed and since then, Aviseq Critical Communication AB has been a wholly owned subsidiary of LFV. The company delivers technical operation and maintenance services to air traffic control centres, airports, national authorities, and companies in Sweden. Changes in the world, resumed total defence, and the new Protective Security Act were important factors when we decided to acquire the business from

Upon reading this, we are well into 2021. Air traffic has most likely not returned to previous levels. Instead, we will see significantly lower volumes for the foreseeable future. Regardless of volume, LFV will continue to be the guarantor of safe and efficient air traffic in Swedish airspace.

Ann Persson Grivas

LFV Director General







THE PAST YEAR IN BRIEF



99.9

Punctuality in 2020 was more than 99.96% in LFV's deliveries.

-57

Air traffic in Swedish airspace decreased by 57% in 2020 compared with 2019.

THE TRAFFIC YEAR 2020

Air traffic fell to very low levels in 2020 due to the pandemic. The year began with marginal reductions compared to 2019, only to drop sharply from March. After all-time lows during the period April – June with volumes that were only between 15 and 22 percent of the volumes in 2019, there was a weak recovery starting from July. Ever since and until the end of the year, the traffic volume stabilised at around 35 percent of the 2019 level.

THE IMPACT OF THE PANDEMIC

The sharp reduction in traffic volumes lead to a significant expected loss of revenue. A sharp reduction in volume together with uncertainties in the regulatory framework concerning En Route and terminal fees led to great uncertainty regarding revenues from civil air traffic. A number of measures were taken in connection herewith.

In mid-March, a recruitment and consultancy freeze was introduced. In April, this was followed by a notice of termination for 500 positions. The notice could be withdrawn in December as a result of the decision in October on the FP3 regulatory framework. However, the financial situation over the coming years remains very strained and therefore the risk of redundancies in the long term is not averted.

FINANCIAL CONTRIBUTION

In June, LFV was allocated appropriations in the form of a contribution of SEK 900 million to cover loss of revenue due to the crisis in the aviation industry.

Linked to the financial contribution, LFV was commissioned by the Government to report on the cost-reducing measures and the change management being carried out in order to adapt the operations in the short and long term to LFV's economic development due to the outbreak of the novel coronavirus. The assignment also included presenting an analysis of the development of civil aviation during the coming three-year period and its effects on LFV's financial development and operations. LFV submitted a partial report on the assignment in August 2020 and a final report in January 2021.

THE EU'S PERFORMANCE PLANS

The EU's performance plans for air navigation service providers have a strong impact on LFV's finances. The goals of the new reference period (RP3) starting on 1 January 2020 should have been adopted in 2020. Due to the pandemic, the process has been delayed. New targets for the period 2020–2024 at EU level will not be prepared until 2021, and final decisions on targets and cost bases for FP3 are expected in early 2022. The pandemic is expected to entail further demands for cost reductions.

AVISEO

On 30 April 2020, the acquisition of Eltel Networks Infranet AB's Aviation & Security business area was concluded. The newly formed company Aviseq Critical Communication AB is a wholly owned subsidiary and part of LFV's enterprise group and LFV is the company's largest customer. The company delivers technical operation and maintenance services to air traffic control centres, airports, national authorities, and companies in Sweden and is thus an important part of aviation infrastructure. The company employs 200 people and has a turnover of around SEK 200 million. Historically, the company's aviation operations date back to the 1950s.

REMOTE AIR TRAFFIC CONTROL

During the year, the work continued in the RTS programme (Remote Tower Services), which will provide remote air traffic control from a control centre at Arlanda to four Swedavia airports. In 2020, image transfer was established between the four airports Kiruna, Umeå, Östersund, and Malmö prior to commissioning, which will commence in 2021. Once fully developed, the control centre at Arlanda, RTC Stockholm, can handle air traffic at 24 airports.

FLIGHT MEASUREMENT ACTIVITIES

In 2019, LFV decided to phase out the flight measurement service. In July 2020, Bromma Air Maintenance AB, BAM, took over the operations. Prior to the handover, LFV ensured that there were conditions for fulfilling commitments in existing contracts.





NEW PRIMARY RADAR

Air traffic control in Malmö has long needed better radar surveillance of parts of the Baltic Sea. A new primary radar in southern Sweden is completed and ready to be commissioned in the spring of 2021.

AIR TRAFFIC CONTROLLER TRAINING

An air traffic controller course was suspended at the end of March due to LFV's difficult financial situation and due to the spread of the coronavirus and the associated restrictions. This meant that, for 28 students, there was a break in training from March until mid-August when training resumed. 22 students graduated from the programme in June.

EU REGULATION 2017/373

EU Regulation 2017/373 aims to coordinate and strengthen the work on how EU air navigation service providers conduct air traffic management. In principle, everything LFV does within the air navigation service is governed by the new regulation, which entered into force on 2 January 2020. At the end of the year, the Swedish Transport Agency issued a certificate to LFV as a provider of air navigation services in accordance with the requirements of Regulation 2017/373.

ROBUST AIR NAVIGATION SERVICE (RF)

Since 2018, LFV has had an assignment to ensure LFV's ability to provide air navigation services regardless of level of preparedness. LFV's programme Robust Air Traffic Service (RF) continued during the year with GAP analyses and capability work, various robust-enhancing measures as well as investments in equipment and facilities for a robust infrastructure. Work in civil defence and other total defence work has also continued

NEW ORGANISATION

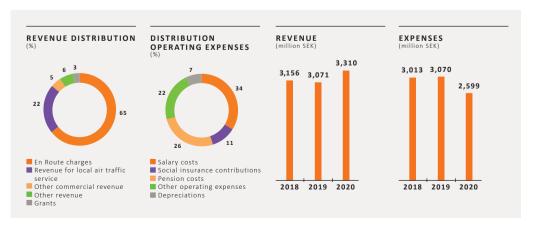
Since 2012, LFV and the Swedish Maritime Administration have operated GSF, Joint Service Functions, for joint management of, among other things, payroll and financial administration as well as receptionist and travel services. In 2020, parts of the GSF were wound up and returned to each respective enterprise. Remaining in GSF, which belongs to LFV, is LFV's own part of the service functions. During the autumn of 2020, a reorganisation of Group functions regarding governing and supporting functions for the Director General was carried out.



The equity/assets ratio was 6% in 2020. A decrease of 2 percentage points compared to 2019.

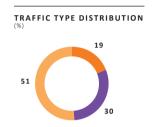
557

The investments in 2020 amounted to SEK 557 million. An increase of 12% compared to 2019.



SIGNIFICANT REDUCTION OF AIR TRAFFIC

Air traffic declined sharply as a result of the COVID-19 pandemic and from mid-March, air traffic was very limited. The number of aircraft movements in Swedish airspace decreased in 2020 by 57 percent and amounted to just under 332,000.



■ Domestic ■ International ■ Transit flights Overflight traffic, without take-off or landing in Sweden, constitutes the largest part of the total traffic volume and decreased sharply as a result of the pandemic by -57.1 percent compared with 2019 traffic. International traffic decreased by 63.9 percent and domestic traffic by 50.9 percent in 2020.

The year began with relatively small decreases during the first two months of the year, which was in line with the development at the end of 2019 and as expected. From mid-March, the pandemic began to hit Europe, which had immediate consequences for European air traffic. Borders were closed and air traffic dropped off sharply. Air traffic volumes were at their lowest in April, with just over 15 percent of the 2019 volumes. After that, traffic has recovered somewhat and was at a level of approximately 35 percent compared to 2019 during the second half of the year.

Likewise, the number of service units has decreased sharply, 56.1 percent. Service units is a unit that consists of a combination of the number of flights, the weight of the aircraft, and the distance flown. Service units is the basis for En Route charges, the fee paid by the airlines that traffic the airspace. Other air navigation service providers, public authorities, and Swedish airports are also financed via En Route charges. Sweden also funds local air navigation services to a greater extent than other countries, using the En Route charge.

AIR TRAFFIC DEVELOPMENT

The aviation industry has been hit hard by the pandemic and faces major challenges. It is not unlikely that the pandemic will be followed by a recession and lower demand for flights, not least among business travellers who have become accustomed to other meeting forms, and that airlines will go bankrupt or restructure, which may further increase development uncertainty. In addition, there is still the issue of aviation and the environment, which is an important factor for development. There is a consensus among assessors that the crisis will be deep and prolonged. However, the assessments differ on how quickly air traffic will recover, up to what levels, and the question is whether there will be as much air traffic in the future.

LONG TERM TREND

The long-term trend in Europe is that traffic on short distances decreases at the rate of the expansion of high-speed trains. At the same time, growth in Asia has a positive effect on the development of the number of overflights, especially in Eastern Europe. Sweden has also been affected by this development in recent decades, as a significant part of Asian traffic affects the south-eastern part of Swedish airspace.



There is much to suggest a continued strong economic development in Asia that affects the development of overflight traffic.

The airlines plan for the shortest route and the lowest fuel consumption. LFV offers airlines direct and efficient routes across Sweden. This, together with a normal congestion in European airspace and a general increase in air traffic globally, suggests that this is a development that will continue. Many airlines are also replacing their aircraft fleets for fewer, larger, and more fuel-efficient aircrafts. This provides the same passenger capacity with fewer aircrafts, which in turn can mean more flights but fewer departures.

THE REGULATORY FRAMEWORKS THAT GOVERN LEV

LFV navigates a large number of complex regulatory frameworks, where both international regulations and conventions as well as national rules, govern and regulate the activities conducted.

LEV AS A PUBLIC AUTHORITY

LFV is one of three state-owned enterprises. The public enterprises, like the administrative authorities, are part of the state and is governed by a number of exemptions from and additions to the regulatory framework that applies to administrative authorities in general. The public enterprises are distinguished above all by the fact that they engage in commercial activities and have greater financial independence than the administrative authorities. Unlike other national authorities, LFV may, following approval by the Government, form companies.

LFV must comply with both national procurement rules and the EU acquis on competition and state aid.

LFV - PROVIDER OF AIR TRAFFIC SERVICES

Aviation safety is of key importance to LFV's operations. Air traffic is by its nature not bound by national borders but moves without physical barriers between nations and continents. However, national borders are also present in the airspace above land borders. To facilitate air traffic, global coordination and control of air traffic services was created early on. In 1946, Sweden ratified the Chicago Convention, which constitutes the foundation for ICAO (International Civil Aviation Organization). The countries that sign the Convention become members of ICAO. The Chicago Convention regulates the rights and obligations of the Member States, rules for the implementation of international standards and recommendations of a technical and aeronautical nature. ICAO adopts standards and recommendations to guide Member States in designing statutes. The purpose is to ensure conformity between national regulations and international standards. ICAO issues standards and recommendations as annexes to the Chicago Convention.

The EU governs LFV's activities through regulations and directives in the field of air navigation services. EU regulations are directly applicable as law while directives must be implemented through national legislation that must meet the requirements set out in the directive. Most of the Swedish laws, ordinances and regulations that regulate the air navigation service are based on EU legislation.

According to the Framework Regulation 549/2004 for the creation of a Single European Sky, the application of the Regulation shall not affect the sovereignty of the Member States over their airspace or the requirements of the Member States with regard to public policy or security as well as defence matters. However, other airspace issues are within the EU's mandate to decide on. For example, the EU has adopted a common system for the certification of air navigation service providers (Regulation 550/2004 on the provision of air navigation services in the single European

sky). To be certified, the requirements set out in Regulation 2017/373 must be met. LFV is a certified air navigation service provider in accordance with these regulations.

LFV receives a large part of its revenues from airspace users according to the performance and charging scheme regulated in EU Regulation 2019/317. In the wake of the pandemic, however, this regulatory framework has been partially sidelined. When the Regulation was adopted, no one could predict the significant variations in the number of airspace movements seen in 2020 compared with the previous year. Against this background, a new temporary regulatory framework has been developed and adopted in mid-October 2020, which means, among other things, that the fees for 2020 and 2021 will be regulated separately.

CIVIL-MILITARY INTEGRATION

LFV's operations are civil-military integrated and LFV is the sole provider of air traffic services to the Swedish Armed Forces in all emergency situations and to the state-owned airport company Swedavia. LFV is also a designated authority, meaning that LFV, together with other such authorities, has a special responsibility for emergency preparedness in Sweden.

LFV must therefore comply with several national laws, ordinances, and regulations that regulate total defence as well as regulations that govern crisis and emergency preparedness issues. In light of LFV's role in Sweden's total defence LFV imposes high protective security and information security requirements on both its own operations and on subcontractors. A new Protective Security Act became effective in 2019. It places high demands on LFV as the activities are important to Sweden's security, not least as LFV is the exclusive supplier for the Swedish Armed Forces.

ANSWERED REFERRALS 2020

LFV shall, in its capacity as administrative authority, respond to Government referrals. Referrals from other public authorities, EU bodies, etc., LFV can choose to answer, in order to participate and influence the development of regulations in the area. These referrals are processed by the unit mainly affected by the referral. In 2020, LFV answered about 50 referrals in a number of different areas.

Most of the Swedish laws, ordinances and regulations that regulate the air navigation service are based on EU legislation.

THE PERFORMANCE PLANS GUIDE OUR GOALS

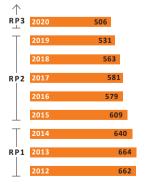
Within the EU, there is extensive regulation of air navigation services. The EU also sets targets for aviation safety, capacity, the environment, and cost-efficiency through five-year performance plans.

EN ROUTE CHARGES 2020 SELECTION OF EUROPEAN COUNTRIES

(EUR / service unit)



ROUTE CHARGES SWEDEN (SEK/ service unit)



The EU's regulation of air navigation services includes, **inter alia**, certification requirements, requirements for technical harmonisation, and the formation of cross-border functional airspace blocks. The European Commission also adopts so-called performance plans with goals for aviation safety, capacity, environment, and cost-efficiency. EU performance plans aim to:

- maintain or improve aviation safety regardless of traffic increases
- · reduce the environmental impact of each flight
- · increase airspace capacity and reduce delays,
- · lower the cost of air traffic control

For Sweden, the goals include En Route and the terminal service at Stockholm Arlanda Airport. For the first reference period, RP1 2012–2014, LFV achieved all goals. For the second reference period, RP2 2015–2019, LFV achieved most goals. Updated feedback on goal fulfilment can be found on pages 55–56.

REFERENCE PERIOD 3

2020 was the first year of the third reference period, RP3. At the beginning of 2020, proposals for decisions regarding performance plans were presented by the European Commission. Sweden and most other states were not proposed to be approved because the plans were not considered to contribute sufficiently to the targets for cost-efficiency.

When the COVID-19 pandemic proved to be a major blow to aviation, the EU launched a review of the RP3 regulatory framework. After various proposals had been submitted for consultation, and after several attempts at decisions in the Single Sky Committee, the EU Appeal Committee decided in October 2020 on a regulatory framework to deal with the situation, EU 2020/1627 (exceptional measures for the third reference period (2020-2024) of the Single European Sky performance and charging scheme due to the COVID-19 pandemic). This regulatory framework means that new EU targets will be prepared and adopted in the spring of 2021, after which revised performance plans shall be sent to the EU in October 2021 and adopted at the beginning of 2022.

In the new plans, the years 2020 and 2021 shall be combined and considered a unit regarding costs and fees. The cost target for these years must take into account actual costs. As the new plan is based on new traffic forecasts and cost bases, the traffic risk sharing will have a limited impact during the beginning of the reference period, the years 2020–2021. Providers of air navigation services shall also provide a special report on the measures taken in connection with the pandemic.

New preliminary data for FP3 was submitted to the Swedish Transport Agency in autumn 2020 and LFV participated

during the year in the consultations organised by the Swedish Transport Agency. Targets for FP3, i.e. for 2020–2024, are thus not yet prepared or adopted. However, the development during 2020 within each target area is briefly commented on in the following.

AVIATION SAFETY

During the third reference period, the aviation safety goals will be followed up through surveys where the safety management system is followed up based on aviation safety culture and other parts of the aviation safety system. The survey on the proposed targets for RP3 has been received, but reporting will not be done until spring 2021 and outcomes will be reported to the EU on 1 June 2021, why there is no outcome to report.

ENVIRONMENT

The KPI regarding the environment has also had a outcome well below previous years due to the low air traffic. The environmental goal is measured as discrepancy between the most direct flight path and actual distance flown. The outcome in 2020 was 1.03 percent (outcome 2019 1.25).

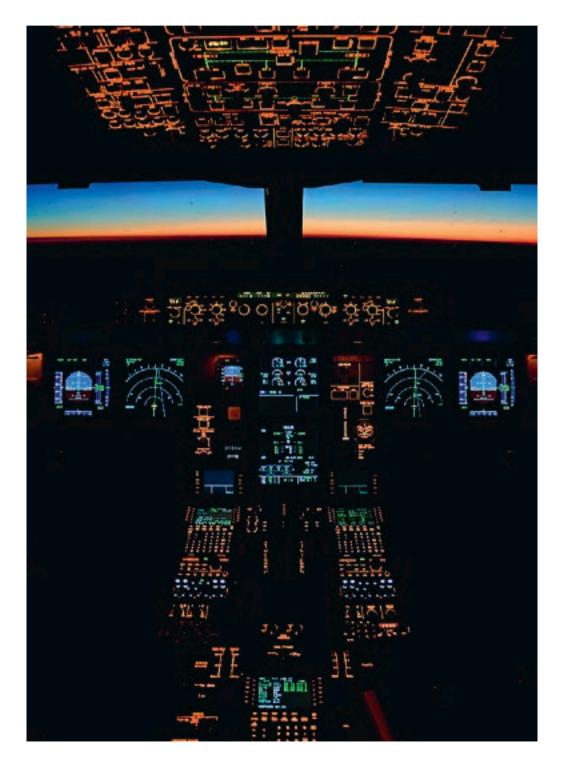
CAPACITY

Due to the low traffic volume during the year, it has been possible to operate air traffic with high availability. 99.96 percent of the flights En Route in Swedish airspace in 2020 could be completed without any delays caused by the air navigation service. The capacity for terminal Arlanda was also at a high level in 2020. The average delay in Swedish airspace was 0.01 (0.07) minutes per flight.

COST EFFICIENCY

The system regulates En Route and terminal fees at Stockholm Arlanda Airport. In total, these fees account for approximately 70 percent of LFV's turnover. In addition to the En Route air navigation service performed at the control centres and associated infrastructure, the En Route charges fund, among other things, a flight information service and a significant part of the local air navigation service performed from the airports' control towers and terminal controls.

As a result of reduced interest rates, the pension liability and costs have increased sharply in 2020. This is partly offset by the cost reductions implemented due to the COVID-19 crisis. LFV's assignment is to maintain an infrastructure and availability in the airspace, and the possibilities of adapting costs to fluctuations in air traffic volume in the short term are very limited.



0.01

The average delay in Swedish airspace amounted to 0.01 (0.07) minutes per flight.

FOUR PERSPECTIVES AND TEN MAIN GOALS

The follow-up of goals and results during the year was affected as a result of the change in air traffic and the opportunities to carry out activities due to the COVID-19 pandemic. The daily monitoring during the year has, however, largely followed normal procedures.



Operational activities were greatly affected by the COVID-19 pandemic. The air traffic that occurred was generally handled without any delays and all targets linked to delays and environmental efficiency were achieved by a margin.

BUSINESS PLAN 2020-2024

LFV has an overall business plan with main goals, sub-goals, and activities. Each unit has a business plan that supports the overall goals. Relevant KPI:s are followed up on a monthly basis, and outcomes and completed activities to achieve the goals are reported quarterly.

Normally, goals and activities are linked to the five-year reference periods adopted by the European Commission and the goals set by the Government for the activities. The European Commission has not yet decided on any goals for the 2020 reference period—2024 (RP3).

COMMENTS ON THE MAIN GOALS OF THE FOUR PERSPECTIVES

Customer and sales

The focus on the commercial business internationally is in LFV's associated companies: Entry Point North AB and Saab Digital Air Traffic Solutions AB. During the previous year, a decision was made not to actively process the international market via the subsidiary LFV Aviation Consulting AB. The operational units are responsible for sales and delivery nationally

During the year, the subsidiary AVISEQ (former business area Aviation & Security within the Eltel Group) was acquired. AVISEQ operates in critical communication and delivers monitoring and technical maintenance services in aviation and security to control centres, airports, national authorities, and companies in Sweden.

Culture and employees

The perspective Culture and employees was particularly challenged during the year due to the pandemic. This entailed new requirements and adjustments for the entire organisation. Adjustments of workplaces, restrictions regarding, for example, access to premises, visitors and travel, transition to digital meetings and to working remotely as much as possible. Managers and employees worked to ensure a contamination-free working environment. Maintaining and developing skills continued to be important but also challenging given the ongoing pandemic.

During spring, LFV was forced to give notice of redundancies due to financial consequences as a result of the pandemic. Redundancy could be handled through preventive measures and no employees had to be terminated. The notice was withdrawn in December 2020.

During the year, a project on a culture of justice, Just Culture, was launched, which is a very important part of LFV's aviation safety culture. The purpose of the project was to analyse, evaluate, strengthen, and follow up the just and safety culture within LFV in order to maintain a high level of aviation safety.

Operations and delivery

The aviation industry and LFV's operations have been characterised by low traffic volumes during the year as a result of the pandemic.

The aviation safety situation is good and all aviation safety goals have been achieved. The air traffic that has occurred has generally been handled without any delays and all targets linked to delays and environmental efficiency are achieved by a margin. The KPI:s regarding productivity are affected in the opposite way and the goals have not been achieved with the current traffic volumes.

Since 2 January 2020, all air navigation service providers in Europe have a new regulatory framework to comply with. Basically everything done in air navigation services and air traffic management services is governed by Regulation (EU) 2017/373. The regulation aims to coordinate and strengthen the work on how EU air navigation and air traffic management service providers shall perform their services. Intensive work was carried out during the year to ensure that LFV complied with the requirements of the Regulation, and LFV received the required certification from the Swedish Transport Agency.

During the year, work began on developing the efficiency of the upper airspace. The development work aims to reduce the environmental impact of aviation and increase productivity in air navigation services.

Since 1 September 2020, the responsibility for LFV's total defence issues and the work with robust air traffic services has been organised and gathered in a new unit. This, together with other measures, aims to improve governance and follow-up, coordinate and ensure the implementation of these tasks.

Investments amount to SEK 557 million, of which new investments SEK 529 million and maintenance of existing investments SEK 28 million. Of the new investments, SEK 236 million are in the Total defence and Robust Air Traffic Services business area. The outcome is higher than last year, but lower than budget. Explanations for why delays occur include, for the total project activity, in addition to the effects of restrictions and delays from suppliers due to the pandemic, a lack of resources and insufficient internal control. Therefore, a new portfolio management process was introduced during the year, and a number of other improvement activities were undertaken within the scope of the project.

Finances

Over time, LFV will increase cost efficiency to meet the requirements set both by the EU, within the framework of the performance plan system, and the customers, as well

MAIN GOALS 2020 **CUSTOMER AND** LFV's brand shall be perceived as attractive and interesting by customers, SALES stakeholders, and potential employees. LFV shall deliver attractive and profitable products and services to regulated operations as well as subsidiaries and, subject to resource availability, to other national airports. With aviation safety as a foundation, LFV shall have leadership and employeeship characterised by customer focus and commercial conduct. LFV shall be an attractive employer where employees' skills are developed **CULTURE AND** based on customer and stakeholder needs. **EMPLOYEES** LFV shall work proactively to continuously develop aviation safety. LFV shall maintain goals from the EU's performance plan regarding delays. **OPERATIONS** LFV will contribute to developing air navigation services and airspace to reduce AND DELIVERY aviation emissions, use energy-efficient solutions in our facilities and, as an employee, act to reduce the environmental impact of the operations. LFV shall strengthen its competitiveness by improving working methods, processes, and innovation capacity. LFV shall plan for its emergency preparedness within the framework of civil defence and deliver air navigation services in all emergency situations. FINANCES LFV must meet the owner's financial goals.



During the year, work began on developing the efficiency of the upper airspace.

as through the Government's financial goals in accordance with annual appropriation directions. As targets for RP3 have not been set by the EU due to the pandemic, there is no target for 2020.

The Government's goal is for the return on equity to amount to 4 percent over an economic cycle and for the long-term equity/assets ratio to be at least 15 percent. The Government's goal was not attained in 2020.

In June, the the Swedish Parliamen decided on a contribution to LFV in the form of framework funding of SEK 900 million to be used for loss of revenue in 2020 due to the outbreak of the novel coronavirus. The regulatory framework and conditions for RP3 and aviation revenues have clarified

somewhat during the autumn, although the situation is uncertain until its targets and cost savings for RP3 have been approved by the European Commission 2021/2022. Loss of income for 2020 in En Route and terminal revenue has been calculated at SEK 8 million, and an appropriation income corresponding to this amount has been reported.

Profit for the year amounts to SEK 672 million, which is in line with the budget. Comprehensive income after revaluation of the pension liability due to changed calculation bases amounts to SEK -122 million. In summary, operating revenue is SEK 172 million lower than budget and operating expenses SEK 195 million lower than budget.

LFV – AN IMPORTANT PART OF AVIATION INFRASTRUCTURE

LFV has an important role in the aviation sector. A safe, efficient, and environmentally friendly air traffic service is a prerequisite for a well-functioning aviation infrastructure, which in turn contributes to meeting the transport policy goals.

According to the ordinance (SFS 2010:184) with instructions for Luftfartsverket, LFV shall work to achieve the transport policy goals. Aviation plays an important role in enabling trade and industry and citizens throughout the country to transport passengers and goods, both domestically and globally. Especially for many smaller towns, there is no realistic alternative to aviation to ensure fast and efficient communications. LFV has an important role in the aviation sector. A safe, efficient, and environmentally friendly air traffic service is a prerequisite for a well-functioning aviation infrastructure.

LFV contributes to the functional goal, which is about creating accessibility for travel and transport, by providing secure, efficient, and environmentally friendly air navigation services all over the country, which is a prerequisite for the accessibility of aviation.

LFV contributes to the consideration goal, which is about safety, environment, and health, by offering safe air navigation services using the best environmental practice. LFV's aviation safety work aims to ensure that LFV does not contribute to anyone being seriously injured or killed.

By optimising flight paths and traffic flows, LFV contributes to reducing aviation's environmental impact. LFV plays an active role in the ongoing work to develop the European air navigation service system. The pandemic has entailed greatly reduced traffic volumes, but the long-term trend has been increases, and air traffic will likely recover in the long term, which means that large traffic volumes shall be possible to manage while the goals of increased aviation safety, reduced unit costs and reduced environmental impact must be achievable.

The pandemic has meant a sharp reduction in traffic volumes, but the long-term trend has been increases, and air traffic is likely to recover in the longer term.



AVIATION SAFETY AT ALL LEVELS

Aviation safety is LFV's first priority. A structured aviation safety work is conducted and all employees have a responsibility regarding roles, mandates, and assignments. Aviation safety work permeates the entire organisation at all levels.

LFV achieves the set aviation safety goals and did not contribute to any aviation safety-related incident that resulted in serious injury or death.

Aviation safety work is a natural part of daily operations but also in the more long-term strategic work. LFV invests in proactive initiatives with a focus on organisational learning to not only learn from what has gone wrong but also from situations and events that have gone well. Incident reporting is followed up and contributes to continued learning.

In connection with the implementation of the EU Regulation 2017/373, LFV has developed an updated flight safety management system, in which all employees have been trained. The Regulation sets new requirements for how LFV's certified services are to be performed. This has led to a large number of processes and procedures being updated or developed. LFV has set up three process teams to coordinate and harmonise the new processes for change management, aviation safety assessment and incident investigation.

FOCUS AREAS

LFV works with aviation safety in a structured manner in the following focus areas:

- runway incursion
- separation minima infringements
- drones
- · airspace intrusion
- flight without transponder
- · technical equipment failure

An example: In the work with runway incursions, LFV uses the European Action Plan for the Prevention of Runway Incursions (EAPPRI V3.0) and ICAO's Manual on the Prevention of Runway Incursions. In June, a new refresher course was published in LUVIT on the subject "Abnormal events, distress / Runway Incursion". At Visby Airport, LFV, together with Swedavia, has taken a number of measures to reduce the number of runway incursions.

OUR AVIATION SAFETY ORGANISATION

Aviation safety forms the basis of LFV's operations with a responsibility that extends from LFV's Board of Directors to the Director General and Group Management to each operating unit and its employees. Everyone in LFV shall have knowledge of aviation safety and that it is the top priority and how their own work can affect aviation safety.

LFV's Aviation Safety Committee controls and follows up aviation safety goals and is the decision-making body for aviation safety-related collaborations and the focus of LFV's long-term and strategic work in aviation safety. Within each operational unit, there are specially designated people responsible for aviation safety work. Everyone engaged in operational work is responsible for aviation safety linked to

the service they perform. Briefing and debriefing before and after a work shift are also part of the aviation safety culture.

In aviation safety work, LFV continuously collaborates with, first and foremost, the Swedish Transport Agency, Swedish Accident Investigation Authority, and the Swedish Armed Forces, but also with other air navigation service providers, Swedavia, and other airport owners. The collaboration has developed during the year with the aim of continuing to improve aviation safety.

EU REGULATION 2017/373

The work within LFV to live up to the requirements under EU regulation 2017/373 has now been completed. This has involved intensive work to ensure that LFV complies with the new regulatory framework. During 2020, the Swedish Transport Agency carried out a number of targeted compliance monitoring activities to verify that LFV meets the requirements of the Regulation.

At the end of 2020, the Swedish Transport Agency issued a certificate to LFV as provider of air navigation services in accordance with Regulation (EU) 2017/373, which replaces the previous certificate.

REPORTING AND JUST CULTURE

One very important part of LFV's aviation safety culture is also a willingness to report and a just culture. In an organisation with Just Culture, employees feel secure in reporting errors and derogations, even those where one's own actions may have affected the course of events, and what is reported is used for learning purposes. A project was conducted during the year with the purpose of analysing, evaluating, strengthening, and following up the just and safety culture within LFV. The project analysed the current situation, which included a causal analysis to clarify what the five indicators for Just Culture are based on. The recommendations made by the project will strengthen LFV's just and safety culture and maintain a high level.

LFV's incident reporting is still at a high level, which promotes proactive aviation safety work.

EUROPEAN AVIATION SAFETY COOPERATION

LFV participates in European aviation safety work through, inter alia, Eurocontrol and CANSO. Within these organisations, where LFV is part of a number of working groups for, inter alia, aviation safety, participants collaborate regarding the development and dissemination of good examples and the development of the EU's regulatory framework, in dialogue with the European Union Aviation Safety Agency (EASA). The rapid development in the drone area is one example of areas where LFV contributes.

2017/373

EU regulation that since 2 January 2020 governs how LFV conducts air navigation services.

FOUR AREAS OF OPERATION





87

The air navigation service share is 87% of LFV's turnover in 2020.

LFV's task is to provide a safe, efficient, and environmentally friendly air navigation service for civil and military aviation. LFV must also work to achieve the transport policy goals. The state-owned enterprise LFV offers air traffic services nationally and internationally. In 2020, LFV in Sweden operated air navigation services at 17 airports from Kiruna in the north to Malmö in the south and four control centres.

AREAS OF OPERATION

LFV's operations are divided into four main areas of operation: Air navigation service, Other commercial activities, Total defence and robust air traffic service and Research and innovation. Almost 90 percent of the turnover refers to air navigation service. Most of the turnover is attributable to the provision of services and sales of products on the national market.

AIR NAVIGATION SERVICE

Air navigation service is LFV's line of business. Air navigation service accounts for 87 (89) percent of LFV's total turnover (2019 excludes intra-group transactions between the state-owned enterprise and NUAC HB). In 2020, air navigation services totalled SEK 2,893 million (2,271).

Air navigation services mainly consist of air traffic control services. The area includes CNS services, flight information, and weather presentation. The services are performed for both civilian and military air traffic. The customers consist of airlines and flight operators that traffic the Swedish airspace, the Swedish Armed Forces, and national, municipal, and privately owned airports. The operations include the air traffic services provided in the upper airspace, En Route, from the control centres in Stockholm and Malmö.

Air traffic services in the airports' control zones and terminal areas are also included, i.e. the area at and directly connected to the airports, as well as during approach and take-off from the airports' control towers and independent terminal control centres as well as a control centre for remote air traffic control. LFV's infrastructure, in the form of control centres, radar stations, navigation aids, operational systems, etc, is used for this purpose. At the airports,

the service is performed from air traffic control towers and using equipment provided by the airports.

Air navigation services are mainly financed by En Route charges 77 (73) percent, compensation from the Swedish Armed Forces 12 (15) percent and compensation for operations at civil airports 11 (12) percent. En Route charges finance air navigation services in the upper airspace and, partly, air navigation services for approach and take-off and at the airports. En route and terminal charges are regulated by EU regulatory frameworks.

The majority of air navigation services are operated exclusively in a regulated market. This applies to air navigation services in the upper airspace as well as services performed for the Swedish Armed Forces and Swedavia. Less than 1 (1) percent of turnover for air navigation services are attributed to the competitive part of the market in Sweden and internationally.

OTHER COMMERCIAL ACTIVITIES

Turnover for the commercial operations amounted to SEK 257 (130) million, equivalent to 8 (5) percent of LFV's total turnover.

Other commercial activities include the leasing of air traffic controllers, airspace services, technical services, environmental services, and training. LFV offers technical and operational specialist and investigative competence as well as aviation safety expertise. Subsidiaries offer operation and maintenance services and services within security such as surveillance and critical communication. LFV provided services to other public authorities through the Joint Service Function (GSF).

TOTAL DEFENCE AND ROBUST AIR TRAFFIC SERVICE

For 2020, LFV had at its disposal framework appropriations and reported appropriation revenues totalling SEK 102 (93) million. The appropriations corresponded to 3 (3) percent of turnover.

Civil defence and Infrastructure for air navigation services within expenditure area 22 Communications account for the majority. LFV allocates funds for administrative and other preparedness and civil defence expenditure in the field of



transport and investments in certain air navigation service infrastructure. LFV shall provide a robust air traffic service in all contingency situations.

LFV has started a programme to create additional robustness and redundancy in the air navigation service area. The programme includes measures in the form of expenses that are offset directly against the grant, as well as investments, which are offset through depreciation during the useful life in the coming years. The programme is extensive in that it covers a wide range of measures, including relatively substantial investments. The work is largely project-based and consists of both internal and external costs, where subcontractors' availability and serviceability are crucial. Some of the appropriations in 2019 and 2020 have, among other things, been used for capacity analyses and preparations for measures and investments to increase robustness.

Only a small part of the new framework grant for 2020, Contribution to LFV, has been allocated. The appropriation may be used to cover loss of revenue due to the coronavirus

RESEARCH AND INNOVATION

During the year, research and innovation activities comprised SEK 56 (67) million, which corresponds to 2 (3) percent of LFV's total turnover.

LFV conducts research and innovation (R&I) in the field of aviation, primarily within the framework of the European research programme for air traffic management, Single European Sky ATM Research (SESAR). Operational costs shall be covered by external funding and financed mainly through EU grants and funds from the Swedish Transport Administration.

THE ENTERPRISE GROUP

The LFV Group consists of the state-owned enterprise, the wholly owned holding company LFV Holding AB, the wholly owned subsidiaries LFV Aviation Consulting AB (LAVCO), Aviseq Critical Communications AB, and LFV Norway AS as well as the associated companies Entry Point North AB and Saab Digital Air Traffic Solutions AB (SDATS).

AVISEQ consists of Eltel's former business area Aviation & Security, and operates in critical communication and

delivers monitoring, technical operation and maintenance services in aviation and security. AVISEQ delivers services to LFV, which is the largest customer.

Entry Point North AB (EPN) is 33 percent owned by LFV, jointly with Danish Naviair and Irish IAA. EPN offers training in air navigation services to the owner organisations, but also to other customers.

Saab Digital Air Traffic Solutions AB is 59 percent owned by Saab and 41 percent by LFV. Through the company, the work of leading, developing, and driving the digitalisation of remote air traffic control has continued. The company offers overall solutions within remote air traffic control.

Until the end of 2019, LFV had the associated company NUAC HB. NUAC HB was a subcontractor to LFV and the Danish air navigation service provider Naviair, each owning 50 percent. On behalf of the parent companies, NUAC operated air navigation services En Route in the Danish-Swedish airspace from the control centres in Stockholm, Malmö, and Copenhagen. The necessary staff was leased by NUAC from LFV and Naviair. On 1 September 2019, the parent companies withdrew their respective part of the business and NUAC was wound up through voluntary liquidation in December 2019.

CERTIFICATIONS

LFV is certified by the Swedish Transport Agency in accordance with the EU regulation on common requirements for the provision of air traffic services and air traffic control services ((EU) 2017/373) and for conducting training of air traffic control personnel ((EU) 2015/340).

LFV is also certified according to the ISO standards 9001 and 14001 regarding quality management and environmental management, respectively. LFV is approved by the Swedish Transport Agency to provide procedural design, airspace design, and flight measurement using, inter alia, navigation aids.

AREA OF OPERATION AIR NAVIGATION SERVICE

LFV operated air navigation services at 17 civilian and military airports and air traffic control at four control centres in 2020. The fee for En Route traffic accounts for about 70 percent of LFV's turnover and revenue for local air navigation service about 15 percent.

13

The traffic volume week 15 in 2020 corresponded to 13% of 2019 traffic for the same period.

Work-wise, 2019 was a hard year for LFV, where LFV's delivery capacity for large parts of the year was on the verge of meeting the KPI:s for En Route capacity. At the start of 2020, the organisation envisioned a good but demanding financial year. LFV's challenge also lay in handling air traffic in the largest exercise by the Swedish Armed Forces in over 20 years, which was to be carried out in May – June 2020.

At the end of February, it was noted that regular traffic levels were decreasing rapidly due to the pandemic, and from 16 March entering freefall until mid-April, reaching an all-time low in week 15 with 13 percent of 2019 traffic. From that time and for the rest of the year, demand was not close to the capacity that LFV's air traffic control system is able to deliver. Capacity as a measure of the efficiency of LFVs production has, due to the pandemic, for a long time lost its relevance in favour of availability. An availability that is important for the Swedish Armed Forces' operations, which has increased in scope rather than decreased in 2020. The pandemic's impact on general aviation is also relatively limited.

LFV's aviation safety remains high in all services produced. LFV's incident reporting remains at a good level during the pandemic.

EN ROUTE

The regular air traffic in the upper airspace sharply decreased from mid-March due to the pandemic. Despite this, En Route operations at the control centres in Stockholm and Malmö continued to have a stable production according to performance requirements (aviation safety, capacity, efficiency, and environment). During 2020, a number of business analyses were carried out to adapt operations and organisation to the new situation, in order to secure LFV's production in the long term. The work on this will continue over the coming years.

What was normal from the time before the pandemic, rising traffic development, changed radically over a very short period of time. From mid-February until mid-March, LFV lost about 60 percent of the traffic base En Route. By the end of March, traffic levels were down to 13 percent of the corresponding period in 2019.

The organisation faced major challenges in adapting to handle a large surplus of operational staff. Procedures for working from home were introduced for operational staff to reduce the surplus and the number of people in the workplace to minimise the risk of infection.

During the year, LFV delivered an air navigation service En Route with sufficient capacity except for an operational disturbance on 12 February 2020. At that time, a loss of power occurred in connection with scheduled work at ATCC Malmö. The loss of power meant that every third working position stopped working and all air traffic was stopped from flying in Malmö's sectors until the error was identified and rectified. The disruption caused a total of just over 2,000 minutes of delay.

LOCAL AIR NAVIGATION SERVICE

LFV provides local air navigation services, mainly for Swedavia's ten airports and for the Swedish Armed Forces. LFV continued to deliver a stable and airworthy service with few disruptions in 2020. The operations have, however, for a long time been under heavy financial pressure from LFV's customers, which over time has affected the ability to support customers in other than day-to-day operations. LFV has increasingly had to dimension the resources for the pure operational activities, which are LFV's main task. 2020 was a year of challenges where LFV's work on transitioning from traditional air navigation service to remote air traffic control and digitalisation of our services were negatively impacted by society's restrictions as a result of the pandemic.

LFV has continued to focus on managing and developing systems in Sweden's aviation infrastructure for all stakeholders, as well as increasing the robustness of our operating environment, for a safe and stable air navigation service in all contingency situations.

UNCERTAINTY ABOUT THE RECOVERY

After the sharp traffic reduction in the spring of 2020, there was a re-growth during the summer months that gave hope for a faster recovery than the traffic forecast that LFV had produced predicted. Traffic levels then continued to rise further in early autumn, only to fall back slightly and stabilise at around 35 percent of the 2019 level, as the spread of infection gained new momentum in Europe and the world. For the rest of the year, the work continued in accordance with the directives and procedures that LFV had developed earlier in the year and with a staff volume that was adapted to 70 percent of the 2019 traffic level. There is great uncertainty regarding what the recovery of traffic will look like. This in turn means that it is difficult to plan the need for resources within LFV. Trying to be adaptable to different traffic scenarios with larger fluctuations in traffic volume than before seems to be the new normal for LFV.



In 2021, RTC Stockholm will be put into operation, a new control centre for remote air traffic control at the airports in Kiruna, Umeå, Östersund, and Malmö.



AREA OF OPERATION TOTAL DEFENCE AND ROBUST AIR TRAFFIC SERVICE

According to its instructions, LFV shall provide air navigation services for civil and military aviation. LFV has this task in all stages of preparedness, including in times of war.

TOTAL DEFENCE

LFV is subject to the Act on Increased Emergency Preparedness (SFS 1992:1403) and is a specially designated authority in accordance with the Ordinance (SFS 2015:1052) on Emergency Preparedness.

Based on existing governance, LFV has developed short and long-term goals for the authority's total defence work. Within LFV, there are a number of contingency planners who are managed by LFV's total defence coordinator to strengthen the total defence capability and to strengthen the ability to deliver air navigation services at all stages of contingency, including in war.

LFV has been allocated funds for civil defence to strengthen the total defence. These have primarily been used for training of and information for employees, inventory and analysis, methods development, acquisition of equipment, exercises, and other improvement measures.

During the year, LFV has worked to further develop the capability to operate from alternative and/or protected management site (administrative management) and to develop a plan for secure communication (liaison plan). Planning has begun to develop the new intelligence and logistics functions for LFV.

Since 2018, LFV has deployed the personnel needed for the operations to function in the event of heightened preparedness. The work on further developing the war organisation is ongoing.

ROBUST AIR TRAFFIC SERVICE

Since 2018, LFV has also been allocated grants to secure LFV's ability to provide air navigation services regardless of level of preparedness. Now under the appropriation item Infrastructure for air navigation services. As a result, LFV started the Robust Air Traffic Services (RF) programme with the goal of balancing LFV's overall mission to deliver safe, efficient, and environmentally friendly air navigation services with the total defence-related requirements imposed on LFV.

Initially, the work largely consisted of conducting needs and capabilities analyses as well as investments in infrastructure in the radar and radio area. A number of projects are underway that, together with the local initiatives, are supplemented with upskilling measures for the entire LFV organisation.

During 2020, the Robust Air Traffic Services programme has implemented a number of changes, primarily in governance and programme management, in order to clarify responsibilities and increase collaboration with the line operations. Review of programme directives and mapping of ongoing activities has been carried out. The goal of the programme is to ensure the long-term ability to deliver a robust air traffic service in all emergency situations.

LFV cooperates to a great extent with the transport authorities and industry stakeholders with respect to contingency planning. In connection with the COVID-19 pandemic, joint forums and activities have transitioned into remote meetings. The TP SAMS forum (The transport sector's collaboration in the event of societal disruptions) has been held regularly each week with reporting of consequences and status due to the effects of the pandemic, while the ongoing, long-term collaboration has continued.

The transport authorities have produced a joint programme plan as a basis for MSB for further development of Sweden's contingency planning.

Collaboration has taken place with the Swedish Armed Forces, airports, county administrative boards, and municipalities. A basic common understanding and awareness of the requirements of total defence is a success factor for LFV and Sweden as a whole.

The year 2020 was marked by the effects of the COVID-19 pandemic, which also affected LFV's work with contingency planning and crisis management, where some activities, mainly exercises, were postponed. In March 2020, LFV set up a team of staff to support the Group management's work with the pandemic. The team worked under partly newly established organisational forms, which have developed gradually and provided valuable experience in crisis organisation and crisis management. The staff work has taken place in close collaboration with other transport authorities and LFV has regularly reported the situation to the Swedish Civil Contingencies Agency and the Swedish Transport Administration.

SECURITY

The security policy situation continues to place high demands on LFV's activities with respect to security.

During 2020, a number of improvements have taken place in all parts of the area of security; personnel security, physical security, and information security. LFV estimates that the requirements will continue to increase, which is why development and improvements are necessary for several years to come. New instructions and regulations in the field of IT security became effective during the latter part of 2020 and these will soon need to be implemented in LFV's operations.

A functioning security work presupposes a high level of awareness among employees. Efforts for increased awareness and increased excellence are a prerequisite for LFV's security work's continued development. During the year, extensive training initiatives were initiated and a security forum was formed with the aim of disseminating experience and raising the level of knowledge within the authority.

The pandemic impacted LFV's work in contingency planning and crisis management.



The goal of LFV's programme Robust Air Traffic Service is to ensure the long-term ability to deliver a robust air traffic service at all stages of preparedness.







AREA OF OPERATION OTHER COMMERCIAL ACTIVITIES

In order for LFV to be able to deliver smart solutions for tomorrow's aviation, collaborations and alliances are strategically important. LFV can thus offer customers innovative and competitive products and concepts.

LFV is involved in developing European airspace through collaborations in organisations and alliances. The pandemic has hit the aviation sector hard and affected sales of services. Cost savings among our customers have meant that sales of services have decreased and also changed in nature.

LFV has increased commercial operations in 2020 through the newly acquired, wholly owned subsidiary AVISEQ, which delivers technical operation and maintenance services to air traffic control centres, airports, national authorities, and companies in Sweden. The company employed approximately 200 employees and had a turnover of approximately SEK 200 million in 2020. AVISEQ was previously Eltel's business area Aviation & Security.

AIRLINES

Representatives of IATA sometimes also participate in strategic meetings with airlines, where long-term overall issues such as fees, capacity, and delivery are discussed.

At the national level, finances and investments are discussed. On the agenda going forward, the highest priority is to develop capacity and invest in new systems for future needs. There is heavy price pressure in the industry, which puts focus on costs and cost efficiency. At the same time, large investments will be required to develop the airspace and systems.

At the tactical level, LFV meets the major airlines in a forum for information exchange and cooperation. Various proposals are discussed here, which may, for example, be about the development of airspace and procedures in the effort to achieve more efficient and environmentally adapted traffic flows.

AIRPORTS

LFV has private, municipal, and national airport customers. For each customer, there is an agreement that forms the basis for delivery, information exchange, and follow-up. Air traffic control and other related services are a major part of the airport's single supply to its customers. LFV is a natural long-term partner in the development of airports.

During the year, despite short-time work schemes, Swedavia carried out a number of projects in which LFV provided expertise. At Gothenburg Landvetter Airport, LFV contributed to the implementation of the environmental permit. Commissioning of the new environmental permit is scheduled for the turn of the year 2020/2021 and will have a positive effect on LFVs environmental goals for 2021 and onwards

The collaboration regarding air traffic control from a control centre in Stockholm for four of Swedavia's airports continues and is now in the final stages before the commission-



ing of two of the airports, Kiruna Airport and Åre Östersund Airport.

LFV chose not to submit an air traffic control tender for Kristianstad Österlen Airport, which meant that LFV left the airport at the turn of the year.

During the year, LFV carried out a large number of airspace and procedural design work for national airports and also offered a new product in the form of environmental statistics, flight path monitoring, landing and take-off, etc., which have been received positively by the market.

INTERNATIONAL

The international market for air navigation service related offers has in recent years been characterised by increased competition. The competition was mainly other air navigation service organisations with associated commercial subsidiaries. The trend came to a halt in 2020, primarily due to the ongoing pandemic.

Despite the pandemic, assignments aimed at developing both airports and air navigation services to live up to future infrastructure requirements are continuously being given.

COLLABORATIONS BUILD AVIATION INFRASTRUCTURE

These are some of LFV's most important partners:

Δ6

Consists of air traffic management service providers in twelve European countries with the aim of driving the development of European aviation forward within the framework of the SESAR program.

BOREALIS

An alliance between nine northern European air traffic management service providers. Borealis' vision is to be able to offer airlines direct flight paths throughout northern Europe in 2021.

CANSO

Civil Air Navigation Services Organisation is a global interest organisation primarily for providers of air navigation services.

COOPANS

A collaboration between the six air navigation service providers in Sweden, Denmark, Ireland, Austria, Portugal, and Croatia to coordinate the development of a common air traffic management system.

EASA

The European Aviation Safety Agency is the common European authority for aviation safety.

ENTRY POINT NORTH AB (EPN)

An air traffic management school owned by air traffic control operators in Sweden, Denmark, and Ireland.

EUROCONTROL

The European organisation for the coordination of air traffic in European airspace with almost 40 member states.

THE SWEDISH ARMED FORCES

Since 1978, civil and military air navigation services have been integrated. Air navigation service is provided by LFV for military aviation, both at wings and in the airspace.

ICAO

The International Civil Aviation Organization is a UN body with the task of contributing to increased aviation safety through common regulations for, inter alia, air navigation services.

INFA

The Innovation and Networks Executive Agency is responsible for developing the European transport system.

SWEDAVIA

State-owned company with the task of operating and developing ten airports from Kiruna in the north to Malmö in the south. LFV delivers air navigation services at these airports and works closely with Swedavia.

SDATS

Saab Digital Air Traffic Solutions AB is owned by Saab (59%) and LFV (41%). The company's task is to develop, market, sell, and operate remote air traffic control

SESAR (SINGLE EUROPEAN SKY)

In Europe, the aviation industry is working together to meet expected traffic increases and develop technical and operational conditions. LFV participates in the EU program SESAR, Single European Sky ATM Research, through COOPANS.

SWEDISH TRANSPORT AGENCY

The Swedish Transport Agency is the Swedish supervisory authority for aviation and designs rules and exercises supervision. LFV collaborates with the Swedish Transport Agency on the design of rules and controls for aviation

EUROPEAN AIRSPACE NEEDS STREAMLINING

LFV is a, from a European and global perspective, a small but respected provider of air navigation services, which empowers and offers an opportunity to influence development. This is thanks to a committed and determined and coordinated action from LFV's management and employees internationally.

In the early 2000s, work began on a seamless airspace, Single European Sky (SES), due to major delays in the airspace.

Prior to the outbreak of the pandemic, European aviation had not been able to deliver the expected capacity in the airspace, resulting in major delays.

Despite the pandemic, the Commission believes that the development of Single European Sky should be pursued in order to meet, among other things, future requirements on flexibility, digitalisation, and drone traffic.

The process is strongly influenced by political input, which often means that the way forward is crooked.

A new European regulatory framework will be developed and begin to be implemented in the spring of 2023 to be operational by 2025. The intention is continued harmonisation of the airspace and system development that leads to increased accessibility for airspace users. Increased competition is also included in the proposal.

AREA OF OPERATION RESEARCH AND INNOVATION

LFV's research focuses on security, capacity, sustainability, and cost efficiency, where digitalisation and automation are important enablers. LFV's research is mainly funded by the Swedish Transport Administration, VINNOVA, and the EU.

Collaboration between public authority, academia, and industry is important to generate the greatest possible effect of the research.

DITA

DITA is a digital employee that has been developed with the aim of increasing automation in air traffic control.

LFV has long conducted a broad work in research and innovation to create smart solutions for tomorrow's aviation. Research activities are ongoing in collaboration with national and international partners. LFV continues to be a driving force in the European research program for air traffic management, SESAR. LFV also runs several national research projects in collaboration with industry stakeholders, academia, and the industrial sector. Cooperation between public authority, academia, and industry is important to generate the greatest possible effect of the research.

The research continues to focus on security, capacity, sustainability, and cost efficiency, where digitalisation and automation are important enablers. LFV is also continuing its investment in the research and demonstration arena at Örnsköldsvik Airport, LARC (LFV Aviation Research Center). The research that LFV carries out and coordinates is externally funded, mainly by the Swedish Transport Administration, VINNOVA, and the EU. The following are some of the research projects and initiatives that LFV has operated during the year.

ADVANCED AUTOPLANNER

The project has developed a model based on modern AI technologies for automated air traffic control in Swedish air-space. The project is a collaboration between LFV and IBM, where IBM has contributed knowledge in the areas of artificial intelligence and automation, LFV with knowledge in air traffic control and simulation.

A model has been developed and evaluated by air traffic controllers in LFV's research simulator during 2020.

Planning is now underway for a continuation project where the prototype will be further developed to deal with more of the complex conditions that exist for air traffic controllers. Among other things, the prototype is intended to be developed to be able to handle declining / rising traffic and different wind conditions. It will also be developed to be able to advise an air traffic controller, giving suggestions on solutions that are presented in a user interface together with the intended time for execution. Automation is expected to generate efficiency in working methods and reduced resource needs.

DECISION SUPPORT CURVED APPROACHES

LFV and GEISTT AB will during 2019–2022 carry out the project Decision Support Curved Approach (BKI) as part of the IRIS programme (Non-Direct Approaches Stockholm Arlanda). GEISTT are specialists in system development where demands are high on the interaction between man and machine. The project develops an advanced prototype for a decision support that supports the air traffic control-

lers' decision-making when several simultaneous curved approaches are used. The decision support calculates the complexity of the airspace for several different time windows and uses this as a basis for showing the effect of the air traffic controller's various decisions and proposing control measures that can optimise the situation.

Experienced air traffic controllers actively participate in the development and the first user tests will begin in 2021. The project is directly aimed at Arlanda's environmental permit and contributes to further increasing the use of curved approaches as significant environmental benefits in terms of fuel savings, time savings, and noise reduction have been noted when these approaches are used.

DITA (DIGITAL ATCO ASSISTANT)

Digital ATCO Assistant (DITA) is a digital employee that will increase automation in air traffic control. DITA detects aircrafts, vehicles, quality assures information, can suggest priorities and thus helps the operator to deliver services to airspace users as expected.

Within the Automation Programme II, LFV and Linköping University jointly develops the DITA concept during 2020–2021 for simultaneous remote air traffic control at several airports. DITA includes both the human-automation interface and AI technology for air traffic control. One goal of the project is to design a support for air traffic controllers to be able to determine when it is appropriate to delegate tasks to a digital assistant.

SESAR 18-53

The project involves the development of the concept "Conflict Detection and Resolution" (CD/R) and is about a further development of today's MTCD (Medium Term Conflict Detection). The tool will also provide suggestions on how conflicts can be resolved. The focus is on proposals in different operational situations, taking into account the limitations that are built into cooperation regulations, airspace restrictions, and the aircrafts' technical conditions. The project is carried out as part of a SESAR project where LFV is a partner in the COOPANS consortium together with the COOPANS members and Thales.

Through the SESAR activity, CD/R will be developed in the direction of being better adapted to LFV's requirements and thus increase the probability and potential of becoming a candidate in a potential next generation of the air traffic control system TopSky. Development is now underway to refine the concept so that it meets operational requirements, increases capacity, and increases automation.

DRONES IN PUBLIC SERVICE

EASA has presented a proposal for a framework, U-Space, so that even unmanned aircrafts can use the airspace to perform services. U-Space includes the gradual introduction of drone services to societal functions and urban transport. LFV runs several projects to optimise the use of the airspace and to make it available to drones.

VINNOVA is an important partner for the introduction of U-Space and supports, among other things, two initiatives for more advanced drone services in and between cities in the future. Stakeholders within community planning, public protection and disaster relief, and technology companies are active in the evaluation of the various prototypes that are developed.

At the end of the year, two large European U-Space projects were granted, where LFV and Linköping University in the coming years will participate together with, among others, Eurocontrol



INCREASED FLEXIBILITY WITH MULTIPLE RTS

Within the SESAR project, research work within Multiple Remote Tower continues until 2022. The project focuses on how to work with a flexible use of included airports within a control centre for remote air traffic control (RTC / Remote Tower Centre). The goal is an even workload for air traffic controllers.

The intention is for a shift manager or equivalent to be present in a control centre in order to, among other things, be able to make long-term decisions about the planning of the distribution of airports in the various work positions. The project is being implemented together with several air navigation services providers and industries within Europe. A complete research result is planned within the project period. For LFV, this research means support for further development within an RTC.



LFV ESTABLISHES TEST ARENA AT ÖRNSKÖLDSVIK AIRPORT

At Örnsköldsvik Airport, LFV establishes, together with the airport, a test arena for air traffic control and airport operations – LFV Aviation Research Center (LARC). LARC will offer opportunities for collaboration between industry, academia, and society in the areas of airport operations, unmanned aviation, electric aviation, and airspace issues and has a planning horizon of at least ten years.

The main purpose of the arena is to develop and validate new solutions that increase security and cost efficiency and reduce climate impact.

In 2020, preparatory work was carried out together with the parties LFV, Örnsköldsvik Airport, Åsele municipality, and Storuman municipality, which aims to establish an innovation cluster based in Örnsköldsvik and branches in Åsele and Storuman. The purpose of the cluster is to strengthen research collaboration and increase the possibility of EU funding for the important areas transition to sustainable aviation and to support the introduction of unmanned aviation.



SESAR 10-93 AND PJ32

The projects involve continued development of the concepts "Virtualisation" and "Dynamic Sectorisation". In these parts of the projects, technical and to some extent operational conditions for "virtualisation" of air traffic control systems and conditions for different types of delegation of airspace are handled. The concepts are technically relatively

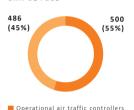
mature and validated, but more work is needed in terms of rules, methods, operational conditions, and cyber security.

The next step is to develop and refine the concept and the technical conditions to meet operational and political requirements to increase flexibility, provide conditions for streamlining, provide potential increase in capacity, and increase automation.

A YEAR MARKED BY THE PANDEMIC

The pandemic has affected our entire operations and our employees. The original plans for the year had to be revised and re-prioritised. Some activities have been cancelled, others "put on ice", and new ones have taken place instead.

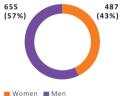
NUMBER OF ANNUAL EMPLOYEES



Other staff

Refers to LFV state-owned enterprise

NUMBER OF EMPLOYEES



Refers to LFV state-owned enterprise



Refers to LFV state-owned enterprise

During the year, focus was on transition work, work environment matters, skills supply, adaptation to the new regulatory framework Common Requirements 373 and management development.

At the beginning of March 2020, it was clear that LFV had to take measures of various kinds to face the new traffic situation. In mid-April, the equivalent of 500 positions were given notice of redundancy. Even before the notice, extensive measures had been initiated in order to avoid as many redundancies as possible. This in turn led to the Group Board in June 2020 deciding to initially reduce the number of positions by approximately 60.

While LFV had a surplus of employees in the air navigation service, there is a shortage of employees in other parts of the operations. The field of technology related to systems and development are lacking engineers and project managers with expert knowledge.

TRANSITION

The substantial work linked to the transition was about finding alternative solutions to redundancies. Early on in the spring, a decision was made to stop external recruitment and the hiring of new consultants. Vacancies were not filled or were filled by existing employees. Leave was granted more generously and to a greater extent than otherwise. Employees were leased to other operations. As a last resort, targeted offers of early retirement were made to solve the redundancy. The transition work was carried out jointly by the parties, both centrally and locally.

LEADERSHIP AND EMPLOYEESHIP

During the year, a leadership philosophy was formulated for managers and leaders within LFV. In connection herewith, a platform for management development was developed. It shall ensure that all managers receive a basic management introduction and that all managers and leaders receive structured and planned upskilling linked to their management and leadership.

In recent years, annual employee surveys have been conducted with the aim of following up areas such as leadership, employeeship, culture, work environment, discrimination, and aviation safety. The plan was to procure a new supplier of employee surveys during the year. Due to the current situation with the pandemic and the cost savings that needed to be made in the spring, it was decided that no employee survey would be carried out during the year, but only a procurement for coming years' surveys. Instead, focus has been on, through various efforts, supporting managers in their leadership under the new con-

ditions where overcapacity, working from home, anxiety and insecurity among employees, etc. have set the tone.

STAFFING

Until the month of February, there was high pressure on recruitment, both for the fee-funded activities but also for the grant-funded. After the recruitment freeze was introduced in March, focus was instead on finding internal solutions to emerging staffing needs. It turned out that the skills required were difficult to find internally, which led to certain activities having to be downgraded or not carried out while it became necessary to seek new employees externally for areas that needed to be maintained.

The air traffic controller training that started in February was paused and resumed after the summer. The air traffic controllers who were to complete their basic training by the summer of 2020 were allowed to complete the training, but remotely, and were then employed as students. As the training of new air traffic controllers takes about three years, it was decided to follow through on the selection of new students that began in the autumn of 2019 in order to offer them a possible training place in January 2021. During the autumn, it was decided to start training according to plan and work on the final selection was initiated.

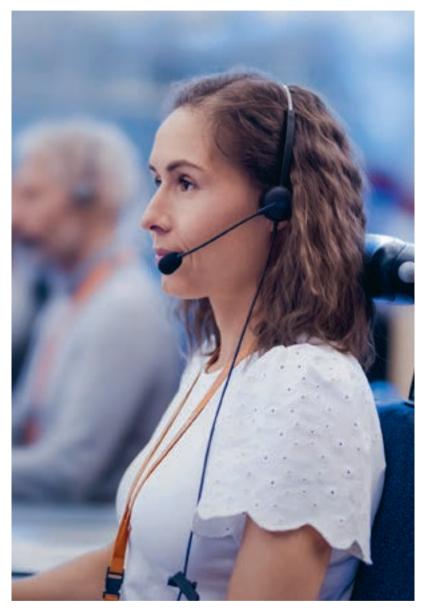
SKILLS SUPPLY

The supply of skills is always key to LFV's operations. During the past year, focus was primarily on continuing to develop the work with skills supply, how it should be managed, planned, and implemented. Within the framework of the RF programme, the project on securing skills and resource supply has continued. The workshops that had been planned regarding the skills supply process during the autumn were delayed due to the pandemic and did not start until early winter.

The new regulatory framework (CR 373) that became effective at the turn of the year also includes requirements linked to skills supply and Human Factors (stress, mental fatigue, problematic use of psychoactive substances, and scheduling). This has led to the creation of a number of procedures and guidelines in the area. In addition, there have been extensive training initiatives linked to the new requirements.

WORK ENVIRONMENT

Work environment issues are always important. The spring's work was mainly about how LFV would meet, organise, and deal with work environment-related issues under the current restrictions. Throughout the year, LFV followed the







LFV STATE-OWNED ENTERPRISE	OUTCOME 2020
Number of employees	1,142
Staff turnover, %	10.4
Average age, years	47
Sick leave (short and long term), %	3.02
Proportion of female managers, %	42.7
Number of new employees,	
of which 34 air traffic control students	69
Proportion of women of new employees	5, % 35

Public Health Agency of Sweden's restrictions and continuously informed both managers and employees about the rules. For example, workshops were held for managers on how to lead remotely. During the autumn, a survey of the organisational and psychosocial work environment was conducted. All units that participated in the survey developed action plans with improvement measures. In addition, mandatory training was held for managers in discrimination matters.

THE GROUP

In 2020, AVISEQ was acquired, with 206 employees (of which 184 men and 22 women). Figures for the entire group are reported on page 65 under Five year summary.

MORE EFFICIENT AIR NAVIGATION SERVICE AND SMARTER FLOWS WITH SWEDEN AIRSPACE PROJECT

Focus on the environment regarding aviation may have been paused somewhat due to the pandemic, but the growth will likely be accompanied by strict environmental requirements. LFV has launched a project, SWEA, to create a more efficient Swedish airspace.

-5

Energy use has decreased by 5 percent per square metre area during the year. The UN's climate panel IPCC describes in its reports that the human impact on the climate leads to a large number of problematic consequences, such as warmer oceans with melting ice and disturbed ecosystems. In November 2019, the European Parliament adopted a resolution in which it was emphasised that Europe and the rest of the world are experiencing a climate emergency.

Through the European Green Deal, the European Commission has created a roadmap focused on making the EU economy sustainable by turning climate and environmental challenges into opportunities and making the transition fair for all. The goal of the roadmap is to make Europe the first climate-neutral part of the world by 2050. With respect to aviation, the European Commission points out, for example, that transport prices must reflect the impact that transport has on the environment. The roadmap includes, among other things, a closer look at subsidies in the form of the current tax exemption for aviation fuel. The Green Deal also emphasises that technology, sustainable solutions, and ground breaking innovation are crucial to achieving the goals set out in the European Green Deal.

NEW ENVIRONMENTAL REQUIREMENTS FOR AVIATION

Focus on the environment regarding aviation may have slowed somewhat due to the pandemic, but the growth of civilian commercial traffic from today's low levels is likely to be accompanied by strict environmental requirements. There are examples where financial support for aviation during the pandemic has been linked to special environmental requirements.

All industry stakeholders will need to assume a great environmental responsibility. This means, for example, an increased pace in the transition to sustainable aviation fuels, development of the electric aviation of the future, but also requirements for air navigation services and airspace to create conditions for reduced emissions.

Electric aviation is considered a very attractive solution to the environmental challenge, but the development of electric aviation faces extremely great challenges in order to become competitive. The electric aircrafts that will be introduced on the market first will be small and carry a limited number of passengers. Their range will be limited, which makes electric aviation most suitable for shorter distances where obstacles make other types of transport difficult, such as flights between places where there are currently natural obstacles, such as sea and mountains, which create long travel times.

In the longer term, LFV's starting point is that an introduction of electric aviation may mean that parts of the cur-

rent aircraft fleet and airlines with jet or turboprop aircrafts are replaced by smaller hybrid or electric aircrafts. That would mean more flight movements to transport the same number of people, with aircrafts flying slower and at lower altitudes than today.

MORE EFFICIENT AIR NAVIGATION SERVICE

LFV has decided to launch the SWEA project, the Sweden Airspace Project. A full implementation of SWEA phase 1 and 2 entails new conditions for LFV to conduct air navigation services through a more appropriate airspace structure (procedures, routes, airspace sectors, and methods) for all flows to and from the Stockholm area.

An airspace structure according to SWEA will lead to positive environmental effects through reduced fuel consumption for the air traffic that flies to and from Stockholm Arlanda Airport. The project has made an assessment of what shorter flight distances, more efficient ascent and descent profiles and a harmonised speed in the arrival phase would provide. Assuming that traffic volumes in 2027/2028 are in line with 2019 volumes, emissions to air are expected to decrease by between 4,000 and 5,000 tonnes of carbon dioxide per year through SWEA.

TODAY'S AIRSPACE IS OUTDATED

Our Swedish airspace is largely out of date and is based on aviation conditions during the 1980s and 90s.

Today, both the requirements and the conditions are different. Analyses of air traffic in Sweden and mapping of current and future needs of airspace users show that there are shortcomings that need to be addressed. In its report to the Government in 2019 on the airspace situation, LFV has proposed an airspace strategy that could address the shortcomings that exist and includes the need for reduced environmental impact.

It is time-consuming to carry out a comprehensive modernisation of the airspace, but LFV believes that it is important that such work begins immediately. SWEA is a project that will address some of the shortcomings that LFV has described in the report to the Government in 2019.

QUALITY MANAGEMENT

To ensure that LFV is governed, managed, and developed efficiently and that stakeholders' requirements are met in a satisfactory manner, LFV works in the integrated business management system VLS. The management system is certified according to ISO 9001:2015.

The growth of civilian commercial traffic from today's low levels is likely to be accompanied by strict environmental requirements.



DIRECT ENVIRONMENTAL IMPACT

LFV affects the environment through its operations. The internal environmental work is conducted in a structured and systematic manner with the support of LFV's environmental management system, which is ISO 14001:2015 certified.

Work is carried out with the aim of reducing energy use and reducing fuel consumption in the operations. To reduce CO_2 emissions, LFV works with both behavioural changes and other measures, such as investments in energy-saving technology. The following significant environmental aspects have been in focus during the year:

- energy use in buildings and facilities
- refrigerants used to cool buildings
- emissions from business trips
- emissions from flight measurements
- procurement and purchasing of products and services

ENERGY USE

The goal is to reduce our own energy use by four percent per square metre area for our owned properties and premises during the period 2020–2025 (base year 2019). The goal for 2020 was to reduce energy use by one percent per square meter of area compared to 2019. As of 2020, use has decreased by five percent. The reason for the reduction is the favourable weather conditions during the year from an energy point of view.

LFV uses energy for operation and heating/cooling of own and leased premises. In addition, energy consumption comes mainly from the operation of the operating systems used at LFV's air traffic control facilities. Emissions caused by energy use are kept at a low level by LFV only buying green

electricity. For heat, 74 percent is renewable and the goal is for this percentage to increase.

BUSINESS TRAVEL

LFV's goal is to reduce the climate impact during the period 2020-2025 by increasing the number of travel-free meetings. The increase in travel-free meetings led to LFV in 2020 reducing CO₂ emissions from business travel by 66 percent, which reached the goal of reducing the amount by two percent compared to 2019. The reason for the significant reduction during the year is the ongoing pandemic, which led to few physical meetings being held and that the number of digital meetings increased greatly. The number of virtual meetings increased by 300 percent in 2020. LFV also works to reduce emissions from business travel by choosing means of transport with as little use of fossil fuels as possible. All company cars must have a low impact on the environment in relation to other cars on the market, and LFV's employees must also choose a rental car with a low environmental impact where practicable.

FLIGHT MEASUREMENTS

In connection with carrying out flight measurements, LFV plans to carry out measurements as geographically close to each other as possible.

PROCUREMENT AND PURCHASING

LFV complies with the National Agency for Public Procurement's sustainability requirements. This ensures that LFV constantly develops the handling of sustainability requirements in connection with our procurements.

In its report to the Government in 2019 on the airspace situation, LFV has proposed an airspace strategy that could address the shortcomings that exist and includes the need for reduced environmental impact.

INTERNAL GOVERNANCE AND CONTROL

LFV's work with internal governance and control is based on the tasks and goals that are clear from instructions, appropriation directions, and from other statutes and government decisions. The process includes risk analysis, control measures, follow-up, documentation, and assessment.

The Government Agency Ordinance (SFS 2007:515) states that the authority must have internal governance and control that functions in a reassuring manner. The Internal Governance and Control Ordinance (SFS 2007:603) places additional requirements on internal governance being integrated into the operations and a tool for senior management's governance.

THE PROCESS OF INTERNAL GOVERNANCE AND CONTROL

LFV's operations are planned, governed, and followed up against set targets in a business plan with associated financial plan approved by the Board. These are the basis for the plan that is submitted to the Government annually, no later than 1 March, in accordance with the Ordinance (SFS 2000:605) concerning the Annual Reports and Budget Documentation. The plans, usually with a five-year perspective, are drawn up taking into account the basic elements: risk analysis, control measures, follow-up, documentation, and assessment. Before each business plan period, planning begins with analyses and strategic discussions to produce goals where both internal and external factors are risk-assessed. This forms the basis for revision of strategies, main goals, business plan, and risks during the planning period.

Internal governance and control are ensured through LFV's organisation, rules of procedure and delegations, policies and guidelines. The process for internal governance and control is largely integrated into LFV's operational con-

trol. Policies, instructions, etc., and all essential processes, including descriptions, are collected and documented in LFV's Business Management System and document management system.

Ongoing follow-up and analysis of outcomes against plans takes place during the year, monthly and quarterly, through reporting to management and the Board from the business based on main and operational goals as well as financial reporting. Other important components in the control environment include senior management's ongoing communication and dialogues with the business, senior management's assessments and decisions, information and built-in controls in processes, etc.

INTERNAL AND EXTERNAL AUDIT

LFV is covered by the Internal Audit Ordinance (SFS 2006:1228) and has an established internal audit function which, based on analysis of the risks of the activities, independently reviews whether senior management's internal governance and control is designed so that the authority fulfils its tasks with reasonable certainty, achieves the operational goals and meets the requirements set out in the Government Agency Ordinance. The results of the review are continuously reported to the Board. LFV works continuously to deal with the internal audit's observations. In addition, there are annual audits performed by the Swedish National Audit Office as well as other external audits and quality audits, etc.



RISK MANAGEMENT

LFV's risk management is an essential tool for LFV to achieve set goals and thereby limit or prevent unacceptable losses, damages, and disruptions.

LFV's risk process is based on set main goals and is integrated into operational planning.

Risk management is done in five steps, where root causes are determined and risks are evaluated, managed, and reported. Each department and function handles both operational, project, and process risks. Group management and the Board focus on top risks, which risks are considered to have the greatest value-at-risk and that have a clear connection to and significant impact on the main goals. A reference group analyses quarterly reported risks. The reference group consists of, among others, LFV's risk coordinators and local risk coordinators from the departments. Follow-up is done monthly by the Group management and quarterly by the Board of Directors.

Area (perspective in business plan)	Risk	Description	Management		
Operations and delivery	Aviation safety	LFV's air traffic control shall be characterised by a high level of aviation safety and efficiency. In order to maintain a high level of aviation safety and minimise the probability of aviation safety events occurring, continuous aviation safety work is conducted at all levels within LFV. The probability that a serious event would occur is considered to be very low. The risks "midair collision" and "runway incursion" are included in LFV's focus areas.	In addition to investigating each individual incident, LFV works continuously with seven focus areas to proactively manage aviation safety risks. A continuous analysis is made of events within each focus area. Based on these analyses, recommendations are made, which are the followed up. During 2020, LFV has continued to develop aviation safe work in accordance with the requirements of EU Regulation 2017/37 The regulation lays down requirements for what LFV needs to do to obtain and maintain the certificates for air traffic management and a navigation services.		
	Total Defence and Robust Air Traffic Service	Extensive work is underway within LFV to strengthen defence and crisis management capabilities and increase the robustness of the infrastructure within the scope of the work with Total Defence and Robust Air Traffic Service. The work places great demands on the operations in terms of resources and priorities.	LFV's total defence planning continues and activities are ongoing to strengthen the robustness of the air traffic service. LFV collaborates and has a dialogue with other stakeholders that LFV depend on. LFV works actively with resource issues and carries out, among other things, extensive recruitment to meet the needs.		
	Cyber and information security	Digitalisation in combination with a changed security policy situation has increased the risk of data breaches and the need to protect sensitive information.	During the year, LFV worked proactively to prevent cyber security and information security risks from occurring. Activities have been implemented to further strengthen LFV's security through, among other things, technical solutions, resource allocation, increased control of subcontractors, training, and the creation of improved procedures.		
	Lack of resources	LFV sees a greater need for resources going forward due to the fact that new and extensive legal requirements will need to be implemented, in combination with total defence planning and high retirement rates among air traffic controllers. Active recruitment work is in progress, but it takes time to train and it can be difficult to find the right skills.	LFV analyses future resource needs within projects and in the operational activities, where legal requirements, delivery, and other commitments are taken into account. LFV prioritises between ongoing and new projects. At the same time, activities are underway to improve the ability to prioritise using new working methods and processes. LFV has developed a strategic short and long-term plan for skills supply by, among others, engineers and air traffic controllers, and resource coordinators have		
Finances	Performance plan (RP3)	A new reference period began in 2020 and the European Commission has not yet made a decision on the Swedish performance plan. There is a risk that LFV will not reach its targets, in particular capacity and cost-efficiency, depending on the Commission's decision.	been hired for the operational activities. During the year, LFV assisted the Swedish Transport Agency in producing data for reporting local conditions, such as increased pension costs and investment and resource needs, before setting targets in FP3. In order to be heard, LFV has also participated in the consultations that		
		The decline in air traffic and a weaker development of the aviation market in the future compared to previous forecasts is also a significant financial risk. Low interest rates and increasing pension liability have a negative effect on costs and fees.	the Swedish Transport Agency has arranged.		
	Currency risk	Currency risk is defined as the profit/loss effect that a currency exchange rate can have on LFV's balance.	The risk is limited by hedging on the period of the known future flows. An interval controls the minimum share hedged within a certain period. Currency hedging of En Route fees takes place according to a special procedure.		
	Credit risk	Credit risk is defined as the risk that the counterparty in a transaction is unable to meet their commitment. LFV has a large surplus liquidity associated with pension liability to manage.	To limit credit risk when investing, counterparties, instruments, maturities, and permitted investments are regulated in LFV's financial policy. Investment may be made in treasury bills, government bonds, deposits into banks supervised by Finansinspektionen, certificates with counterparties wholly owned by the Swedish state or with a corresponding credit rating of K1 and in bonds with counterparties wholly owned by the Swedish government or with a minimum credit rating of A (Standard & Poors) and A2 (Moody's).		
Other risks	Fraud and corruption	Overall, LFV's protection against fraud, corruption, bribery and other irregularities is deemed adequate.	The main activities are regulated and monitored by the Swedish Transport Agency. LFV's organisation, rules of procedure and delegations, regulatory framework, instructions, processes, etc., are defined and documented.		
			In addition, there are other documents and a digital employee handbook that help to clarify regulatory frameworks and attitudes in these matters. Current information regarding corruption, fraud, bribery, and other irregularities is published via the intranet and provided in connection with new hires and management training. Corruption is included as a special area in LFV's Code of Conduct and as a special section in the established whistleblower function.		

FINANCIAL STATEMENTS LFV 2020



INCOME STATEMENT

		GROUP		STATE-OWNED ENTERPRISE	
Million SEK	Note	2020	2019	2020	2019
OPERATING REVENUE					
Aviation revenue	1	2,859	2,205	2,859	2,205
Work performed by the company for its own use		97	45	67	45
Appropriation		102	93	102	93
Other operating revenue	2	253	728	193	728
TOTAL OPERATING REVENUE		3,310	3,071	3,220	3,071
OPERATING EXPENSES					
Staff costs	3	1,864	1,658	1,774	1,658
Miscellaneous external costs	4	-564	1,237	-559	1,247
Depreciation and write-downs of tangible and intangible fixed assets	5	-171	-175	-158	-175
TOTAL OPERATING EXPENSES		-2,599	-3,070	-2,491	-3,080
Results from holdings in associated companies	6	-7	11	-	-
OPERATING PROFIT/LOSS		704	13	730	-9
INCOME FROM FINANCIAL INVESTMENTS					
Interest income	7	11	13	11	13
Interest expenses and similar items	8	-15	-66	-15	-66
TOTAL FINANCIAL INCOME AND EXPENSES		-4	-53	-4	-53
Profit/loss after financial items		700	-40	725	-62
Tax/tax equivalent on the profit/loss for the year	9	-28	9	-28	13
PROFIT/LOSS FOR THE YEAR		672	-31	697	-49
Added:					
Actuarial revaluation of pension liability	17, 18	-794		-794	_
COMPREHENSIVE INCOME AFTER REVALUATION OF PENSION LIABILITY		-122	-31	-97	-49

COMMENTS ON INCOME STATEMENT

Unless otherwise stated, all amounts are reported in million SEK. Information in brackets refer to the previous year.

The LFV Group (LFV)'s profit after financial items amounts to SEK 700 million (-40). Comprehensive income after revaluation of the pension liability amounts to SEK -122 million (-31). Result excluding tax equivalent is SEK 54 million lower than last year, but SEK 35 million better than budget.

Higher Aviation revenue due to higher pension costs due to the technical revaluation of the pension liability; Lower Other operating revenue, lower External costs, and higher Staff costs are the main differences compared to the previous year. Lower revenues in relation to the rest of the costs have resulted in a worse result compared with the previous year.

The largest single explanation for the difference in the items Other operating revenue and Miscellaneous external costs between the years is that in 2019, transactions with NUAC HB were included. LFV resumed operations under its own management for the en route activities in 2019 and corresponding transactions with revenues/costs therefore do not exist in 2020.

OPERATING REVENUE

Operating revenue in 2020 amounts to SEK 3,310 million (3,071), an increase of SEK 239 million.

Aviation revenue

Air traffic-related aviation revenues have increased by SEK 654 million to SEK 2,859 million (2,205). The increase in revenue compared to the previous year is mainly due to higher reimbursement of pension costs due to the revaluation of the pension liability according to new calculation bases for 2020.

En route and terminal charges are determined by the European Commission for multiannual reference periods. In 2020, a new period started: RP3 (2020-2024). The plans for the period were never adopted before the outbreak of the pandemic.

On 12 October 2020, the EU adopted a regulatory framework for a special handling of the years 2020-2021. It states that actual costs for the performance of the services shall be taken into account. However, the goals and performance plan for RP3 (2020-2024) have not yet been finalised or adopted. This is a direct consequence of the

COVID-19 pandemic and the exceptional situation that has arisen for aviation industry operators. New goals are expected to be announced in 2021 and final decisions on revenues for 2020 during the first quarter of 2022.

Aviation revenues, and consequently appropriations for loss of revenue, are based on estimates of compensation levels pending a decision. For 2020, the traffic risk sharing mechanism based on traffic volumes is relevant based on actual costs. The traffic outcome will be known by the time the fee is decided. Focus is on the new performance plan based on actual costs instead of on risk sharing.

One uncertainty factor regarding the rate of charges is an EU statement on the expectation that the cost level in 2020 will not exceed the level for 2019. This is the case with LFV's costs, due to the revaluation of the pension liability using the 2020 calculation basis, which in the draft performance plan has been considered an uncontrollable cost.

If the fee were to be calculated by comparing with the cost outcome for 2019. a loss of revenue of SEK 560 million would occur. Had uncontrollable costs been calculated according to the same methodology as for 2019, the amount would in turn amount to SEK 594 million. The effect of the new calculation basis for the pension liability is now known when a new performance plan for RP3 is adopted, the cost will be considered an actual cost and not uncontrollable. Aviation revenues entered for 2020 are based on the assumption of remuneration in line with actual outcomes including pension costs. In connection with the interim accounts on September 30, 2020, a more cautious reporting was done given that the assessment was that there was even greater uncertainty regarding aviation revenues with an expected loss of revenue of SFK 663 million.

The regulatory framework for RP3, Commission Implementing Regulation (EU) 2019/317, regulates that the changed calculation basis for pension liabilities shall also be considered in RP3 as an uncontrollable cost, for which air navigation service providers shall be fully compensated. Previously submitted draft performance plan for RP3 clearly stated that uncontrollable costs for LFV were expected to arise in 2020 as a

result of a changed calculation basis for the pension liability.

Traffic and number of service units decreased sharply and with that the invoiced revenues. The remaining revenue up to estimated compensation for air navigation services en route and terminal Arlanda is recognised as a long-term receivable. LFV's revenue for air navigation services en route is invoiced based on fixed fees and number of service units, which decreased in 2020 by 56.1 percent compared to 2019. The established en route charges for 2020 were reduced by 4.6 percent, while the terminal fee was raised by 26.4 percent compared to the previous year. However, the final fee for 2020 will not be decided until 2022.

Compensation for local air navigation services at national, military, municipal, and private airports is higher than last year, which is mainly explained by higher revenues in terms of assignments for the Swedish Armed Forces.

Work performed by the company for its own use

The value of work performed by the company for its own use attributable to investment projects amounts to SEK 97 million (45).

Appropriations

Appropriations for 2020 have been received in the amount of SEK 102 million (93), which mainly constitutes an outcome attributable to the appropriation items Civil defence and Air navigation service infrastructure within expenditure area 22. Appropriations to cover loss of revenue have been allocated in the amount of SEK 8 million.

The interim report as of 30 September 2020 reported utilisation of appropriations in the amount of SEK 663 million for revenue loss. The appropriations settlement has been reversed in the annual accounts compared to the third quarter due to a change in the assessment of compensation through the charging scheme based on actual costs for 2020 including pension costs due to changed calculation bases. If the corresponding assumptions had been used in the annual accounts for 2020 as in the interim accounts, the utilisation of appropriations as of 31 December 2020 for loss of revenue would have amounted to SEK 560 million.

Other operating revenue

Other operating revenue amounts to SEK 253 million (728). In 2019, this included compensation from the associated company NUAC HB amounting to SEK 511 million. The corresponding amount is also found as a cost under Miscellaneous external costs last year as LFV then purchased air traffic control services from NUAC and at the same time received compensation for staff and services rendered. The decrease is due to the fact that the operations were returned to LFV as of 1 September 2019, which is why the corresponding invoicing does not exist for 2020.

This year's outcome of commercial services has seen a positive impact in the amount of SEK 61 million through revenues from the new subsidiary AVISEQ, which has been added compared with 2019.

Grant income amounts to a total of SEK 83 million (89). During the year, LFV has received EU grants for financing investment and development activities. Grants for research and innovation are received both from the EU and from the Swedish Transport Administration to develop and streamline air navigation services.

OPERATING EXPENSES

Operating expenses amount to SEK 2,599 million (3,070), a decrease of SEK 471 million.

Staffcosts

Staff costs amount to SEK 1,864 million (1,658), an increase of SEK 206 million. Costs for wages and salary are SEK 58 million higher than the previous year, and costs for social insurance contributions SEK 159 million higher due to increased pension costs. An increase in staff costs for 2020 of SEK 90 million compared with 2019 is attributed to the new subsidiary AVISEQ with approximately 200 employees added during the year.

Miscellaneous external costs

Miscellaneous external costs for the year amount to SEK 564 million (1,237), a cost reduction of SEK 673 million compared to the previous year.

A decrease of SEK 511 million is explained by compensation to NUAC paid for

2019. The corresponding cost does not exist in 2020. In addition, a number of different external costs have been reduced through direct measures and other savings made in response to the COVID-19 pandemic. Cost reductions have been made with respect to training, external consultants, IT, operations and maintenance, as well as travel. A change in the opposite direction, an increase compared to the previous year of SEK 7 million refers to Miscellaneous external costs in the subsidiary AVISEQ.

Depreciations

Depreciations for 2020 amount to SEK 171 million (175).

FINANCIAL INCOME AND EXPENSES

The total financial revenues and costs amounted to SEK -4 million (-53). A decrease of SEK 49 million compared to 2019.

As a result of the interest situation, interest income on liquid assets has been low, as in recent years. Interest income including currency exchange rate profits amounts to SEK 11 million (13). Interest expense attributable to the pension liability amounts to SEK 11 million (66).

REVALUATION OF PENSION LIABILITY

The pension liability has been revalued from the calculation basis of 2019 to the 2020 calculation basis. The discount rate was reduced from -0.7 percent to -1.4 percent. The decrease of 0.7 percentage points and the adjustment of the calculation basis for state-owned enterprises to the same calculation bases as for the state pension business in general meant an increase in LFV's costs of a total of SEK 794 million. The effect of this actuarial revaluation due to changed calculation basis is recognised against Non-restricted equity and as an additional item in the profit/loss for the year. Comprehensive income for the year after revaluation of the pension liability amounts to SEK -122 million.

In November 2020, SPV decided on the gross interest rate for the 2021 calculation basis, which means that the gross interest rate remains at -1.4 percent. Thus, no actuarial revaluation will be made as per 1 January 2021.

The pension liability carries interest and annual indexation, which are recognised as financial items in the income statement. Other changes to pension entitlement and earnings for the year, etc., are reported as staff costs.

LFV HOLDING

The Group's turnover for 2020 amounts to SEK 178 million (24) and Profit/loss after financial items amounted to SEK -18 million (22). The turnover mainly stems from the new subsidiary Aviseq Critcal Communications AB (AVISEQ). The result comes partly from subsidiaries, partly from shares of profit/loss in LFV's associated companies Entry Point North AB and Saab Digital Air Traffic Solutions AB, which are reported in the Group according to the equity method, as well as depreciation of acquisition goodwill of SEK -13 million (0). The companies' operations have also been affected by the COVID-19 pandemic. The outcome for turnover and profit/loss in 2020 is lower than the initial budget for the year.

On 30 April 2020, LFV Holding AB acquired all shares in AVISEQ from Eltel Networks Infranet. AVISEQ delivers services to LFV, which is the single largest customer. Intra-group purchases and sales between LFV and subsidiaries are eliminated in LFV's consolidated accounts. Acquisition goodwill of SEK 193 million will be written off in 10 years. The depreciation period is justified by the fact that the acquisition is a strategic acquisition.

Annual reports for the financial year 2020 for LFV Holding AB and its subsidiaries and associated companies have not yet been adopted at each respective Annual General Meeting in 2021.

After the end of the financial year in January 2021, LFV Holding AB has submitted a conditional shareholder contribution to the associated company Saab Digital Air Traffic Solutions AB. The other partner/parent company has made an equivalent conditional shareholder contribution corresponding to its holding.

BALANCE SHEET

		GRO	DUP		OWNED RPRISE
Million SEK	Note	31/12/2020	31/12/2019	31/12/2020	31/12/2019
ASSETS					
Fixed assets					
Intangible fixed assets					
Goodwill	10	180	-	-	-
Program rights and other intangible fixed assets	10	565	488	567	488
Total intangible fixed assets		745	488	567	488
Tangible fixed assets					
Buildings	11	249	263	249	263
Maintenance expenses on other property	11	1	1	1	1
Electrical installations	11	10	12	10	12
Telecommunications equipment	11	668	334	670	334
Vehicles	11	7	4	6	4
Leased fixed assets	11	1	2	1	2
Fixed assets under construction	11	520	526	524	526
Total tangible fixed assets		1,457	1,143	1,461	1,143
Financial assets					
Holdings in subsidiaries	12	_	_	299	75
Holdings in associated companies	13	35	46	-	_
Other long-term receivables	14	2,676	1,395	2,676	1,395
Deferred tax assets	9	-	28	-	28
Total financial assets		2,711	1,468	2,975	1,498
TOTAL FIXED ASSETS		4,913	3,099	5,003	3,129
Current assets					
Current receivables					
Accounts receivable – trade		109	70	90	69
Claims from subsidiaries		-	-	8	5
Claims from associated companies		37	6	37	6
Tax assets		4	3	-	-
Other receivables		335	306	334	304
Prepaid expenses and accrued income	15	205	179	199	175
Total current receivables		690	565	668	560
Short-term investments	16	2,084	2,534	2,084	2,534
Cash and bank		3,020	3,214	2,876	3,113
Total cash and cash equivalents		5,104	5,748	4,960	5,647
TOTAL CURRENT ASSETS		5,794	6,313	5,628	6,207
TOTAL ASSETS		10,708	9,412	10,631	9,336

BALANCE SHEET

Continuation

		GRO	DUP		OWNED RPRISE	
Million SEK	No	ote	31/12/2020	31/12/2019	31/12/2020	31/12/2019
EQUITY AND LIABILITIES			-			
Equity						
Restricted equity		17				
Public capital			202	202	202	202
Restricted reserves			264	275	252	252
Total restricted equity			465	476	453	453
Unrestricted equity		17				
Profit/loss brought forward			-499	315	-563	280
Profit/loss for the year			672	-31	697	-49
Total unrestricted equity			173	284	134	231
Total equity	-		638	760	587	684
Provisions						
Interest-bearing provisions						
Pension provisions		18	8,739	7,471	8,739	7,471
Non-interest-bearing provisions			,	,	,	,
Other provisions		19	47	35	44	35
Total provisions			8,785	7,506	8,783	7,506
Long-term liabilities						
Interest-bearing liabilities						
Liabilities to leasing companies		20	1	3	1	3
Non-interest-bearing liabilities						
Other non-interest-bearing liabilities		21	65	212	65	212
Total long-term liabilities			66	215	66	215
Current liabilities						
Non-interest-bearing liabilities						
Accounts payable – trade			165	246	150	246
Liabilities to subsidiaries			-	-	18	0
Liabilities to associated companies			2	8	2	8
Tax liabilities			-	-	_	_
Other non-interest-bearing liabilities	22		732	459	722	459
Accrued costs and deferred revenue		23	320	219	302	219
Total current liabilities			1,218	931	1,195	931
TOTAL EQUITY AND LIABILITIES			10,708	9,412	10,631	9,336
Memorandum items						
Contingent liabilities		24	1	1	51	51
Pledged collateral			None	None	None	None

COMMENTS ON BALANCE SHEET AND FUNDS STATEMENT

Unless otherwise stated, all amounts are reported in million SEK. Information in brackets refer to the previous year.

FIXED ASSETS

Total intangible and tangible fixed assets amount to SEK 2,202 million (1,631) as of 31 December 2020, an increase of SEK 571 million. LFV's investments for 2020 amounted to SEK 750 million (498) including goodwill in the acquisition of subsidiaries

This year's investment outcome excluding goodwill is SEK 59 million higher than the previous year, but the outcome is lower than planned, SEK 705 million. Investments have been affected by the COVID-19 pandemic in the form of delays from suppliers, restrictions, re-prioritisations, etc. There has also been a lack of resources in some areas. This year's investments within the scope of the robust air traffic service (RF) programme amount to SEK 236 million. Appropriations relating to these investments in air navigation service infrastructure are allocated at the same pace as depreciations.

LONG-TERM RECEIVABLES AND LIABILITIES

In 2020, long-term receivables increased by SEK 1,281 million to SEK 2,676 million (1,395).Long-term other non-interest-bearing liabilities have decreased by SEK 147 million to SEK 65 million (212).

LFV's revenues for en route and terminal Arlanda are governed by EU regulations that involve risk sharing between air navigation service providers and airlines. In 2020, the difference between invoiced revenue and compensation for the year is recognised as a long-term receivable. There are receivables from previous years attributable to uncontrollable cost increases. For Sweden, changes in pension costs belong to this category. LFV has accrued the recoverable deficits of the year and previous years, which are recognised under the items Other long-term receivables and Other non-interest-bearing long-term liabilities.

Long-term receivables relating to RP2 shall be settled over a period of nine years starting in 2021, and long-term receivables for 2020 (RP3) over a period of 5-7 years starting in 2023.

CURRENT RECEIVABLES

LFV has a claim of SEK 114 million, which due to ongoing discussion with the customer was reserved in the annual accounts 2019 with a corresponding amount pending completion of the discussion.

CASH AND CASH EQUIVALENTS

Cash and cash equivalents amount to SEK 5,104 million (5,748), a decrease of SEK 644 million since the start of the year. This is largely explained by lower invoiced aviation revenues due to lower traffic volumes. Of cash and cash equivalents, SEK 2,084 million (2,534) are invested in short-term certificates that mature in 2021.

PENSION PROVISION

Pension provisions including special payroll tax amount to SEK 8,739 million (7,471) as of 31 December 2020, which is an increase of SEK 1,268 million compared to 31 December 2019. An increase of SEK 794 million is due to changed calculation bases.

The gross interest rate decided by the National Government Employee Pensions Board (SPV) for the 2020 calculation basis is - 1.4 percent. After deduction for expenses of 0.1 percent, the net interest rate is -1.5 percent. The change in the net interest rate between 2019 and 2020 amounts to -0.5 percentage points. This year's change in general consists of this year's accrued pension benefits, SEK 583 million (595), pensions paid, SEK -121 million (-114), and interest/indexation SEK 11 million (66).

TAX AND DIVIDENDS

Tax equivalent for the year amounts to SEK -28 million (9), of which deferred tax SEK -28 million (9) attributable to loss carryforwards and temporary differences between accounting and tax income for the year. The tax equivalent is calculated according to Government guidelines.

LFV shall distribute dividends for the financial year 2020 corresponding to 15 percent on profi/loss after tax equivalent. No dividend is proposed to be distributed considering that comprehensive income after revaluation of the pension liability amounts to SEK -122 million.

PROFITABILITY AND SOLIDITY

The Government's economic goals for LFV are that the profitability on equity after tax equivalent over a business cycle shall amount to 4 percent and the equity/assets ratio

shall equate to 15 percent in the long term. Return on investment (profitability) calculated based on the comprehensive income in 2020 is negative (1 percent) and the equity/assets ratio (solidity) is 6 percent (9).

FUNDS STATEMENT

Cash flow for the year is negative and amounts to SEK -644 million (122). Cash flow from operating activities amounts to SEK 1,732 million (673). This should be seen together with the cash flow from financing activities of SEK -1,658 million (-48), which consists of the change in receivables and other non-interest-bearing liabilities attributable to the fee model for en route charges. The change reported under financing activities also includes the part of the receivables and liabilities classified as shortterm in the balance sheet. Overall, cash flow for the year from operating activities and changes in working capital minus cash flow from financing activities amounts to SEK 74 million. Cash flow from investment activities is SEK -718 million.

STATEMENT OF APPROPRIATIONS

LFV has three framework appropriations within expenditure area 22. Civil defence and air navigation service infrastructure, with an available amount of SEK 168 million (93). LFV allocates funds for administrative and other preparedness and civil defence expenditure in the field of transport and investments in certain air navigation service infrastructure. This year's expenditure on air navigation service infrastructure amounts to SEK 85 million, of which available funds SEK 158 million. Projects have started later or have been delayed due to the COVID-19 pandemic and the resource situation.

In June 2020, a new grant was received, a contribution to LFV, with an available amount of SEK 900 million to use for loss of revenue due to the novel coronavirus. Appropriations for grants have been utilised in the amount of SEK 8 million after assessing claims and accounting for aviation revenues based on EU regulatory frameworks. The part of these two appropriations that has not been allocated is transferred in full to savings of appropriations to be used in 2021.

FUNDS STATEMENT

		GROUI	P	STATE-OWNED ENTERPRISE	
Million SEK	Note	2020	2019	2020	2019
Operating activities					
Profit/loss after financial items		700	-40	726	-62
Adjustment for items not included in cash flow etc.	25	643	589	641	589
		1,343	549	1,366	527
Tax equivalent		-2	-9		_
Cash flow from current operations before changes to working capital		1,341	540	1,366	527
Cash flow from changes in working capital					
Change of stock		=	=	=	=
Change of current receivables		33	92	49	91
Change of current liabilities		358	42	334	42
Cash flow from changes in working capital		1,732	673	1,750	660
Investment activities					
Change in intangible and tangible fixed assets		-729	-499	-556	-499
Change in financial assets		-	_	-	-
Change in group and associated companies		11	-5	-224	_
Cash flow from investment activities		-718	-504	-779	-499
Financing activities	25				
Change in receivables		-1,439	-14	-1,439	-14
Change in liabilities		-219	-35	-219	-35
Cash flow from financing activities		-1,658	-48	-1,658	-48
Cash flow for the year		-644	122	-687	113
Cash and cash equivalents at the beginning of the year		5,748	5,626	5,647	5,534
Cash and cash equivalents at the end of the year		5,104	5,748	4,960	5,647

STATEMENT OF APPROPRIATIONS

Appropriations (thousand SEK)		Allocation for the year according to appropriation directions	Transferred appropriation amounts	Withdrawal	Total amount available	Expenditure	Transfer amount carried forward
Category 22 Communications							
22 01 001 002 Civil defence to LFV	670	9,249	0	0	9,919	-8,954	965
22 01 017 001 Infrastructure for air traffic service		158,297	0	0	158,297	-85,054	73,243
22 01 020 001 Contribution to LFV		900,000	0	0	900,000	-7,944	892,056
-	670	1,067,546	0	0	1,068,216	-101,952	966,264

ACCOUNTING AND VALUATION PRINCIPLES

ACCOUNTING PRINCIPLES

LEV's accounts for the state-owned enterprise and the Group comply with the Ordinance (SFS 2000:605) concerning the Annual Reports and Budget Documentation (FÅB) and ESV's regulations and general guidance, as well as the requirement for Generally Accepted Accounting Principles pursuant to the Bookkeeping Ordinance (SFS 2000:606). To the extent that there is no standard directly targeting public authorities and government agencies, LFV applies, as reported in the respective sections below, the valuation rules set out in the Swedish Accounting Standards Board's General Guidelines BFNAR 2012:1 Annual Report and Consolidated Accounts (K3).

LFV's subsidiaries draw up annual reports in accordance with the Swedish Annual Accounts Act and BFNAR 2012:1 Annual Report and Consolidated Accounts (K3).

As of 1 January 2020, certain changes in the accounting principles for state-owned enterprises apply regarding the reporting of pension provisions. Actuarial revaluations, including special payroll tax calculated on the revaluation, shall from 2020 be reported directly against Government agency capital, unless the revaluation refers to retirement benefits. The same actuarial bases as the SPV applies to other pension rights shall apply. Until 2019, the actuarial bases for state-owned enterprises basically corresponded to the safeguards established by Finansinspektionen (FI). As of 2020, reporting of the additional item actuarial revaluation of the pension liability in the profit/loss for the year has been added to the income statement. LFV reports comprehensive income after revaluation of pension liabilities

The accounting principles and the formatting of the income statement and balance sheet in general are unchanged compared to the previous year.

FORMAT AND SUPPLEMENTARY INFORMATION

Income statements and balance sheets and funds statements have been formatted in accordance with the rules applying to state-owned enterprises and state-owned enterprise groups.

CONSOLIDATED ACCOUNTS

LFV draws up consolidated accounts. The consolidated accounts include the state-owned enterprise and the group companies in which the state-owned enterprise directly or indirectly holds more than half of the votes for all shares or otherwise exercises a controlling influence (subsidiaries) and the other companies (associated companies) in which the state-owned enterprise has a significant influence as a result of shareholdings. All intra-group balances are eliminated on consolidation.

Principles for the Group's reporting of deferred tax are described below under the heading Taxes and tax equivalent.

Subsidiaries

Companies in which LFV directly or indirectly holds more than half of the votes for all shares or otherwise exercises a controlling influence are classified as subsidiaries and consolidated in the consolidated accounts. The Group's annual accounts are drawn up in accordance with the acquisition method. The acquisition date is the date on which the controlling influence is obtained.

Subsidiaries in other countries draw up their annual reports in foreign currencies. Upon consolidation, the items in the balance sheets and profit and loss accounts of these companies are converted using the exchange rate on the balance sheet date and the spot rate, respectively, for the day each transaction took place. The exchange differences that arise are recognised in accumulated exchange differences in the Group's equity.

Associated companies

Companies in which the state-owned enterprise or LFV Holding AB, through holding more than 20 percent and no more than 50 percent of the votes, can exercise significant influence are reported as associated companies. Associated companies are recognised in the consolidated accounts using the equity method.

AREAS OF OPERATION AND GEOGRAPHICAL MARKETS

LFV's operations consist of four main fields of activity: Air navigation service, Other commercial activities, Total defence and robust air traffic service, and Research and innovation. Around 90 percent of the turnover is attributed to Air navigation service.

More than 90 percent of the operations are conducted within Sweden. A minor part of the operations, mainly Other commercial activities, originates from markets outside Sweden.

REVENUE RECOGNITION

Revenues are recognised to the extent it is likely that the economic benefits will fall to the Group, and these benefits can be calculated reliably. Intra-group turnover is eliminated in the consolidated accounts. The principles applied are essentially consistent with BFNAR 2012:1 (K3), Chapter 23 Revenue, which the subsidiaries apply for revenue recognition. Revenues are recognised at the fair value of what has been or will be received, with deduction for discounts.

Appropriations are reported and settled in accordance with the Appropriations Ordinance (SFS 2011:223). Under the heading Settlement with the central government, revenue and expenditure are recognised against the revenue heading and appropriations as well as payments to and from the central government's central account. Recognition of appropriations shall be divided into appropriations in interest-bearing and non-interest-bearing flow. With respect to investments within the scope of publicly funded activities, appropriations are settled at the rate of depreciation.

Grants are recognised as income upon receipt if the purpose of the grant is for it to be used at LFV and if there is no repayment obligation or if the probability of a liability to repay is small. Grants that are subject to repayment obligations are also recognised as revenue if such obligation arises only if the state-owned enterprise does not comply with the conditions and regulations of the grant in question or if something unexpected occurs that disrupts the conditions for the grant. Advances received from EU grants are not settled on an ongoing basis, but are settled in the final accounts of each project. Unused grants are accrued to cover future costs and are recognised under the item Other current liabilities.

Interest and dividends are recognised as revenue when it is likely that the group will receive the financial benefits associated with

the transaction and that the income can be reliably calculated.

Valuation of ongoing assignments

For fixed-price service assignments, the income and expenditure attributable to a completed service assignment are recognised as revenue and cost, respectively, in relation to the degree of completion of the assignment at the balance sheet date (successive profit settlement). An assignment's degree of completion is determined by comparing expenditure incurred at the balance sheet date with estimated total expenditure. When the outcome of an assignment cannot be calculated with reasonable certainty, revenue is recognised only to the extent equivalent to the expenditure incurred for the assignment that are likely to be reimbursed by the purchaser. Known or anticipated losses are immediately recognised as a cost.

For service assignments on current account, the income attributable to a completed service assignment is recognised as revenue when the services are rendered and/or materials are delivered or used.

GENERAL VALUATION PRINCIPLES

Unless otherwise stated below, assets, liabilities, and provisions have been valued at cost of acquisition.

FIXED ASSETS

Intangible fixed assets

LFV applies ESV's regulations and general guidance on reporting research and development expenditure. Expenditure on development of significant value to the operations in coming years is recorded as an intangible fixed asset, provided all the conditions specified in the regulations exist. LFV reports expenditure for purchased licenses and other software whose useful life is estimated to exceed three years and externally acquired materials and services for the development and production of intangible assets as intangible assets when they otherwise meet the criteria for being recognised as assets.

Expenditure for internally generated development (Work performed by the company for its own use) is added to the cost of

acquisition when the criteria for capitalisation are otherwise met.

Research expenditure may not in any case be recorded as a fixed asset. Straight-line depreciation is made according to plan throughout the asset's useful life.

The useful life of an intangible fixed asset is more than five years in cases where it can be determined with a reasonable degree of certainty that the useful life is longer, as is mainly the case for operational air traffic management systems and goodwill.

Tangible fixed assets

Tangible fixed assets are valued at their acquisition value with a deduction for planned depreciation. Expenses for time spent in production of fixed assets are added to the acquisition value. Where appropriate, write-downs are performed in the manner indicated below. Planned depreciation is calculated by accruing the acquisition value linearly over the course of the estimated useful life.

Depreciation begins when an asset is ready to be used for its intended purpose. When an asset includes significant components with different useful lives, the rules on so-called component depreciation are applied. Depreciation periods are continuously reassessed.

Ongoing investment projects related to tangible fixed assets are reported under the heading Fixed assets under construction. The item also includes advance payments to suppliers relating to tangible fixed assets.

Planned depreciation:

Program rights	
and other intangible assets	3-12 years
Goodwill	10 years
Installations in the field	15-30 years
Buildings	15-30 years
Maintenance expenses	
on third-party property	5-10 years
Electrical installations	5-20 years
Telecommunications	
equipment	5-15 years
Vehicles, machinery	
and equipment	3-15 years
Leased assets	3-5 years

When there are indications that an asset has decreased in value, the need for write-downs

is determined using ESV's General Guidance, Chapter 5, Section 5, Write-downs.

LEASING

Leasing is classified as either financial or operational leasing. The classification is made using ESV's General Guidance on financial leasing. Agreements classified as financial leasing, mainly vehicles, are reported as fixed assets with a nominal cost of acquisition with deduction for planned depreciation, and obligations to make future lease payments are reported as liabilities. Operational leasing expenditure is written off on a straight-line basis over the leasing term.

FINANCIAL INSTRUMENTS

Financial instruments primarily held to generate yield or appreciation are valued at fair value unless otherwise indicated below. The fair value is determined based on the market value of the instrument. The change in value since the previous balance sheet date is reported in the income statement.

Financial instruments not held to generate yield or appreciation are valued at amortised cost using the effective interest method, with the exception of shares in wholly and partly owned companies, financial guarantee contracts, and leasing agreements.

The following financial instruments may not be valued at fair value:

- 1. financial instruments held to maturity
- loan claims and other claims arising from the activities and that are not held for trading purposes
- 3. shares and participations in wholly or partly owned companies, and
- 4. liabilities, with the exception of liabilities included as part of a trading portfolio.

Financial instruments held to maturity are financial assets and financial liabilities with fixed or determinable payments and fixed maturities and which the Group intends to keep until maturity. Loan claims and other claims are financial assets with fixed or determinable payments but that are not derivative instruments. Amortised cost is the amount at which a financial asset or financial liability is recognized after acquisition, taking into account:

- accrual of accrued interest using the effective interest method
- · repayment of principal, and
- · any write-downs

A financial asset or financial liability is recognised in the balance sheet when the Group becomes a party to the contractual terms of the financial instrument. Independent sales are recognised each trading day.

ACCOUNTS RECEIVABLE - TRADE

Accounts receivable are recorded with the amount with which they are expected to be received. Provision for expected risk of loss relating to outstanding accounts receivable is made following individual assessment.

RECEIVABLES AND LIABILITIES IN FOREIGN CURRENCIES

Monetary receivables and liabilities in foreign currency are converted at the exchange rate on the balance sheet date. Hedged monetary receivables and liabilities are recognised based on the hedged rate.

Non-monetary receivables and liabilities are recognised at the rate at the time of acquisition. Revaluation of non-monetary items in foreign currency is recognised at the exchange rate on the day of the revaluation.

Exchange rate differences are recognised in the income statement for the financial year in which they arise. Exchange gains are recognised as financial revenue and exchange losses as financial costs under the heading where the difference occurred.

PUBLIC CAPITAL/EQUITY

Under the item Public capital, the following is reported, where applicable:

- allocated funds used by the Authority to finance fixed assets
- specially allocated funds used by the Authority to finance working capital

PROVISIONS AND CONTINGENT LIABILITIES

A provision is defined as a liability of an uncertain amount and/or uncertain date when it will be settled. A provision is reported in the balance sheet when:

1. the group has an obligation (legal or informal) as a result of a past event,

- 2. an outflow of resources is likely to be required to settle the obligation, and
- 3. a reliable estimation of the amount can be made.

Restructuring provisions are made when there is an adopted and detailed restructuring plan in place and the concerned parties have been notified. Future commitments regarding agreements with employees concerning occupational or partial pensions, paid leave of absence, or those who have been made redundant due to a shortage of work where a future commitment through the Swedish Job Security Foundation may be invoked are also recognised under Provisions.

The Group discounts obligations that are expected to be settled after more than 12 months. The increase in the provision due to the passing of time is recorded as an interest expense.

PENSIONS

As of 1 January 2016, an occupational pension agreement applies to government employment, PA 16, which consists of two sections. Section 1 is a wholly defined-contribution plan and applies to employees born in 1988 and later. Section 2 is a defined-benefits plan and to some extent a defined-contribution plan. PA16 represents a system changej, of the state pension system that has a full impact on employees born in 1988 and later, who transition to a defined-contribution pension scheme. Employees born before 1988 have been transferred to PA16 with some adjustments, but retain a defined-benefits pension.

Defined-benefits pensions in accordance with PA 16 section 2 apply to employees born from 1943 to 1973 or employees with an annual income of not less than 7.5 times the income base amount (2020 SEK 501,000; 2019 SEK 483,000).

Persons born before 1943 and with a retirement age of 65 years are covered by PA-91. For air traffic controllers, PA-91 applies if they were born before 1948.

The pension liability includes defined-benefits retirement pension, survivor's pension, disability pension, and temporary retirement pension (60-65 years) for air traffic controllers. With the introduc-

tion of PA16, the exception for temporary retirement pensions from age 60 does not apply for air traffic controllers born in 1988 or later.

The pension liability is calculated by the National Government Employee Pensions Board (SPV) using the safeguarding bases and means that earned pension rights are discounted to present value. The calculation is based on the current interest rate in accordance with SPV's board of directors' decision on actuarial bases for calculating pension liability. The defined-benefits part is adjusted upwards annually with the change in the price base amount. From 2020, state-owned enterprises shall use the same calculation basis as for SPV's pension business in general.

The present value of the pension liability as of 31 December 2020 has been calculated using the 2020 calculation basis. Gross interest rate of -1.4 percent has been used, with deductions for overhead of 0.1 percent, i.e. a net interest rate of -1.5 percent. The present value of the pension liability as of 31 December 2019 was also calculated using the 2019 calculation basis, gross interest rate of -0.7 percent, with deduction for estimated yield tax 0.1 percent and overhead 0.2 percent.

The gross interest rate is calculated by Finansinspektionen as an average of the interest rate for long-term real bonds for the period from 1 October to 30 September of the previous year.

As of 2019, it is no longer possible to choose next year's calculation basis. Instead, valuation is made using the current year's calculation basis. The total effect of actuarial revaluations of provisions for pension obligations related to post-employment benefits amounts to SEK +794 million for 2020, including special payroll tax. According to ESV's regulations and general guidance for the Ordinance (SFS 2000:605) concerning the Annual Reports and Budget Documentation, Chapter 4, Section 2, this cost is recognised directly against Non-restricted equity instead of through the income statement.

This year's provision for the pension liability for pension benefits and interest has been written off. The interest portion of this year's pension costs is recognised under financial revenues and costs. The interest

rate component includes indexation of pension benefits and changes to the calculation principles due to changed interest rate assumption.

The pension liability includes commitments regarding both active staff and pensioners. Non-vested commitments regarding staff with an earlier retirement age than 65 are fully included in the liability, as these pension provisions are expected to be fully utilised. The state-owned enterprise pays special payroll tax on pensions paid. Provision for special payroll tax has therefore been recognised as pension liabilities at the end of the financial year. LFV's pension obligations, as set out above, are recognised under Provisions.

CONTINGENT LIABILITIES

Obligations resulting from past events that are not recognised as liabilities or provision because the size of the obligation cannot be calculated with sufficient reliability, or it is unlikely that an outflow of resources will be required to settle the obligation, are recognised as contingent liabilities.

Potential obligations resulting from past events, the existence of which is confirmed only by the occurrence or absence of one or more uncertain future events, which are not fully within the Group's control, are also recognised as contingent liabilities.

TAXES AND TAX EQUIVALENTS AND DIVIDENDS

LFV's subsidiaries account for current tax and thus pay income tax. The corporate tax rate in Sweden was 21.4 percent for the financial year 2019-2020 and 20.6 percent as of 2021.

The state-owned enterprise LFV is not liable to pay income tax, but LFV applies Chapter 10 of ESV's Special Provisions for state-owned enterprises, and complies with the Government's regulations on so-called tax equivalent, which requires state-owned enterprises to pay the State an amount equivalent to the income tax that would have been paid if the activities had been carried out in the form of a limited company.

The current tax equivalent for the year is calculated based on the profit/loss reported in the consolidated financial statements, with deduction for tax allocations corre-

sponding to the balance sheet allocations that limited companies can use, with supplements for non-deductible items and non-taxable revenue. Deductions are also made for the income tax paid by the subsidiaries. The final amount of this year's tax equivalent to be paid is adopted by the Government in connection with the adoption of the enterprise's annual report.

Deferred tax is declared on differences between recognised and taxable values, loss carryforwards and temporary differences, as well as deferred tax due to intended allocations calculated on the income for the year.

LFV pays special payroll tax on pension costs and is liable to pay tax under the VAT Act. As of 2009, LFV is not entitled to deduct VAT attributable to the exercise of official authority, referring to LFV's charging of air navigation fees. However, LFV receives compensation for input VAT, pursuant to the Ordinance (SFS 2002:831) concerning public authorities' rights to compensation for input VAT.

LFV shall distribute dividends equivalent to 15 percent on the profit after tax. The final amount of dividends is adopted by the Government in connection with the adoption of the enterprise's annual report.

OTHER

The limit for accruals of accrued operating revenue and operating expenses in the annual accounts for 2019 and 2020 amounts to SEK 30,000.

Regarding rounding of amounts stated in the annual report, the figures reported have in some cases been rounded, meaning that tables, graphs, and calculations do not always add up. In texts and tables, figures between 0 and 0.5 are shown as 0. A dash indicates a missing value.

NOTES

Amounts are in million SEK unless otherwise stated.

NOTE 1

AVIATION REVENUE

		GROUP		OWNED ERPRISE
	2020	2019	2020	2019
Route charges	2,139	1,597	2,139	1,597
Terminal fees	197	129	197	129
Remuneration for air navigation	523	479	523	479
service				
Total	2,859	2,205	2,859	2,205

NOTE 2

OTHER OPERATING REVENUE

			STATE	OWNED
	GROUP		ENT	ERPRISE
	2020	2019	2020	2019
Rents and leases	11	8	11	8
Commercial service/services	136	605	86	627
Grants received	83	89	83	89
Service exports	8	22	_	_
Other	14	5	12	5
Total	253	728	193	728

The group companies' share of the state-owned enterprise's other operating income, 5.1% (3.0).

NOTE 3

STAFF COSTS AND INFORMATION ABOUT STAFF, DIRECTOR-GENERAL, BOARD OF DIRECTORS, AND AUDITORS

			STATE-0	DWNED
		GROUP	ENTE	RPRISE
	2020	2019	2020	2019
Salaries	887	830	826	830
Payroll overhead	957	798	930	798
Other staff costs	20	30	18	30
Total			1,774	
Payroll overhead includes pension costs, including payroll tax of		530	664	530

SALARIES AND COMPENSATION

Boards of directors	Boards of directors, Director-General and Managing Directors			
	2020	2019	2020	2019
State-owned enterprise	4	2	822	828
Subsidiaries	1	_	61	0
Total for group	5	2	883	828

SALARIES/FEES FOR THE BOARD OF DIRECTORS AND DIRECTOR-GENERAL IN SEK

Persson Grivas Ann, DG	200101-201231	1,694,953
Olson Jan, Chair	200101-201231	105,294
Hafström Marie, Vice Chair	200101-200630	15,196
Davidson Johan, Vice Chair	200701-201231	15,098
Davidson Johan, Member	200101-200630	15,196
Andrén Eva, Member	200101-200115	1,250
Helgesson Mats, Member	200101-200115	2,500
Hvittfeldt Ann-Christine, Member	200101-201231	30,098
Nilsson Per, Member	200101-201231	30,294
Edström Carl-Johan, Member	200116-201231	28,946
Looström Cecilia, Member	201119-201231	3,500
Teigland Robin, Member	201119-201231	3,500
Bredberg Anne-Marie, staff rep.	200101-201231	1,172,530
– of which board member		
compensation		30,000
Lennartsson Peter, staff rep.	200101-201231	556,405
 of which board member 		
compensation		30,000

SICK LEAVE, %

	STATE-OWNED ENTERPRI		
	2020	2019	
Total sick leave as a proportion of normal working hours	3.02	2.46	
Proportion of total sick leave representing continuous absence of 60 days or more	38.72	47.13	
Sick leave distributed by gender:			
Men	2.40	1.62	
Women	3.83	3.54	
Sick leave distributed by age group:			
29 years or younger	1.37	1.35	
30 - 49 years	2.96	2.07	
50 years or older	3.20	3.02	

NOTE 4
MISCELLANEOUS EXTERNAL COSTS

		GROUP		OWNED ERPRISE
	2020	2019	2020	2019
Resale costs	17	33	8	14
Property and rent expenditures	65	57	59	57
Materials, maintenance, transport	161	190	154	190
Travel expenses	12	27	11	27
External services	238	768	257	787
Administrative costs	70	162	70	173
Total	564	1 237	559	1 247

The group companies' share of the state-owned enterprise's various external costs, 10.6% (0.1).

REMUNERATION TO AUDITORS

		GROUP	STATE-OWN TE	NED EN- ERPRISE
	2020	2019	2020	2019
Swedish National Audit Office				
– Audit engagement	1	1	1	1
KPMG				
– Audit engagement	_	0	-	_
– Other engagements	1	0	1	0
PwC				
Audit engagement	0	0	_	0
– Other engagements	0	0	_	_
E & Y			-	
– Audit engagement	2	1	2	1
Total	4	2	3	2

NOTE 5 DEPRECIATION AND WRITE-DOWNS

		GROUP	STATE-0	OWNED RPRISE
	2020	2019	2020	2019
Depreciations				
Intangible assets	67	56	54	56
Buildings	16	14	16	14
Maintenance expenses on				
third-party property	0	0	0	0
Electrical installations	2	3	2	3
Telecommunications equipment	82	99	82	99
Vehicles, machinery and equipment	2	2	2	2
Leased facilities	1	1	1	1
Total	171	175	158	175

NOTE 6 RESULTS FROM HOLDINGS IN ASSOCIATED

NOTES

			STATE-0	
		GROUP	ENTE	RPRISE
	2020	2019	2020	2019
Associated companies:				
Entry Point North AB	_			
Share in associated company's	8	17	-	-
profit/loss	_			
NUAC HB				
Share in associated company's	-	0	-	-
profit/loss				
SAAB Digital Air Traffic				
Solutions AB				
Share in associated company's	-15	-5	-	-
profit/loss				
Total	-7	11	_	_

NOTE 7 INTEREST INCOME

COMPANIES

		GROUP	STATE-C ENTE	OWNED RPRISE
	2020	2019	2020	2019
Interest income from bank balances	0	0	_	0
Interest income from short-term investments	7	5	7	5
Interest income from short-term receivables	0	0	0	0
Other financial income	3	8	3	8
Total	11	13	11	13

NOTE 8 INTEREST EXPENSES AND SIMILAR ITEMS

			STATE-0	DWNED
		GROUP	ENTE	RPRISE
	2020	2019	2020	2019
Interest portion of the change in				
pension liability for the year	11	66	11	66
Interest expenses for financial				
leasing	0	0	0	0
Other financial costs	4	1	4	1
Total	15	66	15	66

L F V 2 0 2 0 N O T E S

NOTE 9 TAX/TAX EQUIVALENT ON THE PROFIT/LOSS FOR THE YEAR

		GROUP
	2020	2019
Tax equivalent for the year		
Group profit/loss before tax	700	-40
Tax reported for the year	-28	9
– of which tax in subsidiaries	-1	_
–of which deferred tax on tax losses and taxable temporary differences	-27	9
Profit/loss after tax	672	-31
Deferred tax asset		
Value brought forward	28	18
Change in deferred tax on deductible tax losses	-28	13
Change in deferred tax on taxable temporary differences	0	-3
Value carried forward	-	28

Deferred tax relates to loss carryforward and temporary differences are attributable to the valuation of receivables. As of 31 December 2020, deferred tax assets attributable to loss carryforwards have been reversed in full, considering it is uncertain when accumulated loss carryforwards may be used. Therefore, deferred tax assets on loss carryforwards have not been included in the annual accounts for 2020.

		GROUP		OWNED
	2020	2019	2020	2019
PROGRAMME RIGHTS AND OTHER INTANGIBLE ASSETS				
Acquisition value brought forward	959	858	959	858
Acquisitions for the year	137	116	140	116
Sales/disposals	-5	_	-5	_
Reclassifications	0	-15	0	-15
Acquisition value carried forward	1,091	959	1,094	959
Depreciations and write-downs brought forward	-471	-415	-471	-415
Depreciations for the year	-54	-56	-54	-56
Sales/disposals	5	_	5	_
Reclassifications	-6	_	-6	_
Accumulated depreciations and write-downs carried forward	-527	-471	-527	-471
Planned residual value carried forward	565	488	567	488

The useful life of intangible fixed assets is more than five years in cases where it can be determined with a reasonable degree of certainty that the useful life is longer, as is mainly the case for operational air traffic management systems and goodwill.

NOTE 10 INTANGIBLE FIXED ASSETS

			STATE-0	DWNED
		GROUP	ENTE	RPRISE
	2020	2019	2020	2019
GOODWILL	_		_	
Acquisition value brought forward	_	_	_	_
Acquisitions for the year	193	_	_	_
Acquisition value carried	193	-	-	-
forward				
Depreciations and write-downs brought forward	-	_	_	-
Depreciations for the year	-13	_	_	_
Accumulated depreciations and write-downs carried forward	-13	_	-	_
Planned residual value carried forward	180	_	-	_

NOTE 11 TANGIBLE FIXED ASSETS

			STATE-0	OWNED
		GROUP	ENTE	RPRISE
	2020	2019	2020	2019
BUILDINGS			_	
Acquisition value brought forward	577	466	577	466
Acquisitions for the year	_	111	_	111
Sales / disposals	_	_	_	_
Reclassifications	3	_	3	_
Acquisition value carried forward	580	577	580	577
Depreciations and write-downs brought forward	-314	-300	-314	-300
Depreciations for the year	-15	-14	-15	-14
Sales / disposals	_		_	-
Reclassifications	-1	_	-1	_
Depreciations and write-downs carried forward	-331	-314	-331	-314
Planned residual value carried forward	249	263	249	263

		GROUP	ENTE	
	2020	2019	2020	2019
MAINTENANCE EXPENSES ON THIRD-PARTY PROPERTY				
Acquisition value brought forward	1	-	1	-
Acquisitions for the year	1	1	_	1
Sales / disposals	_	_	_	_
Acquisition value carried forward	2	1	1	1
Depreciations and write-downs brought forward	0	_	0	_
Depreciations for the year	0	0	0	0
Sales / disposals	_	_	_	_
Depreciations and write-downs carried forward	0	0	0	0
		-		
Planned residual value carried forward	1	1	1	
Planned residual value carried forward		GROUP	STATE-0	OWNED
	2020		STATE-0	OWNED ERPRISE
forward		GROUP	STATE-0	OWNED ERPRISE
forward ELECTRICAL INSTALLATIONS Acquisition value brought		GROUP	STATE-0	DWNEDERPRISE 2019
forward	2020	GROUP	STATE-(ENTE 2020	OWNED ERPRISE 2019 73
ELECTRICAL INSTALLATIONS Acquisition value brought forward	2020	GROUP	STATE-(ENTE 2020	OWNED ERPRISE 2019
ELECTRICAL INSTALLATIONS Acquisition value brought forward Acquisitions for the year	2020 74	GROUP 2019 73	STATE-(ENTE 2020 74	DWNED ERPRISE 2019 73
ELECTRICAL INSTALLATIONS Acquisition value brought forward Acquisitions for the year Sales / disposals Acquisition value carried	2020 74 - -2	GROUP 2019 73 3 -2	STATE-(ENTE 2020 74 —	73 3
ELECTRICAL INSTALLATIONS Acquisition value brought forward Acquisitions for the year Sales / disposals Acquisition value carried forward Depreciations and write-downs brought forward	2020 74 - -2 72	GROUP 2019 73 3 -2 74	STATE-1 ENTE 2020 74 -2 72	73 3 -22
ELECTRICAL INSTALLATIONS Acquisition value brought forward Acquisitions for the year Sales / disposals Acquisition value carried forward Depreciations and write-downs	2020 74 - -2 72	GROUP 2019 73 3 -2 74 -60	STATE-6 ENTE 2020 74 	73 3 -20 74
ELECTRICAL INSTALLATIONS Acquisition value brought forward Acquisitions for the year Sales / disposals Acquisition value carried forward Depreciations and write-downs brought forward Depreciations for the year	2020 74 - -2 72 -61	GROUP 2019 73 3 -2 74 -60 -3	STATE-1 ENTE 2020 742 72 -61	73 73 74 -60

				OWNED
	2020	GROUP	2020	ERPRISE 2019
TELECOMMUNICATIONS	2020	2019	2020	2015
EQUIPMENT				
Acquisition value brought forward	1,653	1,611	1,653	1,611
Acquisitions for the year	420	84	421	84
Sales / disposals	-70	-41	-70	-41
Reclassifications	-3		-3	-
Acquisition value carried forward	2,001	1,653	2,002	1,653
Depreciations and write-downs brought forward	1,319	1,261	1,319	1,261
Depreciations for the year	-83	-99	-83	-99
Sales / disposals	69	41	69	41
Reclassifications	1	_	1	-
Depreciations and write-downs carried forward	1,332	1,319	1,332	1,319
Planned residual value carried forward	668	334	670	334
		GROUP		OWNED ERPRISE
	2020	2019	2020	2019
VEHICLES, MACHINERY, ETC.				
Acquisition value brought forward	34	32	34	32
Acquisitions for the year	5	2	4	2
Sales / disposals	0	_	0	-
Reclassifications	-6		-6	_
Acquisition value carried forward	33	34	32	34
Depreciations and write-downs brought forward	-30	-28	-30	-28
Depreciations for the year	-2	-2	-2	-2
Sales / disposals	0	-	0	-
Reclassifications	6		6	
Depreciations and write-downs carried forward	-26	-30	-26	-30
Planned residual value carried	7		6	4

		GROUP		OWNED ERPRISE
	2020	2019	2020	2019
LEASED FIXED ASSETS				
Acquisition value brought forward	5	5	5	5
Acquisitions for the year	_	0	-	0
Sales / disposals	-1	0	-1	0
Acquisition value carried forward	4	5	4	5
Depreciations and write-downs brought forward	-3	-2	-3	-2
Depreciations for the year	-1	-1	-1	-1
Sales / disposals	1	0	1	0
Depreciations and write-downs carried forward	-3	-3	-3	-3
Planned residual value carried forward	1	2	1	2

412 -424 6	-201 15	417 -426 6	382 -201 15
-424	-201	120	-201
412	382	417	382
526	331	526	331
2020	2019	2020	2019
GROUP		STATE-OWI ENTERPF	
		2020 2019	GROUP ENTE 2020 2019 2020

 $^{{}^{*}\}mathrm{Of}$ which SEK 48 million in advances payments to suppliers.

NOTE 12

HOLDINGS IN SUBSIDIARIES

	COMPANY REG. NO.	NUMBER SHARES	PERCENTAGE OF SHARE CAPITAL	NOMINAL VALUE	BOOK VALUE
Direct holdings					
Shares in group company, LFV Holding AB	556374-8432	75,000	100	75	299
Indirect holdings (via LFV Holding AB)					
Shares in group companies	-		-	-	
Aviseq Critical Communication AB	559235-1083	25,000	100	0	_
LFV Aviation Consulting AB	556193-1469	3,000	100	3	_
LFV Norway AS	915 874 770	100	100	0	_

NOTE 13

HOLDINGS IN ASSOCIATED COMPANIES

			STATE-0	DWNED
		GROUP	ENTE	RPRISE
	2020	2019	2020	2019
Accumulated profit shares, etc.			,	
At the start of the year	46	41	_	_
Share of net profit/loss of asso-	•			
ciated companies	-7	11	-	_
Change in associated companies'				
equity, etc.	-4	-6	-	
Total	35	46	-	_
Book value	35	46	_	

Holdings in associated companies - Breakdown of the state-owned enterprise's and the group's holdings in associated companies

	COMPANY REG. NO.	NUMBER SHARES	PERCENTAGE OF SHARE CAPITAL	NOMINAL VALUE	SHARE OF ADJ. EQUITY	BOOK VALUE	
Breakdown of the state-owned enterprise's and the group's holdings in associated com- panies							STATE- WNED RPRISE
Indirect holdings (via LFV Holding AB)							
Entry Point North AB	556682-8272	100 000	33	0	42	42	_
SAAB Digital Air Traffic Solutions AB	559060-0747	205	41	0	-7	-7	_
						35	-

NOTE 14

OTHER LONG-TERM RECEIVABLES

			STATE-	OWNED
		GROUP	ENT	ERPRISE
	2020	2019	2020	2019
At the start of the year	1,395	1,288	1,395	1,286
Additional items	1,284	117	1,284	117
Settlement Eurocontrol	_	_	_	_
Items carried forward	-2	-11	-2	-9
Total	2,676	1,395	2,676	1,395

NOTE 15

PREPAID EXPENSES AND ACCRUED REVENUE

			STATE	-OWNED
	GROUP		ENT	TERPRISE
	2020	2019	2020	2019
Other prepaid expenses	51	64	50	63
Accrued revenue, other	153	115	149	112
Total	205	179	199	175

NOTE 16

LONG- AND SHORT-TERM INVESTMENTS

		GROUP		OWNED ERPRISE
	2020	2019	2020	2019
Short-term				
Commercial papers	2,084		2,084	
Bonds	_	_	_	_
Total	2,084	2,534	2,084	2,534
Long-term			•	
Bonds	_	_	_	_
Total	-	_	-	-

NOTE 17

RESTRICTED RESERVES AND UNRESTRICTED EQUITY

-				-	CTATE-	OWNED
	GROUP					ERPRISE
		Restrict-	Unre-		Restrict-	Unre-
	State capital	ed re- serves	stricted equity	State capital	ed re- serves	stricted equity
Amount at the start of the year accord- ing to adopted balance sheet	202	275	284	202	252	231
Dividends	_	_	_	_	_	_
Changes attributa- ble to the group's associated com- panies	_	_	_	_	_	_
Transfer between unrestricted and restricted equity	_	-11	11		_	_
Actuarial revalu- ation of pension liability	_	_	-794	-	_	-794
Profit/loss for the year	-	_	672		_	697
Amount at the end of the year	202	264	173	202	252	134

NOTE 18 PENSION PROVISIONS

			STATE-OWNED		
		GROUP	ENT	ERPRISE	
	2020	2019	2020	2019	
At the start of the year	7,471	7,056	7,471	7,056	
Pension provision for the year	584	595	584	595	
Pension payments for the year**	-121	-114	-121	-114	
Indexation and interest	11	-66	11	-66	
Change due to changed	***************************************		***************************************		
calculation basis	794	_	794		
Total	8,739	7,471	8,739	7,471	

^{*} The annual report for the central government uses a different actuarial calculation basis for the pension liability until 31 December 2019. LFV's pension liability in the 2019 annual report for the central government amounts to SEK 7,135 million (of which special payroll tax SEK 1,393 million). The effect of actuarial revaluations of provisions for pension obligations related to post-employment benefits (excluding special payroll tax on pension costs) amounts to SEK 145 million for 2019. As of 2020, the same actuarial calculation basis is used in the annual report for LFV as for the central government.

NOTE 20

LIABILITIES TO LEASING COMPANIES

			STATE	-OWNED
		GROUP	EN.	TERPRISE
	2020	2019	2020	2019
Leasing companies	1	3	1	3

NOTE 21

OTHER NON-INTEREST-BEARING LIABILITIES

			STATE	-OWNED
	GROUP		EN	TERPRISE
	2020	2019	2020	2019
Security funds	30	31	30	31
Restructuring fund	5	5	5	5
Liability to Eurocontrol	30	176	30	176
Total	65	212	65	212

NOTE 19

OTHER PROVISIONS

			STATE-0	OWNED
		GROUP	ENTE	RPRISE
	2020	2019	2020	2019
Restructuring costs	11	8	11	8
Other provisions	36	27	34	27
Total	47	35	44	35

NOTE 22

OTHER NON-INTEREST-BEARING CURRENT LIABILITIES

		GROUP		OWNED
-	2020	2019	2020	2019
	2020	2019	2020	2019
Debt to the central govern- ment*	326	1	326	1
Liability to Eurocontrol	159	231	159	231
Employee withholding taxes and				
employer's contributions	51	49	46	49
Other current liabilities	196	178	191	178
Total	732	459	722	459

^{*}SEK 251.3 million will be repaid due to non-utilised funds from grant 1:20 Contribution to LFV.

^{**}Amount is inclusive of payroll tax.

NOTE 23 ACCRUED EXPENSES AND DEFERRED REVENUE

		GROUP	STATE-C ENTE	WNED RPRISE
	2020	2019	2020	2019
Salaries and compensation	9	7	7	7
Holiday pay liability	70	67	66	67
Social security contributions	38	30	36	30
Other accrued costs	107	35	106	35
Deferred grants	61	62	61	62
Other deferred revenue	35	17	27	17
Total	320	219	302	219

NOTE 24 CONTINGENT LIABILITIES

			STATE-OWNER		
		GROUP	ENTERPRI		
	2020	2019	2020	2019	
Guarantee for pension liabilities with LFV Airport Center AB	1	1	1	1	
Guarantee in favour of group companies (framework for bank					
guarantees)	_		50	50	
Total	1	1	51	51	

 $^{^{*}}$ LFV may issue guarantees for credits up to SEK 400 million (200) in favour of LFV Holding AB regarding financial commitments in the group of companies.

NOTE 25

FURTHER INFORMATION REGARDING THE FUNDS STATEMENT

Non-cash adjustments, etc.

			STATE	-OWNED
		GROUP	ENT	TERPRISE
	2020	2019	2020	2019
Depreciations	158	175	158	175
Pension provisions	474	414	474	414
Other provisions	11	-1	9	-1
Total	643	589	641	589

Cash flow from financing activities

			STATE-	OWNED	
		GROUP	ENTERPR		
	2020	2019	2020	2019	
Receivables change (short-term part)	-155	104	-155	104	
Receivables change (long-term part)	1,284	-117	1,284	-117	
Total	1,439	-14	1,439	-14	
Changes to non-interest-bearing liabilities (short-term part)	-72	39	-72	39	
Changes to non-interest-bearing liabilities (long-term part)	-146	-73	-146	-73	
Total	-218	-34	-218	-34	

INVESTMENTS

	Out-	Out-	Out-		Out-
	come	come	come	Plan	come
	2017	2018	2019	2020	2020*
Acquisition and development of new investments					
ATM equipment	62	112	173	163	195
Radar equipment	21	38	122	114	63
Communications equipment	35	12	4	45	28
Radio equipment		2	124	190	205
Buildings	3	101	_	_	16
IT	3	0	6	_	19
Commercial investments	29				2
Other			2	22	1
Total acquisition and development expenses	153	264	430	534	529*
Of which investments in fixed assets	153	264	430	534	529
Funding					
Own resources	153	264	430	534	529
Total funding of acquisitions and development	153	264	430	534	529
Maintenance of existing investments					
ATM equipment	5	7	6	17	3
Radar equipment	28	27	24	10	11
Communications equipment	30	22	29	18	13
Radio equipment	10	3	2	18	1
Buildings	1	_	6	2	2
IT	_	1	_	_	_
Commercial investments	_	_	_	_	
Other	_	_	1	1	
Total maintenance expenses	73	59	68	65	28
Of which investments in fixed assets	73	59	68	65	28
Funding				_	
Own resources	73	59	68	65	28
Total funding for maintenance	73	59	68	65	28

^{*} Excluding acquisition of subsidiary SEK 193 million.

LFV continuously upgrades both technical systems and infrastructure as well as working methods. During the year, development and replacement investments have been made to meet the requirements on functionality, aviation safety, capacity and regularity as well as cost efficiency. Extensive investments have also been made in infrastructure for a robust air navigation service.

During the year, investment projects were affected by the coronavirus pandemic, where most projects were delayed due to travel restrictions and entry bans, as well as delays from suppliers. Since March 2020, LFV has been working intensely to adapt its operations to the special circumstances the pandemic resulted in. Some delays and reprioritisations have occurred, which also

affects the investment plan in the coming year. In recent years, LFV has made significant investments in radar communications in the form of modernisation of existing radar stations but also in new stations as a result of increased requirements for airspace monitoring, system turnover, and requirements through new European regulatory frameworks. Investments in the new primary radar stations and modernisation of the existing stations will be completed in 2021. Investments in radar communication will be made continuously and will continue in the coming year with a focus on increased robustness.

For several years, LFV has developed and invested in remote air traffic control infrastructure, so-called Remote Tower Services (RTS), to meet customer and market demand. In 2020, investments have been made in technical solutions for RTS at

four of Swedavia's airports, to be operated from the remote air traffic control centre (RTC) in Stockholm. The first of four airports will launch in 2021. During the year, LFV has also made investments in communication, radio and transmission systems. There is an ongoing need for investments in this area as systems age and in order to maintainsafety, capacity, and availability. Investments in this area will, according to plan, continue in coming years for the replacement of older systems and with a focus on robustness as well as physical and logical IT security.

Other significant investments this year were made in the field of ATM equipment, including COOPANS, continuity, and L-CAPS. This year's investments in COOPANS are at the same level as last year and include continuous updates and functional improvements in the TopSky air traffic control system. Investments in L-CAPS, an aeronautical information solution (AIS), are necessitated by an EU regulation aimed at modernising AIS services. The implementation is scheduled to be completed in 2021. LFV's investment in a continuity solution means enabling traffic control to be operated from the other control centre in the event of a loss of one. Functionality for incremental continuity capacity will begin in 2021.

LFV continuously implements priorities and adjusts the investment plan in relation to external changes, regulatory requirements, and operational needs.

The outcome for 2020 is slightly higher than in 2019, but lower than the 2020 plan, which, in addition to certain re-prioritisation, is mainly due to delayed implementation due in part to the coronavirus pandemic. Restrictions in the form of travel bans and visiting bans made access to operational facilities more difficult and in some cases impossible. LFV has also had a lack of resources in some fields of competence. As a result of new regulations, increased capacity requirements, increased demands of society, and increased robustness of air navigation services in all preparedness situations, the rate of investments has gradually increased in recent years. This has posed the challenge of having sufficient human resources to cope with the higher rate of investment

In the next few years, investments are expected to be at a similar level as in 2020 with continued investments mainly in ATM, radar and radio and communication equipment.

REPORTING ACCORDING TO PERFORMANCE PLAN

In accordance with the EU Single European Sky legislation (SES), performance goals relating to air traffic services en route and terminal Arlanda have been established for the second reference period (RP2) 2015 – 2019.

The following table presents the goals for the Danish-Swedish airspace block (DK-SE FAB) and LFV's follow-up of these for 2015 – 2019.

Target areas – KPI	Area	KPI (definition)	Target 2019	Out- come 2019	Target 2018	Out- come 2018	Target 2017	Out- come 2017	Target 2016	Out- come 2016	Target 2015	Out- come 2015
AVIATION SAFETY Introduction of the RAT method, %	Danish- Swedish airspace	Aviation safety incidents	100	100	100	100	100	100	100	100	100	100
Maturity of SMS – Safety Management System	Danish- Swedish airspace	Maturity according to survey	C		С		С		C		С	
– safety culture (scale A= lowest, E=highest)	LFV	Maturity according to survey	С	D	С	D	С	D	С	D	С	D
Maturity of SMS – Safety Management System – Other	Danish- Swedish airspace	Maturity according to survey	С		С		С		С		С	
(scale A= lowest, E=highest)	LFV	Maturity according to survey	D	С	С	С	С	С	С	С	С	С
ENVIRONMENT Average horizontal en route efficiency, %	En route Danish- Swedish airspace	Discrepancy between distance flown and straight- est distance.	1.19	1.25	1.20	1.21	1.20	1.18	1.20	1.20	1.20	1.18
CAPACITY ATFM delays – minutes per flight	En route Danish- Swedish airspace	Delays caused by air navigation service	0.09	0.07	0.09	0.04	0.10	0.02	0.10	0.05	0.10	0.02
Terminal ATFM delays on arrival – minutes per flight	Terminal Arlanda	Delays caused by air navigation service	0.35	0.32	0.35	0.41	0.35	0.12	0.35	0.22	0.35	0.07
COST-EFFICIENCY (Sweden), SEK		Unit cost – Sweden	513.36		531.68		550.72		569.89		585.00	
		– LFV	386.41	394.01	402.42	409.98	419.44	476.91	440.70	470.42	457.11	565.47
	En route	 LFV excluding expenses exempted from risk sharing 		366.35		364.36		391.08		407.21		435.01
		Unit cost – Sweden	1,046.49		1,073.95		1,100.00		1,144.60		1,212.76	
	Terminal Arlanda	– LFV	748.34	855.30	763.42	848.62	786.06	982.09	810.45	960.42	856.93	1,142.53
	Alldliud	 LFV excluding costs exempted from risk sharing 		804.28		755.67		771.55		804.97		862.70

The reporting on the performance plan below includes final reconciliation for 2019 after the end of RP2. For RP3, there are no set targets, but outcomes are reported for the key performance indicators (KPIs) that will be subject to EU targets. 2020 is the first year of the RP3 period (2020-2024).

AVIATION SAFETY

RP2: The target at EU level is complete implementation of the RAT method within the EU from 2019. The RAT method is a method for classifying aviation safety events. For LFV, however, the performance plan's goal was for the method to be fully implemented as early as 2015. LFV achieved this goal.

In addition to the use of the RAT method, there are goals related to assessed degree of maturity according to a survey regarding safety management systems divided into safety culture and other. LFV's maturity does not meet the targets set in 2019 following revision by the Swedish Transport Agency.

RP3 – 2020: The survey on the proposed targets for RP3 has been received, but reporting will not be done until spring 2021 and outcomes will be reported to the EU on 1 June 2021.

ENVIRONMENT

The goal entails that the discrepancy between distance flown and straightest distance is measured on average horizontal en route efficiency. The intention is for the flight path to be as straight as possible and thus cause as little environmental impact as possible. Sweden is at the forefront in the environmental area and has been using 'Free route airspace' for several years, which means that airlines have the opportunity to fly straight through Swedish airspace.

RP2: The goal applies to Danish-Swedish airspace as a whole and was achieved during the years 2015-2017, while the goal was barely reached in 2018. In 2019, the goal was not achieved as a result of weather-related disruptions and military aviation activities. The goal was very ambitious and even small disturbances caused deviations. RP3 – 2020: The Swedish outcome for RP3

was followed up and amounted to 1.03 percent and was one of the lowest in Europe. The outcome was affected by the low traffic volumes in the airspace.

CAPACITY

The goal includes air traffic delays caused by air navigation services measured as average delay per flight.

RP2: The performance plan's capacity goal for en route applies to the Danish-Swedish airspace block as a whole.

The outcome for 2019 means that LFV has contributed to achieving the goal. The goal has thus been achieved in the second reference period of all years. The goal for Terminal Arlanda was also reached in 2019. The delays that have occurred during the year are due to weather-related restrictions, lack of resources on certain days throughout the summer, and disturbances in technical infrastructure.

RP3 – 2020: The Swedish outcome for RP3 was followed up and amounted to 0.01 minutes per flight. For Terminal Arlanda, the outcome was 0.00 minutes per flight. The outcome was affected by the low traffic volumes in the airspace.

COST-EFFICIENCY

RP2: Cost-efficiency goals are set at national level and measure real unit costs at the 2012 price level, measured in HICP, Harmonised Index of Consumer Prices. The costs pertaining to en route are, in accordance with the national guidelines developed by the Swedish Transport Agency, costs for en route activities at the control centres, infrastructure, and large parts of tower operations.

For Terminal Arlanda, costs for the tower service including management and support services are included. There was a high outcome for both en route and terminal Arlanda in 2019, as this included costs exempt from risk sharing regarding extra pension provisions due to the low interest rates. The target was not met in 2019 for either en route or terminal Arlanda, neither in total nor excluding exempted pension costs. The outcome for 2019 was corrected following LFV's reporting to the Swedish Transport Agency in spring 2020. The costs exempted from risk sharing are

regulated in the fee system after the end of RP2, which means that final reconciliation has taken place in 2020.

RP3 – 2020: The cost-efficiency goals will be followed up for 2020 and 2021, all in all, in view of the current situation and in line with Regulation (EU) 2020/1627 on exceptional measures for the third reference period (2020-2024).

During 2020, LFV participated in the Swedish Transport Agency's consultations.

DIVIDEND PROPOSAL

Luftfartsverket (Civil Aviation Authority) shall distribute dividends of 15 percent of the profit for the year. For 2020, the profit for the year amounts to SEK 672 million and comprehensive income after revaluation of the pension liability amounts to SEK -122 million. Dividends of SEK 0 million are proposed. Tax equivalent for the year amounts to SEK -28 million. Tax payable amounts to SEK 0 million.

We deem the internal governance and controls of Luftfartsverket (LFV, the Civil Aviation Authority) to be satisfactory during the period covered by the annual report. We certify that the annual report provides a true and fair picture of the organisation's results and of its costs, revenue, and financial position of Luftfartsverket.

Jan Olson CHAIR DIRECTOR-GENERAL Ann-Marie Bredberg Johan Davidson Carl-Johan Edström Ann-Christine Hvittfeldt Peter Lennartsson Cecilia Looström Per Nilsson Robin Teigland The Swedish National Audit Office's audit report on this annual report was delivered in February 2021. Stefan Andersson Margit Nestra

Norrköping, 18 February 2021

AUDIT REPORT FOR LUFTFARTSVERKET 2020

REPORT ON THE ANNUAL REPORT AND CONSOLIDATED ACCOUNTS

STATEMENTS

In accordance with Section 5 of the Act on Audit of State Activities etc. (SFS 2002:1022), the Swedish National Audit Office has carried out an audit of Luft-fartsverket's annual report with consolidated accounts for 2020, dated 2021-02-18

In the opinion of the Swedish National Audit Office, the Authority has:

- drawn up the annual report and consolidated accounts in accordance with the
 Ordinance (SFS 2000:605) concerning
 the Annual Reports and Budget Documentation, instructions, appropriation
 directions, and government decisions
 specific to the Authority.
- in all material respects provided a true and fair view of the financial results, funding, and financial position of Luftfartsverket and the Group as of 31 December 2020
- submitted a directors' report and other information consistent with and supporting a true and fair view in the annual report as a whole.

GROUNDS FOR THE OPINIONS

The Swedish National Audit Office has carried out the audit in accordance with the International Standards of Supreme Audit Institutions (ISSAI) for financial auditing, and the Swedish National Audit Office's instructions for auditing profit and loss accounts and other information in the annual report (RRI). Our responsibility according to these standards is described in greater detail in the section Auditor's responsibility. We are independent of the Authority in accordance with the ISSAI 30 Code of Ethics and have fulfilled our commitments pursuant to these ethical rules. We believe that the audit evidence we have obtained is sufficient and appropriate as a basis for the Swedish National Audit Office's statements.

Senior management's responsibility for the annual report

The Authority's senior management is

responsible for drawing up an annual report that provides a true and fair view in accordance with the Ordinance (SFS 2000:605) concerning the Annual Reports and Budget Documentation, instructions, appropriation directions, and other decisions specific to the Authority. The Authority's senior management is also responsible for the internal governance and control that it deems necessary for drawing up an annual report that is free of material misstatements, whether due to irregularities or errors.

In preparing the annual report, the Authority's senior management is responsible for assessing the Authority's ability to continue as a going concern. They highlight, where applicable, circumstances that may affect the ability to continue as a going concern and to use the going concern assumption unless there are special reasons not to do so.

Auditor's responsibility

Our objectives are to obtain a reasonable degree of certainty that the annual report as a whole is free from material misstatements, whether due to irregularities or errors, and to submit an audit report containing the Swedish National Audit Office's statements. Reasonable certainty is a high degree of certainty, but is no guarantee that an audit carried out in accordance with the ISSAI and RRI will always detect a material misstatement if one exists. Inaccuracies may arise due to irregularities or errors and are considered material if they, individually or collectively, can reasonably be expected to influence the financial decisions the user makes based on the annual report.

As part of an audit in accordance with ISSAI, we exercise professional judgement and maintain professional scepticism throughout the audit. In addition:

• we identify and assess the risks of material misstatements in the annual report, whether due to irregularities or errors, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of failing to detect a material misstatement as a result of irregularities is higher than that of a material misstatement due to

error, as irregularities may involve collusion, falsification, intentional omissions, misinformation or failure to implement internal governance and control.

- we obtain an understanding of the part of the Authority's internal governance and control relevant to our audit in order to design audit measures that are appropriate given the circumstances, but not to issue a statement on the effectiveness of the Authority's internal governance and control.
- we evaluate the appropriateness of the accounting policies used and the reasonableness of management's accounting estimates and related disclosures.
- we draw a conclusion regarding the appropriateness of management using the going concern assumption in preparing the annual report. Based on the obtained audit evidence, we also draw a conclusion on whether there is any material uncertainty relating to such events or circumstances that may lead to significant doubts as to the Authority's ability to continue as a going concern. If we conclude that there is a material uncertainty, we shall, in the audit report, draw attention to the disclosures in the annual report concerning the material uncertainty and the assessment provided or, if such disclosures are insufficient, modify our opinion on the annual report.
- we evaluate the overall presentation, structure and content of the annual report, including the disclosures, and whether the annual report outlines the underlying transactions and events in a manner that provides a true and fair view.

As part of the review in accordance with RRI, we plan and carry out the audit in order to:

- obtain sufficient and appropriate audit evidence that material information, of financial or non-financial nature, provided in the directors' report has been drawn up with the aim of providing a true and fair view of the activities together with the other parts of the annual report, based on the regulatory framework.
- take necessary measures regarding other information to ensure that it is consistent with the other parts of the annual report and free from material errors, based on our knowledge of the Authority. Our commu-

nication with senior management includes, among other things, the planned scope and focus of the audit and significant results from the audit, including any significant deficiencies in internal governance and control that we have identified.

REPORT ON OTHER REQUIRE-MENTS IN ACCORDANCE WITH LAWS AND OTHER REGULATIONS

Senior management's compliance with applicable regulations for the use of appropriations and revenue

OPINION

Based on our audit of the annual report, it is the Swedish National Audit Office's opinion that the Authority has, in all material respects, used appropriations and revenue in accordance with the purposes determined by the Swdish Parliament and in compliance with the applicable regulations.

GROUNDS FOR THE OPINION

We have conducted the audit in accordance with the ISSAI and RRI. Our responsibilities according to these are described in greater detail in the Auditor's responsibility section.

We believe that the audit evidence we have received is sufficient and appropriate as a basis for the Swedish National Audit Office's statement.

SENIOR MANAGEMENT'S RESPONSIBILITY

The Authority's senior management is responsible for ensuring that the use of and accounting for appropriations and revenue is in accordance with the applicable regulations and the financial conditions set out in appropriation directions and government decisions specific to the Authority.

AUDITOR'S RESPONSIBILITY

Our responsibility is to audit the Authority's annual report in accordance with the ISSAI and RRI. Our auditing standards require us to consider legal and regulatory compliance and any effects of significant deviations from applicable regulatory frameworks in the financial parts of the annual report. Our responsibility also includes

reviewing whether senior management's administration complies with applicable regulations and special decisions. In addition to the regulatory framework and special decisions that directly affect the accounts, this includes the regulations that directly refer to the use of funds decided by the Riksdag and the Government¹. Based on the audit of the annual report, we submit an opinion on the Authority's compliance with these regulatory frameworks.

Senior management's assessment of internal governance and control

OPINION

In our audit of the annual report, nothing has emerged to indicate that the management in its assessment of internal governance and control has not complied with the Ordinance on Internal Governance and Control (SFS 2007:603)

GROUNDS FOR THE OPINION

We have conducted the audit in accordance with the ISSAI and RRI. Our responsibilities according to these are described in greater detail in the Auditor's responsibility section.

We believe that the audit evidence we have received is sufficient and appropriate as a basis for the Swedish National Audit Office's opinion.

SENIOR MANAGEMENT'S RESPONSIBILITY

The management of the Authority is responsible for submitting, in compliance with the requirements in the Ordinance concerning the Annual Reports and Budget Documentation (SFS 2000:605), instructions, appropriation directions, and government decisions specific to the authority, a statement on the internal governance and control at the Authority.

AUDITOR'S RESPONSIBILITY

Our responsibility is to provide our opinion on the annual report based on our audit. We have conducted the audit in accordance with the ISSAI and RRI. When planning and conducting the audit, we consider the parts of internal governance and control relevant to how the Authority draws up its annual

report to present a true and fair view. Our responsibility does not include making a statement on the effectiveness of the Authority's internal governance and control. Our opinion concerning the management's assessment of internal governance and control is based on the measures we have taken to review the annual report and does not provide the same level of certainty as an opinion based on an audit.

Responsible auditor Stefan Andersson was the decision-maker in this case. Project manager Margit Nestra was rapporteur.

Stefan Andersson

Margit Nestra

Copy for information purposes: Luftfartsverket, the Ministry of Enterprise and Innovation, the Budget Department of the Ministry of Finance (Finansdepartementet).

1) Appropriations Ordinance (SFS 2011:223), Fees Ordinance (SFS 1992:191), Ordinance on Lending and Guarantees (SFS 2011:211), Capital Supply Ordinance (SFS 2011:210), Transfer of State Real Estate Ordinance (SFS 1996:1190), Transfer of State Movable Assets Ordinance (SFS 1996:1191).

BOARD OF DIRECTORS



Jan Olson Chair since 2013

Directorships: Chair, Arlandabanan Infrastructure AB and Märsta Förenade Åkeriföretag AB. **Previous positions:** Senior management positions SAS and SJ. Head of Business Development at SJ 2003-2012, CEO 2012.

Education: M.Sc. Economics Stockholm University.

Year of birth: 1950



Johan DavidsonDeputy Chair since 2020, member since 2013

Current position: Chief Economist, Svensk Handel.

Directorships: The Swedish Fortifications Agency and the National Property Board Sweden (SFV).

Previous positions: Chief Economist, Sveriges Apoteksförening, political adviser and Deputy Head of Coordination at the Cabinet Office. **Education:** Studies in national economics at

Stockholm University. **Year of birth:** 1972



Ann Persson Grivas Member since 2017

Directorships: Chair, LFV Holding AB, LFV Aviation Consulting AB, Aviseq Critical Communication AB, and Entry Point North. Deputy Chair, Luleå University of Technology/LTU. Member, SOS Alarm and the Supervisory Council of the Swedish Institute of Space Physics.

Previous positions: Senior management positions Swedish Social Insurance Agency, Sony Ericsson, Vattenfall, Telefonibolaget 3, and SAS. Education: Higher Education Diploma in the

Humanities, Uppsala University.

 $\textbf{Year of birth:}\ 1961$



Carl-Johan Edström

Member since 2020

Current position: Chief of Air Force.

Previous positions: Fighter pilot, squadron commander, local aviation commander and wing commander at Norrbotten Air Force Wing.

Education: Military training and a Master's Degree in Strategic Studies (security policy and military operations).

Year of birth: 1967



Ann-Christine Hvittfeldt

Member since 2016

Current position: Several directorships. **Previous positions:** Volvo Logistics AB, Hemtex AB, Speedcargo AB/DFDS AS.

Education: Economics High School, Bergaskolan Export & Import Int Trade, University of Gothenburg Transport economy and material supply, etc.

Year of birth: 1966



Per Nilsson

Member since 2014

Current position: Head of Development of Swedish Customs.

Previous positions: Deputy Director-General and Chief of Staff of Swedish Customs, Deputy Director of Tax and Customs Division of the Ministry of Finance.

Education: National Economics, Linköping

University.

Year of birth: 1967



Cecilia Looström

Member since 2020

Current position: Head of Department Swedish

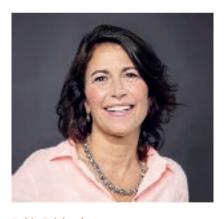
Civil Contingencies Agency.

Previous positions: Assistant under-secretary Ministry of Defence, Head of Department Aero-

space Engineering, FOI

Education: Engineering Physics, KTH

Year of birth: 1961



Robin Teigland

Member since 2020

Current position: Professor Chalmers University of Technology.

Previous positions: Professor and board member at Stockholm School of Economics, McKinsey & Company.

Education: BA Stanford University, MBA The Wharton School, MA University of Pennsylvania, PhD in Economics, Stockholm School of Economics.

Year of birth: 1964



Ann-Marie Bredberg

Staff representative member since 2010

Current position: Air traffic controller and chair of the ST Trade Union within air traffic control in LEV

Directorships: LFV Holding (staff representative). **Education:** Air traffic controller.

Year of birth: 1963



Peter Lennartsson

Staff representative member since 2010

Current position: Air traffic controller and 1 vice chairman of the ST Trade Union. Education: Air traffic controller.

Year of birth: 1972

2010-1 July 2020 Marie Hafström, Deputy Chair

2015-20 January 2020 Mats Helgesson, Member 2013-16 January 2020 Eva Andrén, Member

GROUP MANAGEMENT



Ann Persson Grivas Director General

Employed since: 2017

Directorships: Chair LFV Holding AB, LFV Aviation Consulting AB, Aviseg Critical Communication AB, and Entry Point North. Deputy Chair, Luleå University of Technology/LTU. Member, SOS Alarm and the Supervisory Council of the Swedish Institute of Space

Previous positions: Senior management positions within the Swedish Social Insurance Agency, SAS, Sony Ericsson, Vattenfall, and Telefonibolaget 3. Education: Higher Education Diploma in the Humanities, Uppsala University.

Year of birth: 1961



Petra Sernulf

Director Legal Affairs/Quality/Aviation Safety/ Environment and General Counsel

Employed: 1997-2005 and since 2008. Directorships: Board member LFV Holding AB. Previous positions: Service as law clerk in district court and legal counsel for LFV, the Swedish Prison and Probation Service, and Glimstedt law firm

Education: LL.M., Stockholm University.

Year of birth: 1963



Magnus Corell Deputy Director General and Interim DG

Employed since: 2019

Directorships: Board member LFV Holding AB. **Previous positions:** Senior positions within the Swedish Government Offices, with experience from the Ministry of Infrastructure, the Ministry of Enterprise and Innovation, and the Ministry

Education: LL.M. Uppsala University, trained as a judge, Svea Court of Appeal, the Swedish Armed Forces Interpreter Academy.

Year of birth: 1969



Barbro Bolander

HR Director and Acting Communications Director

Employed since: 2017

Directorships: Member LFV Holding AB Previous positions: Senior positions at the National Board of Health and Welfare, the Swedish Schools Inspectorate, Grand Thornton, the Swedish Armed Forces, DNB Asset Management, SJ.

Education: Human Resources Specialist, Linköping University and Stockholm University.

Year of birth: 1957



Peter Fältsjö Interim Director En Route

Employed since: 2000

Previous positions: HR manager of the air trafficservice. CEO of Sturup Handling AB. Manager Operation ATCC Malmö. CEO of NUAC HB.

Education: Within the Swedish Armed Forces and Human Resources Management Training, Karlstad University.

Year of birth: 1960



Sture HjalmarssonActing Director Governance and Finance

Employed since: 2019

Previous positions: Leading positions within national authorities, publicly listed companies, and muncipalities, both in charge of operations and staff.

Year of birth: 1951



Anna Helena WåhlinDirector Operations

Employed since: 1982

Directorships: Member LFV Holding AB, LFV Aviation Consulting AB, and Saab Digital Air

Traffic Solutions AB.

Previous positions: Several leading positions

within LFV.

MANAGEMENT

Education: Air traffic controller.

Year of birth: 1962



Ulf Thibblin Chief Technical Director

Employed since: 2013

Directorships: Member LFV Holding AB, LFV Norway AS, Entry Point North AB, and Saab Digital Air Traffic Solutions AB.

Previous positions: Senior management positions within Saab and Ericsson.

Education: Master of Engineering in Theoretical Physics, and Doctor of Technology at Linköping University.

Year of birth: 1958



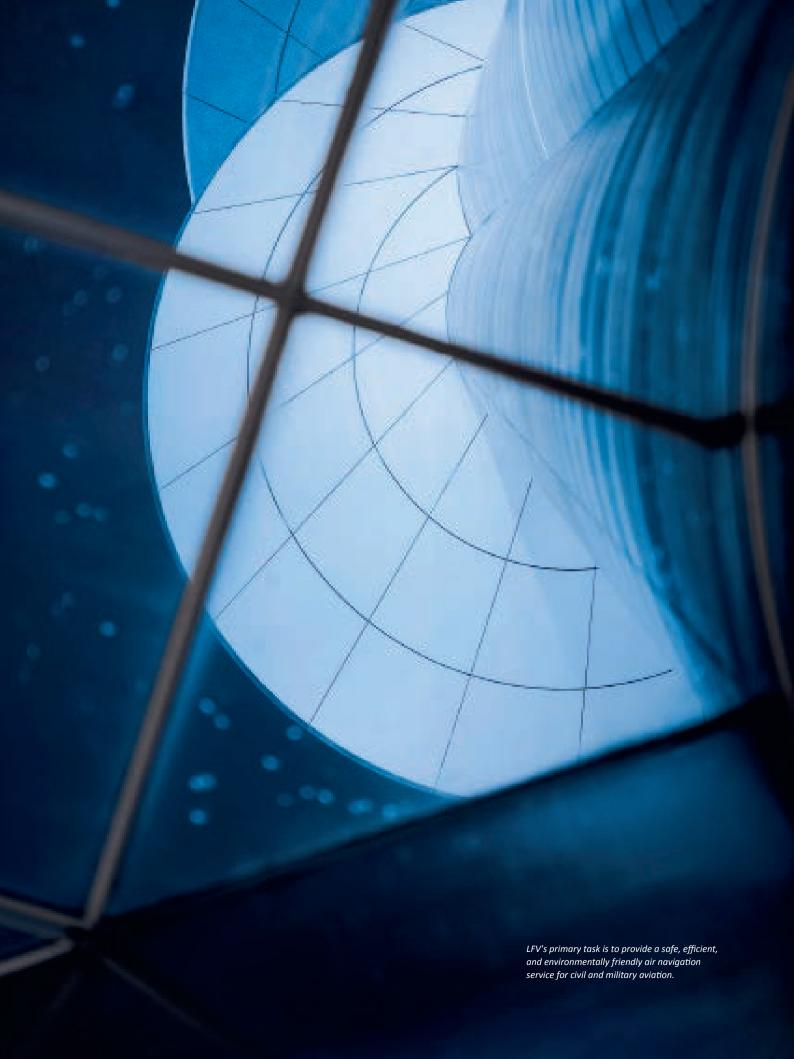
Jan Berggren
Acting Director Shared Services

Employed since: 2003

Previous positions: Several senior positions within both LFV and the Swedish Maritime Administration.

Year of birth: 1962

2014-31 August 2020 Mikael Larsson, Chief Financial Officer 2014-31 August 2020 Maria Wall Petrini, Director Business Intelligence 2014-13 September 2020 Elisabeth Lindgren, Chief Communications Officer



FIVE YEAR SUMMARY

	2020	2019	2018	2017	2016
AIR TRAFFIC (thousand)					
Number of movements in Swedish airspace:					
Domestic	62	127	140	153	152
International	100	277	288	286	270
Transit flights	169	369	357	323	304
TOTAL	332	774	785	762	726
Number of service units (thousand)	1,676	3,820	3,815	3,614	3,402
FINANCES (SEK MILLION)					
Operating revenue	3,310	3,071	3,156	3,253	3,149
Profit/loss after financial items	700	-40	5	-78	14
Comprehensive income after revaluation of pension liability	-122	-	-	-	-
investments	557	498	324	227	161
Return on equity, %	(neg.)	(neg.)	1	(neg.)	1
Equity/assets ratio, %	6	8	9	9	11
Cash and cash equivalents	5,104	5,748	5,626	5,322	4,890
Equity	638	760	791	790	854
Pension liability	8,739	7,471	7,056	6,539	5,803
BALANCE SHEET TOTAL	10,708	9,412	9,028	8,382	7,624
STAFF					
Number of annual employees	1,121	992	982	974	983
of which operational air traffic controllers	500	548	541	546	530
of which other staff	621	444	441	428	453
Number of employees	1,348	1,123	1,114	1,125	1,143
of which women	509	488	485	490	504
of which men	839	635	629	635	639
Sick leave, % in the state-owned enterprise	3.02	2.46	2.81	3.00	2.71

ABBREVIATIONS AND EXPLANATIONS

A6. Alliance within SESAR focused on technological development. A6 consists of fifteen air navigation service providers and two associated members

AAS. Airspace Architecture Study. A proposal on how to design Europe's airspace in the medium term, between 2025 and 2035.

A and B events. An international system for categorisation of events based on their impact on aviation safety.

ANSP. Air Navigation Services Provider.

ATCC. Air Traffic Control Center.

ATM. Air Traffic Management.

ATS. Air Traffic Services, air navigation service.

AVISEQ, Aviseq Critical Communication AB.

BOREALIS. The Borealis Alliance is an association consisting of air navigation service providers in nine countries in northern Europe: Ireland, the United Kingdom, Iceland, Denmark, Norway, Sweden, Finland, Estonia, and Latvia. Operational concepts for cooperation.

CANSO. Civil Air Navigation Services Organisation. International cooperation organisation for air navigation service providers.

CNS. Communication Navigation Surveillance.

Common Requirements. The European Commission Implementing Regulation 2017/373 laying down common requirements for providers of air traffic management/air navigation services and other air traffic management network functions and their oversight.

COOPANS. Cooperation between six air navigation service providers in Sweden, Denmark, Ireland, Austria, Portugal, and Croatia. Joint technology development

DK-SE-FAB. Common Danish-Swedish airspace. Until 1 September 2019, LFV and Danish Naviair operated joint air navigation services in this airspace through the jointly owned company NUAC.

EASA. European Aviation Safety Agency. The European aviation safety authority.

EN ROUTE. Flight on routes between airports. Traffic is controlled from a control centre.

EUROCONTROL. Eurocontrol coordinates European air traffic. Eurocontrol has no legislative authority but works to harmonise and develop air navigation services in the Member States. Nearly 40 states are members.

FAB. Functional Airspace Block. The Danish-Swedish airspace is an FAB.

FDP. Flight Data Processor.

FRA. Free route airspace. Straight flight paths that mean shorter flight paths and lower emissions.

CSF. Common service functions. Shared resource for LFV and the Swedish Maritime Administration for financial administration etc. In 2020, CSF was discontinued and the functions were returned to each respective organisation.

IATA. International Air Transport Association. The trade association for airlines

ICAO. International Civil Aviation Organization. UN agency for aviation.

MSSR. Monopulse secondary surveillance radar or secondary radar. Detects objects in the air and data from a transponder.

PSR. Primary Surveillance Radar or primary radar. Detects objects in the air.

RAT method. Risk Analysis Tool. Method for systematically classifying safety-related events within aviation.

RTC. Remote Tower Center. From the newly constructed RTC Stockholm, LFV will conduct remote air traffic control for the four Swedavia airports Kiruna, Umeå, Östersund and, Malmö.

RP. Reference Period. The EU sets targets for air navigation service providers over a reference period.

RTS. Remote Tower Services, remote air traffic control.

SDATS. Saab Digital Air Traffic Solutions. Company for the development, marketing, sales, and operation of remote air traffic control. Owned by LFV and Saab.

SES. Single European Sky. The EU's effort to reduce the number of airspace units in Europe, which are currently, with a few exceptions, national.

SESAR. Single European Sky ATM Research. Joint European programme to increase airspace capacity while maintaining safety, reducing the environmental impact of aviation, and cutting air traffic management costs in half.

SWEA. Sweden Airspace Project. Comprehensive airspace modernisation that, once fully implemented, streamlines air navigation services.

TFÖ. Total Defence Exercise. TFÖ2020 was carried out in 2020.

VCS. Voice Communication System.

WAM. Wide Area Multilateration. A form of radar.



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