

Annual Report 2017



DFS Deutsche Flugsicherung

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The business year 2017

This is a courtesy translation of the German original of the DFS Annual Report 2017. It is provided solely for your information and for the convenience of English-speaking readers. In the event that the English and German versions permit different interpretations, the German text shall prevail.

Report of the Supervisory Board

Type and scope of review and consultation

In the business year 2017, the Supervisory Board performed its functions as prescribed by law and the Articles of Association. It regularly advised and monitored the Board of Managing Directors and was involved in decisions of fundamental importance to the company.

In fulfilling its tasks, the Supervisory Board was supported by the personnel, audit and project committees. The committees thoroughly discussed the resolutions to be adopted and prepared recommendations for the decisions to be taken at the plenary meetings. An additional committee was formed for the commercial business to support its development within the DFS Group. It twice provided information on various activities.

In the business year 2017, there was one change to the composition of the Supervisory Board. Dr Edeltraud Leibrock left the Supervisory Board on 31 July 2017. Dr Carl-Stefan Neumann succeeded her as an external representative on the Shareholder's side.

The Board of Managing Directors reported to the Supervisory Board on the basis of quarterly reports in accordance with Section 90 of the German Stock Corporation Law (AktG). The Supervisory Board was informed on important issues on an ad hoc basis. The Board of Managing Directors reported to the Supervisory Board in due form.

During the business year 2017, the Supervisory Board held four ordinary meetings to discuss the situation and development of the company. An extraordinary meeting was held to decide on the determination of the proportion of women in the two upper executive levels at DFS and to discuss the strategic orientation of DFS.

The Supervisory Board specifically dealt with the following topics at its meetings:

- the 2016 annual financial statements and consolidated financial statements, the management report, and the Group management report and the audit report on the 2016 annual financial statements and consolidated financial statements,
- the 2018 Group economic plan, with the associated investment and financial plan,
- the spin-off of the Aeronautical Solutions division and its inclusion in DFS Aviation Services GmbH,
- the follow-up contract for the apron management service at Berlin Brandenburg Airport (BER),
- the review of the efficiency of the Supervisory Board and
- the provision of technical services for the air navigation service provider in Luxemburg, ANA.

In addition, the Supervisory Board approved the investments

- iCAS Programme Application 2 and
- the conclusion of a contract for maintenance and the functional extension of iCAS for upper airspace at the Karlsruhe control centre

Result of the review

The Supervisory Board observed that the course of consolidation continued to be pursued in the year under review. The cost-cutting measures proved to be sustainable so that costs continued to decline. In other areas, too, the five-point programme proved to be successful.

On the basis of the audit report prepared by the auditors Mazars GmbH & Co. KG, the Supervisory Board discussed the 2017 annual financial statements and consolidated financial statements and the management report including conclusions in accordance with Section 53 of the German Budgetary Principles Act (HGrG), including the Group management report. The audit committee met for discussions in advance. The comprehensive control and risk management system established in the company was included in the audit. The auditors were present at the discussions. They gave an account of the key results of their report and were available to answer questions. The Supervisory Board found no exceptions to be taken against the audit report and the auditors' findings. It proposed that the shareholder meeting approve the annual financial statements and the consolidated financial statements. The Supervisory Board reviewed the proposal of the Board of Managing Directors on the use of profits and agreed to it.

The Supervisory Board would like to thank the Board of Managing Directors for its work in the interest of the company and the successes achieved in 2017. Moreover, without the commitment shown by all members of staff and the staff councils none of these successes would have been possible. They deserve our gratitude and recognition.

The Supervisory Board



Dr Martina Hinricher
Chairperson



Dr Martina Hinricher

Members of the Supervisory Board

Chairperson

Dr Martina Hinricher

Ministerialdirektorin

Federal Ministry of Transport and Digital
Infrastructure

Dr Edeltraud Leibrock

Consultant

(Supervisory Board Member until
31 July 2017)

Deputy Chairperson

Markus Siebers

Air traffic controller

DFS Deutsche Flugsicherung GmbH

Volker Möller

Air traffic controller

DFS Deutsche Flugsicherung GmbH

Carmen von Bornstaedt-Radbruch

Ministerialrätin

Federal Ministry of Defence

Dr Carl-Stefan Neumann

Bagus Neumann GbR

(Supervisory Board Member from
1 August 2017)

Antje Geese

Ministerialdirigentin

Federal Ministry of Transport
and Digital Infrastructure

Peter Schaaf

Chairperson Central Staff Council

Air traffic controller

DFS Deutsche Flugsicherung GmbH

Catja Gräber

Senior expert data

communication service

DFS Deutsche Flugsicherung GmbH

Andrea Wächter

Head of Tower Branch Hamburg

DFS Deutsche Flugsicherung GmbH

Andreas Hoppe

Colonel (G.S.)

Federal Ministry of Defence

Dirk Wendland

Systems engineer

DFS Deutsche Flugsicherung GmbH

Dr Angelika Kreppein

Regierungsdirektorin

Federal Ministry of Finance

Correct at 31 December 2017

Members of the Advisory Council

Chairperson

Norbert Barthle

Member of the German Bundestag
Parliamentary State Secretary

Harry Hohmeister

Member of the Executive Board
Deutsche Lufthansa AG

Frank Annuscheit

Member of the Board of Managing
Directors
Commerzbank AG

Ulrich Lange

Member of the German Bundestag

Andreas Berger

Member of the Board of Management
Allianz Global Corporate & Specialty SE

Kirsten Lühmann

Member of the German Bundestag

Dr Jürgen Bierbaum

Alternate Member of the Boards
ALTE LEIPZIGER – HALLESCHE Group

Karl Müllner

Lieutenant General
Chief of Staff, Air Force
German Air Force Command

Dirk Fischer

Member of the German Bundestag

Prof Dr Bernd Sanner

Medical Director
AGAPLESION BETHESDA
KRANKENHAUS WUPPERTAL gGmbH

Michael Garvens

President
German Airports Association (ADV)
Chief Executive Officer
Flughafen Köln/Bonn GmbH

Dr Stefan Schulte

Chairperson of the Executive Board
Fraport AG

Prof Dr Elmar Giemulla

President
Aircraft Owners and Pilots Association
(AOPA Germany)

Ralf Teckentrup

President
German Airline Association (BDF)
CEO of the Executive Board
Condor Flugdienst GmbH

Winfried Hermann

Minister of Transport and Infrastructure
Ministry of Transport and Infrastructure
Baden-Württemberg

Klaus Thiemann

Michael Hoppe

Chairperson
Board of Airline Representatives in
Germany e.V. (BARIG)

Correct at 31 December 2017

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Consolidated financial statements

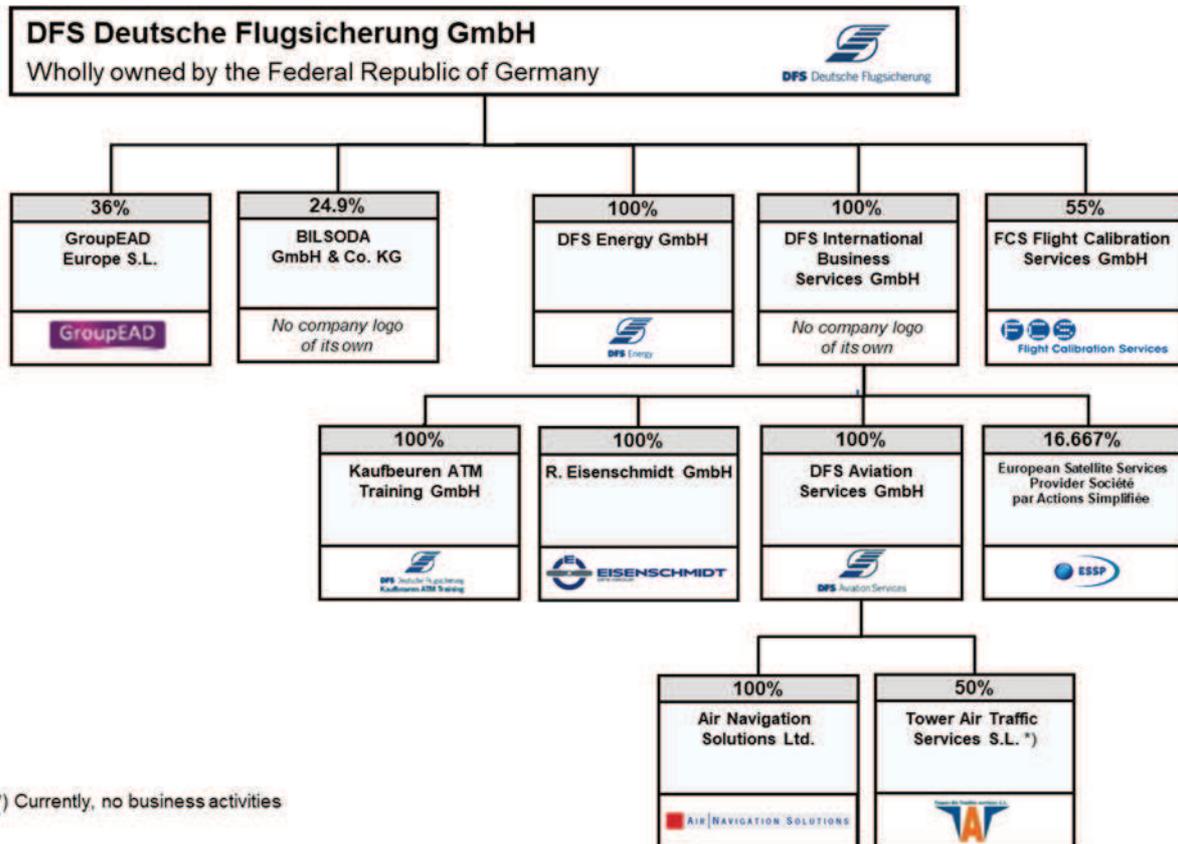
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Group management report

for the business year 2017

1 Group organising principles

1.1 Structure of the Group



*) Currently, no business activities

As at 31 December 2017

DFS Deutsche Flugsicherung GmbH (DFS) manages the Group as the ultimate parent company and carries out operational activities itself. The subsidiaries and investments supplement the portfolio of services offered by the Group and operate in areas closely related to the aviation industry.

The consolidated financial statements cover six investments. The results and financial position are primarily determined by the business activities of DFS. Information on the scope of consolidation can be found in Note 3.

Group EAD Asia Pacific Limited was sold to Airways New Zealand Limited in 2017.

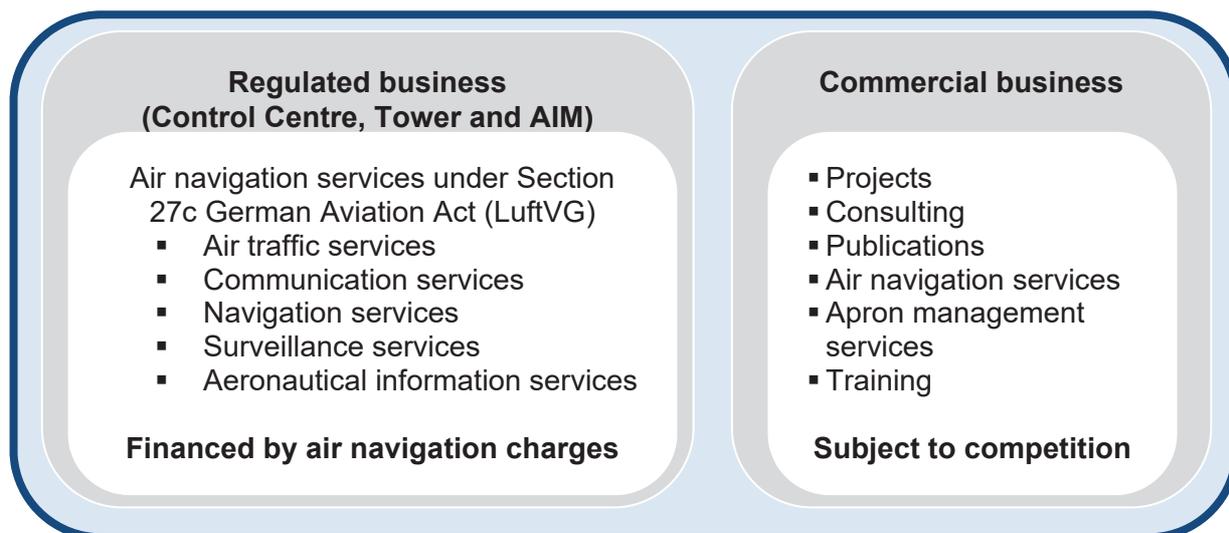
The liquidation of the DFS U-Kasse was completed in 2017.

1.2 Business activities

1.2.1 Overview

The DFS Group, which employs 5,608 operational and administrative staff (5,386 at DFS), ensures the safety of German airspace and also offers additional products and services on the free market (the commercial business).

The DFS Group divides its business activities into two segments. One segment – the regulated business – is financed by air navigation charges, while the other segment – the commercial business – competes for business on the free market. The segment financed by air navigation charges is the main business.



1.2.2 Regulated business

The regulated business – providing air navigation services – is defined by the tasks set out in Section 27c of the German Aviation Act (LuftVG). As a company entrusted to perform State functions, DFS provides air traffic services (ATS) and support services. It operates control centres in Langen, Bremen, Karlsruhe and Munich as well as 16 control towers at international airports in Germany. For this purpose, it develops and operates air traffic services systems as well as communications, surveillance and navigation systems.

The DFS Situation and Information Centre registered 3,211,771 controlled aircraft movements overall in German airspace in 2017, representing an increase of 3.3 percent over the previous year. DFS controlled over three million of these, which represents a new record. This traffic volume in Germany is higher than the former record of 3.15 million flights measured in 2008.

Control Centre division

The Control Centre division at DFS is in charge of air traffic control for approach control services and en-route services (area control service), including all air traffic services systems as well as the flight information service and the alerting service.

Since 1 January 2012, the European Commission has regulated en-route services by means of a performance scheme for air navigation services and network functions (Regulation (EU) No 390/2013) and the introduction of a common charging scheme (Regulation (EU) No 391/2013). The focus is on European and national requirements covering safety, environment, capacity and cost-efficiency. As the national supervisory authority, the Federal Supervisory Authority for Air Navigation Services (BAF) determines the German contribution to the

performance plan at the level of the Functional Airspace Block Europe Central (FABEC). The charges are laid down by EUROCONTROL on the basis of a decision of the Enlarged Commission in accordance with the German Ordinance on Route Charges of the Air Navigation Services (FSStrKV).

Tower division

The Tower division at DFS controls air traffic at Germany's designated international airports (aerodrome control service), including all air traffic services systems as well as the flight information service and the alerting service.

The aerodrome control service has been subject to economic regulation since 2015. As had been the case previously, the terminal charges are set by means of a statutory instrument of the Federal Government (FSAAKV).

Aeronautical Information Management (AIM) division

The AIM division at DFS provides its customers with all relevant aeronautical information and aeronautical information services for the safe conduct of flights. AIM collects, processes and publishes aeronautical data, such as flight plans and NOTAM, and publishes numerous aeronautical publications and products, such as the Aeronautical Information Publication (AIP).

1.2.3 Commercial business

The subsidiaries and investments support and enhance the portfolio of services offered by the Group on the free market. Commercial services are offered globally. In contrast to the regulated business, the commercial business is not subject to economic regulation. Intersegment transactions are conducted at arm's length conditions and prices (see Note 32).

The management of the Group has decided to bundle the commercial business in investments under the DFS International Business Services GmbH holding company to the extent legally possible and economically sensible.

The management of the Group transferred the operational responsibility for the training of military air traffic controllers to Kaufbeuren ATM Training GmbH, which was newly formed in 2016 and, in 2017, it also transferred the former DFS Aeronautical Solutions division to DFS Aviation Services GmbH.

1.3 Legal framework and management organisation

In 1993, DFS was entrusted with the tasks of the Federal Administration of Air Navigation Services (BFS) by the Federal Republic of Germany. The Headquarters of DFS are located in Langen near Frankfurt at: Am DFS-Campus 10, Langen, Germany. The company is registered under HRB 34977 on the Commercial Register at the Local Court in Offenbach am Main.

The object of the company is the development, provision and execution of the air navigation services delegated to the company by the Federal Ministry of Transport and Digital Infrastructure (BMVI). The company can provide air navigation services in Europe as well as carry out related sideline activities in Germany and abroad.

The sole Shareholder is the Federal Republic of Germany.

The distribution of responsibilities among the Managing Directors of DFS forms the basis for the management organisation (as at 1 May 2017).

Chairman and Chief Executive Officer	Managing Director Operations	Managing Director Human Resources (Labour Director)
<ul style="list-style-type: none"> • Strategy, organisation, international affairs • Institutional and legal affairs, risk management, compliance • Export control • Safety and security management systems • Internal audit, quality management • Corporate communications, public relations, environment • Finance incl. taxes and charges, insurances • General administration • Procurement • Consulting services and system deliveries • Military affairs 	<ul style="list-style-type: none"> • Air traffic services • Airspace management • Air traffic flow management • Aeronautical information service • Communication, navigation and surveillance services • Capacity planning of operational personnel, product/system management for technical systems, logistics • Research and development • Technical and infrastructural facility management • Development of air traffic management (ATM) systems and business and administrative information technology 	<ul style="list-style-type: none"> • Human resources strategy • Collective bargaining (strategies and policies) • Human resources management • Human resources development, initial and continuation training, Academy • Staff planning (excluding capacity planning of operational personnel) • Payroll accounting • Compensation and incentive systems • Occupational pensions • Social and health management • Industrial safety, accident prevention • Labour law, collective bargaining law

The Board of Managing Directors is supported by an Executive Committee, which is made up of the Managing Directors and the members of the executive management level (division directors). At its weekly meetings, the Executive Committee discusses important corporate issues and shares information.

The Supervisory Board of DFS comprises 12 members, six appointed by the Shareholder and six elected by the employees (see Note 44.2 for the composition of the Supervisory Board).

The subsidiaries active in the commercial business are managed through the holding company DFS International Business Services. It holds, manages, administers and finances its operating investments by means of intercompany (Group) contracts, such as control agreements, profit and loss transfer agreements and cash pool agreements. It also limits the liability of DFS to the carrying amount of the investment of DFS International Business Services. The company implements the structural and operational rules laid down by the management of the Group by means of shareholder resolutions, employees of DFS taking on supervisory board membership and the contractual commitments set out in intercompany (Group) contracts. The board of DFS International Business Services consists of DFS executives, who carry out this role in addition to their normal duties.

The management of the Group is responding to the continuing consolidation in the aviation industry and the resulting diversified framework conditions and regularly reviews whether further measures to adapt and realign the structure of the Group are required.

1.4 Strategies and objectives

1.4.1 Strategic direction

To fulfil its statutory obligation, DFS is committed to delivering an outstanding level of performance at a first-class, uncompromising safety level. The services the company provides are tailored to the differing needs of its customers and are provided in a sustainable manner (see declaration of conformity with The Sustainability Code at www.deutscher-nachhaltigkeitskodex.de; in German only). As a recognised provider of air navigation services for complex airspaces and airports, it contributes to enhancing the performance of the air transport system, while carefully taking noise abatement needs into account, and focuses on the four strategic dimensions, namely corporate culture, advanced technology, quality leadership and relative cost leadership.

Corporate culture

DFS offers challenging, attractive and family-friendly jobs for aviation enthusiasts and innovative people from around the world seeking the opportunity to shape the future of air transport. The intensive work in the human resources (HR) area is strengthening both the reputation of the company as well as the feeling of identification with the company among active, former and future employees of the company (see section 4).

Technology

The company researches, develops and employs innovative technologies. It strives to achieve an edge in performance and knowledge over other air navigation service providers (see section 2.2.1 under *Drones* and 2.6.1 under *Remote Tower Control (RTC)*).

Quality leadership

DFS provides its customers with a high level of service quality. Its goal is to provide the level of capacity as required through the use of innovative procedures and technologies. Productivity is to be systematically raised by consistent alignment with the performance targets and the targeted use of resources.

Relative cost leadership

Economic regulation exerts a material influence on the demand for products and services as well as on costs. DFS therefore supports the appropriate further development of national and European regulation and is optimising its use of resources (relative cost leadership). It aims to achieve a top ranking among air navigation service providers (ANSP) that manage a comparable level of complexity in the central performance area of cost-efficiency (costs per controlled hour of flight).

1.4.2 Five-point programme

The Board of Managing Directors positions the Group in line with its strategic direction and defines the material objectives of the Group. It successfully set up a five-point programme, adapted strategic guidelines and implemented numerous projects and measures in a targeted manner. The Board of Managing Directors constantly reviews the progress of the programme and its compatibility with the market environment.

Air navigation services in Europe

DFS remains an independent air navigation service provider. It cooperates with its European partners in a reliable and predictable manner while actively shaping the European consolidation and concentration process as a strong air navigation service provider. The company supports suitable and appropriate regulations to implement the Single European Sky (SES) objectives.

Air traffic services

DFS optimises airspace structures and operating procedures. It is harmonising ATS systems across Europe and introducing flexibility into the deployment of staff. Innovative and value-producing technological solutions, concepts and knowledge deliver a competitive edge. In its core business of en-route control services, the company is concentrating on one air traffic services (ATS) system line (iCAS), which allows sectorless air traffic management. With the modernisation of arrival and departure procedures, it will be possible in future to provide aerodrome control services from a remote location for selected airports (remote tower concept). The quality of all services remains exemplary in Europe and is regularly benchmarked against the highest standards.

Increase in productivity

Since 2013, DFS has been pursuing a constant reduction in annual operating costs of approximately 1.5 percent per year for the second reference period (until the end of 2019). The company, in close dialogue with the employees, staff councils and trade unions affected, is raising staff flexibility, avoiding a further increase in headcount and using natural staff turnover to reduce staff numbers. All measures are being introduced in a socially compatible manner. Compulsory redundancies are not planned.

Human resources

DFS is developing management structures that are fit for the future and is strengthening its dependable and trust-based working relationships with its staff, executives and the staff representatives.

Commercial business

DFS sees particular growth opportunities in the commercial business. By systematically enhancing its own potential and acquiring new markets and customers, it continuously analyses and boosts its competitiveness.

1.4.3 Financial strategy

The financial strategy of DFS promotes the financial stability of the Group and is based on the following areas:

Good to very good credit rating

Investors, business partners and employees should be able to continue to trust in the financial stability of the company and its subsidiaries. The company secures the very good investment grade rating in combination with its Shareholder (see section 2.6.3.1).

Adequate liquidity

Because of the low interest rate environment, DFS will maintain its room to manoeuvre over the near term by issuing attractively priced commercial paper (short-term) and using demand deposits (short-term). This will allow the company to react flexibly to changes in its environment at all times. The very good investment grade rating requires adequate liquidity safeguarded by fund assets not protected against insolvency.

Adequate capital structure and equity ratio

Measures are being taken to continuously strengthen the capital structure and equity ratio. The negative impact on the equity as defined under International Financial Reporting Standards (IFRS) stemming from the revised standard on the recognition of long-term employee benefits (see Note 26.8) from the 2013 business year will be reduced step by step over the following three reference periods by being considered in the air navigation charges. DFS will continue to maintain the equity ratio shown in 'adjusted equity' (see Note 37.1) of around 28.5 percent and to progress towards a fully funded status for occupational pensions in a step-by-step manner.

Low debt and unencumbered assets

The infrastructure of the company is unencumbered and remains the property of the company. This creates a stable asset base that is in essence freely available.

Ability to pay a dividend

The Group is currently focusing on the provision of cost-effective air navigation services that ensure the capital provided by the Shareholder earns an adequate return. As a consequence of the strict regulation the core business is subject to, the Group lacks the classical long-term value-based indicators that would allow an alignment with long-term success and performance indicators. Nevertheless, the targeted expansion of the commercial business will gradually result in the increasing importance of market value for the Group.

Risk management system

A modern risk management system supports the planning and control of financial risks in a consistent manner (see section 6.2.2.1).

1.5 Planning and control

When managing the Group, the Board of Managing Directors differentiates between the regulated business and the commercial business as required by law (Transparency Directive, TranspRLG).

Regulated business

The management of the regulated business is aligned with the regulatory environment, the strategic dimensions and objectives, the requirements of the regulated business, the organisational structure as well as the five-point programme. The planning and control process identifies suitable measures to be taken, embeds them in the yearly rolling five-year plan and continuously monitors the divisions.

Performance and cost objectives as well as the internal requirements stemming from the five-point programme determine the demands placed on the individual divisions.

The achievement of these objectives and requirements is measured by means of planned/actual comparisons which are carried out both on a regular basis (monthly, half-yearly and yearly) and ad hoc. Achievement is monitored and reported at a corporate, divisional and product level. A system of financial indicators has been developed. These indicators are primarily based on IFRS and are used for budgeting. Requirements for operating costs are determined for the divisions and laid down using the following format:

Operating costs
Staff costs
+ Other operating expenses (e.g. material costs)
+ Depreciation and amortisation
= Primary costs
+ Charges from internal cost allocation
- Income from internal cost allocation
= Operating costs

Planning and control also uses non-monetary indicators, such as the analysis of the traffic forecast, in addition to financial metrics on cost-efficiency.

As regards non-monetary indicators, DFS constantly measures indicators for the key performance areas of safety, air traffic control (ATC) capacity and the environment, such as infringements of separation, punctuality indicators and horizontal flight efficiency.

Commercial business

The commercial business is materially influenced by the competitive environment in which it operates. Planning and control is carried out by setting targets for contribution margins and returns on sales, whereby a positive contribution to earnings at the earnings-before-interest-and-tax (EBIT) level should be generated.

The operating subsidiaries should generate a profit before tax typical for the industry.

1.6 Research and development

German airspace demands a particularly high-performing air navigation service provider over the long term, as this airspace is extremely busy and complex in international comparison. Technological and operational innovations represent an important means of managing the growing cost pressure, the increasing requirements as regards environmental sustainability and the rise in air traffic predicted in all forecasts for the medium term. These issues must all be managed while maintaining an unrestricted safety level. Therefore, DFS has been involved in international and national research projects for many years. It concentrates on applied research which leads to new products, procedures and working methods and follows the path from invention to innovation.

The most prominent project at the international level is the SESAR project (Single European Sky Air Traffic Management Research), which encompasses all areas of air navigation services. It is organised within the scope of the SESAR Joint Undertaking, which DFS joined as an active member in June 2009, along with other leading organisations (air navigation service providers, airspace users, airports and manufacturers).

National activities focus on regional challenges, such as the optimisation of flight routes for overflights and the operation of busy airports, such as Frankfurt and Munich (including their arrival and departure procedures). DFS conducts real-time and fast-time simulations, tests new key technologies and subsequently develops air traffic control software and suitable simulators. Within the scope of the German aeronautical research programme sponsored by the Federal Ministry for Economic Affairs and Energy (BMWi) with its technology line of funding for safe, efficient and sustainable aviation processes and flight guidance, DFS was able to once again position itself as consortium project manager. The goal of grant projects, and of all other forms of cooperation, is to work jointly with German partners from research and industry to improve the starting basis for subsequent international activities.

DFS promotes the development of innovations. These currently include:

- The remote provision of aerodrome control services without a control tower (see section 2.6.1 under *Remote Tower Control*).
- Sectorless flying: a revolutionary concept that assigns aircraft in the entire controlled area to a particular air traffic controller and which promises more expeditious traffic handling with less effort (see section 7.2.1 under *Project S-ATM Robusto*).
- Surveillance systems that use all available sensors, such as various radar systems, multilateration and the position determined by the aircraft itself, to be able to track the aircraft seamlessly from gate to gate, on the ground as well as in the air.
- Support systems for air traffic controllers that reduce their workload by means of optimised information processing, especially through advice on conflict avoidance, and by means of step-by-step automation.
- The interoperability of European air traffic management systems that keeps pace with new developments – an important precondition for the SES initiative (Single European Sky) (see section 7.2.1).
- An advanced, cost-efficient standardisation of technical infrastructure and procedures as a precondition for further automation and innovation.
- Extensive virtualisation of air traffic control systems and establishment of data centres in the medium term.
- Comprehensive activities for a safe and fair integration of unmanned aircraft systems (see section 2.2.1 under *Drones*).

DFS allocated a total of approximately €65.5 million and 393 staff posts to research and internally generated developments. The capitalisation ratio equals roughly 38.5 percent.

Grant funding payments of €28.7 million were received in 2017 from European research framework programmes in this regard, including SESAR and the German aeronautical research programme. The implementation of the R&D results also takes place within the scope of the SESAR Deployment Alliance (SDA) together with air navigation service providers, airlines and airport operators.

2 Report on economic position

In addition to the overall economic situation, political, legal and industry-specific factors have a fundamental influence on the development of air transport. A flourishing global economy has been acting as a growth engine for the aviation industry. Nevertheless, there are factors which have a negative effect, such as political tensions, natural disasters, negative regulatory, legal and tax issues as well as temporary and geographic concentrations of illnesses. The number of flights has a material influence on the business activities of the regulated business. It is also a major factor for the commercial business, as DFS Aviation Services and Air Navigation Solutions provide air navigation services at German regional airports as well as at the airports of Gatwick and Edinburgh in the United Kingdom. The aviation-related consultancy projects, technical support services and specialist publications follow the general trend of the aviation sector.

2.1 Overall economic situation

The global economy expanded at a stable rate in 2017. The United States and Japan maintained their growth path. Growth rates were revised upwards in both countries during the year. The Chinese economy expanded faster than forecast (6.9 percent compared with a forecast of 6.5 percent). The Russian Federation and Brazil came out of their recessionary phases. Overall, according to the OECD, global growth came in at 3.6 percent, above the forecast of 3.3 percent.

In the euro area, the upturn continued. EUROSTAT forecast a rise in gross domestic product (GDP) of 2.5 percent over the previous year, both for the euro area as well as for the EU-28. European growth is being driven by robust private consumption, high global economic growth and declining unemployment combined with moderate wage and salary growth. In addition, investment activity is taking off thanks to favourable financing conditions and the clear rise in business confidence as uncertainty declines.

In Germany, according to the Federal Statistical Office, GDP rose by 2.2 percent in 2017 compared with the previous year, clearly exceeding the expectations of the Federal Government from its Autumn Projection 2016 of 1.4 percent. The German economy therefore continued its steady and broad-based growth. In previous years, private consumption had been the driving force behind the economy. In 2017, however, the improved global economy meant there was added strength coming from foreign trade.

2.2 Development of business

2.2.1 Development of air traffic

IFR flights 2017

In 2017, air transport in Germany continued the recovery observed over the previous three years and broke, thanks to an additional growth spurt, the record high set in 2008. Traffic in Germany grew by 3.3 percent over 2016 to 3,211,771 flights.

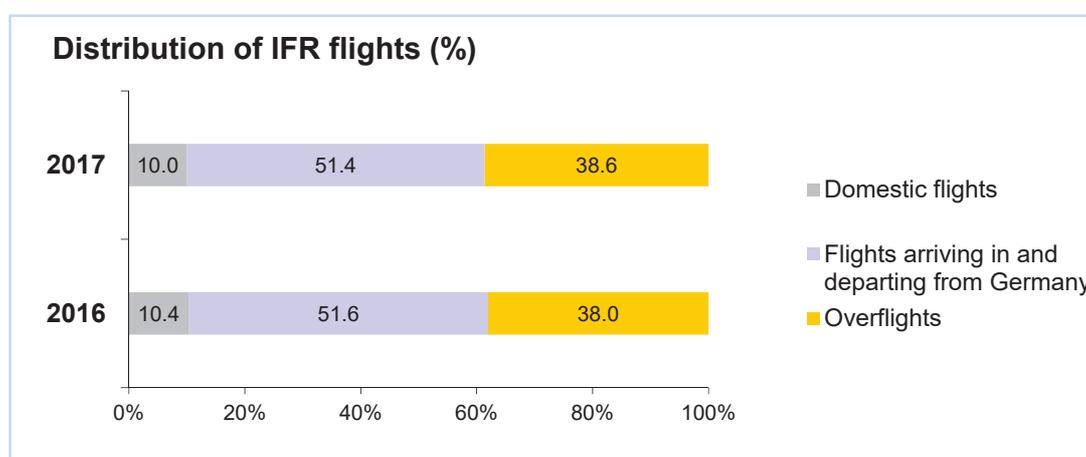
The basis for this rise was the strong economic growth in Germany and the continued upswing in the whole euro area. As in the previous years, the low-cost carriers were the main growth engine, expanding their market share on the European continent. Lufthansa, through its low-cost subsidiary, participated in this growth, while its core corporate entity concentrated on expanding intercontinental traffic. The second half of 2017 was marked by the insolvency of Air Berlin, the second-largest German airline, which had a significant impact on the traffic figures in the fourth quarter.

IFR flights in Germany

	2017	2016	Change
Civil flights	3,168,147	3,064,788	3.4%
Military flights	43,624	43,973	-0.8%
Total	3,211,771	3,108,761	3.3%

The busiest day of 2017 was 23 June, with 10,667 controlled flights.

The breakdown of domestic flights, arrivals and departures as well as overflights remained basically the same as in the previous year. Domestic flights declined slightly, while arrivals and departures rose slightly.



Traffic at the airports where DFS operates

In 2017, traffic rose significantly by 1.6 percent over the previous year at the designated international airports in Germany. As in previous years, this traffic volume was distributed very unevenly. High growth rates could be observed especially where low-cost carriers, such as Ryanair or easyJet, have bases or are expanding routes, particularly in Frankfurt (2.7%), Munich (2.6%), Berlin Schönefeld (5.3%) and Nürnberg (7.2%). Traffic declined at the airports of Bremen, Dresden and Stuttgart. The negative consequences of the insolvency of Air Berlin were particularly noticeable at Berlin Tegel Airport, with a decline of 6.4 percent.

Traffic at the international airports			
	2017	2016	Change
Frankfurt	475,365	462,742	2.7%
Munich	401,728	391,521	2.6%
Düsseldorf	220,904	216,875	1.9%
Berlin Tegel	173,045	184,974	-6.4%
Hamburg	153,931	151,785	1.4%
Cologne Bonn	139,760	135,391	3.2%
Stuttgart	117,939	118,918	-0.8%
Berlin Schönefeld	99,870	94,886	5.3%
Leipzig Halle	65,963	61,488	7.3%
Hannover	62,401	61,797	1.0%
Nürnberg	53,074	49,495	7.2%
Bremen	30,246	32,861	-8.0%
Dresden	21,450	22,727	-5.6%
Münster Osnabrück	18,223	16,808	8.4%
Saarbrücken	8,787	9,285	-5.4%
Erfurt Weimar	5,455	4,907	11.2%
Total	2,048,141	2,016,460	1.6%

Competition and airlines' pressure to reduce costs and restructure

In an increasingly price-sensitive market environment, in addition to the traditional European airlines with their strong positions in their domestic markets, especially low-cost airlines are setting the tone for the intense competition in the German air transport market.

The low-cost airlines continued to strengthen their position as growth engines in German airspace and at the 16 designated international airports.

Lufthansa remains the market leader in Germany and continues to expand its intercontinental services. At the end of 2017, it became Europe's first five-star airline, positioning itself in the high-margin market of first-class passengers. The company is transferring flights within

continental Europe and on selected intercontinental routes to its low-cost subsidiary Eurowings, which is significantly expanding its business activities.

Ryanair strengthened its leading position among the low-cost carriers after growing 12.6 percent over the previous year. It now ranks as the second-largest customer of DFS, extending its lead over the other low-cost carriers. However, the other low-cost carriers also grew significantly in 2017, particular Norwegian, WIZZ, easyJet and the Romanian airline, Blue Air.

The Gulf airlines (Emirates, Etihad and Qatar) continued to grow and saw a rise in flights of about eight percent, while the Turkish airlines continued the contraction first seen in 2016 into 2017. Overall, there were just under five percent fewer flights than in the prior-year period.

Air Berlin – which had been the second-largest German airline – filed for insolvency on 15 August 2017, after its main shareholder, Etihad, declared that it would no longer provide financial support. The airline was granted debtor-in-possession insolvency proceedings. Flight operations continued until 27 October 2017.

Climate action plan and emissions trading system

EU Directive 2009/29/EC incorporates all aircraft that take off or land at an airport located in the EU in an emissions trading system and allocates certificates to the aviation industry (pollution rights), of which 85 percent have been assigned to the airlines involved. The remaining 15 percent were auctioned off. There is opposition – particularly from the United States, the Russian Federation, China and India – against the inclusion of airlines from non-EU States in the European emissions trading system.

Grassroots movements, night curfew and the new Berlin Brandenburg Airport

In Germany, citizens continue to react in a sensitive manner to noise disturbance caused by air traffic. The night curfew at Frankfurt Airport, the referendum against the third runway at Munich Airport and the renewed postponement of the opening of the new airport in Berlin are dampening the drivers of growth for the national economy.

Air transport tax in Germany

In Germany, the law introducing an air transport tax (*Luftverkehrsteuergesetz* - LuftVStG) has been in force since the beginning of 2011. This law governs the levying of a tax that has to be paid for every passenger that departs from a German airport.

Tax payment (€)	2018***	2017**	2016*
Short-haul flights	7.46	7.38	7.38
Medium-haul flights	23.31	23.05	23.05
Long-haul flights	41.97	41.49	41.49

* applicable German ordinance: *Luftverkehrsteuer-Festlegungsverordnung (LuftVStFestV) 2016*

** applicable German ordinance: *Luftverkehrsteuer-Absenkungsverordnung (LuftVStAbsenkV) 2017*

*** applicable German ordinance: *Luftverkehrsteuer-Absenkungsverordnung (LuftVStAbsenkV) 2018*

This passenger-based air transport tax increases the overall costs for the entire air transport industry.

Conflict of interests between renewable energy and air safety

Within a radius of 15 kilometres, wind turbines can interfere with the proper operation of VOR and DVOR facilities and pose a hazard to air safety. (VOR is the short form of VHF omnidirectional radio range and the acronym VHF itself stands for very high frequency, while DVOR stands for Doppler VOR.) The Federal Supervisory Authority for Air Navigation Services (BAF) decides if the erection of new wind turbines can be approved within this radius based on the expert opinion submitted by DFS. Investors promoting the expansion of renewable energy are increasingly seeking legal remedies when they see the profitability of their projects being put at risk when approval is not granted. They are contesting the expert opinions of DFS and consider smaller distances and spacings to be technically acceptable.

DFS considers large parts of the expert opinions provided by opposing parties to be unsound. Following an appeal proceeding, the Higher Administrative Court of Lower Saxony strengthened the position of DFS and the BAF in December 2014. It recognised the technical arguments as well as the forecast calculations of DFS (BAF) and agreed that the wind turbines had the potential to cause interference. The Federal Administrative Court affirmed this decision in its entirety in April 2016. The decision is therefore legally binding. Legal disputes are not over yet as there are still a series of cases pending before the courts.

Drones

DFS has made considerable advances in its activities to achieve the "safe and fair integration of unmanned aircraft systems (UAS) into German airspace", which it began in 2016. DFS is critically examining both the rewards and risks posed by unmanned aviation. Pilots of manned aircraft have reported a rise in the number of occurrences where they were impeded by drones. This underlines the justification for and necessity of this work.

In cooperation with the German Ministry of Transport and Digital Infrastructure (BMVI), a link was activated on the DFS website to a new site on safe drone flight (www.sicherer-drohnenflug.de) in March 2017. On the entry into effect of the regulation governing the operation of unmanned aircraft in April 2017, DFS used this opportunity to develop an app that informs the users of unmanned aircraft systems about the new rules.

Since November 2016, DFS and Deutsche Telekom have been jointly conducting a project to validate that it is possible to safely and efficiently integrate unmanned aircraft systems in airspace close to the ground using the mobile telecommunications network. This involves the identification of drones on an air situation display (registration and situational awareness), traffic control, mission optimisation and tracking as well as the possibility of commercial use, including operations beyond the line of sight and sensor connectivity.

At the Drone Detection Day in July 2017, the current possibilities for the detection and protection against non-cooperative drones were demonstrated in front of select representatives of ministries, security authorities, the German Federal Network Agency (BNetzA), airports, associations and companies.

In addition, the European Aviation Safety Agency (EASA) has published the draft for the European regulation on drones (Notice of Proposed Amendment "Introduction of a regulatory framework for the operation of drones – Unmanned aircraft system operations in the open and specific category"). The draft legislation sees the categorisation of drone classes according to purpose and associated risks, a tiered system of qualifications for drone pilots and the registration of devices in national registers in the Member States.

2.2.2 Principal legal and regulatory influencing factors

Calculation of charges and definition of profit

In accordance with the European regulations for air navigation service providers, DFS switched the cost-base for calculating charges from HGB to the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB) as at 1 January 2007.

The regulatory conditions had to be adjusted to avoid volatility in the level of charges determined, in particular, by the revised IAS 19. Its revision in 2013 led to considerable fluctuations in equity capital. In a directive dated 12 December 2012, the Federal Supervisory Authority for Air Navigation Services (BAF) stipulated that the actual financing expense for occupational pensions should not be subject to the cost-efficiency targets of the performance plan, but is instead to be considered as a determined cost in the performance plan and therefore part of the cost-base. Charges take the length of service and interest cost into account in a mutatis mutandis application of IAS 19 as part of the performance plan. The uniform discount rate for the second reference period used to determine the obligation is based on the interest rate that can be earned on plan assets (3.54%). This rate reflects prudent commercial judgement. The differences between the obligation and plan assets (plan deficit/plan surplus) are allocated in a rolling fashion over the average remaining time to work of the staff (15 years) and also taken into account in the following reference periods as a component of the charges. Additional conservative assumptions for career, salary and inflation trends support the correct matching of the funding of occupational pensions and avoid random fluctuations in the cost-base for charges and therefore arbitrary charges for airspace users. A difference (funding deficit) between the obligation and the assets that is determined in the planning phase for the following reference period is distributed over 15 years and increases revenues and liquidity in the IFRS consolidated financial statements.

In addition, the regulatory authority has given DFS the right to spread the material measurement differences from the conversion from German Commercial Code (HGB) to IFRS for balance sheet items directly in equity, namely fixed assets (development costs, borrowing costs, depreciation and amortisation), pension obligations and other provisions (catch-up effects). The regulatory authority has also given DFS the right to invoice airspace users over a period of 15 years (until the end of 2022) for the ex-post financing requirements (Article 6 of Regulation (EC) No 1794/2006).

There is a divergence between the commercial accounting rules and the basis for determining revenues from air navigation charges. This divergence leads to a corresponding divergence in the expense line items. Since 2013, the assessment basis for tax has been based on the charges-related result, in accordance with Section 31b(3) of the German Aviation Act (LuftVG). However, a corresponding regulation to determine the basis for the payment of dividends is still not in place.

Uncontrollable costs

Article 14(2a) of Regulation (EU) No 391/2013 allows for the sharing of costs with airspace users for the costs that do not lie within the control of air navigation service providers. Despite the fact that the first reference period is over, the assessment, identification and determination of these uncontrollable costs has still not been made because the European Commission has still not supplied an unequivocal determination.

Currently, there is no application guide for uncontrollable costs (Article 14(2) of Regulation (EU) No 391/2013) to offer DFS a reliable orientation on this issue. In addition, the Federal Republic of Germany has not yet reported any uncontrollable costs for the first reference period to the European Commission.

Given the overall uncertain legal situation, which also relates to the allowable remedies and legal recourse available to dispute decisions on this issue taken by the Federal Supervisory Authority for Air Navigation Services (BAF), the Federal Ministry of Transport and Digital Infrastructure (BMVI) and the European Commission, DFS does not yet recognise those costs in the financial statements stemming from the first and second reference periods which, in its own opinion, should be borne by airspace users (as at 31 December 2017: €28.3 million). On the other hand, DFS already recognises a provision for the uncontrollable costs that will likely have to be reimbursed for the first and second reference periods (as at 31 December 2017: €38.8 million).

Second reference period

The European Commission decided that the second reference period would run from 2015 to 2019 and introduced mandatory European targets for the performance area safety and a financial incentive system for the performance area capacity. In the opinion of the European Commission, the performance plan submitted by the FABEC States did not meet the targets for cost-efficiency and was therefore rejected. In the opinion of the European Commission, the new performance plan that was then drawn up – which contained adjustments to charges within the course of the year – was still not adequate and this plan was also rejected in autumn 2015. At the 64th meeting of the Single Sky Committee (SSC) on 21 February 2017, the Member States and the European Commission agreed, following difficult negotiations, on the retroactive acceptance of the performance plan for the second reference period.

The targets of the revised performance plan restrict the economic performance of DFS. DFS takes a critical view of the cost-efficiency targets laid down in the FABEC performance plan. The ability of the company to act is severely restricted and determinations, such as on the return on equity, do not adequately reflect the risks under which the company operates. For the third reference period (see section 7.2.1), the European Commission is urged to align the regulatory targets more closely to the capabilities and local circumstances of the air navigation service providers.

European funding programme

The EU plans to provide €2.5 billion of grant funding for targeted investment in the ATM (air traffic management) sector through its Connecting Europe Facility (CEF) until the end of 2023. DFS participates in this programme and received the approval for grant funding of a maximum of €54.5 million in 2017. However, under Article 14(2)(13) of Regulation (EU) No 409/2013 (Common Projects), such grant funding counts as 'other revenue' as set out in Article 2(k) of Regulation (EU) No 1794/2006 and should be used to reduce air navigation charges. DFS supports a regulation at the European level that would provide a real monetary incentive for air navigation service providers to become involved in these programmes.

Strengthening of the equity position by the Federal Republic of Germany

The German legislator approved a contribution of €50 million to the registered capital of DFS in 2015 as well as €112.5 million in each of the following four years (a total of €500 million). This was carried out as part of a budgetary appropriation under the Law on the Approval of the Federal Budget for the Fiscal Year 2015 (*Gesetz über Feststellung des Bundeshaushaltsplans für das Haushaltsjahr 2015*, BGBl. I, p. 2442). The Federal Republic of Germany as the sole Shareholder undertook to raise the registered capital accordingly.

On 25 November 2016, the German Bundestag approved an additional capital contribution of €101.9 million for 2017 in the Budget Act 2017 (printed documents of the Bundestag 18/9200, 18/9202). The Federal Republic of Germany as the sole Shareholder undertook to raise the registered capital accordingly and made the payment in the middle of 2017.

All these measures should strengthen the equity base and stabilise the charges at a level appropriate for the European setting, even in times of demanding regulatory targets.

2.2.3 Forecast/actual comparison

Forecast/actual comparison 2017			
	Actual as at 31 Dec 2016	Forecast for 2017	Actual as at 31 Dec 2017
Service units	En-route services: 13.49m Terminal services: 1.40m	Stable trend (DFS forecast)	En-route services: 14.30m Terminal services: 1.42m
Revenues (total)	€1,169.7m	Declining trend in revenues	€1,103.6m
Revenues (commercial business)*	€52.9m	Increase in high single-digit million euro range	€79.7m
Depreciation and amortisation	€108.9m	Slight rise in level of depreciation and amortisation	€116.3m
Earnings (total)	€86.6m	Positive earnings at the level of the previous year	€30.8m
Earnings (commercial business)	€1.2m	Earnings in the low single-digit million euro range	€2.2m
Staff	5,695	Reduction in staff numbers	5,608

* from total revenues of €53.3 million in 2016 (2017: €65.9 million)

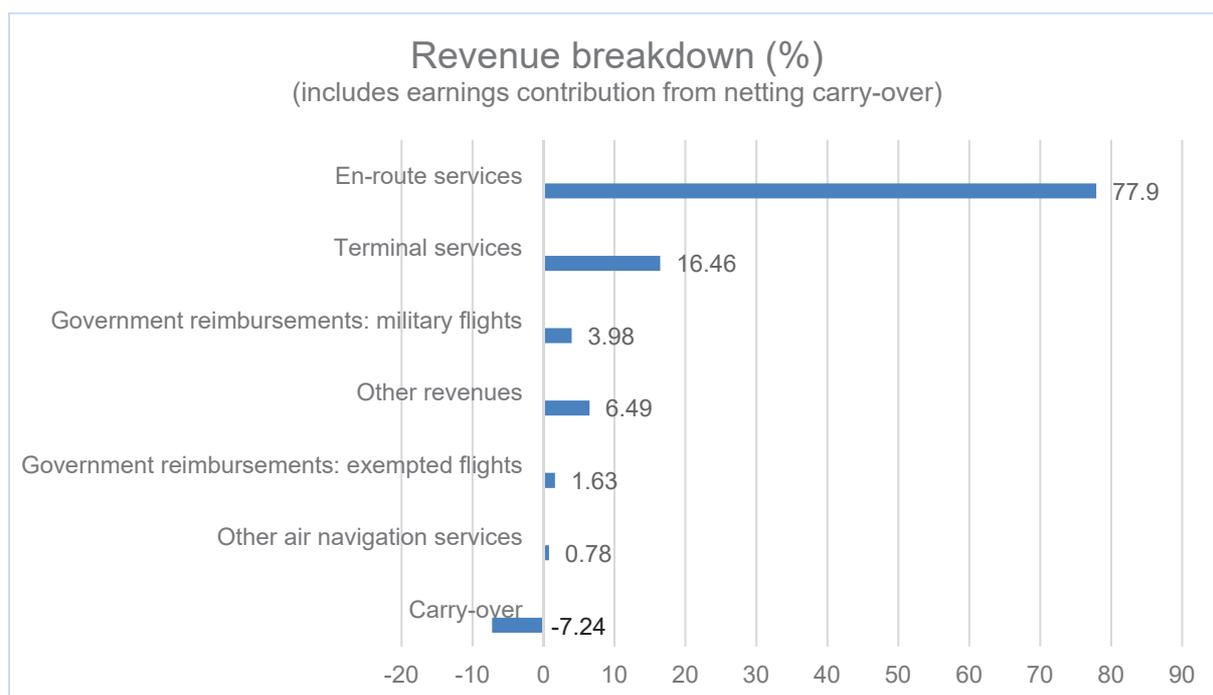
More information on earnings can be found in section 2.5.

2.3 Results of operations

2.3.1 Revenues

In 2017, the DFS Group generated revenues of €1,103.6 million (2016: €1,169.7 million). Despite the rise in flight movements, the significant reduction in unit rates required by regulation led to this decline of 5.7 percent compared with the previous year.

For DFS, the shift from full cost recovery to a performance-oriented charging structure for en-route and terminal services brings with it substantial changes in the breakdown of revenues. Within certain limits, DFS is exposed to the rewards and risks resulting from the development of air traffic (see section 3.1.3).



Revenues from air navigation services decreased from €1,117.3 million to €1,031.9 million. This is after netting the carry-over from previous years (€23.5 million) and the carry-over 2017 (minus €103.3 million). Revenues from en-route and terminal services declined because of the adjusted unit rates (see section 3.1).

Revenues from en-route charges (€m)

	2017	2016	2015	2014	2013
Total	859.8	899.3	962.3	801.1	796.2
Compared with previous year (%)	-4.4	-6.5	+20.1	+0.6	+5.7

These revenues were exclusively generated by DFS.

Revenues from terminal charges (€m)

	2017	2016	2015	2014	2013
Gross	182.5	211.5	233.8	232.6	227.3
Reimbursements paid	(0.9)	(0.7)	(0.7)	(0.6)	(0.9)
Net	181.6	210.8	233.1	232.0	226.4
Compared with previous year (net, in %)	-13.9	-9.6	+0.5	+2.5	+4.0

These revenues were exclusively generated by DFS.

Revenues from government reimbursements (€m)

	2017	2016	2015	2014	2013
Military operational air traffic	43.9	61.6	61.0	59.1	57.4
Exempted flights	18.0	6.5	6.5	6.5	6.5
Total	61.9	68.1	67.5	65.6	63.9
Compared with previous year (%)	-9.1	+0.9	+2.9	+2.7	+0.5

These revenues were exclusively generated by DFS.

The exempted flights relate to en-route flights under visual flight rules.

Revenues from other air navigation services (€m)

	2017	2016	2015*	2014	2013
Aeronautical publications	4.3	4.2	7.0**	0.3	7.5**
Flight inspection services	3.8	2.7	2.2	2.0	2.5
Other air navigation services	0.5	1.4	0.9	1.2	1.5
Total	8.6	8.3	10.1	3.5	11.5
of which commercial business	4.2	4.2	3.8	---	---
Compared with previous year (%)	+3.6	-17.8	+188.6	-69.6	+55.4

* Figures adjusted; comparability with prior year limited

** This item contains income from a technology transfer agreement (2013: €4.6 million; 2015: €3.0 million). This means it is neither directly comparable with previous years nor with subsequent years.

Other revenues (€m)					
	2017	2016	2015*	2014	2013
Total	71.6	52.5	37.7	20.7	17.2
of which commercial business	62.3	48.7	37.7	---	---
Compared with previous year (%)	+36.4	+39.3	+82.1	20.3	-15.7

* Figures adjusted; comparability with prior year limited

The Group generates other revenues primarily from air traffic control services at nine German regional airports and London Gatwick Airport, consultancy and staff services, apron management service, energy sales and training services.

2.3.2 Other operating income

Other operating income (€m)					
	2017	2016	2015*	2014	2013
Total	59.4	46.6	33.3	35.3	33.7
of which commercial business	1.5	0.5	0.9	---	---
Compared with previous year (%)	+27.5	+39.9	-5.7	+4.7	-56.7

* Figures adjusted; comparability with prior year limited

Material components:

- Project-specific funding by the European Commission (€32.2 million)
- Income from the qualified technological equipment (QTE) transaction, exchange rate gain (€14.7 million)
- Derecognition of liabilities (€7.0 million)
- Reimbursement of costs of the business year and of previous years (€1.9 million)
- Benefits-in-kind (€2.9 million)
- Reversal of provisions (€0.7 million)

2.4 Principal expense categories

Employee expenses (€m)					
	2017	2016	2015*	2014	2013
Total	862.8	838.5	850.7	803.1	808.5
Wages and salaries	605.2	609.2	593.6	593.8	585.7
Social security costs and expenses for pensions and assistance	249.1	206.4	230.0	180.2	197.8
Costs of personnel belonging to the Federal Aviation Office (LBA)**	8.5	22.9	27.0	29.1	25.0
of which commercial business***	40.3	33.1	23.7	---	---
Share of total costs (%)	75.4	77.1	77.2	76.9	76.7
Compared with previous year (%)	+2.9	-1.4	+5.9	-0.7	+4.7

* Figures adjusted; comparability with prior year limited

** LBA: Federal Aviation Office – *Luftfahrt-Bundesamt*. In 2017, Federal Government funds were used to bear some of the expenses for former public service employees of the LBA.

*** This item contain allocated costs.

Interest of €74.7 million accruing from provisions for pensions and early retirement is charged to the financial result. The return on plan assets (€38.9 million) is credited to the financial result.

Other operating expenses (€m)					
	2017	2016	2015*	2014	2013
Total	152.8	128.9	130.8	132.7	138.3
of which commercial business**	23.9	11.3	7.0	---	---
Share of total costs (%)	13.3	11.8	11.9	12.7	13.1
Compared with previous year (%)	+18.5	-1.5	-1.4	-4.0	-4.0

* Figures adjusted; comparability with prior year limited

** This item contain allocated costs.

Material components:

- Spare parts and maintenance (€53.5 million)
- Occupancy costs (€15.7 million)
- Costs of external personnel (€9.0 million)
- Rental and leasing (€8.5 million)
- Telecommunication costs (€6.9 million)
- Exchange rate losses from the QTE transaction (€14.6 million)
- Legal and consultancy costs (€4.5 million)
- Travel costs (€6.9 million)
- Other employee expenses (€9.1 million)
- Vehicle costs (€3.4 million)
- Insurance (€2.8 million)

Depreciation and amortisation (€m)					
	2017	2016	2015*	2014	2013
Total	116.3	108.9	109.6	104.5	102.4
of which commercial business	3.1	1.8	1.7	---	---
Share of total costs (%)	10.2	10.0	10.0	10.0	9.7
Compared with previous year (%)	+6.8	-0.6	+4.9	+2.1	-2.5

* Figures adjusted; comparability with prior year limited

2.5 Group earnings

In 2017, the DFS Group realised net income of €30.8 million (previous year: €86.6 million).

Net income (€m)					
	2017	2016	2015*	2014	2013
Total	30.8	86.6	123.6	34.9	35.8
of which commercial business	2.2	1.2	4.7	---	---
Compared with previous year (%)	-64.4	-29.9	+254.2	-2.5	-59.3

* Figures adjusted; comparability with prior year limited

The earnings in 2017 contain the costs reimbursed by airspace users for previous years of €55.2 million (previous year: €53.4 million) from the conversion of the cost-base for calculating charges from the German Commercial Code (HGB) to IFRS as at 1 January 2007 (catch-up effects). They also contain costs of €52.7 million (previous year: €54.2 million) from the change in the charges-related parameters for expenses for occupational pensions (imputed model, see section 2.2.2) within the scope of the introduction of regulated charges as at 1 January 2012. In addition, they contain capitalised development costs of €25.4 million (previous year: €3.1 million) as well as grant funding of €32.2 million (previous year: €25.6 million).

Earnings before taxes (€m)	
Net income	30.8
Taxes on income and gains	-8.7
EBT	22.1

There was a positive impact on earnings from the development in service units being higher than the forecast and the impact of the five-point programme.

DFS also took into account the additional income from charges from 2015 to be offset in the charges for users in 2017 (see section 2.2.2).

The net income of €2.2 million (previous year: €1.2 million) contributed by the commercial business was not significant.

Overall, the positive Group earnings were impacted by material special items.

2.6 Assets and financial position

2.6.1 Capital expenditure

The DFS Group invests in a targeted manner in preserving and developing the required infrastructure. Regulations and standards from ICAO, EUROCONTROL and the EU are taken into consideration. The safety of air traffic plays a decisive role when it comes to such decisions on capital expenditure. Against this background, capital expenditure amounted to €111.8 million (previous year: €85.5 million) in the business year 2017.

The principal projects with the highest share of capital expenditure are:

iCAS programme – interoperability through European collaboration Centre Automation System

DFS launched the iCAS programme to consolidate all projects, sub-projects and individual measures for the development of the air traffic control (ATC) system iCAS, the future air traffic control system at all DFS control centres. The programme comprises both concrete procurement and development measures to provide iCAS at the DFS control centres as well as a variety of bilateral and multinational cooperation measures at a European level. The iCAS programme aims to ensure that the multinational initiatives to shape the future European air traffic management system and the development of iCAS are conducted in a coordinated manner and that the interests of DFS are suitably taken into account. The future iCAS system will in particular meet the interoperability requirements of the SES regulations.

The project pursues the following objectives:

- Replacement of the P1/VAFORIT air traffic control system at the Karlsruhe control centre before the end of the life cycle in 2017/2018 so that measures to extend its useful life are not needed.
- Harmonisation of air traffic control systems at the DFS control centres and the creation of system and technical conditions to optimise the maintenance organisation of air traffic control centres.
- Creation of the system and technical platform to implement the operational concepts of the future with the goal of boosting performance (SESAR, FABEC). Cooperation and cost splitting with other air navigation service providers in the realisation and use of iCAS.

The first objective was achieved on time. The iCAS system went operational at the Karlsruhe control centre on 13 November 2017. DFS has thus taken the first step on the path of harmonising the systems used within DFS and subsequently in Europe. The introduction of iCAS primarily brings technical advances. Based on a completely new hardware platform, the system reacts faster and with more performance than the previously used P1/VAFORIT system. In addition, the monitor image is improved.

Modernisation and Replacement of Surveillance Infrastructure (MaRS)

The MaRS project involves the comprehensive replacement and modernisation of the surveillance infrastructure required for the air situation, including associated buildings and technical facilities all over Germany. It has an investment volume of approximately €240 million over a period of 15 years. The pilot facility is being set up at a site in Frankfurt West.

Remote Tower Control (RTC)

In the future, the Tower division will control the international airports of Saarbrücken, Erfurt and Dresden using modern camera and transmission technology. It is bundling aerodrome control at one central location in Leipzig and expects long-term cost savings from the use of new technologies and procedures as well as from the optimised and more efficient deployment of staff under one uniform concept of endorsements and operation.

Radio Site Upgrade and Modernisation (RASUM) 8.33

DFS is equipping 95 radio stations for the 8.33 kHz channel spacing requirements in lower airspace, including the necessary structural and infrastructural measures. The project creates urgently needed radio frequencies and implements the conclusion taken by the ICAO European Air Navigation Planning Group (EANPG) 48 dated November 2006 and Regulation (EU) No 1079/2012. The volume of capital expenditure amounts to €100 million over the entire period.

Voice switching system ISIS-XM (Improved Speech Integrated System) in Bremen

DFS is harmonising its voice switching systems and is replacing the system in Bremen within the scope of the so-called BRISE project. In the future, ISIS-XM is to be installed at all DFS control centres to achieve a homogeneous system landscape. A uniform user interface and concept will increase training efficiency and create the necessary conditions to enable the transfer of services (such as consolidating control centres at night) and new concepts to ensure air traffic control (ATC) operations in contingencies.

In the business year 2017, assets under construction as part of the projects worth a total of €86.5 million were completed (previous year: €5.4 million). The main share was made up by the ongoing iCAS programme.

With these projects, the DFS Group secures its position as a reliable partner for aviation.

2.6.2 Balance sheet structure

Balance sheet 2017

In 2017, the balance sheet total increased by 15.8 percent over the previous year to €2,251.2 million.

Assets

Non-current assets rose marginally by 1.2 percent, while current assets rose by 25.8 percent.

The increase in current assets was the result of counteracting effects. The Group raised its investment in securities from €557.2 million to €963.4 million using fixed and variable rate investments, which are primarily administered through an investment entity.

On the other hand, liquid funds declined by 28.4 percent to €276.9 million. Trade receivables declined by 6.8 percent. Other receivables rose by 22.8 percent primarily due to the change in creditors with debit balances.

Equity and liabilities

The level of equity improved by €446.3 million primarily due to the remeasurement of the net defined benefit liability (minus €196.2 million, OCI), the positive earnings from the business year (+€30.8 million) and the rise in subscribed capital from the capital contribution of the Shareholder (+€214.4 million, see Note 25). Overall, the negative equity declined by 39.6 percent.

Non-current liabilities declined by 6.6 percent. This was primarily attributable to the decline in the net liability from pension obligations, chiefly from actuarial gains, as well as the decline in the financial liabilities. Other provisions rose, however.

Based on the prior-year figures, the net liability (difference between obligation and plan assets) decreased to €2,183.8 million (previous year: €2,313.3 million) because of the rise in the discount rate from 1.7 percent (as at 1 January 2017) to 1.8 percent (as at 31 December 2017), while the salary trend (2.5%) remained stable. The service cost rose over the previous year (+€32.1 million) primarily due to the decline in the discount rate from 2.4 percent (as at 1 January 2016) to 1.7 percent (as at 1 January 2017).

Non-current financial liabilities declined chiefly due to the repayment of a debenture loan (minus €87.5 million) and the reclassification of a bond (minus €25.0 million).

Non-current other provisions rose by 38.2 percent primarily because of additional income from charges to be netted with airspace users from 2017 (carry-over).

Current liabilities declined by 21.3 percent. Other provisions rose (+€23.8 million) because of additional income from charges to be netted with airspace users from 2016 (carry-over), while financial liabilities rose owing to a reclassification.

Net financial indebtedness amounted to minus €973.8 million as at 31 December 2017. The leverage ratio at the balance sheet date thus amounted to minus 43.3 percent. Interest expenses, driven primarily by pension obligations, were higher than interest income by €23.7 million.

Current effects				
	2017 (€m)	2016 (€m)	Change (€m)	Change (in %)
Balance sheet total	2,251.2	1,944.2	307.0	15.8
Intangible assets	207.3	206.7	0.7	0.3
Property, plant and equipment	507.2	517.0	-9.8	-1.9
Financial assets	9.2	9.5	-0.3	-3.2
Inventories	5.3	5.0	0.3	6.0
Trade receivables	155.8	167.1	-11.3	-6.8
Securities	963.4	557.2	406.2	72.9
Cash and cash equivalents	276.9	387.0	-110.1	-28.4
Equity	-681.3	-1,127.6	446.3	-39.6
Pension provisions	2,183.8	2,313.3	-129.5	-5.6
Non-current financial liabilities	232.5	357.6	-125.1	-35.0
Current financial liabilities	34.1	8.9	25.2	283.1
Trade receivables	36.6	30.7	5.9	19.2
Other current liabilities	91.9	99.0	-7.1	-7.2

Balance sheet indicators

	2017	2016	2015*
Net financial indebtedness (€m) (Financial liabilities – liquid funds)	-973.8	-577.8	-159.4
Leverage ratio (%) (Net financial indebtedness / balance sheet total)	-43.3	-29.7	-8.8
Asset intensity (%) (Non-current assets / balance sheet total)	35.5	40.6	45.3

* Figures adjusted

Balance sheet indicators when fully considering catch-up effects from the conversion to IFRS and the under-recovery

	2017	2016	2015*
Net financial indebtedness (€m) (Financial liabilities – liquid funds)	-973.8	-577.8	-159.4
Leverage ratio (%) (Net financial indebtedness / balance sheet total)	-23.7	-14.3	-4.7
Asset intensity (%) (Non-current assets / balance sheet total)	19.5	19.6	24.0

* Figures adjusted

In Note 37, a detailed reconciliation can be found of the equity as at 31 December 2017 to the charges-related equity. The charges-related equity includes DFS Energy and takes into consideration the catch-up effects from the conversion to IFRS and the procedure approved by the Federal Supervisory Authority for Air Navigation Services (BAF) for costs to be recovered from the treatment of occupational pensions (see section 2.2.2).

2.6.3 Liquidity

2.6.3.1 Financial management

Financial management at the Group is responsible for securing and supporting the statutory obligation of DFS and, at the same time, fostering the competitiveness of the commercial business. DFS optimises its performance through an appropriate equity and debt structure, the economical use of equity capital, an optimised use of debt and the planning and control of cash flows.

Financing is carried out primarily by drawing on the cash inflows from operating activities and on funds from a money and capital market programme. Furthermore, there are special items impacting assets that have a temporarily favourable effect on liquidity (see section 2.5).

Group Treasury plans and controls the level of cash and cash equivalents and the procurement of funds. It incorporates subsidiaries in the flow of funds by means of intra-Group liquidity offsetting (cash pool agreements). Funds are collected and centrally controlled where legally allowed and commercially sensible. The financing requirements of subsidiaries are satisfied by inter-Group settlement accounts and loans. The DFS Group aims to achieve a balanced financing structure and holds, despite the negative interest rate environment, liquid reserves to effectively meet unexpected changes in the environment and market (see section 6.2.2).

Business dealings with a select group of principal bankers are conducted using uniform standards and existing reciprocal cash flows are continuously improved.

The DFS Group finances its non-current liabilities congruently with debenture loans and a bond that was traded on the exchange in Luxembourg until 31 January 2018. Short-term liquidity is covered by means of a multi-currency commercial paper programme. This financing form was not used in the business year. Appropriate liquidity from short-term demand deposits and fund assets not protected against insolvency ensures the solvency of the DFS Group.

With its money and capital market programme, the DFS Group attracts both national and international investors. These investors base their investment decisions and price fixing on the credit rating of each debtor. To support their decision-making process, DFS has its creditworthiness rated by means of standardised credit ratings from credit rating agencies according to internationally uniform and consistent procedures.

The rating agencies Standard & Poor's and Moody's confirmed the ratings of DFS in combination with its Shareholder for 2017 both for their short- and long-term ratings (AAA/A-1+ and Aa3/P-1).

At year-end 2017, the issued volume had a nominal value of €25.0 million from a bond with a remaining term to 31 January 2018 as well as a nominal value of €197.5 million from debenture loans with a remaining term of up to six years.

The average weighted interest rate of the fixed-rate bond and debenture loans amounted to 2.867 percent at the balance sheet date.

2.6.3.2 Group cash flow statement

Cash and cash equivalents at year-end are made up as follows:

Cash and cash equivalents (€'000)			
Cash inflow (+) / cash outflow (-)	2017	2016	2015*
Operating activities	265,897	336,356	315,914
Investing activities	-108,894	-81,257	-74,924
Financing activities	139,111	-25,098	155,747
Changes impacting cash flow	296,114	230,001	396,737
Cash and cash equivalents at the beginning of the year	944,247	714,246	317,509
Cash and cash equivalents at the end of the year	1,240,361**	944,247**	714,246

* Figures adjusted

** Contains fund assets not protected against insolvency

Additional information can be found in the cash flow statement and in Note 33. No dividend was paid out to the Shareholder in the business year 2017.

2.7 Overall assessment on the economic situation

The results and financial position are influenced primarily by the legal environment, economic regulation, catch-up effects, grant funding, capitalisation of development costs, the moderate but stable growth in air traffic, the continuing low interest level as well as measures taken by the Board of Managing Directors to reduce costs.

In the business year 2017, revenues generated by the DFS Group were lower than in the previous year due to the significantly lower unit rates required by regulation. Net income came in at €30.8 million. While net income remained in positive territory, it was primarily influenced by catch-up effects and the change in the charges-related parameters for expenses related to occupational pensions (imputed model). DFS is promoting the refinancing of occupational pensions through a higher commitment to asset forms with a more attractive risk/return ratio.

In 2017, Federal Government funds were additionally used to bear the cost for air navigation charges for all components of the cost-base for charges.

The commercial business only made a small contribution to improving earnings despite the significant rise in revenues in 2017.

3 Segment reporting

3.1 Regulated business

3.1.1 Control Centre division

Service unit

In the Control Centre division, a service unit is computed as the square root of the weight factor multiplied by the distance factor. The economic value of each flight conducted is taken into account so that the value of the air traffic control service performed is considered by the legislator when establishing the relevant air navigation charges.

Definition of service unit:

$$\text{En-route services: } \sqrt{\frac{\text{max. take - off weight in tonnes}}{50}} \times \frac{\text{distance in km}}{100}$$

The amount to be paid by the airspace user is given by multiplying the service unit by the en-route unit rate.

Development of service units – en-route services

	2017	2016
Total	14,303,636	13,489,534
Compared with previous year (%)	+6.0	+4.5

In 2017, the number of service units rose by roughly 6.0 percent over the previous year. This was 9.0 percent higher than the revised performance plan, which forecast 13,122,000 service units for 2017. The increase results from the rise in traffic and the use of larger, and thus heavier, aircraft. In addition, Germany's overall stable economy and the improvement in the economies of neighbouring European States influenced this development.

The national en-route unit rate comprises air-traffic-related cost elements of DFS, the German Meteorological Service (DWD), EUROCONTROL, the Maastricht control centre and other national bodies, such as the German Federal Ministry of Transport and Digital Infrastructure (BMVI) and the Federal Supervisory Authority for Air Navigation Services (BAF).

En-route unit rate (€)

	2018	2017	2016	2015	2014	2013
Total	67.07	69.36	82.59	90.15	77.32	76.50
DFS share	58.09	60.10	66.68	74.56	62.55	63.22
Compared with previous year (total, in %)	-3.3	-16.0	-8.4	+16.6	+1.1	+3.1

The EU Regulation on the common charging scheme for air navigation services (Regulation (EU) No 391/2013) contains compensation mechanisms to partly offset losses in revenues as a consequence of fluctuations in traffic volumes as well as an inflation adjustment. The decrease in the unit rate since 2016 is primarily attributable to the use of higher planning values

for the service units in the revised performance plan and the savings stemming from the five-point programme (see section 1.4.2).

The DFS share of the unit rate for 2018 will sink by 3.3 percent over the previous year, while the share of the unit rate for en-route services will remain stable at around 87 percent.

3.1.2 Tower division

Service unit

In the Tower division at the 16 designated international airports, a service unit is the quotient obtained by dividing by 50 the maximum take-off weight, expressed as a figure taken to two decimal places, to the power of 0.7.

Definition of service unit:

$$\text{Terminal services: } \left(\frac{\text{max. take - off weight in tonnes}}{50} \right)^{0.7}$$

The amount to be paid by the airspace user is given by multiplying the service unit by the unit rate for terminal services.

Development of service units – terminal services

	2017	2016
Total	1,424,060	1,395,519
Compared with previous year (%)	+2.0	+3.6

The unit rate rose by 2.0 percent over the previous year, which is roughly 4.5 percent over the revised performance plan. This is the fourth consecutive year in which German airports recorded above-average growth. In this case as well, the rise in service units was due to the rise in traffic and the use of larger, and thus heavier, aircraft.

The unit rate for terminal services comprises air-traffic-related cost elements of DFS, the German Meteorological Service (DWD) and other national bodies, such as the German Federal Ministry of Transport and Digital Infrastructure (BMVI) and the Federal Supervisory Authority for Air Navigation Services (BAF).

Terminal unit rate (€)

	2018	2017	2016	2015	2014	2013
Total	127.87	130.59	159.23	181.62	183.87	181.99
DFS share	125.18	127.80	151.31	173.28	177.20	175.84
Compared with previous year (total, in %)	-2.1	-18.0	-12.3	-1.2	+1.0	+6.2

The decrease in the unit rate since 2016 is primarily attributable to the use of higher planning values for the service units in the revised performance plan and the savings stemming from the five-point programme (see section 1.4.2).

The DFS share of the unit rate for 2018 will decrease by 2.1 percent over the previous year, while the share of the unit rate for terminal charges will remain at around 98 percent.

3.1.3 Results of operations

Results (€m)		
	2017	2016
Total revenues (external)	1,124.8	1,166.0
Total expenses	1,077.6	1,035.6
EBIT	47.2	130.4
Financial result	-23.2	-39.2
Income taxes	4.5	-5.8
Net income	28.5	85.4

More information on segment reporting can be found in Note 32.

The changeover from full cost recovery to charges based on performance for the Control Centre division (since 2012) and the Tower division (since 2015) has had a material impact on cost structures. Savings or additional expenses are no longer passed on in the following periods but directly impact the earnings of DFS. Currently, there are still issues concerning interpretation and application which could influence the future development of the company's economic situation. From the point of view of DFS, there are a small number of measurement, accounting and charging issues which have not been unequivocally resolved since the date of the transition (31 December 2011 / 1 January 2012). The regulatory authority and DFS continue to work on the contentious issue of drawing up a binding catalogue of qualifying uncontrollable costs. Such costs will have to be borne in full by airspace users.

For the Control Centre division (since 2012) and the Tower division (since 2015), the regulatory situation has split the risks and rewards resulting from the differences between planned and actual traffic volume between the airspace users and DFS. If defined thresholds are exceeded, DFS is authorised and obliged to return or demand any over- or under-recoveries (carry-over).

Risk/reward transfer from deviation in traffic volume		
Deviation in traffic volume (v)	DFS share	User share
$v \leq 2.0\%$	100.0%	---
$2.0\% < v \leq 10.0\%$	30.0%	70.0%
$v > 10.0\%$	---	100.0%

3.2 Commercial business

3.2.1 Business activities

The main focus of the (non-regulated) commercial business is on providing air traffic control services at nine German regional airports and two UK airports, the sale of aviation-related products and publications, the training of military air traffic personnel and the sale of energy.

Air traffic at the regional airports where DFS Aviation Services operates

The development in air traffic experienced at the regional airports where DFS Aviation Services operates was basically positive, due to the general rise in flight movements and cargo in Germany. Air traffic rose roughly two percent over 2016, following the prior-year decline in aircraft movements at the airports where this company provides air traffic services. The insolvency proceedings for FMC GmbH (the operator of Cochstedt Airport) are continuing. Based on the insolvency plan dated 4 September 2017, DFS Aviation Services will provide limited services until 31 March 2018.

Ryanair announced that it planned to grow its market share in Germany primarily at the larger international airports. This new strategy raises the competitive pressure on regional airports significantly, especially as the airline is also increasingly stationing its aircraft at the larger international airports. The EU is reducing State aid by means of EU Guideline 2014-2020 (2013/C 209/01), which is raising the pressure to achieve cost savings at the airports primarily funded from the public purse.

Air traffic in the United Kingdom

Within a stable economic environment, the volume of air traffic in the United Kingdom grew by less than the European average in 2017, following higher than average growth in the previous years. In 2017, flight movements rose by 2.7 percent over the previous year, while European traffic saw growth of 4.4 percent compared with the previous year.

Air traffic at Gatwick Airport

Gatwick is the second-largest airport in the United Kingdom with more than 280,000 flight movements. It is considered the busiest single-runway airport in the world, with connections to more than 200 destinations. It counts more than 50 airlines as customers, which transported 45.6 million passengers. This number continues to grow.

Air Navigation Solutions handles the traffic volume of up to 950 flight movements per day safely. This marks a new world record for a single-runway airport.

Air navigation services at Edinburgh Airport

In 2016, Air Navigation Solutions won the tender to take over the provision of air traffic services at Edinburgh Airport in the United Kingdom.

Edinburgh is the largest airport in Scotland with 121,800 flight movements and around 12.4 million passengers. It is used by 33 airlines, which fly to 130 destinations. In September 2016, Air Navigation Solutions was awarded the contract to take over the provision of air traffic services from April 2018. It developed a detailed transition plan with the UK air navigation service provider NATS and Edinburgh Airport (EAL) and is readying staff to take over services there.

Training of military air traffic control personnel

Kaufbeuren ATM Training took on responsibility for the full operational and on-time training of military air traffic control in Kaufbeuren with the beginning of the integration phase on 1 January 2017. The curriculum and training material were taken over by Kaufbeuren ATM Training and incorporated into the new teaching concept. In addition to the full launch of the simulator and teaching infrastructure, a comprehensive quality management system was established and approved by the competent supervisory authority, the German Military Aviation Authority (LufABw). The official approval was issued by the German Military Aviation Authority in July 2017.

All the courses offered were carried out in accordance with the service level agreement.

Aviation-related products and publications, and training services

The Group produces aeronautical charts and publications and other aeronautical information in paper and electronic form and sells them together with technical devices for flight preparation and conduct. Since 2017, R. Eisenschmidt has been authorised to develop, produce and market products and services for the training of pilots, including pilots of unmanned aircraft systems.

Consulting and project business

The Aeronautical Solutions (AS) division at DFS was spun off into DFS Aviation Services in 2017. It advises air navigation service providers worldwide on procedures planning, airspace structures and safety management (consulting). It supplies systems and air-traffic-related data to airports, conducts apron management services at airports, maintains and services technical facilities, and sells training services. In the business year, a contract to provide technical services with a volume of €34.4 million and a term of ten years was signed with the air navigation service provider in Luxemburg, ANA. This represents a further long-term revenue stream for the subsidiary. The division uses the specialist expertise of DFS departments.

Energy supplies

DFS Energy produces and distributes electricity, heating water, steam and chilled water. The company supplies DFS (approx. 60%), the Paul Ehrlich Institute (approx. 40%) and the German Federal Environment Agency (its share is contained in the figure for the Paul Ehrlich Institute) at the Campus in Langen. DFS Energy ensures that all users can operate off-grid for a limited period by providing an emergency power supply. It also ensures that the technical infrastructure is fit for purpose and that a reserve of primary energy is kept available.

3.2.2 Results of operations

Results (€m)		
	2017	2016
Total revenues (external)	65.9	53.3
Total expenses	67.3	52.6
EBIT	-1.4	0.7
Financial result	-0.5	0.4
Income taxes	4.1	0.1
Net income	2.2	1.2

More information on segment reporting can be found in Note 32.

4 Personnel

Motivated and qualified staff are imperative for the long-term success of the DFS Group. This is why human resources management at DFS stresses a holistic approach from selection through appropriate compensation and targeted training and development to the long-term retention of staff in the Group. Financial incentives are supported by HR policies aligned to the different phases of life and family needs.

Employee structure

As at 31 December 2017, the DFS Group had a total of 5,608 employees. This number is made up of non-exempt staff (covered by collective agreements), exempt employees (not covered by collective agreements) and executive staff as well as assigned personnel of the Federal Aviation Office (LBA) working for DFS and soldiers released from regular service. Non-exempt employees are subject to the provisions of the company-specific collective bargaining agreements.

Executive staff and exempt employees negotiate their contracts freely on an individual basis. These employees have target agreements covering corporate goals and their area of expertise. The degree of fulfilment of these agreements determines the variable salary components.

The assigned personnel of the Federal Aviation Office (LBA) working for DFS comprise another employee group. These established and non-established civil servants, who have remained in an employment relationship with the Federal Government, still fall under the Federal Civil Servants' Remuneration Regulation (*Bundesbesoldungsordnung*) and the collective agreement for the public service (*Tarifvertrag für den öffentlichen Dienst – TVöD*). The collective agreements at DFS do not apply to them. DFS bears the relevant expenses.

Air traffic controllers (from the age of 55) and flight data assistants (from 59) receive transitional payments in the period before their formal retirement. This right to receive transitional payments accounts for a significant component of the pension commitment.

Information on the compensation structure of the Board of Managing Directors can be found in Note 44.

Employees (as at 31 December)					
	2017	2016	2015*	2014	2013
Permanent employees (total) (of which at subsidiaries)	5,608 (222)	5,695 (157)	5,742 (70)	5,879 ---	6,046 ---
Salaried staff (of which at subsidiaries)	5,156 (222)	5,210 (157)	5,214 (70)	5,316 ---	5,317 ---
Soldiers released from regular service	165	202	211	219	235
Wage-earners	22	22	25	26	27
Technical/commercial students & apprentices	47	41	42	45	50
Air traffic control trainees	60	48	52	51	172
Personnel belonging to the Federal Aviation Office (LBA)	158	172	198	222	245
of which established civil servants	(126)	(134)	(152)	(171)	(188)
of which non-established employees	(32)	(38)	(46)	(51)	(57)
Compared with previous year (%)	-1.5	-0.8	-2.3	-2.8	-0.9
Share of female employees (%)	27.5	27.1	27.0	26.8	26.5
Share of foreign employees (%)	5.2	4.7	3.9	4.0	4.1

* Figures adjusted; comparability with prior year limited

The table for 2017 contains employees from the following subsidiaries:

At the end of December, DFS Aviation Services had 81 members of staff.

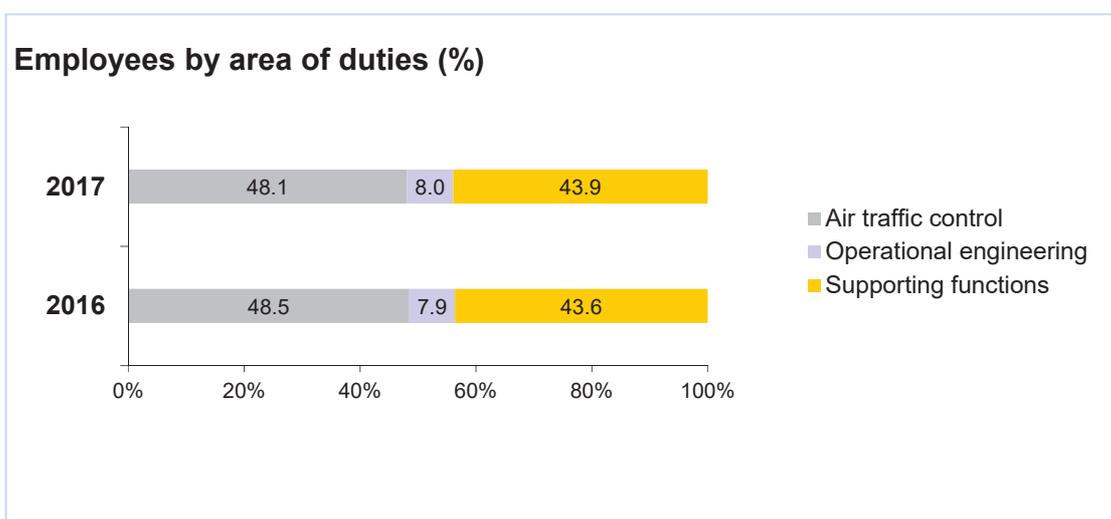
At the end of December, R. Eisenschmidt had 10 members of staff.

At the end of December, Kaufbeuren ATM Training had 45 members of staff.

At the end of December, Air Navigation Solutions had 86 members of staff.

DFS Energy and DFS International Business Services have no employees of their own.

The planned long-term reduction in operating costs also covers a reduction in headcount. DFS will achieve this by means of age-related separations and by adopting a conservative policy as regards filling vacancies.



Of the 5,608 employees of the Group, 930 were part-time – 613 women and 317 men. The share of part-time employees rose by 1.5 percent over the previous year, reaching 16.6 percent. The age structure of staff is well balanced, with the average age being 43.5 years. The turnover rate was 1.07 percent in 2017.

At present, 27.5 percent of employees are women; a rate that has increased steadily since 2011. Currently, 61 of the 495 management positions in the company are held by women, representing a share of 12.3 percent.

DFS applies the German law on the equal participation of women and men in management positions in the private sector and in public service (FührposGleichberG) and has laid down a target for the share of female division directors of five percent (previously: 0%) and the share of female department heads of 13 percent (previously: 11%) for the periods from 1 January 2017 until 31 December 2021. As part of the five-point programme, the company is increasingly fostering in a targeted manner both family-friendly policies and equal opportunities at the company.

Foreign employees mainly come from the United States and the United Kingdom, followed by Spain and Austria. Overall, 45 nations are represented.

Work and family

DFS is continuing to expand measures to support staff in combining work and family life and has set up HR policies aligned with the phases of life. It has been certified by the non-profit Hertie Foundation under its 'work and family audit' (*audit berufundfamilie*) since 2014. Recertification was achieved in 2017. Since 2011, DFS has been working with a childcare centre in Langen, where its Headquarters are located. Places are available for employees' children, and similar places are also available at childcare centres near the other DFS branches in Munich and Karlsruhe. Since 2016, DFS has also offered a programme for school-aged children during the summer holidays at the company sites in Langen, Munich, Karlsruhe and Bremen. The support for employees who are caring for dependents was and continues to be expanded, for example by the HR and health management units at DFS providing comprehensive information and advice.

Over the course of their whole career, staff can make use of flexible working-time models, health programmes, a company sports club, seminars and further training opportunities.

Personal staff development

DFS is aware that a large part of the future success of the company is coupled to the further development of the individual strengths and abilities of its staff.

For this reason, DFS offers a wide range of initiatives to foster professional and interdisciplinary competences. This range is currently being reworked and aligned with the changed needs of employees. The willingness to learn, the exchange of experience, networking and a feedback culture all play a central role in this regard.

Training

DFS is well aware of its responsibility to society and has been offering job-starters attractive trainee and university places for years.

Training starts		
	2017	2016
Total	84	57
Air traffic controllers	65	42
Dual courses of studies/apprenticeships	19	15
Compared with previous year (%)	+47.4	-5.0

In addition to training air traffic controllers, the spectrum of training currently offered at DFS also encompasses dual courses of studies in professions in short supply (degrees in electrical engineering, IT, air navigation technology and aviation management) and commercial apprenticeships.

This allows DFS to meet its demand for qualified staff. As these staff are trained internally, they will, in all likelihood, take on duties within DFS on completion of their training or degree.

In the future, DFS will continue to offer interesting and promising trainee and university places.

Collective bargaining

In 2017, DFS implemented the provisions of the collective agreements covering the Group, structural measures and partial retirement agreed at the end of 2016.

Two collective agreements entered into force on 1 April 2017, one on partial retirement (ATZ-TV) and the other on structural measures and early retirement (StrukturTV).

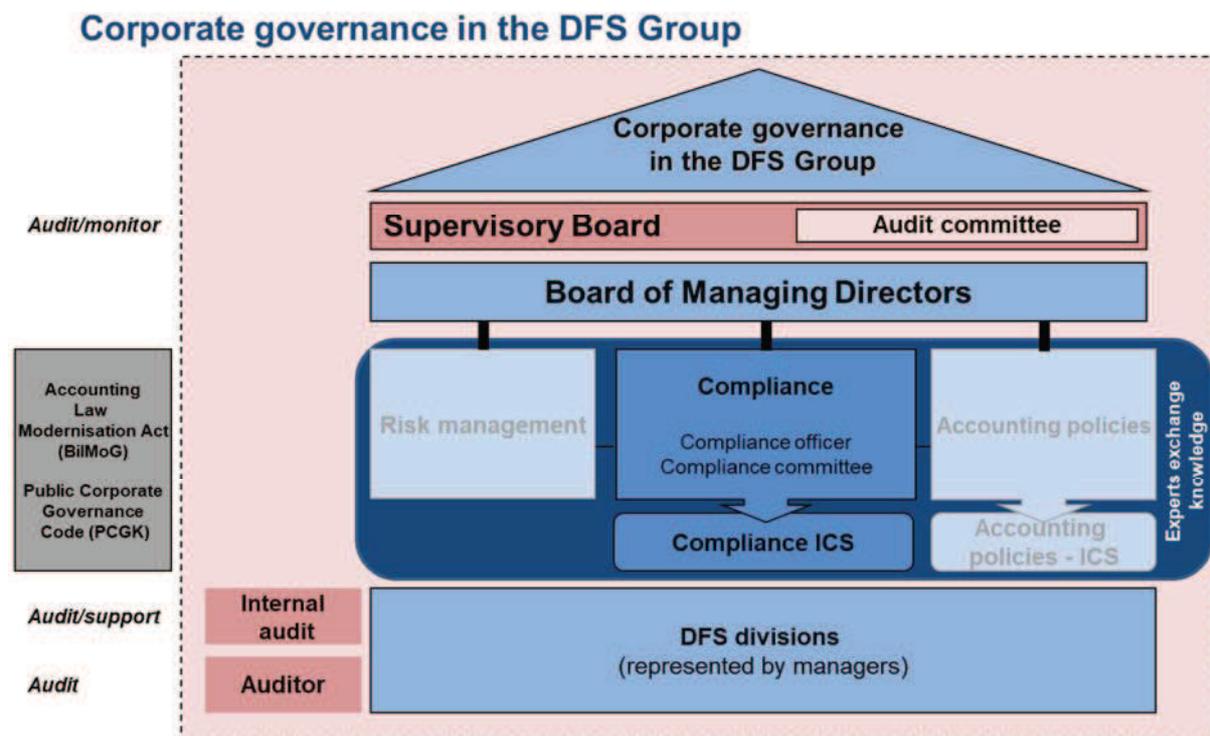
In the second half of the year, DFS and the air navigation services union, GdF, worked on the creation of a series of collective agreements covering the whole Group, namely a Framework Group Agreement (*Rahmenkonzertarifvertrag*), a Group Framework Agreement (*Konzernmanteltarifvertrag*), a Framework Group Agreement Covering Remuneration (*Rahmenkonzernvergütungstarifvertrag*) and a Framework Group Agreement Covering Pensions (*Rahmenkonzernversorgungstarifvertrag*). These negotiations have now been completed. The contracts are to be signed in the first quarter of 2018.

In addition, on 9 June 2017, the partners to the collective agreements reached a joint conclusion to the negotiations on workload-related compensation as part of the so-called validation round 2017. This is the basis for the current collective bargaining which is aimed at finding a joint method of determining workload and raising operational flexibility by adapting the Special Provisions for Air Navigation Services (*SR FS-Dienste*). Furthermore, additional changes in the Collective Agreement on the Grading System (ETV) were agreed, provided the negotiations were completed successfully.

On 6 February 2017, the parties to the collective agreements signed the Collective Framework Agreement (MTV), the Collective Agreement on the Grading System (ETV) and the Collective Agreement covering Pensions (VersTV) for the employees of Kaufbeuren ATM Training GmbH.

The collective bargaining agreements for the subsidiaries reflect the particular requirements of the competitive environment and have no material effect on the results and financial position of the Group.

5 Compliance



As a State-owned entity, DFS and the domestic subsidiaries where DFS is the majority shareholder are subject to the Public Corporate Governance Code (PCGK) of the Federal Government of Germany. Under this code, the Board of Managing Directors has to ensure adherence to and compliance with legal provisions and corporate guidelines. DFS introduced a compliance management system (CMS) on the basis of this code.

The CMS, together with the risk management system (RMS) and the internal control system (ICS) for accounting and financial reporting, form the three pillars of the corporate structure for risk management.

The compliance committee advises the compliance officer. The committee is made up of the executive management level from the Group Data Protection and Quality Management, Corporate Safety and Security Management as well as the Corporate Management divisions. To ensure the connection of the compliance management system to the internal control system and the risk management system, the heads of Financial Management, Risk Management as well as Group Internal Audit are permanent guests of the committee. In 2017, the compliance committee had four scheduled meetings.

DFS employees can also turn to an external ombudsman if they suspect a compliance infringement.

The focal points of the activities in 2017 were an investigation into the harmonisation of the risk management system with the compliance management system due to the new auditing standard for risk management systems (IDW PS 981) from the Institute of Public Auditors in Germany (IDW) as well as the preparation for the implementation of a tax compliance management system due to the practice statement on the auditing standard for compliance management systems (IDW PS 980).

The compliance management system is constantly upgraded and expanded. Organisationally, the matter is assigned to the Institutional and Legal Affairs division. There is a direct reporting channel from the compliance officer to the Board of Managing Directors and the Supervisory Board.

6 Risk report

6.1 Risk management system

The DFS Group uses a comprehensive set of instruments to identify, analyse, monitor and manage the risks associated with its business. The risk management process is managed centrally by the independent Risk and Contract Management unit. This department is supported by the risk management committee (RMC) when conducting evaluations that span several organisational divisions and processes. As a rule, the members of this body belong to the executive management level and are closely involved in the business decision-making processes, understand company-wide interrelationships and are hence in a position to contribute to forming a comprehensive overview.

The direct and indirect subsidiaries of DFS are systematically managed and monitored using in-house risk management systems. The risk management systems of the subsidiaries are aligned with Group rules and report to the management of the Group through the DFS Risk Management department.

Risk Management takes account of the changes taking place in the aviation industry and the company, advances risk management methodically and therefore ensures the early identification of risks and the combatting of business risks.

This specialist department uses a process description and an operational instruction to lay down standards for the ongoing company-wide recognition, assessment, documentation and reporting of business risks. The early identification of risks begins with the applications for approval of business plans and projects. Possible effects encompass the following topics: operations (e.g. fulfilling the statutory mandate, infrastructure); finance (e.g. costs, financial markets, customers/suppliers); management (e.g. strategy, personnel, organisation) as well as the external environment (e.g. politics and legislation, disasters and terrorist attacks).

As part of their management duties, the directors of the divisions identify potential/existing risks that have arisen, including for the issues mentioned above, and are responsible for ensuring that the statements on the risk situation in their organisational units are correct. They report quarterly unless an ad hoc report is required. A risk announcement contains a description and an assessment of the risk as well as the causes and countermeasures. In general, the forecast period is one year.

Risks are assessed across all segments and are based on an evaluation of the probability of occurrence and the possible level of damage of the hazards under consideration as reported by the organisational units concerned. The goal is a quantified assessment; in well-founded cases a qualified assessment is permissible. Criteria for a qualified assessment are laid down centrally in an assessment matrix. Only the risks to the going-concern status are included in the risk report to the Board of Managing Directors and the Supervisory Board.

The reporting of risks to the Board of Managing Directors takes place on a quarterly basis, while the Supervisory Board is informed on a half-yearly basis. Both reports include an overview of changes from the prior period and all notifications that were no longer judged to be business risks in the period under review.

The integrity of the risk management system is tested by Group Internal Audit as well as in the course of the audit of the annual financial statements by the external auditors.

6.2 Material risks

6.2.1 Corporate strategy risks

Corporate strategy risks arise primarily from misjudgements of external conditions and future market developments. They can lead to an inadequate alignment of corporate activities, with negative consequences for the results and financial position of the DFS Group. This is why DFS devotes considerable attention to the analysis and forecasting of air traffic, the political environment and the European charging and performance scheme. The Board of Managing Directors reviews its estimates in close cooperation with relevant bodies, checks variances and discusses risks. The DFS Board of Managing Directors therefore sees only a slight corporate strategy risk.

6.2.2 Financial risks

6.2.2.1 Principles of financial risk management

As part of its business activities, the DFS Group is exposed to numerous financial risks. The management of these risks is an integral component of the planning and implementation system. The Board of Managing Directors lays down the associated corporate policy. The objective of the corporate policy is to contain and/or mitigate existing risks. Financial management at DFS implements these targets and uses a system to manage financial risks that is tailored to the specific business of the Group. Particularly since the beginning of the global financial market crisis, DFS has been continuously following and analysing the developments on the financial markets in a critical dialogue with its principal bankers and the rating agencies to reassess any existing strategies and develop new strategies as necessary.

As part of its overall risk management system, DFS performs Value-at-Risk (VaR) analyses to manage market price risks (interest, currencies). The risk position is assessed weekly by the Treasury department based on market price risks. The VaR indicates the absolute loss for a company of a defined risk position which will not be exceeded with a previously defined probability over a given period of time. The calculation of the VaR at DFS is based on a holding period of ten days and a probability of 95 percent. On 31 December 2017, the cumulative loss at a confidence level of 95 percent amounted to under €1,121 thousand (previous year: €2,707 thousand).

The VaR is determined with the help of statistical time series on the relevant financial market data (interest rates, exchange rates). Historical simulations are computed by extrapolating scenarios from the past to the future using simulated changes in market values for financial instruments.

This market risk analysis includes all money market transactions of DFS, issued bonds, debenture loans, securities, currency hedges as well as all associated risk positions (foreign currency purchases and foreign currency receivables/liabilities). Quantitative information on VaR values for risks from currency and interest rate changes is summarised in Note 36.3.

Clearly defined external conditions support the planning and control of risks based on the reporting. Speculative transactions with derivative instruments where there is no underlying transaction are forbidden. As regards financial investing, transactions are only entered into with counterparties who either have a long-term rating of at least A+/A1, short-term A-2/P-2, or a correspondingly high creditworthiness or other form of collateral.

6.2.2.2 Liquidity risk

Daily liquidity is monitored by the Treasury department and is managed with liquidity planning during the year and over the medium term (see section 2.6.3.1).

6.2.2.3 Default risk

DFS is exposed to default risk and, increasingly, collection and enforcement risk from the operating business in the Control Centre and Tower divisions, from the commercial business as well as from financial instruments. That is why receivables are monitored constantly in the operating business and default risks considered by means of specific allowances. In addition, for terminal services DFS demands security deposits from customers with relevant sales volumes when defined warning thresholds are exceeded.

For the Control Centre division, EUROCONTROL invoices all flights on the basis of the data transmitted by the individual Member States and supplementary information from the Network Manager. The invoices are issued based on the data (operator, weight, distance) known at that point in time. In individual cases, agreements are reached under which third parties make partial payments of outstanding amounts for services received after consultation with the Member States and at EUROCONTROL's reasonable discretion. EUROCONTROL does not require any security to be lodged but initiates enforcement measures to collect amounts due which have not been paid within the deadlines laid down. This requires a resolution from the Member States.

DFS has no influence on the discretion applied when EUROCONTROL makes such decisions. The intergovernmental agreement entitled Multilateral Agreement relating to Route Charges dated 12 February 1981 (BGBl. 1984 II p. 109) at European level prevents it from demanding security deposits to limit imminent defaults for en-route services. Notwithstanding these restrictions, the regulatory authority currently rejects the inclusion of these collection, default and enforcement risks as uncontrollable costs. The maximum default risk is reflected in the carrying amounts of the financial assets recognised on the balance sheet.

Warranty obligations for the commercial business are demanded as part of a contract-related quality management.

6.2.2.4 Rating risk

The business and performance of DFS are monitored by external rating agencies and the Deutsche Bundesbank (eligibility of the debt instruments of DFS). Negative analyses and the downgrading of the ratings could make the take-up of external financing more difficult and negatively influence the conditions for such financing and lead to higher interest rates.

DFS concluded a US lease-in/lease-out transaction (five tranches) with two US investors (QTE transaction) for a portion of its air navigation systems under non-current assets in 2002 and 2003.

This transaction was basically terminated in the second quarter of 2012. The remaining German shell structure with a remaining term up to the start of 2022 is restricted to a receivable to Nord/LB bank (the borrower) and a liability to KfW Bank (the lender). The associated cash flows match as regards amount, term and currency. Over its term, DFS bears the default risk of Nord/LB bank to the amount of €42.2 million as of the balance sheet date (previous year: €55.4 million). KfW Bank is authorised to extraordinarily terminate the loan if the rating of DFS falls under AA- (Standard & Poor's) or Aa3 (Moody's). In such a case, DFS would have to name a third party within a period of thirty days that will acquire the receivable of KfW against DFS to the amount of €42.8 million (previous year: €56.3 million).

6.2.2.5 Interest rate risk

The Group is exposed to interest rate risk from the financing area, from financial assets as well as from the measurement of obligations under occupational pensions.

The effective management of the interest rate risk is ensured through the use of derivative financial instruments with term and volume congruence between the underlying transaction and the hedge. DFS monitors the impact of regulations to be able to react with appropriate measures to changes in the area of occupational pensions.

Variances in the present value of the pension obligations for changes in parameters of +/- 0.5 percentage points are shown in the sensitivity analysis in the Notes (see Note 26.3).

6.2.2.6 Currency risk

The DFS Group is exposed to transaction risks as part of cross-border procurement transactions. The majority of foreign currency purchases/liabilities results from suppliers invoicing in US dollars (USD/\$). The total volume amounted to approximately \$0.6 million in the reporting period (previous year: \$0.6 million). Other currencies are only of minor importance.

These risks are limited by means of hedging using derivative financial instruments. Currency risks from financial transactions (foreign bonds, commercial paper) are hedged immediately on conclusion of the transaction.

A bullet euro loan of €3.5 million with a remaining term until 2020 made by DFS International Business Services to Air Navigation Solutions (UK) may lead to negative effects for Air Navigation Solutions from currency fluctuations.

6.2.3 Performance-related and IT risks

The top priority for DFS and its subsidiaries is to ensure the safety of air traffic, which is why DFS has set up safety and security management systems for the provision of air traffic control services that correspond to the provisions of Regulation (EU) No 1035/2011. The risk management system of DFS and its subsidiaries has incorporated ATM-related systems and applications as well as administrative systems and applications.

A variety of measures are taken at the level of planning, implementing and operating of the infrastructure of DFS and its subsidiaries to minimise the probability of downtime of the operational infrastructure of DFS which would endanger air safety and impact the business performance. Where required for the provision of air navigation services, such measures include, for example, redundancy, diversification and spatial separation of critical systems, the extensive storage of data on separate data carriers as well as the SAP backup computer centre.

6.2.4 Staff-related risks

The commitment and abilities of its staff are crucial for the DFS Group to maintain safety in German airspace and to ensure an efficient level of performance.

Economic regulation and technological developments mean that the company is facing significant changes. The Human Resources department develops measures that support management and staff in exploiting the opportunities offered by change.

An additional risk that cannot be underestimated stems from demographic change and increasing competition among companies for highly qualified staff and executives. This risk

takes on particular significance when one considers the approximately ten percent decline in the labour force participation rate in Germany forecast by 2030. The internal demographic characteristics also present a risk as regards a balanced age structure and the long-term maintenance of professional skills.

Human Resources has set up a strategic HR and executive development programme and HR marketing and recruiting measures targeted at maintaining human capital. As necessary, qualified professionals are recruited externally.

DFS has a comprehensive in-house health management programme to ensure that staff remain healthy and maintain their ability to perform.

6.2.5 Insured risks

The insurance cover of DFS encompasses common insurable risks of DFS and its subsidiaries. It particularly includes compensation for the loss or damage of material assets and the resulting interruption of operations minus the usually agreed deductible.

It should be kept in mind when assessing the insured risks that DFS mainly performs sovereign functions on behalf of the Federal Republic of Germany in keeping with Article 87d of the German Basic Law (*Grundgesetz*) in conjunction with Sections 31b and 31d of the German Aviation Act (LuftVG). As a consequence, the Federal Republic of Germany is liable for claims brought by third parties for damages in line with the principles of State liability. In the case of damage culpably caused by DFS, aviation liability insurance covers a limit of €767 million per instance of damage, thus releasing the Federal Republic of Germany from its liability to this amount. For non-sovereign tasks, statutory public liability insurance is covered. For contractually agreed activities, such as the apron management service or the provision of air traffic services abroad through subsidiaries, the respective public liability agreed to the named amount in the contract is covered. In addition, claims for damages by third parties from employer's liability risks are covered by insurance.

6.3 Overall assessment of the risk situation

The Board of Managing Directors currently discerns no risks, except for abstract terror and catastrophe scenarios, which individually, or as a group, would pose a threat to the going-concern status of the company.

7 Outlook

7.1 Development of the economic environment and the effects on air transport

Based on the forecasts of international organisations, the Federal Government assumes that the growth in the world economy will accelerate and as a result the German economy will continue to expand due to the dynamism of global trade.

The leading economic institutes and organisations as well as the Federal Government see economic growth in Germany as being positive across the board for 2018. In its Annual Economic Report 2018, the Federal Government expects economic growth of 2.4 percent for 2018. The leading economic institutes in Germany (including DIW, ifo, IWH and RWI) forecast growth between 2.1 percent and 2.65 percent for 2018. In the Autumn Projection 2017, a rise in gross domestic product of 1.9 percent is forecast for 2019, while growth of 1.3 percent is forecast for the following years until 2022.

The International Air Transport Association (IATA) forecasts continued strong growth in passenger numbers to around 4.3 billion worldwide for 2018 (2017: approx. 4.1 billion; 2016: approx. 3.8 billion). However, ticket prices will rise on average by three percent due to rising costs for fuel, wages and airport charges. In the coming year, industry-wide profits are expected to reach a record high of \$38.4 billion. Cargo volumes will also continue to rise. IATA anticipates 62.5 million tonnes of air cargo in 2018.

Continued positive growth in air traffic is expected due to the stable overall economic situation in Europe, and especially in Germany, as well as the continued low oil price. Based on the EUROCONTROL STATFOR baseline scenario, DFS forecasts the volume of service units in Germany to grow by roughly 2.6 percent in 2018 over 2017. For the Tower division, DFS expects a rise in service units of approximately 1.5 percent. These are significantly above the targets from the revised performance plan for the second reference period.

7.2 Future development

7.2.1 Regulated business

Preparation for the third reference period

The third reference period begins in 2020 (see 2.2.2 under *Second reference period*). In preparation, the European Commission will issue proposals for the legal framework for this period at the beginning of 2018. It is to be expected that these proposals will address deficits in the current regulation and contain several changes for the handling of the performance plan and system of charges. Targets for the upcoming reference period will probably be communicated at the end of 2018.

EASA

In December 2015, the European Commission proposed an amendment to Regulation (EC) No 216/2008 (EASA basic regulation). The amended basic regulation clarifies the competences of the Agency (including in the area of ATM) and contains the extension of competences of EASA relating to the drawing up of regulations to apply across Europe for drones / unmanned aircraft systems (UAS). The final approval of the European Parliament and the Council of Ministers and the subsequent entry into force is expected in mid-2018.

SES II+ package

In 2014, the European Parliament passed a draft of the package of regulations SES II+ on its first reading, which was an amended version of the Commission proposal. In December 2014, the Council agreed on a "general direction", but did not formally conclude the procedure because of foreign-policy differences between two of the contracting parties. All further work on the SES II+ package has been on hold since then. Currently, the further course of this initiative cannot be forecast.

iCAS programme

Following the successful launch of iCAS at the Karlsruhe control centre, DFS concluded a five-year contract with the vendor to ensure the continued performance of iCAS. This contract also covers a further extension of the system. It governs the functional further development and maintenance of the new air traffic control system iCAS Upper Airspace (phase I).

SESAR

In addition, DFS supports the European requirements for the modernisation of the air traffic management network through its participation in the SESAR project. Under the auspices of the SESAR Joint Undertaking (SJU), it develops, together with its partners, technologies and procedures that are fit for purpose (see section 1.6). DFS has been an active member of the SJU since June 2009, along with other leading organisations.

SESAR Deployment Manager

DFS aims to exert material influence on the SES initiative of the European Commission as part of its strategic orientation. To this end, DFS has been an active member of the SESAR Joint Undertaking since June 2009, along with other leading organisations. In numerous projects, it developed and updated the requirements for the air traffic management network as well as for the most suitable technologies and procedures.

In 2014, the SESAR development process moved to the long-term phase of technical and operational implementation and the setting up of air traffic management (ATM) procedures (deployment management). As part of the SESAR Deployment Alliance, DFS has been fulfilling the task awarded by the Commission in 2014 to plan, coordinate and implement a comprehensive modernisation of European airspace within the scope of the deployment management for the time period since 2014. This consortium is a cross-industry partnership

of four airlines, eleven air navigation service providers and 25 airport operators. The task is financed out of the European CEF funding programme (CEF – Connecting Europe Facility), where a total of roughly €2.5 billion is earmarked until the end of 2020 for deployment management. DFS is thus able to influence the introduction of new technologies and benefits from the considerable funding, as well as from the avoidance of incorrect cost allocation and flawed capital expenditures.

Project S-ATM Robusto (sectorless air traffic control in upper airspace)

With the S-ATM Robusto project, the implementation of the first step in sectorless air traffic control will begin at the Karlsruhe control centre in 2018.

Sectorless ATM (S-ATM) means that specific parts of airspace are no longer divided into sectors or sector families but viewed as a whole. Each air traffic controller is assigned a defined number of aircraft in this large airspace. These aircraft could be distributed anywhere in their area of responsibility. By establishing a sectorless airspace, aircraft no longer need to be transferred to other air traffic controllers at sector boundaries. Instead, they are handled by one air traffic controller while in this airspace.

The project aims to raise air traffic controller productivity in S-ATM airspace and establish an airspace with the highest level of air traffic controller productivity in Europe. It will also allow air traffic controllers to be deployed more flexibly.

7.2.2 Commercial business

The management of the Group plans further expansion in those commercial business areas directly connected to air navigation services when opportunities arise on the market. Marketing and consulting activities are being expanded worldwide. This expansion is being supported by the set-up of representative offices close to customers in the promising markets of Southeast Asia and China. The Board of Managing Directors therefore expects revenues to increase in the single-digit million euro range in 2018.

The revenues and costs of the commercial business will rise significantly compared with the year under review because of new contracts, the expansion of business fields and the start of operations in Edinburgh. The commercial business is expected to contribute positive earnings in the single-digit million euro range in 2018.

7.3 Results and financial position

7.3.1 Revenues and costs

As is common in this industry, expenses in the regulated business are primarily influenced by the economic regulation of unit rates, staff costs and occupational pensions. The Board of Managing Directors is counteracting these challenges by using collective bargaining measures and the targeted reduction of costs under the five-point programme. It focuses on boosting productivity, reacting to fluctuating demand with increased staff flexibility and limiting staff recruitment. Vacant positions are successively not being refilled and natural turnover is being used to reduce staff numbers. Airspace structures and procedures are being optimised and capital expenditure on recoverable, high-performance and harmonised ATM systems is being stepped up. Project and general costs are being reduced.

For the second reference period, the Board of Managing Directors is currently observing a stable development in air traffic within the planning assumptions.

The determination of the performance plan for air navigation services and the associated economic regulation of air navigation charges leads to the continued splitting of the traffic risk and revenue risk between airspace users and air navigation service providers in the second reference period. Due to the wide fluctuations in the traffic forecasts issued by the national supervisory authorities and the long period covered by the forecast period, these risks can only be estimated with a high degree of uncertainty.

The Board of Managing Directors also sees the potential for negative consequences from the incentive system (capacity) introduced on earnings. Due to the current asymmetry in the splitting of traffic risk and cost risk, air navigation service providers are being burdened with the consequences stemming from the changes in certain factors over which they have no control, such as shifts in traffic streams, deviations from traffic forecasts, weather conditions or strikes by air traffic services personnel in neighbouring countries. The Board of Managing Directors calls for national circumstances to be better taken into account in economic regulation in the future than has been the case so far.

7.3.2 Strengthening of the equity position by the Federal Republic of Germany

The Federal Republic of Germany is strengthening the equity position of DFS with a contribution of €601.9 million overall. It will pay the outstanding contributions to the registered capital of €112.5 million each year in 2018 and 2019. The Board of Managing Directors expects that the Federal Republic of Germany will strengthen the air transport industry over the long term, enabling DFS to react flexibly to the strict regulatory cost targets which involve lower air navigation charges.

7.3.3 Capital expenditure

Capital expenditure on air navigation systems to expand capacity and infrastructure, as well as on replacement investments, will be financed from cash flow or loans and amortised by matched depreciation/amortisation charges. The level of depreciation and amortisation in 2018 is expected to be at the same level as in 2017.

7.3.4 Liquidity

Currently, the financial strategy of DFS is primarily being influenced by two counteracting effects from events on the capital markets. Low interest rates on the capital markets are favouring the take-up of debt and ensuring low interest expenses. However, the low returns that can currently be earned on the market mean that the pension plan assets are not yielding substantial low-risk income. The planned growth in plan assets is slowing down.

7.3.5 General statement and earnings forecast

Overall, the Board of Managing Directors expects moderate but stable growth in air traffic in Germany. In 2018, revenues will remain at the level of 2017 due to the strictly regulated and therefore constant unit rates, despite the growth in traffic.

The Board of Managing Directors is therefore discussing the regulatory environment with all stakeholders and is reviewing legal measures against the determinations set out in the performance plans and the non-recognition of uncontrollable costs.

In 2018, the Board of Managing Directors expects the Group to record positive earnings at the level of the previous year, resulting primarily from catch-up effects and the five-point programme.

Langen, 21 March 2018

The Board of Managing Directors

Prof Klaus-Dieter Scheurle

Robert Schickling

Dr Michael Hann

DFS Deutsche Flugsicherung GmbH
Consolidated statement of comprehensive income
for the period 1 January 2017 to 31 December 2017

	Note	2017 €'000	2016 €'000
Revenues	5	1,103,553	1,169,748
Changes in inventory and other own work capitalised	6	27,799	3,020
Other operating income	7	59,399	46,560
Total operating revenues and income		1,190,751	1,219,328
Cost of materials and services	8	-13,083	-11,874
Employee expenses	9	-862,784	-838,504
Depreciation and amortisation	10	-116,260	-108,913
Other operating expenses	11	-152,827	-128,898
Earnings before interest and taxes (EBIT)		45,797	131,139
Financial income	12	107,641	95,564
Financial expenses	12	-131,361	-134,368
Financial result	12	-23,720	-38,804
Profit (loss) before income taxes		22,077	92,335
Income taxes	13	8,695	-5,748
Net income		30,772	86,587
Of which attributable to the Shareholder of the parent company		30,772	86,587

	Note	2017 €'000	2016 €'000
Net income		30,772	86,587
Of which attributable to the Shareholder of the parent company		30,772	86,587
Other comprehensive income			
Expenses and income without subsequent reclassification in the income statement recognised in equity			
Reclassification in the income statement			
Remeasurement of the net defined benefit liability from the defined benefit obligation = actuarial gains (+) and losses (-) of the ongoing business year	25	196,191	-556,044
Tax effects	25	0	0
Expenses and income without subsequent reclassification in the income statement recognised in equity			
Reclassification in the income statement			
Change in fair value of the available-for-sale financial assets	25	5,063	11,079
Measurements from foreign currency translation	25	-105	-919
Tax effects	25	0	0
Total other comprehensive income	25	201,149	-545,884
Of which attributable to the Shareholder of the parent company		201,149	-545,884
Total result		231,921	-459,297
Of which attributable to the Shareholder of the parent company		231,921	-459,297

DFS Deutsche Flugsicherung GmbH

Consolidated balance sheet as at 31 December 2017

	Note	31 Dec 2017	31 Dec 2016
		€'000	€'000
Assets			
Goodwill	14	80	80
Intangible assets	15	207,280	206,648
Property, plant and equipment	16	507,216	516,993
Investment property	17	722	752
Investments in associated companies	18	1,348	1,348
Financial assets	18	5,533	6,354
Derivative financial instruments	18	2,306	1,765
Other receivables and assets	21	61,821	52,336
Deferred tax assets	13	12,986	3,345
Non-current assets		799,292	789,621
Trade receivables	19	155,796	167,148
Future receivables from construction contracts	20	6,185	6,774
Other receivables and assets	21	37,201	30,304
Inventories	22	5,305	5,043
Securities	23	963,440	557,243
Liquid funds	24	276,921	387,004
Current tax assets	31	7,088	1,062
Current assets		1,451,936	1,154,578
Balance sheet total (assets)		2,251,228	1,944,199

DFS Deutsche Flugsicherung GmbH

Consolidated balance sheet as at 31 December 2017

	Note	31 Dec 2017	31 Dec 2016
		€'000	€'000
Equity and liabilities			
Subscribed capital	25	530,288	315,888
Capital reserve	25	74,296	74,296
Remeasurement reserves	25	-1,373,573	-1,574,722
Retained earnings	25	87,685	56,913
Equity		-681,304	-1,127,625
Provisions for pensions and similar obligations	26	2,183,795	2,313,274
Other provisions	27	192,526	139,348
Financial liabilities	28	232,454	357,614
Trade payables	29	758	593
Other liabilities	30	19,873	5,674
Income tax obligations	31	30,869	30,869
Non-current liabilities		2,660,275	2,847,372
Other provisions	27	109,546	85,733
Financial liabilities	28	34,072	8,864
Trade payables	29	36,623	30,721
Other liabilities	30	91,916	99,034
Income tax obligations	31	100	100
Current liabilities		272,257	224,452
Balance sheet total (equity and liabilities)		2,251,228	1,944,199

DFS Deutsche Flugsicherung GmbH
Consolidated statement of changes in equity
for the period 1 January 2017 to 31 December 2017

Note	Subscribed capital	Capital reserves	Revaluation reserves	Retained earnings	Other reserves	Total	Of which attributable to the Shareholder of the parent company
25	€'000	€'000	€'000	€'000	€'000	€'000	€'000
Correct at 1 Jan 2016	153,388	74,296	-1,028,838	-29,691	0	-830,845	-830,845
Capital increase	162,500	0	0	0	0	162,500	162,500
Company disposals	0	0		17	0	17	17
Payment of dividend to Shareholder	0	0	0	0	0	0	0
Operating result							
Net income	0	0	0	86,587	0	86,587	86,587
Other comprehensive income							
Remeasurement of the net defined benefit liability	0	0	-556,044	0	0	-556,044	-556,044
Change in the fair value of available-for-sale financial assets	0	0	11,079	0	0	11,079	11,079
Measurements from foreign currency translation	0	0	-919	0	0	-919	-919
Tax effects	0	0	0	0	0	0	0
Correct at 31 Dec 2016	315,888	74,296	-1,574,722	56,913	0	-1,127,625	-1,127,625
Capital increase	214,400	0	0	0	0	214,400	214,400
Company disposals	0	0		0	0	0	0
Payment of dividend to Shareholder	0	0	0	0	0	0	0
Operating result							
Net income	0	0	0	30,772	0	30,772	30,772
Other comprehensive income							
Remeasurement of the net defined benefit liability	0	0	196,191	0	0	196,191	196,191
Change in the fair value of available-for-sale financial assets	0	0	5,063	0	0	5,063	5,063
Measurements from foreign currency translation	0	0	-105	0	0	-105	-105
Tax effects	0	0	0	0	0	0	0
Correct at 31 Dec 2017	530,288	74,296	-1,373,573	87,685	0	-681,304	-681,304

DFS Deutsche Flugsicherung GmbH

Consolidated cash flow statement

for the period 1 January 2017 to 31 December 2017

Note	2017	2016
33	€'000	€'000
Net income	30,772	86,587
of which interest	-11,441	4,260
of which dividend received	603	296
of which deferred income taxes	945	8,297
of which income taxes paid (-)	-7,076	-4,208
Depreciation and amortisation on intangible assets and property plant and equipment	116,260	108,913
Gains (-) from the measurement of bonds	0	-689
Income (-) from asset disposals	-123	-99
Losses (+) from asset disposals	2,213	628
Other non-cash expenses (+)	0	15
Other non-cash expenses (+) / income (-) from remeasurement	201,149	-545,883
Decrease (+) in trade receivables	11,352	9,724
Decrease (+) / increase (-) in future receivables from construction contracts	588	-4,573
Increase (-) / decrease (+) in other receivables and assets	-29,197	54,341
Increase (-) / decrease (+) in inventories	-261	418
Increase (-) / decrease (+) in current tax assets	-6,027	4,082
Increase (-) in deferred tax assets	-9,641	-2,551
Decrease (-) / increase (+) in provisions for pensions and similar obligations	-129,479	596,882
Increase (+) in other provisions	76,991	12,151
Increase (+) in trade payables	6,067	7,184
Increase (+) in other liabilities	7,081	5,237
Decrease (-) from the QTE transaction	-407	-271
Cash inflow from operating activities	265,897	336,356
Payments (-) for investments in intangible assets and property, plant and equipment	-111,257	-83,754
Payments (-) for investments in financial assets	-540	-1,765
Proceeds (+) from disposal of intangible assets and property, plant and equipment	2,077	3,111
Proceeds (+) from disposals of financial assets	826	761
Equity measurement of stakes in associated companies	0	390
Cash outflow from investing activities	-108,894	-81,257
Principal payment (-) on financial debt	-87,500	-22,200
Taking on (+) financial debt	785	1,392
Payments (-) for finance leases	-15	-30
Amounts paid in by Shareholder	214,400	0
Financial result	11,521	923
Interest received	8,591	4,784
Interest paid	-8,671	-9,967
Cash inflow/outflow from financing activities	139,111	-25,098
Net change in cash and cash equivalents	296,114	230,001
Cash and cash equivalents at the beginning of the year	944,247	714,246
Cash and cash equivalents at the end of the year	1,240,361	944,247

Notes to the consolidated financial statements 2017

1 General basis

The DFS Group is an air navigation service provider (ANSP) that operates internationally. The ultimate parent company is DFS Deutsche Flugsicherung GmbH (DFS), which has its Headquarters in 63225 Langen, Am DFS-Campus 10, Germany. The company is registered on the Commercial Register (HRB 34977) at the Local Court in Offenbach am Main, Germany, as a limited liability company (GmbH). DFS is wholly owned by the Federal Republic of Germany, represented by the Federal Ministry of Transport and Digital Infrastructure (BMVI).

The main business of the DFS Group is defined by the tasks set out in Section 27c of the German Aviation Act (LuftVG). Under this act, it is entrusted with providing air navigation services (a sovereign task). The Group management report contains information on the business activities and the object of the Group (see sections 1.2 and 1.3 in the Group management report).

2 Application of accounting standards

The regulations:

Regulation (EC) No 1606/2002 of the European Parliament and of the Council of 19 July 2002 on the application of international accounting standards

Regulation (EC) No 550/2004 of the European Parliament and of the Council of 10 March 2004 on the provision of air navigation services in the Single European Sky (the service provision Regulation)

Regulation (EC) No 1794/2006 of the Commission of 6 December 2006 laying down a common charging scheme for air navigation services

Regulation (EU) No 1191/2010 of 16 December 2010 amending Regulation (EU) No 1794/2006 of the Commission on the development of a common charging scheme for air navigation services

Regulation (EU) No 390/2013 of the Commission of 3 May 2013 laying down a performance scheme for air navigation services and network functions

Regulation (EU) No 391/2013 of the Commission of 3 May 2013 laying down a common charging scheme for air navigation services

oblige the DFS Group to draw up its consolidated financial statements as at 31 December 2017 in line with International Financial Reporting Standards (IFRS). It applies the standards of the International Accounting Standards Board (IASB) and the interpretations of the International Financial Reporting Interpretations Committee (IFRIC) as recognised and endorsed by the European Union (EU).

These financial statements consider Regulation (EC) No 1606/2002, which is enacted in Section 315e of the German Commercial Code (HGB) by means of the Accounting Law Reform Act (BilReG) dated 4 December 2004.

These consolidated financial statements were prepared in accordance with the standards endorsed for use in the EU.

The business year of the Group corresponds to the calendar year (1 January to 31 December).

The Board of Managing Directors of DFS drew up the consolidated financial statements and approved them for submission to the Audit Committee of the Supervisory Board and the Supervisory Board on 21 March 2018. The Supervisory Board discussed the consolidated financial statements and the opinion of the Audit Committee and issued a recommendation to the Shareholder to approve the consolidated financial statements. The Shareholder may amend the group financial statements released by the Board of Managing Directors. The approved consolidated financial statements will be available via the electronic German Federal Gazette in accordance with Section 325(2a)(1) of the German Commercial Code (HGB) and on our website at: www.dfs.de.

3 Consolidation

3.1 Consolidation principles

On initial consolidation of Group companies, the DFS Group measures the acquired identifiable assets, liabilities, contingent liabilities and deferred taxes at fair value at the acquisition date for business combinations (acquisition method) and compares these to the acquisition costs (purchase price allocation). The non-acquired share of the fair values of assets and liabilities is accounted for as minority interest by the Group. Acquisition-related costs are expensed in the periods in which the costs are incurred.

After the purchase price allocation, the Group recognises the remaining difference between the purchase price and the net assets acquired as goodwill. If the value of the net assets acquired exceeds the purchase price, the difference is recognised directly in profit or loss. The DFS Group recognises the differences from acquired minority interests directly in equity after the transfer of control. The acquisition costs of foreign entities acquired are translated into euro at the respective exchange rate at the date of acquisition.

The DFS Group eliminates the revenues, income and expenses as well as the receivables and liabilities stemming from transactions between the consolidated entities against each other. In addition, it eliminates the interim results from intercompany deliveries of non-current assets and inventories.

3.2 Consolidation

DFS, as the ultimate parent company, presents the consolidated financial statements including all those investments where it holds a controlling interest, joint arrangements, associated companies and those investments where it holds a non-controlling interest.

The Group includes investments where it holds a controlling interest if it has existing rights that give it the current ability to direct the relevant activities of an investee. Relevant activities are activities that significantly affect the investee's returns. Within the meaning of IFRS 10, the DFS Group controls a subsidiary when it has exposure, or rights, to variable returns from its involvement with the investee and has the ability to use its power over the investee to affect the amount of these returns due to ability to direct the relevant activities. In the absence of any other restrictive contractual arrangements, control is generally based on the direct or indirect majority of voting rights of the Group. For structured entities, control is based on contractual arrangements and not on the majority of voting rights.

Joint arrangements exist when the DFS Group jointly controls activities with a third-party based on a contract. IFRS 11 differentiates between joint ventures and joint operations. Depending on the characteristics, the Group accounts for the activities of joint ventures by applying the equity method and of joint operations proportionately based on rights and obligations.

The DFS Group measures associated companies over which it exercises significant influence within the meaning of IAS 28 using the equity method. It increases or decreases the carrying amount of the investment each year to reflect the investor's share of the net assets. Significant influence is indicated when the DFS Group directly or indirectly holds between 20.00 percent and 50.00 percent of the voting rights in an investee. The assumption of influence can be reversed through a clear demonstration to the contrary.

Taken together, the investments where there is a non-controlling interest exert only an immaterial influence on total assets, revenues and net income from a Group perspective and are not material for the representation of the results and financial position of the DFS Group. The Group therefore does not include them in the consolidated financial statements. These companies are recognised at cost and disclosed under financial assets as investments at the Group.

Companies included in the consolidated financial statements of the DFS Group			
Acronym	Company	Registered office	Shareholding in %
DFS	DFS Deutsche Flugsicherung GmbH	Langen, Germany	Ultimate parent company
Consolidated companies (controlling interest)			
DFS International Business Services	DFS International Business Services GmbH	Langen, Germany	100.00
DFS Energy	DFS Energy GmbH	Langen, Germany	100.00
DFS Aviation Services	DFS Aviation Services GmbH	Langen, Germany	100.00
R. Eisenschmidt	R. Eisenschmidt GmbH	Egelsbach, Germany	100.00
Kaufbeuren ATM Training	Kaufbeuren ATM Training GmbH	Kaufbeuren, Germany	100.00
Air Navigation Solutions	Air Navigation Solutions Ltd.	London, United Kingdom	100.00
Associated companies			
FCS	FCS Flight Calibration Services GmbH	Braunschweig, Germany	55.00
Investments with a non-controlling interest			
GroupEAD	GroupEAD Europe S.L.	Madrid, Spain	36.00
BILSODA	BILSODA GmbH & Co. KG	Pullach, Germany	24.90
Investment through DFS International Business Services GmbH:			
ESSP SAS	European Satellite Services Provider Société par Actions Simplifiée	Toulouse, France	16.67
Investment through DFS Aviation Services GmbH:			
TATS	Tower Air Traffic Services S.L.	Madrid, Spain	50.00

The commercial business will be further expanded and bundled. In this regard, the DFS Board of Managing Directors decided to spin off the Aeronautical Solutions division and incorporate it into DFS Aviation Services GmbH. The changes to the articles of association concerning the company, the object of the company and the Board of Managing Directors were entered on the Commercial Register on 31 January 2017. The entry on the Commercial Register for the spin-off and the increase in capital were made on 9 October 2017. There was no impact on the consolidated financial statements from the transfer process.

Changes in scope of consolidation						
	As at 31 Dec 2016	Consolidation/ reconciliation	Additions	Disposals		As at 31 Dec 2017
Consolidated companies (controlling interest)	8	0	0	1		7
of which domestic	7	0	0	1		6
of which foreign	1	0	0	0		1
Associated companies – measurement using equity method	1	0	0	0		1
of which domestic	1	0	0	0		1
Investments (non-controlling) – measurement using cost method	4	0	0	0		4
of which domestic	1	0	0	0		1
of which foreign	3	0	0	0		3
Non-consolidated investments	1	0	0	1		0
of which foreign	1	0	0	1		0

The liquidation of the DFS benevolent fund (DFS U-Kasse) has been completed. The company was deleted from the Commercial Register B at the Local Court in Offenbach am Main on 29 March 2017.

GroupEAD held 20.00 percent (250 shares) in the joint venture GroupEAD Asia Pacific Limited Wellington, New Zealand, while Airways International Limited held 80.00 percent (1,000 shares). On 31 December 2016, Airways International Limited invoked the cessation clause and the joint venture terminated with the publication in the New Zealand companies register in May 2017.

3.3 Investments

Additional disclosures on investments (non-controlling)					
	FCS	GroupEAD	BILSODA	ESSP SAS	TATS
	€'000	€'000	€'000	€'000	€'000
Shareholding in %	55.00	36.00	24.90	16.67	50.00
Additional shareholders	SKYNAV S.A., Belgium, 25.00% AUSTRO CONTROL, Austria, 20.00%	Entidad Pública Empresarial Aeropuertos Españoles y Navegación Aérea, Spain, 36.00% FREQUENTIS AG, Austria, 28.00%	AD Grundstücks-gesellschaft mbH & Co. KG, Germany, 75.10%; BILSODA Beteiligungs GmbH, General partner, Germany, 0.00%	ANSPs from Spain, Italy, United Kingdom and France each hold 16.67%; and Portugal and Switzerland, 8.33% each	INDRA Sistemas S.A., Spain, 50.00%
Income from investments (previous year)	0 (390)	186 (46)	0 (0)	417 (250)	0 (0)
Current assets	2,417 ¹⁾	2,797 ¹⁾	308 ¹⁾	32,719 ¹⁾	1,003 ¹⁾
Non-current assets	6,144 ¹⁾	242 ¹⁾	6,989 ¹⁾	1,032 ¹⁾	--
Current liabilities	1,896 ¹⁾	1,007 ¹⁾	390 ¹⁾	20,216 ¹⁾	--
Non-current liabilities	3,057 ¹⁾	0 ¹⁾	4,077 ¹⁾	2,283 ¹⁾	--
Equity	3,608 ¹⁾	2,032 ¹⁾	2,830 ¹⁾	11,252 ¹⁾	1,003 ¹⁾
Net income	618 ¹⁾	279 ¹⁾	-89 ¹⁾	3,353 ¹⁾	--
Revenues	9,489 ¹⁾	6,709 ¹⁾	596 ¹⁾	62,353 ¹⁾	--
¹⁾ Values as at 31 December 2016					
Business year	1 Jan - 31 Dec	1 Jan - 31 Dec	1 Jan - 31 Dec	1 Jan - 31 Dec	1 Jan - 31 Dec
Accounting standards	HGB	Spanish Commercial Code	HGB	French Commercial Code	Spanish Commercial Code

3.3.1 FCS Flight Calibration Services GmbH

FCS carries out flight inspections of navigation and surveillance infrastructure, the validation of procedures in aviation as well as services and consulting. It also carries out preparatory work of all kinds for the conduct of flight inspections.

The registered capital of FCS amounts to €205 thousand (DM 400 thousand). Although DFS holds more than half of the shares (55.00%), individual provisions of the articles of association of FCS as well as the rules of internal procedure for the board prevent DFS from exercising control. It therefore assigns FCS to associated companies and measures the companies using the equity method.

FCS has been granted an intercompany credit line of €1.50 million by DFS to cover its liquidity needs as part of a cash pool agreement. This was not taken up in the business year. In addition, DFS International Business Services granted FCS four loans totalling €12.30 million to finance aeroplanes and inspection systems.

FCS operates an early warning system for risks, which allows possible and identified risks to be discussed regularly and suitable countermeasures to be taken. There are no risks to the going-concern status.

3.3.2 GroupEAD Europe S.L.

GroupEAD operates and develops a European aeronautical database for aeronautical information services. DFS holds a stake of 36.00 percent from its paid-in capital of €360 thousand in GroupEAD. Agreements at the shareholder meeting should be confirmed by a majority of the valid votes. DFS, therefore, cannot exercise sole control of GroupEAD. As the company is immaterial for the results and financial position of the DFS Group, the Group measures it at cost and discloses it under financial assets as an investment. There are no risks to the going-concern status.

3.3.3 BILSODA GmbH & Co. KG

BILSODA erects, rents, operates and administers a parking garage in Bremen. It is used by Airbus Operations GmbH and DFS. With a partnership contribution of €2 thousand, DFS holds a stake of 24.90 percent in BILSODA. In addition, it financed its share of the construction costs of the parking garage with additional contributions of €1.99 million. The distribution of votes at the shareholder meeting and the individual agreements in the articles of association prevent DFS from exercising control. The investment does not have a material impact on the results and financial position of the DFS Group. The Group recognises BILSODA at cost as an investment under financial assets.

3.3.4 European Satellite Services Provider Société par Actions Simplifiée

ESSP SAS operates and develops the European satellite-based augmentation system EGNOS (European Geostationary Navigation Overlay Services) to improve the positional accuracy of the US Global Positioning System (GPS). With a capital contribution of €167 thousand, DFS International Business Services holds a stake of 16.67 percent in ESSP SAS. There are no risks to the going-concern status. ESSP SAS has no material impact on the results and financial position of the DFS Group. The Group measures the company at cost and discloses it under financial assets as an investment.

3.3.5 Tower Air Traffic Services S.L.

Since 2011, DFS Aviation Services has had a stake of 50.00 percent in the joint venture Tower Air Traffic Services with a capital contribution of €0.50 million. The primary goal is the participation in public tenders for the provision of aerodrome control services in Spain. The company did not win any public tenders for aerodrome control services in Spain and has no business activities at the moment. The investment does not have a material impact on the results and financial position of the DFS Group. The Group recognises Tower Air Traffic Services at cost and discloses it under financial assets as an investment.

4 Accounting policies

The DFS Group carries out accounting and measurement using uniform standards. It applies the historical cost principle, unless IFRS prescribes different measurement principles. The associated disclosure is made with the respective accounting policy.

4.1 New and amended International Financial Reporting Standards and Interpretations

4.1.1 Mandatory standards and interpretations

The DFS Group uses the following new and revised standards that are mandatory for business years beginning on or after 1 January 2017. The endorsement by the European Union has been made with the publication of the standard in the Official Journal of the European Union.

Standard	Title	Publication IASB	EU endorsement	Effective date
Amendments to existing standards and interpretations				
IAS 12	Income taxes (Recognition of deferred tax assets for unrealised losses)	19 Jan 2016	6 Nov 2017	1 Jan 2017
IAS 7	Statement of cash flows (Disclosure initiative)	29 Jan 2016	6 Nov 2017	1 Jan 2017
Catalogue	Improvements to International Financial Reporting Standards (2014 to 2016)	8 Dec 2016	7 Feb 2018	1 Jan 2017 / 1 Jan 2018

On 6 November 2017, the European Union endorsed the amendments to IAS 12 (Income taxes) with the title "Recognition of deferred tax assets for unrealised losses". The amendments involved clarifications on the recognition of deferred tax assets for unrealised losses that are related to a debt instrument measured at fair value. The amendments are mandatory for the first time for business years beginning on or after 1 January 2017. Earlier application is permitted. The DFS Group does not currently hold assets that give rise to deferred tax assets for unrealised losses from measurement at fair value. Therefore, there was no impact on the consolidated financial statements.

Since 6 November 2017, the amendments to IAS 7 (Statement of cash flows) with the title 'Disclosure initiative' have applied under European law. The amendments improve the disclosures on the changes in liabilities arising from a company's financing activities, including changes from cash flows and non-cash changes. The amended standard is mandatory for the first time for business years beginning on or after 1 January 2017. Earlier application is permitted. There was no impact on the DFS consolidated financial statements.

On 7 February 2018, the European Union endorsed the annual improvements to IFRS for the cycle 2014-2016. Within the scope of this regular process, the EU made non-urgent corrections and clarifications, and eliminated inconsistencies. This impacted particularly the standards IAS 28 (Investment in associates and joint ventures), IFRS 1 (First-time adoption of international financial reporting standards) and IFRS 12 (Disclosure of interests in other entities). The amendments are mandatory for the first time for business years beginning on or after 1 January 2017 for IFRS 12 and 1 January 2018 for IAS 28 and IFRS 1. Earlier application is permitted. There was no impact on the consolidated financial statements as the amendments only involve small adaptations.

4.1.2 Voluntary standards and interpretations

The IASB has published the following revised or new standards and interpretations. The standards have already been incorporated into European law as part of the endorsement procedure. They become effective from the point in time given and early application is permitted.

The Group is currently examining the impact of the new and amended standards on the Group's results and financial position. The standards will be applied when they become effective and early application will not be availed of.

Standard	Title	Publication IASB	EU endorsement	Effective date
New standards and interpretations				
IFRS 15	Revenue from contracts with customers	28 May 2014	22 Sep 2016	1 Jan 2018
IFRS 15	Including amendments to revenues from contracts with customers (postponement of date of first application)	11 Sep 2015	22 Sep 2016	1 Jan 2018
IFRS 9	Financial instruments	24 Jul 2014	22 Nov 2016	1 Jan 2018
IFRS 16	Leases	13 Jan 2016	31 Oct 2017	1 Jan 2019
Amendments to existing standards and interpretations				
IFRS 15	Revenue from contracts with customers (Clarifications)	12 Apr 2016	31 Oct 2017	1 Jan 2018
IFRS 4	Insurance contracts (applying IFRS 9 with IFRS 4)	12 Sep 2016	3 Nov 2017	1 Jan 2018

On 22 September 2016, the EU adopted the new standard IFRS 15 (Revenue from contracts with customers) into EU law, including the changes to the date of first application. In addition, on 31 October 2017, the EU endorsed further amendments/clarifications on identifying performance obligations and the extent they are separately identifiable within the context of a contract, on determining the difference between principal and agent as well as on revenues from licences. IFRS 15 governs the recognition of revenue as regards certainty, amount and timing (point in time / period of time). The standard provides a principles-based five-step model. The customer contract and the distinct performance obligations contained therein have to be identified. Subsequently, the transaction price has to be determined. Afterwards, the price is allocated to the individual performance obligations. Then, revenue is recognised for the allocated proportionate transaction price. The new standard also requires comprehensive disclosures. IFRS 15 supersedes IAS 11 (Construction contracts) and IAS 18 (Revenue) and their interpretations. The standard and amendments are mandatory for the first time for business years beginning on or after 1 January 2018. On first application, it has to be applied retrospectively, with certain practical expedients being available for the transition. Earlier application is permitted. The DFS Group will apply IFRS 15 for the first time as at 1 January 2018 on the basis of the modified retrospective method so that any conversion effects are recognised cumulatively in retained earnings. The Group does not currently expect a significant impact on the consolidated financial statements, however. In the regulated business, revenues are determined by means of statutory notifications of charges (*Gebührenbescheide*), meaning that revenue recognition is laid down by law. In the commercial business, the recognition of revenue might be spread over time in individual cases. To determine when control is passed under IFRS 15, the issue is not just the timing of the transfer of the significant risks and rewards but the time from when the customer has the ability

to direct the use of the asset. The majority of the construction contracts currently accounted for using the percentage-of-completion method in the commercial business meet the requirements for the revenue to be recognised over time. In addition to the changes in the balance sheet through the recording of assets and liabilities from contracts, additional qualitative and quantitative disclosures have to be made.

The new standard IFRS 9 (Financial instruments) has applied since 22 November 2016. It contains comprehensive changes to the recognition, measurement and presentation of financial instruments and the related disclosures. The classification and measurement of financial assets are based on the business model of the entity and on the characteristics of the contractual terms of the cash flows. The basis of the new impairment model is the expected credit losses from the time of initial recognition and before the default event. The rules on hedge accounting provide for a more appropriate reflection of risk management activities for managing non-financial risks. The new regulations replace IAS 39 (Financial instruments: recognition and measurement). IFRS 9 is mandatory for the first time for business years beginning on or after 1 January 2018. On first application, it has to be applied retrospectively, with transitional relief being available. Earlier application is permitted. The Group will not apply the standard earlier nor adjust prior-year figures under the transitional relief. The DFS Group sees itself confronted with significant uncertainties when forecasting as the current low-interest-rate policy prevailing on the capital markets requires the use of new financial instruments. In addition, loans and credit lines are currently being reduced and the financing of occupational pensions is being changed. The Group does not expect any changes relating to the financial instruments that have been measured at amortised cost. To implement the new rules on impairment, the Group intends to use the simplified approach under IFRS 9 and to recognise lifetime expected credit losses. Impairments are therefore recognised earlier.

On 31 October 2017, the EU endorsed the changes to IFRS 16 (Employee benefits) into European law. IFRS 16 introduces a single model for leases for lessees. This encompasses a right-of-use asset and a lease liability at the present value of the lease payments under lease contracts with a term of more than 12 months. Recognition exemptions are available for short-term leases and leases where the underlying asset has a low value. Lessor accounting remains largely unchanged. IFRS 16 supersedes IAS 17 (Leases) and its interpretations. The standard is mandatory for the first time for business years beginning on or after 1 January 2019. On first application, it has to be applied retrospectively, with certain practical expedients being available for the transition. Earlier application is permitted under certain conditions. The DFS Group, however, does not plan to avail itself of this option. The new standard will lead to a rise in non-current assets in the Group from the recognition of right-of-use assets. The financial indebtedness will rise as a result of the presentation of the corresponding leasing obligations. The DFS Group applies the exemption option for company vehicles due to the short lease term and does not capitalise them. The former straight-line expenses under other operating leases are replaced with the depreciation of the right-of-use assets and interest expenses on the liabilities. Cash payments for the principal portion of the lease liability are classified as cash outflows from financing activities in the cash flow statement.

On 3 November 2017, the EU endorsed the amendments to IFRS 4 (Insurance contracts) into European law. The amendments offer, under certain conditions, ways to address the accounting consequences from the different effective dates of IFRS 9 and IFRS 17. Insurance entities may continue to use IAS 39 instead of IFRS 9 for business years beginning before 1 January 2021. In addition, there is the option to reclassify, from profit or loss to other comprehensive income, the impact of the changes in market variables on designated financial assets. The amended standard is mandatory for the first time for business years beginning on or after 01 January 2018. Earlier application is permitted. The DFS Group, however, does not plan to avail itself of this option. The Group does not issue any insurance contracts that fall within the scope of IFRS 4. Therefore, there is no impact on the consolidated financial statements.

4.1.3 Published, though not yet mandatory, standards and interpretations

The IASB has issued the following standards which are not yet mandatory. Before these can be applied, they have to be recognised and endorsed by the EU. They become effective from the point of time given.

The DFS Group is currently examining the possible impact on the consolidated financial statements. It does not avail itself of the right of early application of new or amended standards.

Standard	Title	Publication IASB	Expected effective date	Relevant to DFS
New standards and interpretations				
IFRS 14	Regulatory deferral accounts	30 Jan 2014	Not endorsed by EU	Yes
IFRS 17	Insurance contracts	18 May 2017	1 Jan 2021	No
IFRIC 23	Uncertainty over income tax treatments	7 Jun 2017	1 Jan 2019	Yes
Amendments to existing standards and interpretations				
IFRS 10 / IAS 28	Consolidated financial statements / investments in associates and joint ventures (Sale or contribution of assets between an investor and its associate or joint venture)	11 Sep 2014	Deferred indefinitely	Yes
IFRS 2	Share-based payment (Classification and measurement of share-based transactions)	20 Jun 2016	1 Jan 2018	No
IFRIC 22	Foreign currency transactions and advance consideration	8 Dec 2016	1 Jan 2018	Yes
IAS 40	Investment property (Transfers of investment property)	8 Dec 2016	1 Jan 2018	Yes
IFRS 9	Financial instruments (Prepayment features with negative compensation)	12 Oct 2017	1 Jan 2019	No
IAS 28	Investments in associates and joint ventures (Long-term interests in associates and joint ventures)	12 Oct 2017	1 Jan 2019	Yes
Catalogue	Improvements to International Financial Reporting Standards (2015 to 2017)	12 Dec 2017	1 Jan 2019	Yes

4.2 Use of assumptions and discretionary decisions

At the balance sheet date, the DFS Group makes annual forecasts of future developments for accounting and measurement purposes. The comprehensive set of assumptions, estimates and judgements made may have a considerable influence on the representation of the results and financial position of the DFS Group. They are based on historical experience and expectations about the occurrence of future events which appear commercially reasonable in the given circumstances. The Group continuously verifies its estimates and prognoses. If external conditions develop differently than expected, the actual amounts may vary from the estimates. Any variances from the actual circumstances are recognised in profit and loss when they occur. The key assumptions concerning the future and other key sources of estimation uncertainty at the balance sheet date which have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next business year are described below.

4.2.1 International Financial Reporting Standards and Interpretations

Revisions to accounting policies resulting from new and revised standards and interpretations are applied retrospectively, unless otherwise regulated. The prior-year statement of comprehensive income and the opening balance sheet for the prior-year period are adjusted as if the new accounting policies had always applied.

4.2.2 Consolidation of affiliated companies and investments

The DFS Group includes all companies over which it can exercise control within the meaning of IFRS 10 in its consolidated financial statements. In the absence of any other restrictive contractual arrangements, a majority of voting rights results in control as a rule. For business combinations, the Group measures the acquired identifiable assets, liabilities and contingent liabilities at fair value at the acquisition date. After the purchase price allocation, the remaining difference between the purchase price and the newly measured proportionate net assets is recognised as goodwill.

Associated companies where the Group exercises significant influence within the meaning of IAS 28 are measured using the equity method. Significant influence is indicated when the DFS Group directly or indirectly holds 20.00 percent or more of the voting rights in an investee. The assumption of influence can be reversed through a clear demonstration to the contrary.

The Group classifies joint arrangements within the meaning of IFRS 11 as either joint ventures or joint operations. Depending on the characteristics, it accounts for the activities of joint ventures by applying the equity method, and accounts for joint operations proportionately, based on its rights and obligations.

Taken together, the investments with a non-controlling interest are not material for the results and financial position of the DFS Group based on total assets, sales and net income when viewed from a Group perspective. The Group therefore does not include them in the consolidated financial statements. These companies are recognised at cost and disclosed under financial assets as investments at the Group. The DFS Group has set a materiality threshold of 5.00 percent for judgements on this issue.

4.2.3 Useful lives of property, plant and equipment

The DFS Group estimates the useful lives of property, plant and equipment based on their probable usability. As an orientation, it uses the official tax depreciation table (*AfA-Tabelle*) for general purpose assets (see letter from the German Federal Ministry of Finance (BMF) dated 15 December 2000 in the Federal Tax Gazette (*Bundessteuerblatt*) I 2000, p. 1,532). Adjustments are made, as necessary, based on historical experience.

4.2.4 Impairment of internally generated intangible assets

Impairment tests are carried out on internally generated intangible assets to determine the present value of expected future cash flows if there are objective indications of impairment. The Group evaluates current requirements due to changing market conditions as well as the progress of new intangible assets that are already in the development process.

4.2.5 Impairment of financial assets

Impairment tests are carried out on financial assets to determine the present value of expected future cash flows if there are objective indications of impairment. The Group evaluates, in addition to other factors, the timing and extent of variances from cost, interest and exchange rates, the financial situation, the short-term business prospects as well as the general economic situation. If there is doubt about whether financial assets carried under the category "Held-to-maturity" will be settled, the DFS Group evaluates the need to impair the receivable using the estimated probability of default. When there are doubtful trade receivables, the Group evaluates the creditworthiness of customers and determines the allowance for doubtful accounts required based on probable default risks from information on insolvencies.

4.2.6 Long-term service contracts

The DFS Group recognises revenues from long-term service contracts using the percentage-of-completion method. To determine the percentage of completion and thus the progress of performance, estimates are required of the material influencing factors such as costs incurred, contract income and contract risks. The expert departments responsible constantly review all the estimates and make any necessary adjustments.

4.2.7 Pensions and similar obligations

The measurement of pensions and similar obligations is based on assumptions set out at the beginning of the business year. The discount rate at the balance sheet date is based on the market yield on high-quality corporate bonds with an average rating of AA using the standard procedure. The DFS Group uses bonds which, like the pension obligation, are measured in euro. The term of the corporate bonds corresponds to the term of the obligation. The interest rate for the expected return on plan assets corresponds to the discount rate. The percentage rates for the salary trend and the projected increase in benefits are based on past experience. Biometric data serve as the basis for the estimates of average life expectancy (mortality tables taken from Heubeck-Richttafeln 2005 G). Any change to these assumptions has an impact on the present value of the pension obligations. The Group recognises changes in value (particularly actuarial gains and losses) directly in equity as a remeasurement of defined benefit obligations under other comprehensive income.

4.2.8 Other provisions

The measurement of other provisions requires judgements on estimated costs, expected cash flows and their maturities (see Note 4.5.16). The provisions relate to contracts, collective agreements, legal provisions or other obligations. They are recognised based on financial and actuarial calculations or historical experience using prudent commercial judgement. The premises underlying other provisions are reviewed annually and adjusted to current circumstances as necessary.

The discount rates for non-current provisions were adjusted to the development of interest rates in the business year.

4.3 Currency translation

The DFS Group presents its consolidated financial statements in the reporting currency euro. Unless otherwise stated, all amounts are given in thousands of euro (€'000) and rounded using the common method.

The Group translates foreign currency transactions into the functional currency of the individual unit using the rate prevailing at the date of the transaction. After initial recognition, foreign currency fluctuations for monetary items (liquid funds, receivables, liabilities) are recorded in profit or loss and non-monetary items (intangible assets; property, plant and equipment; inventories) are carried at historical cost using the exchange rate at the date of the transaction.

The DFS Group translates the financial statements of foreign subsidiaries (as well as the hidden reserves and obligations identified in purchase price allocations) using the concept of a functional currency under IAS 21. The current rate method (mean exchange rate at the balance sheet date) is used to translate assets, liabilities, contingent liabilities and other financial obligations. The translation of items for the income statement, however, uses a rate that approximates the exchange rate at the date of the transaction (average exchange rate). The exchange difference from the translation of equity and the differences from the translation into the presentation currency are recognised directly in other comprehensive income by the DFS Group.

Currencies	ISO code	Standard conversion Mean exchange rate 31 Dec 2017	EMU conversion Asked price 31 Dec 2017	Standard conversion Mean exchange rate 31 Dec 2016	EMU conversion Asked price 31 Dec 2016
US dollar	USD (\$)	1.19930	1.20230	1.05410	1.05710
Pound sterling	GBP (£)	0.88723	0.88923	0.85618	0.85818
Swiss franc	CHF	1.17020	1.17220	1.07390	1.07590

4.4 Items in the statement of comprehensive income

4.4.1 Income and expense recognition

Revenues and other operating income are recognised if:

- the provision of the service or the sale of goods involves the transfer of the material risks and rewards to the customer,
 - it is probable that future economic benefits will be generated from the transaction,
 - there is no right of disposition nor effective control;
- and
- the level of revenues and the costs to sell incurred and expected can be quantified reliably.

Operating expenses are recognised in the income statement when the service is used or at the time the expenses are incurred.

The DFS Group accounts for revenues and expenses from long-term service contracts using the percentage-of-completion method. Revenues are recognised based on the stage of completion. The stage of completion results from the relationship between the contract costs incurred up to the balance sheet date and planned contract costs to this date. If the execution of the service contract requires a significant period of time, contract costs may also include direct borrowing costs. Variations in contract work, claims and incentive payments are included to the extent that they have been agreed with the customer. The contract costs are expensed using the matching principle. If the total contract costs exceed the total contract revenue, the expected loss is expensed immediately. If the results of a service contract cannot be estimated reliably, the probable revenues are recorded at the value of the costs incurred. Revenues from long-term service contracts accounted for using the percentage-of-completion method are reported by the Group under "Future receivables from construction contracts" in the balance sheet after deducting any payments received.

Interest income and expenses are recorded in accordance with the matching principle.

4.4.2 Impairments

Assets are reviewed at every balance sheet date to determine if there are indications of impairment under IAS 36. This involves comparing the carrying amount with the recoverable amount of the asset.

The carrying amount is the amount at which an asset is recognised after deducting any accumulated amortisation/depreciation and accumulated impairment losses thereon. The recoverable amount is the higher of the net realisable value and the value in use. The net realisable value is equal to the fair value less costs to sell. Value in use is the present value of the future cash flows expected to be derived from the continuing use of an asset and its disposal at the end of its useful life calculated using the discounted cash flow method. The Group calculates the present value with an interest rate before tax that reflects market conditions, calculated using the estimated zero-coupon curves of the German Bundesbank (the Svensson method is used). No risk premium in accordance with IAS 36.55(b) was used, as the assets are not exposed to any special risks.

If the recoverable amount of an asset is less than the carrying amount, an impairment is made to the recoverable amount. If a recoverable amount cannot be determined for the individual asset, then it is determined for the smallest cash generating unit to which the relevant asset can be allocated. Impairment losses are recognised directly in profit or loss in other operating expenses.

If, at a later date, the reasons for impairments made in previous years no longer apply, either in full or in part, the impairment loss is reversed accordingly. The reversal is limited to the carrying amount which would have applied if the impairments from the past were excluded and it is recognised in the income statement. A reversal of impaired goodwill is not permitted.

4.5 Items in the balance sheet

4.5.1 Goodwill

The DFS Group recognises goodwill from business combinations in accordance with IFRS 3 as an asset at cost at the acquisition date. Cost is the difference between the purchase price for the shares and the proportionate net assets acquired. The net assets are the difference between the fair values of the identifiable assets acquired and the liabilities assumed as well as the contingent liabilities. Acquisition-related costs are expensed.

There is no scheduled amortisation for goodwill. Goodwill is reviewed at every balance sheet date to determine if there are indications of impairment. Impairment testing involves comparing the carrying amount with the recoverable amount of the asset. The tests are conducted at the level of the cash generating unit. The recoverable amount is determined using recognised discounted cash flow methods. If the recoverable amount is lower than the carrying amount, an impairment loss is recognised down to the recoverable amount in accordance with IAS 36. Once goodwill has been impaired, it is not permitted to reverse the impairment in subsequent periods.

4.5.2 Intangible assets

Assets acquired for valuable consideration are capitalised at cost when it is probable that the asset will generate future economic benefits for the company and the costs can be measured reliably.

Intangible assets that arose from own development activities are capitalised at cost. This presupposes that future economic benefits will be generated from the products. Production costs comprise all direct costs and an appropriate share of development-related overhead. Borrowing costs are capitalised as part of production costs in accordance with the requirements of IAS 23.

Prepayments are measured at cost. The prepayments are allocated to the respective intangible assets at the time of commissioning and written off over their useful life.

Intangible assets have a limited useful life. They are written off on a straight-line basis from the beginning of use as follows:

Intangible assets	Useful life
Concessions, industrial and similar property rights and assets as well as licences in such rights and assets	3 to 8 years
Internally generated intangible assets	8 years
Prepayments	Only after commissioning

Research expenses and associated government grants are recognised in profit or loss. Grants from airports or the Paul Ehrlich Institute are deducted from cost. EU grant funding from the Connecting Europe Facility (CEF) programme is recognised as accruals and recorded in profit or loss over the useful lives of the underlying property, plant and equipment.

4.5.3 Property, plant and equipment

Tangible assets acquired for valuable consideration are capitalised at cost when it is probable that the asset will generate future economic benefits for the company and the costs can be measured reliably.

Costs include the purchase price as well as all directly attributable costs required to bring the asset to the site and get it into the working condition as intended by management.

The DFS Group divides property, plant and equipment (in particular buildings) into the material economic components and reports them separately. Costs for the replacement of components and general overhaul are capitalised separately.

Production costs for internally generated property, plant and equipment comprise direct production costs (prime costs), an appropriate share of manufacturing overhead as well as the borrowing costs that are directly attributable up to the time of completion in accordance with IAS 23.

Government grants are deducted from the carrying amount of the corresponding asset. EU grants from the CEF programme are recognised as accruals and recorded in profit or loss over the useful lives of the underlying property, plant and equipment.

All assets (except for land) have a limited useful life and are written off on a straight-line basis from the beginning of use as follows:

Property, plant and equipment	Useful life
Building – Structure	40 years
Building – Façade	25 to 30 years
Building – Interior finishing	25 years
Building – Heating, ventilation, water	15 years
Building – Electronics	15 years
Outside facilities	5 to 19 years
Technical equipment	3 to 20 years
Operating and office equipment	3 to 20 years

Costs for repairs and ongoing maintenance of property, plant and equipment that have not led to an extension or material improvement are recognised under other operating expenses in the income statement.

When property, plant and equipment are sold, decommissioned or scrapped, any gains or losses from the difference between the net disposal proceeds and the amortised cost are recognised in other operating income or expenses.

4.5.4 Investments accounted for using the equity method

The DFS Group recognises associated companies at cost using the equity method at the acquisition date. In subsequent periods, the carrying amount is adjusted to account for the associated changes in equity. If there are indications for an impairment of investments, the lower recoverable amount is used for the carrying amount as required by the regulations of IAS 36.

4.5.5 Leases

The DFS Group concludes rental, tenancy and lease contracts with limited or unlimited terms to maintain flexibility as regards liquidity. It examines the contracts in accordance with IAS 17 to establish whether they are finance leases that have to be capitalised or operating leases to be expensed.

A lease is considered a finance lease when the lessor transfers all the material risks and rewards from ownership of an asset to the lessee. If these conditions are not met the Group classifies the lease as an operating lease.

For finance leases, the Group capitalises the lower of the present value of the minimum lease payments or the fair value of the leased asset. The payment obligations resulting from future lease instalments are recognised as a financial liability at the corresponding value of the leased asset. The minimum lease payments are split between a principal component and an interest component, with the interest being calculated using the effective interest rate method. The Group depreciates the leased asset over the shorter of the estimated useful life or the term of the lease.

The lease payments under operating leases are expensed over the term of the lease arrangement on a straight-line basis.

4.5.6 Investment property

The DFS Group classifies property as investment property if it is exclusively held either for rental income or capital gains and is not used operationally. The amortised cost is used for measurement. The buildings are depreciated using the straight-line method.

4.5.7 Financial instruments – Financial assets

Financial instruments relate to all contractual claims and obligations that directly or indirectly lead to an exchange of cash. Such an instrument is a contract which results in a financial asset for one party and either a financial liability or an equity instrument for the other party.

Financial assets are classified as "At fair value through profit or loss", "Held-to-maturity", "Loans and receivables" or "Available-for-sale" (see Note 34).

- The category "At fair value through profit and loss" comprises financial assets that are held for trading. Financial assets are assigned to this category if they were acquired with the intention to sell in the short term. Derivatives also belong to this category unless they qualify as hedging instruments. The DFS Group exclusively employs effective derivatives to hedge existing and future interest rate and currency risks under a hedging policy defined by the Board of Managing Directors and monitored by the Treasury department. While interest rate swaps are used to manage interest risk, cross-currency interest rate swaps hedge both interest rate risk and currency risk from financing in foreign currencies. Initial recognition as at the time of settlement and subsequent measurement occur at fair value. Financial instruments are deemed current if their realisation is expected within 12 months. Otherwise, they are disclosed as non-current. Derivative financial instruments with positive fair values are reported as receivables; those with negative fair values are reported as liabilities. All derivative financial instruments were accounted for without the creation of designated hedging relationships. The changes in the fair value between the reporting dates are recognised in profit or loss in the financial result.
- The category "Held-to-maturity" contains non-derivative financial assets with fixed or determinable payments, and a fixed term. The company must have the intention and ability to hold the financial instruments until maturity. Initial recognition occurs at fair value as at the time of settlement (plus direct transaction costs). Receivables denominated in a foreign currency are translated using the rate at the reporting date and recognised in the income statement. Subsequently, financial instruments are carried at amortised cost using the effective interest method. If there are doubts about the collectibility of receivables, they are written down to the lower recoverable amount based on the estimated probability of default. If the amount of the write-down declines in the following periods, the required reversals are made through the income statement. Interest income is considered in the financial result.
- The category "Loans and receivables" consists of financial assets with fixed or determinable terms of payment which are not traded on an active market. The assets are broken down into non-current and current remaining terms. Initial recognition occurs at fair value as at the time of settlement (plus direct transaction costs). Receivables denominated in a foreign currency are measured at the balance sheet date and recognised in the income statement. Subsequent measurement is at amortised cost using the effective interest rate method for interest-bearing and non-interest-bearing loans and receivables. If there are doubts about the collectibility of receivables, they are written down to the lower recoverable amount based on the estimated probability of default and the impairment loss is recognised. If the amount of

the write-down declines in the following periods, the required reversals are made through the income statement. Interest income is reported in the financial result.

- The category "Available-for-sale" includes all other financial assets which cannot be allocated to any other category (such as financial assets or securities). Initial recognition occurs at fair value at the time of settlement (plus direct transaction costs). Subsequent measurement of this category occurs at fair value to the extent this can be reliably determined at the balance sheet date. Unrealised gains and losses from changes in fair value between the reporting dates are recognised directly in equity in other reserves. Upon the sale of financial assets or a permanent impairment of the market value below the carrying amount, other reserves are reversed and the cumulative gains and losses are recognised in profit or loss.

Financial assets are derecognised when the contractual rights to payments from the financial assets no longer exist or all risks and rewards have been transferred.

4.5.8 Fair value

The fair value of financial instruments is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (exit price). The fair value is measured based on the assumptions that knowledgeable market participants who are independent of each other and who are willing and able to enter into a transaction would make while acting in their economic best interest. Fair value is a market-based measurement, not an entity-specific measurement.

The fair value measurement assumes that the transaction is made in the principal market for the asset or liability. In the absence of such a market, the most advantageous market is to be used. This is the market that would maximise the amount that would be received to sell an asset or minimise the amount that would be paid to transfer a liability, taking into consideration transport and transaction costs. However, fair value measurements are not adjusted for transaction costs.

The DFS Group uses valuation techniques to determine fair value that are appropriate under the given circumstances and for which sufficient data are available. The techniques maximise the use of relevant observable inputs and minimise the use of unobservable inputs.

Inputs

Level 1 Directly observable inputs

Observable (unadjusted) quoted prices in accessible active markets for identical assets or liabilities.

Level 2 Indirectly observable inputs

Inputs that are observable for assets or liabilities either directly or indirectly.

- a) Quoted prices for similar assets or liabilities in active markets.
- b) Quoted prices for identical or similar assets or liabilities in markets that are not active.
- c) Inputs other than quoted market prices that are observable.
- d) Market-corroborated inputs (values derived from market data using statistical methods).

Level 3 Unobservable inputs

Entity's own assumptions on the behaviour of a typical market participant.

Valuation techniques

Market approach

This approach derives market multiples from a set of identical or comparable assets (matrix pricing).

Cost approach

This approach is based on the amount required to replace the service capacity of an asset (the current replacement cost).

Income approach

This method discounts future cash flows to a current amount (present value techniques, option pricing models, residual income method).

The DFS Group undertakes reclassifications within the hierarchy at the end of the business year in which the changes took place.

Further information on the determination of the fair value can be found in Notes 17 and 34.

4.5.9 Trade receivables

Trade receivables are carried at amortised cost. Due to the predominately short-term nature of trade receivables, the carrying amounts at the balance sheet date do not differ significantly from their fair values. The Group therefore assumes that trade receivables can be sold for at least their carrying amounts in the short term and sets the fair value at the same level.

The DFS Group determines the allowance for doubtful accounts required based on probable default risks from information on insolvencies. It also demands security deposits from customers with relevant sales volumes when defined warning thresholds are exceeded. The allowances for doubtful accounts are recognised in a separate allowance account in the income statement. Such allowances are derecognised through the income statement should the reasons for the impairment no longer apply in subsequent periods. If a receivable that had already been written down is classified as uncollectible, it is written off completely.

Trade receivables in foreign currencies are measured at the reporting date and recognised in the income statement.

4.5.10 Other receivables and assets

Receivables and other assets are carried at amortised cost. Due to the predominately short-term nature of other receivables and assets, the carrying amounts at the balance sheet date do not differ significantly from their fair values. The Group assumes that the assets can be sold for at least their carrying amounts in the short term and sets the fair value at the same level.

Allowances for doubtful accounts are measured based on the probable default following an analysis of their age and maturity and information on insolvencies and recognised as an expense on a separate allowance account.

Other receivables and assets in foreign currencies are measured at the reporting date and recognised in the income statement.

4.5.11 Deferred taxes

IAS 12 regulates the treatment of deferred taxes using the liability method. Deferred tax assets and liabilities are recognised by the DFS Group for all temporary differences between the tax base of assets and liabilities and their carrying amounts in the Group balance sheet according to IFRS as well as for consolidation adjustments recognised in profit or loss. The differences are limited to those items whose changes influence taxable earnings.

Issues related to the calculation of charges are excluded (see Section 31b(3)(3) of the German Aviation Act (LuftVG)).

Deferred tax assets are also recognised for future claims to tax reductions resulting from tax loss carryforwards. Deferred tax assets for deductible temporary differences and for tax loss carryforwards are only recognised to the extent that there are future taxable profits which either the temporary differences or unused taxable losses can offset.

The computation of deferred taxes is based on the existing or applicable income tax rates in each country at the date of valuation. The income tax rate of 29.83 percent (previous year: 29.83%) is made up of a corporate income tax of 15.00 percent, a solidarity surcharge of 5.50 percent and a weighted average German municipal trade tax multiplier rate of 400.00 percent on a tax rate (*Steuermessbetrag*) of 3.50 percent. The effect of changes in tax rates on deferred tax assets and liabilities is reflected in the income tax expense for the period in which the law was changed.

Deferred tax assets and liabilities are netted if permitted under law and the receivables and payables are against the same tax authority.

Deferred tax assets and liabilities are not discounted.

4.5.12 Liquid funds

Liquid funds include cash, cash accounts as well as short-term money market investments and certificates of deposit at credit institutions. Cash and cash equivalents are carried at amortised cost. Due to the predominately short-term nature of cash and cash equivalents, the carrying amounts at the balance sheet date do not differ significantly from their fair values. The Group therefore sets the fair values at the same level as the carrying amounts.

Liquid funds in foreign currencies are converted at the closing rate.

Overdrafts taken up are reported by the DFS Group in the balance sheet as liabilities to credit institutions under current financial liabilities.

4.5.13 Inventories

Inventories are carried at cost based on the weighted average method or at production cost.

Production costs comprise direct production costs (especially direct materials and direct labour) as well as an appropriate share of the necessary material and manufacturing overhead. Administrative expenses and costs of employee assistance programmes are included to the extent they can be allocated to production. Financing costs are not recognised as part of production costs.

Subsequent measurement occurs at the lower of deemed cost and net realisable value. Inventory risks resulting from the duration of storage or impaired usability led to write-downs upon determination of the net realisable value. If the reasons for a write-down no longer apply, the write-down is reversed. Lower values at the reporting date due to lower prices on sales and purchase markets were taken into account.

4.5.14 Other reserves

This item relates to changes recognised directly in equity, provided they are not based on capital transactions with the Shareholder. This includes, in particular, the changes in fair value of the available-for-sale financial assets and their associated tax effects.

4.5.15 Provisions for pensions and similar obligations

Defined benefit plans are measured in accordance with IAS 19 using the projected unit credit method on the basis of actuarial reports at the balance sheet date. This requires, in particular, assumptions to be made about long-term salary trends and average life expectancy. The premises on salary trends are based on historical trends and take into account country-specific interest and inflation levels. Biometric data serve as the basis for the estimates of average life expectancy (mortality tables taken from Heubeck-Richttafeln 2005 G).

The rate used to discount pension obligations is determined by reference to market yields at the end of the reporting period on high-quality fixed-rate corporate and treasury bonds. The discount rate is an actuarial assumption and is set at the beginning of each business year. With the help of this interest rate, the Group calculates the net interest result, for which the net pension obligation or net defined benefit liability is multiplied by the interest rate. The net pension obligation results from the deduction of plan assets with their fair value from the gross pension obligation and is therefore a net amount. In the event of an asset surplus (i.e. a net defined benefit asset), a corresponding procedure is applied. Before offsetting, the DFS Group reports the net interest result in the financial result under financial income and financial expenses.

Remeasurements of the net defined benefit liability are recognised directly in equity in other comprehensive income. This includes in particular the actuarial gains and losses resulting from changes in expectations as regards the estimates made at the beginning of the year compared with the actual development during the business year. In addition, a portion of the actual return on plan assets at the end of the year in excess of the expected return on plan assets at the beginning of the year is recognised directly in equity. The remeasurements recognised in equity cannot be recognised in profit or loss in the following periods.

The service cost is made up of the current and past service costs. The latter reflects the change in pension obligations as a consequence of plan adjustments and plan curtailments. It is recognised directly in profit or loss when incurred in the statement of comprehensive income and reported under employee expenses.

The development of plan assets is made up of the contributions, payments and income from a matched reinsurance contract. The reinsurance contract requires an investment in line with the investment guidelines under the general cover fund of the insurer as well as a separate fund-based investment. This fund-based investment allows the DFS Group's contract with the insurer to have a higher equity ratio to gain a long-term increase in return compared with the return provided by the general cover fund of the insurance consortium. The fund investment is restricted to a maximum of half of the whole capital reserve of the reinsurance contract. The expectations placed on the fund investment are formulated by a strategy commission. It considers the latest expectations for the capital markets and risk issues. Pension obligations for which there are plan assets are netted against the fair value of these plan assets.

No provisions are recognised for defined contribution plans. The level of contributions at the DFS Group is dependent on the income relevant to pension calculations. The payments for defined contribution plans are expensed when due and reported as part of employee expenses.

4.5.16 Other provisions

Other provisions are recognised for past events that result in present obligations to third parties. These provisions must be capable of being estimated reliably and must lead to an outflow of resources in the future with a probability of at least 50.00 percent. A provision is recognised with the settlement amount, which represents the highest probability of occurrence based on best estimates and under consideration of all discernible risks.

The DFS Group expects the majority of the other provisions to fall due in the next one to five years. Some of the individual provisions may involve a time period up to 2041. Therefore, uncertainties remain as to the timing and concrete amount of the expenses. Nevertheless, the Group expects to utilise the full amount of the provisions (100.00%) and expects that the outflow of economic benefits will equal the amount set aside in the provisions.

Provisions for obligations which in all probability will not lead to a reduction in assets in the subsequent year are discounted at prevailing market rates and carried at the present value of the expected outflow of resources, provided the interest effect is material. The discount rates are based on the yields on debt securities outstanding issued by residents, public debt securities and listed Federal securities corresponding to their remaining term as published by the German Bundesbank. In addition to these yields, a company-internal risk premium of 0.25 percent is added.

If a change in an estimate results in a reduction of the obligation, then the provision is reversed proportionally and the income reported under other operating income.

4.5.17 Financial instruments – Financial liabilities

Financial liabilities generally give rise to a claim for repayment in cash or in the form of another financial asset. The classification is subdivided into the categories "At fair value through profit or loss" and "Amortised cost" (see Note 34).

- Financial liabilities classified as "At fair value through profit and loss" (derivative financial instruments) are held exclusively for trading. Their initial and subsequent recognition are at fair value. The changes in fair value between the reporting dates and interest expenses are recognised in profit or loss in the financial result.
- The category "Amortised cost" contains all other financial liabilities which cannot be allocated to another category. The initial recognition is at fair value, including transaction costs directly connected with the issuance of the liability. Subsequent measurement of liabilities is at amortised cost using the effective interest rate method for liabilities with high or low interest rates. Bonds and debenture loans are carried at amortised cost using the effective interest method. Due to the predominately short-term nature of trade payables and other liabilities, the carrying amounts at the balance sheet date do not differ significantly from their fair values. The DFS Group therefore sets the fair values at the same level as the carrying amounts. Amounts derecognised and the allowance for doubtful accounts are disclosed in profit and loss and interest expenses in the financial result.

For financial liabilities with maturities up to one year, the fair value corresponds to the carrying amount. If the maturity is longer than one year, the fair value is calculated by discounting the settlement value at a risk-free rate.

Liabilities denominated in a foreign currency are converted using the rate at the reporting date.

4.6 Change to accounting policies under IAS 8

As part of the five-point programme, the Group is promoting the orientation of the company towards innovative technologies and is intensifying the development of in-house software in this regard. In recent years, progress has been made from the further development of the control of the project portfolio and projects to be able to successfully pursue and manage development projects. In addition, measures have been taken to significantly improve the management of the inherent risks within development projects. For this reason, the DFS Group is bringing the capitalisation of development costs in line with this strategic orientation from the business year 2017. Up until then, only the development costs of system projects were capitalised. In future, site projects will be considered, too. Site projects cover all those activities that go beyond the scope of a system project and which are needed so that the product of a system project can be put into a useable state at the respective site. The time of the capitalisation will be brought forward from the time of the overall technical release to the time of the so-called Project Application 2. The change of the measurement method led to additional capitalised development costs of approximately €10.00 million.

Notes to the statement of comprehensive income

5 Revenues

	2017	2016
	€'000	€'000
Revenues from air navigation services	1,031,940	1,117,267
Other revenues	71,613	52,481
	1,103,553	1,169,748

Revenues from air navigation services

	2017	2016
	€'000	€'000
En-route charges	859,803	899,312
Terminal charges	182,470	211,488
Payments to German MET Service (DWD) and Ministry of Transport (BMVI) from terminal charges	-942	-729
Carry-over from the traffic and inflation variance of the current year	-103,343	-55,960
Carry-over from the traffic and inflation variance of previous years	23,471	-13,269
Revenues from en-route and terminal charges	961,459	1,040,842
Reimbursements by the State for military flights and facilities	43,906	61,580
Reimbursements by the State for exempted flights	18,000	6,500
Aeronautical publications	4,262	4,241
Flight inspection services	3,757	2,717
Other air navigation services	556	1,387
Revenues from air navigation services	1,031,940	1,117,267

6 Changes in inventory and other own work capitalised

	2017	2016
	€'000	€'000
Changes in inventory of finished goods and work in progress	2,364	-50
Other own work capitalised (primarily internally generated IT systems)	25,435	3,070
	27,799	3,020

7 Other operating income

	2017	2016
	€'000	€'000
Income from QTE transaction (exchange rate gains)	14,663	8,656
R&D project funding by the EU Commission and German Federal and regional ministries recognised in the income statement	32,240	25,602
Income from derecognition of liabilities	7,009	6,077
Income from reversal of provisions	674	1,774
Remaining	4,813	4,451
	59,399	46,560

8 Cost of materials and services

	2017	2016
	€'000	€'000
Raw materials, consumables used and purchased goods	4,723	5,934
Purchased services (flight inspection and consulting services)	8,360	5,940
	13,083	11,874

9 Employee expenses

	2017	2016
	€'000	€'000
Wages and salaries ²⁾	605,223	609,177
Expenses for IFRS pensions	183,136	140,981
Social security costs and expenses for assistance	65,970	65,467
Cost of personnel belonging to the Federal Aviation Office (LBA)	8,455	22,879
	862,784	838,504

²⁾ See Note 44.1 for the remuneration of the Board of Managing Directors

Besides the usual outlays for wages, salaries and social security expenses for DFS personnel, this item also includes the costs charged by the Federal Aviation Office (LBA) for personnel belonging to the LBA.

Average annual number of employees		
	2017	2016
Salaried staff	5,180	5,225
Soldiers released from regular service	171	207
Wage-earners	22	23
Technical and commercial students and apprentices	98	84
DFS Group staff	5,471	5,539
Employees covered by the collective agreement for the public service (TVöD)	35	41
Established civil servants	131	140
Personnel belonging to the Federal Aviation Office (LBA), Directorate Air Navigation Services	166	181
	5,637	5,720

10 Depreciation and amortisation

	2017	2016
	€'000	€'000
Intangible assets	46,936	37,685
Property, plant and equipment	69,294	71,198
Investment property	30	30
	116,260	108,913

The impairment tests carried out in the business year resulted in no impairment charges being recognised for intangible assets; property, plant and equipment; investment property and financial assets.

11 Other operating expenses

	2017	2016
	€'000	€'000
Spare parts and maintenance	53,546	46,401
Occupancy costs	15,744	16,332
Rent and leasing costs	8,515	8,591
Costs of external personnel	9,035	10,571
Other employee expenses	9,051	6,254
Legal and consultancy costs	4,496	4,984
Travel costs	6,919	6,128
Telecommunication	6,857	6,602
Costs from previous years	1,261	1,288
Vehicle costs	3,354	3,302
Asset disposals	2,848	842
Insurance policies	2,770	2,683
Magazines, journals, stationery	1,010	971
Advertising costs	1,562	777
Entertainment expenses	1,028	1,003
Costs of monetary transactions	2,783	1,626
Write-downs and write-offs of receivables	5,636	512
Expenses from QTE transaction (exchange rate losses)	14,583	8,685
Remaining	1,829	1,346
	152,827	128,898

12 Financial result

	2017	2016
	€'000	€'000
Income from fund assets to finance retirement obligations	38,919	51,556
Gains from the financial assets of the investment entity	66,135	40,802
Interest income from QTE transaction	1,354	1,512
Other interest income	630	705
Income from foreign currency translation	0	691
Income from investments	603	296
Interest income from operating taxes	0	2
Financial income	107,641	95,564
Expenses from discounting provisions	-74,725	-91,934
Expenses from the financial assets of the investment entity	-48,894	-33,916
Other interest expense	-6,601	-6,956
Interest expense from QTE transaction	-1,095	-1,226
Interest expense from operating taxes	-7	0
Result from fair value adjustment of derivatives	0	-331
Expenses from securities	-39	-5
Financial expenses	-131,361	-134,368
Financial result	-23,720	-38,804

Additional disclosures on the financial result

	2017	2016
	€'000	€'000
Interest result from financial instruments determined using the effective interest method not classified in the category "At fair value through profit or loss"	-6,638	-6,858
Interest income from impaired financial assets	386	312
Gains from the measurement of financial assets recognised directly in equity from the category "Available-for-sale"	5,063	11,079

13 Income taxes

	2017	2016
	€'000	€'000
Current income taxes	945	8,297
Deferred income taxes	-9,640	-2,549
	-8,695	5,748

Current income taxes relate to corporation taxes, including the solidarity surcharge, and German municipal trade taxes. The computation of income taxes at DFS is based on applicable tax regulations in connection with Section 31b(3)(3) of the German Aviation Act (LuftVG). For the other Group subsidiaries, the trade and corporation tax laws and regulations are of relevance.

Breakdown of effective income taxes		
	2017	2016
	€'000	€'000
Corporation tax	417	3,915
Corporation tax from previous years	61	0
Solidarity surcharge	23	201
Solidarity surcharge from previous years	4	0
Municipal trade tax	389	4,085
Municipal trade tax from previous years	51	0
Foreign taxes	0	96
	945	8,297

In addition to the tax liabilities from the current business year, possible estimated additional tax demands are also included to the extent that they might result from the current tax audit.

DFS owes taxes as the dominant enterprise for the dependent enterprise DFS Energy. Therefore, the deferred taxes of the dependent enterprise are reflected in the dominant enterprise. The spin-off of the energy plant, which is assigned to the areas relevant to air navigation charges, into DFS Energy led to a continuation of the tax measurement for this legal entity. Therefore, in determining taxes, the special situation as regards air navigation charges at DFS is also taken into consideration at DFS Energy. This does not lead to taxable temporary differences in value between the IFRS and the tax accounts.

In the Group, the tax groups are DFS, DFS International Business Services and Air Navigation Solutions. DFS International Business Services is the dominant enterprise for the dependent enterprises DFS Aviation Services, R. Eisenschmidt and Kaufbeuren ATM Training, and therefore owes the taxes. Hence, the deferred taxes of the subordinated companies are reflected in the dominant enterprise (DFS International Business Services). The sum of the results of the two groups and Air Navigation Solutions differ from the consolidated Group result as the expenses and income among the individual Group companies are eliminated in a different manner than that used for the groups for tax purposes.

Reconciliation from expected to current income tax expense		
	2017	2016
	€'000	€'000
Net income before income taxes	22,076	92,335
Expected tax rate (in %)	29.83	29.83
Expected income tax expense	6,585	27,543
Tax expense not relating to the period under review	116	0
Reduction in the tax base under Section 31b German Aviation Act (LuftVG)	-6,891	-20,515
Variances in municipal trade tax	0	421
Foreign taxes	0	96
Deferred tax expense	-9,640	-2,549
Variances from consolidation	1,135	752
Current income tax expense	-8,695	5,748
Effective tax rate (in %)	-39.39	6.22

Deferred taxes by balance sheet item

	Deferred tax assets		Deferred tax liabilities	
	2017	2016	2017	2016
	€'000	€'000	€'000	€'000
Intangible assets	0	0	14,490	8,665
Property, plant and equipment	2,415	2,725	948	891
Available-for-sale securities	0	0	11,619	5,623
Receivables and other assets	337	0	2,054	4,896
Provisions for pensions and similar obligations	784,628	796,432	0	0
Other provisions	24,239	24,378	0	677
Liabilities	3,398	2,755	417	532
	815,017	826,290	29,528	21,284
Impact due to Section 31b LuftVG (until 2012: methodology n + 2 used)				
Intangible assets	0	0	-14,490	-8,665
Property, plant and equipment	-1,632	-2,497	-761	-955
Available-for-sale securities	0	0	-11,619	-5,623
Receivables and other assets	0	0	0	-31
Provisions for pensions and similar obligations	-764,577	-778,806	0	0
Other provisions	-19,538	-24,375	0	-677
Liabilities	-787	-490	0	0
	-786,534	-806,168	-26,870	-15,951
Other allowances	-13,670	-11,444	0	0
Netting	-2,658	-5,333	-2,658	-5,333
Air Navigation Solutions	-14	0	0	0
Kaufbeuren ATM Training	16	0	0	0
DFS Aviation Services	829	0	0	0
	12,986	3,345	0	0

The DFS Group does not recognise any deferred tax assets for tax loss carryforwards as there is no potential to offset them in the foreseeable future. In addition, there are no issues which result in deferred tax assets not being recognised.

Notes to the balance sheet

14 Goodwill

	Cost				As at 31 Dec €'000
	As at 1 Jan €'000	Additions €'000	Disposals €'000	Transfers €'000	
2016	€'000	€'000	€'000	€'000	€'000
R. Eisenschmidt GmbH	80	0	0	0	80
	80	0	0	0	80
2017	€'000	€'000	€'000	€'000	€'000
R. Eisenschmidt GmbH	80	0	0	0	80
	80	0	0	0	80

	Amortisation					Carrying amount
	As at 1 Jan €'000	Additions €'000	Disposals €'000	Transfers €'000	As at 31 Dec €'000	As at 31 Dec €'000
2016	€'000	€'000	€'000	€'000	€'000	€'000
R. Eisenschmidt GmbH	0	0	0	0	0	80
	0	0	0	0	0	80
2017	€'000	€'000	€'000	€'000	€'000	€'000
R. Eisenschmidt GmbH	0	0	0	0	0	80
	0	0	0	0	0	80

The goodwill from the acquisition of R. Eisenschmidt GmbH results from the difference between the purchase price and the fair value of the net assets at the acquisition date.

The regular impairment tests of goodwill showed no indication that an impairment loss under IAS 36 had to be recognised.

Underlying assumptions for the conduct of impairment tests for goodwill

	31 Dec 2017	31 Dec 2016
R. Eisenschmidt GmbH		
Planning period	2018 to 2022 ³⁾	2017 to 2021 ⁴⁾
Planned revenues in €'000	4,548 to 7,521	4,100
Revenue growth in %	+10.87 to +257.44	0.00
EBT development in %	+10.87 to +257.44	-4.36 to +9.88
Investment ratio in %	0.00	0.00

³⁾ From Annual Plan 2018 of the shareholder meeting on 11 December 2017

⁴⁾ From Annual Plan 2017 of the shareholder meeting on 12 December 2016

15 Intangible assets

	Cost				As at 31 Dec
	As at 1 Jan	Additions	Disposals	Transfers	
2016	€'000	€'000	€'000	€'000	€'000
Concessions, rights and licences	587,132	7,750	-6,209	2,111	590,784
Internally generated intangible assets	52,158	2,754	0	0	54,912
Assets under construction (AUC)	63,874	19,068	0	-2,096	80,846
	703,164	29,572	-6,209	15	726,542
2017	€'000	€'000	€'000	€'000	€'000
Concessions, rights and licences	590,784	15,588	-5,098	70,275	671,549
Internally generated intangible assets	54,912	25,627	0	0	80,539
Assets under construction (AUC)	80,846	7,701	0	-70,229	18,318
	726,542	48,916	-5,098	46	770,406

	Amortisation					Carrying amount
	As at 1 Jan	Additions	Disposals	Transfers	As at 31 Dec	As at 31 Dec
2016	€'000	€'000	€'000	€'000	€'000	€'000
Concessions, rights and licences	452,854	34,054	-5,011	0	481,897	108,887
Internally generated intangible assets	34,366	3,631	0	0	37,997	16,915
Assets under construction (AUC)	0	0	0	0	0	80,846
	487,220	37,685	-5,011	0	519,894	206,648
2017	€'000	€'000	€'000	€'000	€'000	€'000
Concessions, rights and licences	481,897	43,238	-3,719	15	521,431	150,118
Internally generated intangible assets	37,997	3,698	0	0	41,695	38,844
Assets under construction (AUC)	0	0	0	0	0	18,318
	519,894	46,936	-3,719	15	563,126	207,280

The regular impairment tests of intangible assets showed no indication that an impairment loss under IAS 36 had to be recognised.

Intangible assets for which there is a contractual obligation to accept but which do not yet come under the economic power of disposition of the DFS Group are shown in Note 38.2.

The DFS Group has not assigned any intangible assets nor pledged them as collateral. It freely controls these assets.

Individually material intangible assets	Carrying amount	Remaining useful life	Share of total carrying amount
	31 Dec 2017		
	€'000	in years	31 Dec 2017 in %
iCAS software	83,477	2 - 8	40.27
P1/ATCAS software including release	37,618	7	18.15
VAFORIT software	16,787	1	8.10
PSS software	4,500	4 - 7	2.17
	142,382		68.69
Total carrying amount	207,280		100.00

Capitalisation of borrowing costs for intangible assets	31 Dec 2017	31 Dec 2016
Borrowing costs in €'000	1,091	1,974
Capitalisation rate in %	2.88	2.94

16 Property, plant and equipment

	Cost					As at 31 Dec
	As at 1 Jan	Additions	Disposals	Transfers	Currency differences	
	€'000	€'000	€'000	€'000	€'000	€'000
2016						
Land and buildings	697,018	2,196	-622	250	0	698,842
Technical equipment (plant) and machinery	1,112,747	34,097	-64,467	2,881	0	1,085,258
Operating and office equipment	84,583	2,627	-3,136	191	0	84,265
Assets under construction (AUC)	7,561	15,262	0	-3,337	0	19,486
	1,901,909	54,182	-68,225	-15	0	1,887,851
2017						
Land and buildings	698,842	4,678	-35,662	6,058	0	673,916
Technical equipment (plant) and machinery	1,085,258	42,840	-88,655	10,213	-4	1,049,652
Operating and office equipment	84,265	3,510	-4,097	286	0	83,964
Assets under construction (AUC)	19,486	11,313	0	-16,603	0	14,196
	1,887,851	62,341	-128,414	-46	-4	1,821,728

	Depreciation					Carrying amount	
	As at 1 Jan	Additions	Disposals	Transfers	Currency differences	As at 31 Dec	As at 31 Dec
2016	€'000	€'000	€'000	€'000	€'000	€'000	€'000
Land and buildings	408,053	21,557	-376	0	0	429,234	269,608
Technical equipment (plant) and machinery	896,692	44,562	-62,324	-54	0	878,876	206,382
Operating and office equipment	60,727	5,078	-3,109	54	-2	62,748	21,517
Assets under construction (AUC)	0	0	0	0	0	0	19,486
	1,365,472	71,197	-65,809	0	-2	1,370,858	516,993
2017	€'000	€'000	€'000	€'000	€'000	€'000	€'000
Land and buildings	429,234	17,559	-33,808	0	0	412,985	260,931
Technical equipment (plant) and machinery	878,876	46,696	-87,791	-21	-1	837,759	211,893
Operating and office equipment	62,748	5,039	-4,023	6	-2	63,768	20,196
Assets under construction (AUC)	0	0	0	0	0	0	14,196
	1,370,858	69,294	-125,622	-15	-3	1,314,512	507,216

Capitalisation of borrowing costs for property, plant and equipment

	31 Dec 2017	31 Dec 2016
Borrowing costs in €'000	434	268
Capitalisation rate in %	2.88	2.94

Research and development costs	31 Dec 2017	31 Dec 2016
	€'000	€'000
Expenses for research and development	65,492	42,943
- of which research costs recognised in the income statement	40,289	40,195
- of which capitalised additions in assets under construction	25,203	2,748
Capitalised borrowing costs on development costs	423	7
Development costs in assets under construction as at 31 December	13,456	2,754
Scheduled depreciation of development costs based on the degree of completion notified	3,698	3,631
R&D project funding by the EU Commission and German Federal and regional ministries deducted from cost	0	0

The DFS Group concludes rental and lease contracts for land and buildings, technical facilities and machines as well as vehicles. The material rewards and risks are borne by the respective contracting party. There are no additional risks from these contracts for the Group. It does not make use of purchase price options, rather the items are transferred when the lease matures. Vehicles are leased for one year without an option to extend.

Maturity of operating leases	Up to 1 year	1 to 5 years	More than 5 years	Total
	€'000	€'000	€'000	€'000
2017	7,257	9,492	4,895	21,644
2016	8,679	10,915	6,508	26,102

Expenses and income recognised in the statement of comprehensive income	2017	2016
	€'000	€'000
Minimum lease payments from operating leases	8,515	8,591

The carrying amount of property, plant and equipment which the Group does not freely control (finance leases) amounts to €0 thousand (previous year: €14 thousand).

The qualified technological equipment (QTE) transaction was terminated except for the remaining shell structure (for additional disclosures see Note 21).

Property, plant and equipment for which there is a contractual obligation to accept but which do not yet come under the economic power of disposition of the Group are shown in Note 38.2.

The DFS Group has not assigned any property, plant and equipment nor pledged them as collateral. It freely controls these assets.

The regular impairment tests of property, plant and equipment showed no indication that an impairment loss under IAS 36 had to be recognised.

Compensation of €6 thousand (previous year: €23 thousand) for third parties for property, plant and equipment that was impaired, irrecoverably lost or decommissioned was recognised in the income statement.

17 Investment property

	Cost				As at 31 Dec €'000
	As at 1 Jan €'000	Additions €'000	Disposals €'000	Transfers €'000	
	2016 Property in Braunschweig	1,210	0	0	
2017 Property in Braunschweig	1,210	0	0	0	1,210

	Depreciation					Carrying amount
	As at 1 Jan €'000	Additions €'000	Disposals €'000	Transfers €'000	As at 31 Dec €'000	As at 31 Dec €'000
	2016 Property in Braunschweig	428	30	0	0	458
2017 Property in Braunschweig	458	30	0	0	488	722

The DFS Group rents a building, including the land, in Braunschweig, Germany, to FCS, which uses this land for its own operational purposes.

The DFS Group is not contractually obliged to conduct repairs, maintenance or improvements. However, it is authorised to make material changes to the premises and the rental object as well as necessary repairs and maintenance without the approval of FCS. There are no other contractual obligations or restraints on disposition.

Expenses and income recognised in the statement of comprehensive income		
	2017 €'000	2016 €'000
Rental income	116	125
Depreciation	30	30
Repairs	0	0

The property is depreciated over the useful life of 40 years using the straight-line method. The latest review of the rental and land values revealed no indications of an impairment under IAS 36. The appraisal dated 10 October 2017 demonstrates the recoverability of the carrying amounts.

Appraisal on the value of the property

Date of appraisal	10 October 2017	3 December 2012
Date to which appraisal applies	1 October 2017	1 December 2012
Procedure	DCF method	DCF method
Market value / fair value	€815 thousand	€980 thousand
Property yield (<i>Liegenschaftszinssatz</i>) of the city of Braunschweig	5.60%	7.60%
Initial discount rate	7.50%	8.25%

The fair value of investment property is determined by an external independent property valuer who possesses the relevant professional qualification and up-to-date experience with the location and type of property to be valued.

Valuation technique

Discounted cash flow method: The calculation of the fair value is based on current rental rates considering various factors such as the standard land values, property yield, other operating expenses, risk of default on rents, remaining useful life of the building, maintenance risk as well as current property developments.

Unobservable inputs

Discount rate, risk of default on rents, other operating expenses

Level

3

Relationship between inputs and fair value

The estimated fair value would increase if

- the risk-adjusted discount rate was lower
 - the risk of default on rents was lower
 - other operating costs were lower
-

18 Financial assets

	Cost				As at 31 Dec
	As at 1 Jan	Additions	Disposals	Remea- surement	
	€'000	€'000	€'000	€'000	€'000
2016					
Investments in associated companies	1,738	0	0	-390	1,348
Investments	2,886	0	-56	0	2,830
Loans to associated companies	4,255	0	-731	0	3,524
Derivative financial instruments	0	1,765	0	0	1,765
	8,879	1,765	-787	-390	9,467
2017					
Investments in associated companies	1,348	0	0	0	1,348
Investments	2,830	0	-57	0	2,773
Loans to associated companies	3,524	0	-764	0	2,760
Derivative financial instruments	1,765	541	0	0	2,306
	9,467	541	-821	0	9,187

	Impairments					Carrying amount As at 31 Dec
	As at 1 Jan	Additions	Disposals	Transfers	As at 31 Dec	
	€'000	€'000	€'000	€'000	€'000	€'000
2016						
Investments in associated companies	0	0	0	0	0	1,348
Investments	0	0	0	0	0	2,830
Loans to associated companies	0	0	0	0	0	3,524
Derivative financial instruments	0	0	0	0	0	1,765
	0	0	0	0	0	9,467
2017						
Investments in associated companies	0	0	0	0	0	1,348
Investments	0	0	0	0	0	2,773
Loans to associated companies	0	0	0	0	0	2,760
Derivative financial instruments	0	0	0	0	0	2,306
	0	0	0	0	0	9,187

Associated companies accounted for using the equity method		
	31 Dec 2017	31 Dec 2016
	€'000	€'000
As at 1 Jan	1,348	1,738
Proportionate net income	0	0
Dividends received	0	-390
As at 31 Dec	1,348	1,348

Investments					
	Group EAD	BILSODA	ESSP SAS	TATS	Total
	€'000	€'000	€'000	€'000	€'000
Shareholding in %	36.00	24.90	16.67	50.00	
Share capital	360	0	167	500	1,027
Liable capital (<i>Hafteinlagen</i>)	0	2	0	0	2
Other contributions	0	1,744	0	0	1,744
As at 31 Dec 2017	360	1,746	167	500	2,773

Loans to associated companies	Term	Nominal value	Nominal interest rate	31 Dec 2017	31 Dec 2016
		€'000	in %	€'000	€'000
FCS					
Loan 2 Aeroplane 1	2006 - 2017	5,000	4.00	94	519
Loan 3 Flight instrument system 2	2009 - 2019	900	5.25	154	245
Loan 4 Aeroplane 2	2009 - 2025	4,300	5.25	2,512	2,760
		10,200		2,760	3,524

There were no indications of a need to impair as required by IAS 36.

Derivative financial instruments relate to capital investments held for trading. These are traded on active markets with published market prices, which are used for measurement (see Note 23 for additional disclosures).

19 Trade receivables

Due dates of trade receivables				
	Up to 1 year	1 to 5 years	More than 5 years	Total
	€'000	€'000	€'000	€'000
2017	155,796	0	0	155,796
2016	167,148	0	0	167,148

Aged-list		
	31 Dec 2017	31 Dec 2016
	€'000	€'000
Carrying amount	155,796	167,148
of which not impaired and		
- not yet overdue	149,609	157,478
- up to 30 days overdue	3,294	3,833
- 31 to 60 days overdue	1,515	2,764
- 61 to 180 days overdue	646	1,826
- more than 180 days overdue	732	1,247
of which impaired	0	0

Trade receivables were written down to the amount that could be recovered as soon as information on the insolvency of customers was available. There are no indications that the debtors whose receivables were overdue will not be able to fulfil their obligations.

Development of allowances		
	31 Dec 2017	31 Dec 2016
	€'000	€'000
As at 1 Jan	6,034	8,220
Additions	7,700	588
Utilisation	0	0
Reversal	-2,181	-2,774
As at 31 Dec	11,553	6,034

Expenses (-) and income (+) recognised in the statement of comprehensive income		
	2017	2016
	€'000	€'000
Derecognition and write-off of receivables	-254	-3,020
Income from payment of receivables previously written off	134	202
Income from other derecognitions	3	119
Additions to specific allowances	-7,700	-588
Income from reversal of specific allowances	2,181	2,774

At the balance sheet date, there were no trade receivables in foreign currencies (previous year: none).

The DFS Group did not pledge any receivables as securities for loans.

20 Future receivables from construction contracts

Due dates of future receivables from construction contracts				
	Up to 1 year	1 to 5 years	More than 5 years	Total
	€'000	€'000	€'000	€'000
31 Dec 2017				
Gross value	6,185	0	0	6,185
Prepayments received	0	0	0	0
Carrying amount	6,185	0	0	6,185
31 Dec 2016				
Gross value	6,774	0	0	6,774
Prepayments received	0	0	0	0
Carrying amount	6,774	0	0	6,774

Expenses and income recognised in the statement of comprehensive income		
	2017	2016
	€'000	€'000
Contract revenue recognised in the business year	2,075	5,363
Costs incurred in the business year	1,865	4,301
Profit earned for ongoing projects	210	1,062
Amounts withheld	0	0

21 Other receivables and assets

	31 Dec 2017	31 Dec 2017	31 Dec 2016	31 Dec 2016
	Total	Remaining term more than 1 year	Total	Remaining term more than 1 year
	€'000	€'000	€'000	€'000
QTE transaction	41,042	34,374	53,856	46,695
Capitalised value	3,046	3,046	2,813	2,813
Receivables from EU grant funding	24,341	24,341	2,763	2,763
Interest receivables	1,463	0	1,718	0
Under-recovery	0	0	105	0
Trusteeship (<i>Treuhandverein</i>)	5,918	50	5,743	50
Creditors with debit balances	16,666	0	6,427	0
Remaining	822	10	1,021	15
Other receivables and assets (financial)	93,298	61,821	74,446	52,336
Remaining other receivables and assets (non-financial)	5,363	0	7,495	0
Prepayments	361	0	699	0
	99,022	61,821	82,640	52,336

Aged-list

	31 Dec 2017	31 Dec 2016
	€'000	€'000
Carrying amount	99,022	82,640
of which not impaired and		
- not yet overdue	99,022	82,640
- up to 30 days overdue	0	0
- 31 to 60 days overdue	0	0
- 61 to 180 days overdue	0	0
- more than 180 days overdue	0	0
of which impaired	0	0

No receivables served as securities for loans or as collateral for other liabilities.

The qualified technological equipment (QTE) transaction with foreign investors was basically terminated in 2012. The DFS Group agreed with the remaining contracting parties to keep up the domestic cash flows. The restructuring of the contractual relationships allowed financial drawbacks to be avoided. The remaining purely inner-German shell structure comprises a claim against NORD/LB and a liability against KfW Kreditanstalt für Wiederaufbau (see Note 28). The new loan contracts concluded have fixed interest and principal payments and a term until 2 January 2022. The Group receives the claims from the ongoing rent from NORD/LB without having to provide a consideration. The Group bears the default risk of NORD/LB during the term. The rating agencies Moody's and Fitch Ratings awarded NORD/LB an Aa1 or AAA

rating for long-term guaranteed liabilities. For the liability, temporally limited collateral was pledged to KfW in the form of the assignment of the receivables against NORD/LB. This hedge was dissolved in 2013 after a one-off payment. The termination of the QTE transaction led to a significant improvement in the risk position for the creditors of DFS.

22 Inventories

	31 Dec 2017	31 Dec 2016
	€'000	€'000
Goods in stock	4,956	4,657
Emission rights	349	386
	5,305	5,043

Expenses and income recognised in the statement of comprehensive income

	2017	2016
	€'000	€'000
Raw materials and consumables used	2,336	3,314
Cost of purchased products	2,387	2,620
Impairment of raw materials and consumables used	7	7
Impairment of finished goods and goods for resale	0	0

23 Securities

	31 Dec 2017	31 Dec 2016
	€'000	€'000
Securities	963,440	557,243

Securities relate to available-for-sale capital investments, both fixed-rate and variable-rate. There are active markets with published market prices, which are used for measurement.

The DFS Group invested in a fund (legal name: ATCP-UI-Fond) through an investment entity. The Group's overall investment goal is to reduce the risk of loss on a yearly basis compared with the strategic asset allocation while earning a return consistent with the allocation over the market cycle. The DFS Group expects a long-term return on the whole portfolio of 2.40 percent per year on average over the investment horizon of three to five years. The capital investments made were distributed in the consolidated financial statements over the corresponding financial assets and liabilities.

The DFS Group defines asset allocation bands for the minimum and maximum exposure for each asset class: cash, government bonds, corporate bonds and equities.

The Group also classifies various risk categories:

- Market risk (beta risk) is defined as the loss in value from the change in value of the asset class.
- Hedge error is defined as the loss resulting if the assigned benchmark cannot be replicated exactly in the asset class.
- Tracking error is the risk that there might be a divergence between the behaviour of the underlying portfolio and the behaviour of the benchmark.

The investment entity reviews these risks regularly. The exposures are adjusted at least once a month as needed and hedged using derivatives, futures or options.

24 Liquid funds

	31 Dec 2017	31 Dec 2016
	€'000	€'000
Cash in hand and cheques	40	42
Cash at bank	276,881	386,962
	276,921	387,004

25 Equity

	31 Dec 2017	31 Dec 2016
	€'000	€'000
Subscribed capital	530,288	315,888
Capital reserve	74,296	74,296
Remeasurement reserves	-1,373,573	-1,574,722
Retained earnings	87,685	56,913
	-681,304	-1,127,625

The registered capital of the DFS Group amounts to €530,287,500.00 (five hundred and thirty million two hundred and eighty seven thousand five hundred euro). There are 5,302,875 shares with a nominal value of €100.00 each held by the sole Shareholder, the Federal Republic of Germany, represented by the Federal Ministry of Transport and Digital Infrastructure (BMVI). The shares may not be sold or encumbered. Additional shareholders may not be admitted.

In 2016, the registered capital was raised by €450,000,000.00 to €653,387,500.00 in return for issuing 4,500,000 shares with a nominal value of €100.00 each. The contributions for the new shares are to be made in January 2016, 2017, 2018 and 2019 (a quarter in each year). The registration of this capital increase was made on 1 March 2016.

The Shareholder of DFS decided on 21 June 2017 to raise the registered capital by €101,900,000.00 to €755,287,500.00 in return for 1,019,000 new shares with a nominal value of €100.00 each. The entry on the Commercial Register B of the Local Court in Offenbach am Main was made on 3 August 2017.

The capital reserves consist of other payments of the Shareholder (Section 272(2)(4) German Commercial Code, HGB) and serve to strengthen the share capital.

Other reserves are used for changes recognised directly in equity that are not based on capital transactions with the Shareholder.

The Shareholder approved the consolidated financial statements, the Group management report and the financial statements as at 31 December 2016 under the German Commercial Code (HGB) in resolution number 155 dated 16 May 2017 and decided to offset the profit of 2016 under HGB against retained earnings:

Uses of net income as at	31 Dec 2016	31 Dec 2015
	€'000	€'000
Net loss (-) / profit (+)	145,570	-138,190
Gross dividend to the Shareholder	0	0
Offsetting against retained earnings	145,570	-138,190

Other comprehensive income after taxes contained in the reserves

	Remeasurement reserves	Other reserves	Other comprehensive income
31 Dec 2017	€'000	€'000	€'000
Remeasurement of the net defined benefit liability	196,191	0	196,191
Change in the fair value of available-for-sale financial assets	5,063	0	5,063
Measurements from foreign currency translation	-105	0	-105
	201,149	0	201,149
31 Dec 2016	€'000	€'000	€'000
Remeasurement of the net defined benefit liability	-556,044	0	-556,044
Change in the fair value of available-for-sale financial assets	11,079	0	11,079
Measurements from foreign currency translation	-919	0	-919
	-545,884	0	-545,884

26 Provisions for pensions and similar obligations

Provisions for pensions are recognised exclusively for defined benefit plans for active and former employees.

The level of detail presented in the numbers reported in the following sections is based on the collective agreements and individual contracts relevant to the DFS Group:

Acronym	Contents
VersTV (Pensions) ⁵⁾	This collective agreement relates to the pensions for the staff employed at the DFS Group.
ÜVersTV (Transitional payments)	This collective agreement relates to the transitional payments for air traffic controllers and flight data assistants employed at the DFS Group.
KTV (Insurance)	This collective agreement covers the health and long-term care insurance for the staff employed at the DFS Group.
Miscellaneous	The accessory obligations for death grants and the deferred compensation scheme for pensions (old) are grouped under "Miscellaneous".

⁵⁾ The defined benefit obligations under the VersTV continue to be split in Note 26.6 between the final salary benefits and the benefits linked to average career earnings.

26.1 Pension plans

There are various forms of pension provision available to the employees of the DFS Group which are largely governed by collective agreements.

Under the collective agreement covering pensions (VersTV), employees who began employment at the company by 31 December 2004 receive old-age, disability and surviving dependant's benefits (defined benefit plans) linked to the respective final salary of the employee (Plan A). However, employees who entered service from 1 January 2005 receive benefits under the collective agreement covering pensions which are linked to average career earnings (Plan B). Under this system, a pension component is calculated each year based on the respective income and the old-age pension is determined based on the sum of the annual pension components.

Air traffic controllers and flight data assistants receive a transitional retirement benefit linked to their final salary (ÜVersTV). This is to cover the period from the end of their operational activity until the earliest possible receipt of the statutory pension.

Both plans (VersTV and ÜVersTV) are financed by reinsurance policies that are recognised as plan assets within the meaning of IAS 19.8. The reinsurance contract requires an investment in line with the investment guidelines under the general cover fund of the insurer and a separate fund-based investment created for part of the assets. The latter, however, is limited to a maximum of half of the actuarial reserve.

DFS pays an increased employer contribution for health insurance for the employees who were previously employed as established civil servants with the former Federal Administration of Air Navigation Services (BFS) and the Federal Aviation Office (LBA). This compensates over the entire active period of employment and in retirement for the fact that these staff are no longer covered by the German civil service welfare provisions for healthcare.

The DFS Group pays death grants to qualifying next of kin of active employees. The grants are equal to the previous remuneration and are paid for two and half months from the month following the month in which the employee passed away.

In addition, there are individual contractual benefits approved in 2005 which are based on the salary conversion model for exempt employees. The amount of the pension capital underlying the benefit is based on the salary converted with a return of 6.00 percent.

In addition to defined benefit benefits, the DFS Group also grants defined contribution benefits.

There were no changes, curtailments or settlements to the pension plans in the business year.

26.2 Actuarial assumptions

In %	31 Dec 2017	31 Dec 2016
Discount rate	1.80	1.70
Projected return on plan assets	1.80	1.70
Salary trend	2.50	2.50
Projected increase in benefits ⁶⁾	1.00 - 4.00	1.00/1.25/2.00

⁶⁾ 1.25 percent for the guaranteed adjustment for staff with benefits under VersTV 2009
2.00 percent for staff with benefits under VersTV 1993 (static reference)

26.3 Sensitivity analysis

The sensitivity analysis takes into account the respective change of one individual assumption compared to the reference value, which is made up of the sum of the individual present values of the pension obligations from the VersTV (Pensions), ÜVersTV (Transitional payments) and KTV (Insurance). The remaining parameters of the original calculations remain unchanged. This ensures that potential correlation effects are excluded.

	Changes to the actuarial assumptions	Impact on the defined benefit obligations	
		€'000	In %
Present value of defined benefit obligations at 31 Dec 2016		4,559,891	
Discount rate	Increase by 0.5 percentage points	-470,231	-10.31
	Decrease by 0.5 percentage points	513,488	11.26
Salary trend	Increase by 0.5 percentage points	214,888	4.71
	Decrease by 0.5 percentage points	-197,549	-4.33
Present value of defined benefit obligations at 31 Dec 2017		4,601,231	
Discount rate	Increase by 0.5 percentage points	-447,130	-9.72
	Decrease by 0.5 percentage points	524,648	11.40
Salary trend	Increase by 0.5 percentage points	210,823	4.58
	Decrease by 0.5 percentage points	-194,147	-4.22

The VersTV dated 21 August 2009 sets out a fixed annual adjustment of 1.25 percent. This means there is no sensitivity calculation for the pension progression.

For a specific group of people, the adjustment logic is set out in the VersTV 2005. This collective agreement has an adjustment of 2.00 percent per year as well as a lagging correction

for inflation that follows a three-year rhythm. As this represents an immaterial portion of the overall obligation, the DFS Group does not conduct a sensitivity calculation for the pension progression.

26.4 Risks

The pension obligations and the plan assets are subject to fluctuations over time. The reasons for these fluctuations and the associated risks arise from the usual actuarial risks and the financial risks in connection with the plan assets.

26.4.1 Demographic risks

As a large part of the defined benefit obligations are paid for the whole life and also include survivor's pensions, earlier entitlement and longer periods of benefit payment can lead to higher pension obligations, expenses and higher retirement benefits than expected.

26.4.2 Market price risks

The amount of the net obligation from occupational pensions is exposed to interest rate risk and is particularly influenced by the discount rate. The rate is determined by reference to market yields at the reporting date on high-quality fixed-rate corporate and treasury bonds. The current low level of interest rates has resulted in a comparatively high obligation. Potential fluctuations in the pension obligations are considered when managing the plan assets. However, the rise in the pension obligations can only be partly offset by the rise in the market values of plan assets. The low interest rate level means that substantial returns cannot be earned, which reduces the speed at which the assets for occupational pensions may grow.

The investment form chosen by DFS Aviation Services offers a balanced mix of risk and return. The insurance contracts offer a guaranteed rate of 2.25 percent for old contracts and 0.90 percent for new contracts, including the grant of a terminal bonus.

26.4.3 Liquidity risks

The daily liquidity of the DFS Group is monitored by the Treasury department and is managed with the help of short-term (< year) and medium-term liquidity plans.

26.4.4 Inflation risks

The Group distinguishes in its pension plans between benefits that are based on the respective final salary of the employee and benefits based on the career average plan. With the latter, the pension component is directly tied to the respective income. A rise in salaries tied to inflation would therefore lead to a rise in the pension obligations.

26.5 Duration and expected pension and contribution payments

The DFS Group has concluded reinsurance policies with an insurance consortium consisting of four life insurance companies to secure its obligations from the collective agreement on pensions and transitional payments. This ensures that the benefits payable can actually be paid when the insured event arises. The capital investment of the consortium is made under

the provisions of the German Insurance Supervision Act (VAG), which requires a separate investment in a fund-based pension insurance policy. All the consortium members to the group insurance policy are also members of the guarantee fund of the Protektor Lebensversicherungs-Aktiengesellschaft, ensuring that the interests of the insured are protected in the event of an insolvency of one of the companies (additional information can be found at: www.protektor-ag.de).

Expected due date of undiscounted payments	Up to 1 year	2 to 5 years	6 to 15 years
	€'000	€'000	€'000
Estimated pension payments ⁷⁾	102,254	500,634	1,693,411
- of which reinsured with the insurance consortium	94,931	468,006	1,594,458
Expected employer contributions to plan assets	231,594	1,101,348	2,304,019

⁷⁾ From the Aon-Hewitt detailed forecast 2017 to 2032 dated 7 June 2017

The weighted duration of the pension obligations amounts to 21.4 years (previous year: 21.9 years) as at 31 December 2017.

26.6 Defined benefit obligations

	VersTV (Pensions)	ÜVersTV (Transitional payments)	KTV (Insurance)	Other	Total
31 Dec 2016	€'000	€'000	€'000	€'000	€'000
As at 1 Jan 2016	2,629,107	969,823	222,520	5,617	3,827,067
Current service cost	93,301	48,941	2,021	115	144,378
Interest expense	62,584	22,793	5,258	131	90,766
Retirement benefits paid	-44,152	-36,555	-7,072	-596	-88,375
Actuarial gains (-) and losses (+)	481,570	91,875	18,017	291	591,753
- of which changed parameters	495,400	94,072	27,196	256	616,924
- of which experience-based adjustments	-13,830	-2,197	-9,179	35	-25,171
Present value of defined benefit obligations	3,222,410	1,096,877	240,744	5,558	4,565,589
- of which benefits based on final salary					
Retirement payments	2,873,914	-	-	-	-
One-time payments	0	-	-	-	-
- of which benefits based on career average plan					
Retirement payments	348,496	-	-	-	-
One-time payments	0	-	-	-	-
31 Dec 2017	€'000	€'000	€'000	€'000	€'000
As at 1 Jan 2017	3,222,410	1,096,877	240,744	5,558	4,565,589
Current service cost	118,297	55,807	2,128	117	176,349
Interest expense	54,386	18,308	4,029	92	76,815
Retirement benefits paid	-47,497	-40,626	-7,366	-480	-95,969
Actuarial gains (-) and losses (+)	-83,876	-8,298	-23,833	-8	-116,015
- of which changed parameters	-80,263	-14,621	-3,348	-36	-98,268
- of which experience-based adjustments	-3,613	6,323	-20,485	28	-17,747
Present value of defined benefit obligations	3,263,720	1,122,068	215,702	5,279	4,606,769
- of which benefits based on final salary					
Retirement payments	2,859,469	-	-	-	-
One-time payments	22,960	-	-	-	-
- of which benefits based on career average plan					
Retirement payments	381,291	-	-	-	-
One-time payments	0	-	-	-	-

26.7 Plan assets

	VersTV (Pensions)	ÜVersTV (Transitional payments)	KTV (Insurance)	Other	Total
31 Dec 2016	€'000	€'000	€'000	€'000	€'000
As at 1 Jan 2016	1,530,864	558,328	21,502	0	2,110,694
Projected return on plan assets	37,493	13,527	507	0	51,527
Employer contributions and payments	88,968	33,134	0	0	122,102
Retirement benefits paid	-35,884	-31,059	-774	0	-67,717
Actuarial gains (+) and losses (-)	13,418	22,764	-473	0	35,709
Market value of plan assets	1,634,859	596,694	20,762	0	2,252,315
Actual return on plan assets	50,911	36,291	34	0	87,236
31 Dec 2017	€'000	€'000	€'000	€'000	€'000
As at 1 Jan 2017	1,634,859	596,694	20,762	0	2,252,315
Projected return on plan assets	28,238	10,274	346	0	38,858
Employer contributions and payments	83,649	39,468	0	0	123,117
Retirement benefits paid	-40,031	-30,654	-807	0	-71,492
Actuarial gains (+) and losses (-)	61,063	19,361	-248	0	80,176
Market value of plan assets	1,767,778	635,143	20,053	0	2,422,974
Actual return on plan assets	89,301	29,635	98	0	119,034

Composition of plan assets

	31 Dec 2017	31 Dec 2016
	€'000	€'000
Capital investment in the general cover fund of the insurer (VersTV, ÜVersTV)	1,476,373	1,351,580
Capital investment in the general cover fund of the insurer (KTV)	20,052	20,763
Capital investment in fund-based pension insurance policy	926,548	879,972
Market value of plan assets	2,422,973	2,252,315

The capital investment of the consortium is subject to the provisions of the German Insurance Supervision Act (VAG). While the life insurance policies are subject to specific investment guidelines, capital investments in fund-based pension insurance policies allow a higher equity allocation. This should lead to higher returns than normal. The separate investment is managed by an investment company on behalf of the insurance company and the asset allocation is as follows:

Allocation of the capital investment in fund-based pension insurance policy		
	31 Dec 2017	31 Dec 2016
	In %	In %
Shares	67.30	53.50
Bonds	31.60	44.30
Cash	1.10	2.20

Each year as at 31 December, the life insurance companies compare the capital reserve of the fund-based pension insurance policy with the capital reserve of a normal pension insurance policy. They check if there is sufficient cover for the promised insurance benefits. If this is not the case, the contribution to the fund-based pension insurance policy is increased to boost the existing capital reserve to the required level.

The capital investment in fund-based pension insurance policies is measured at present value and not at market price. They are a component of assets and are determined by the consortium at the balance sheet date.

26.8 Remeasurement of the net defined benefit liability in equity

	VersTV (Pensions)	ÜVersTV (Transitional payments)	KTV (Insurance)	Other	Total
	€'000	€'000	€'000	€'000	€'000
31 Dec 2016					
As at 1 Jan 2016	-699,191	-228,925	-100,221	-957	-1,029,294
Remeasurement of the net defined benefit liability in equity (other comprehensive income) = actuarial gains (+) and losses (-) of the ongoing business year	-468,152	-69,111	-18,490	-291	-556,044
Remeasurement of the net defined benefit liability in equity	-1,167,343	-298,036	-118,711	-1,248	-1,585,338
31 Dec 2017					
As at 1 Jan 2017	-1,167,343	-298,036	-118,711	-1,248	-1,585,338
Remeasurement of the net defined benefit liability in equity (other comprehensive income) = actuarial gains (+) and losses (-) of the ongoing business year	144,939	27,659	23,585	8	196,191
Remeasurement of the net defined benefit liability in equity	-1,022,404	-270,377	-95,126	-1,240	-1,389,147

26.9 Net defined benefit liability

	VersTV (Pensions)	ÜVersTV (Transitional payments)	KTV (Insurance)	Other	Total
31 Dec 2016	€'000	€'000	€'000	€'000	€'000
As at 1 Jan 2016	1,098,243	411,495	201,018	5,617	1,716,373
Expenses in income statement	118,392	58,207	6,772	246	183,617
Retirement benefits paid	-8,268	-5,496	-6,298	-596	-20,658
Employer contributions	-88,968	-33,134	0	0	-122,102
Remeasurement of the net defined benefit liability in equity (other comprehensive income) = actuarial gains (-) and losses (+) of the ongoing business year	468,152	69,111	18,490	291	556,044
Net defined benefit liability	1,587,551	500,183	219,982	5,558	2,313,274
31 Dec 2017	€'000	€'000	€'000	€'000	€'000
As at 1 Jan 2017	1,587,551	500,183	219,982	5,558	2,313,274
Expenses in income statement	144,445	63,841	5,811	209	214,306
Retirement benefits paid	-7,466	-9,972	-6,559	-480	-24,477
Employer contributions	-83,649	-39,468	0	0	-123,117
Remeasurement of the net defined benefit liability in equity (other comprehensive income) = actuarial gains (-) and losses (+) of the ongoing business year	-144,939	-27,659	-23,585	-8	-196,191
Net defined benefit liability	1,495,942	486,925	195,649	5,279	2,183,795

26.10 Balance sheet amounts

	VersTV (Pensions)	ÜVersTV (Transitional payments)	KTV (Insurance)	Other	Total
	€'000	€'000	€'000	€'000	€'000
31 Dec 2016					
Present value of defined benefit obligations	3,222,410	1,096,877	240,744	5,558	4,565,589
Fair value of plan assets	1,634,859	596,694	20,762	0	2,252,315
Funding status obligation (+) and asset (-)	1,587,551	500,183	219,982	5,558	2,313,274
Amount not recognised as assets (IAS 19.64)	0	0	0	0	0
Net amount of debt items (+) and asset items (-) in the balance sheet	1,587,551	500,183	219,982	5,558	2,313,274
31 Dec 2017					
Present value of defined benefit obligations	3,263,720	1,122,068	215,702	5,279	4,606,769
Fair value of plan assets	1,767,778	635,143	20,053	0	2,422,974
Funding status obligation (+) and asset (-)	1,495,942	486,925	195,649	5,279	2,183,795
Amount not recognised as assets (IAS 19.64)	0	0	0	0	0
Net amount of debt items (+) and asset items (-) in the balance sheet	1,495,942	486,925	195,649	5,279	2,183,795

26.11 Expenses and income recognised in the statement of comprehensive income

	VersTV (Pensions)	ÜVersTV (Transitional payments)	KTV (Insurance)	Other	Total
	€'000	€'000	€'000	€'000	€'000
31 Dec 2016					
Interest expense	62,584	22,793	5,258	131	90,766
Projected return on plan assets	-37,493	-13,527	-507	0	-51,527
Net interest expense	25,091	9,266	4,751	131	39,239
Current service cost	93,187	48,941	2,021	115	144,264
Past service cost	0	0	0	0	0
Expenses in income statement	118,278	58,207	6,772	246	183,503
Reversal of the provision for past service cost					-6,065
Interest income from capitalised value					-28
Contributions to the German mutual insurance association					0
Payments to defined contribution plans					36,492
- of which contributions to pension insurance					33,371
					213,902
31 Dec 2017					
Interest expense	54,386	18,308	4,029	92	76,815
Projected return on plan assets	-28,238	-10,274	-346	0	-38,858
Net interest expense	26,148	8,034	3,683	92	37,957
Current service cost	118,297	55,807	2,128	117	176,349
Past service cost	0	0	0	0	0
Expenses in income statement	144,445	63,841	5,811	209	214,306
Reversal of the provision for past service cost					-6,065
Interest income from capitalised value					-61
Contributions to the German mutual insurance association					2,510
Payments to defined contribution plans					36,030
- of which contributions to pension insurance					33,836
					246,720

27 Other provisions

	As at 1 Jan 2017	Utilisation	Reversal	Discounting	Additions	As at 31 Dec 2017	Remaining term more than 1 year
	€'000	€'000	€'000	€'000	€'000	€'000	€'000
Over-recovery of charges	136,172	-29,641	0	0	103,343	209,874	124,625
Personnel	29,728	-3,324	-151	225	8,650	35,128	25,086
Re-conversion	18,534	-94	0	-380	0	18,060	17,309
Leasehold	19,119	-579	-28	-1,898	0	16,614	15,995
Preserving records	10,289	-908	0	-38	1,055	10,398	9,511
Restructuring	1,738	0	0	0	0	1,738	0
Miscellaneous	9,501	-1,096	-495	0	2,350	10,260	0
	225,081	-35,642	-674	-2,091	115,398	302,072	192,526

The provision for over-recovery of charges relates to the over-recovery for the past service cost still to be allocated over six years.

For the en-route cost unit, a regulated procedure for determining charges has been in force since 2012. Across Europe, the respective national supervisory authorities lay down binding unit rates according to EU regulations. Consequently, traffic volume and cost changes impact profit and loss. If the values fall short, the DFS Group is authorised and obliged to demand any under-recovery and if the values exceed the relevant thresholds, it is authorised and obliged to return any over-recovery (carry-over). In 2015, the terminal services cost unit was shifted to a performance-based form of regulation. The charges are set by means of a statutory instrument of the Federal Government. For the en-route cost unit, the chances and risks resulting from the differences between planned and actual traffic volume are split between the airspace users and the Group.

The DFS Group participated in several bidding rounds in targeted investments in air traffic management under one of the EU funding programmes. From these grant programmes of the Connecting Europe Facility (CEF), the Group acquired grant funding to foster SESAR implementation projects over various terms until 2023. The DFS Group plans to use the grant funding to reduce air navigation services charges and includes the funding in the over-recovery of charges. Grant funding is recognised as accruals and recorded in profit or loss over the useful lives of the underlying property, plant and equipment.

Personnel provisions comprise provisions for early retirement, partial retirement, anniversary payments and recuperation cures (treatments) for air traffic controllers. Actuarial reports are available for early retirement, partial retirement and anniversary obligations.

Up until now, partial retirement obligations were recognised based on individual contractual agreements. The contributions were placed in a fiduciary account. With effect from 1 April 2017, DFS concluded a new collective agreement covering partial retirement with the air navigation services union (GdF) based on the so-called 'block model'. The work to be done over the entire period of the employment relationship under partial retirement is split in such a way that it is carried out in the first half, or block (working phase, *Beschäftigungsphase*). In the second half, or block, the employee is released from work and paid proportionally. The DFS Group recognises provisions for the release phase. Partial retirement obligations are based on a discount rate as at 1 January 2018 of 1.80 percent (previous year: 3.23 percent) and a salary trend of 2.50 percent (previous year: 2.50 percent).

The provisions for lease interest (for a heritable building right) relate to payment obligations to the (German) Protestant Church (*Evangelische Kirchengemeinde*) concerning land, and the building upon it, in Berlin Schönefeld, which is not used operationally. The heritable building right (*Erbbaurecht*) has a term until 31 December 2041.

The provision for restructuring relates to personnel (severance payments) and infrastructural measures (re-conversion obligations) in connection with operational units to be closed where no future economic benefits are expected.

Due dates of future non-discounted settlement values						
	2018	2019	2020	2021	2022	From 2023
	€'000	€'000	€'000	€'000	€'000	€'000
Over-recovery of charges	85,249	96,125	6,065	6,065	0	16,369
Personnel	10,042	6,156	1,417	1,416	1,416	14,681
Re-conversion	751	0	0	3,300	0	15,236
Leasehold	619	632	644	657	671	13,769
Preserving records	887	904	987	996	992	5,877
Restructuring	1,738	0	0	0	0	0
Miscellaneous	9,885	0	0	0	0	0
	109,546	103,817	9,113	12,434	3,079	65,932

Discount rates (in %) distributed over the respective remaining terms in years						
	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7
2017	-0.45	-0.35	-0.25	-0.05	0.15	0.25
2016	-0.48	-0.46	-0.38	-0.26	-0.09	0.07
	7 to 8	8 to 9	9 to 10	11 to 15	15 to 30	
2017	0.47	0.57	0.68	0.66	1.28	
2016	0.17	0.32	0.46	0.45	1.02	

Due to the change in the discount rates, the discounted provisions decreased by €544 thousand (previous year: rise of €1,153 thousand) and the interest expense improved by €518 thousand (previous year: decline of €1,085 thousand) in comparison with the application of the previous year's rates.

28 Financial liabilities

	31 Dec 2017	31 Dec 2017	31 Dec 2016	31 Dec 2016
	Total	Remaining term more than 1 year	Total	Remaining term more than 1 year
	€'000	€'000	€'000	€'000
Bonds	25,000	0	25,000	25,000
Debenture loans	197,500	197,500	285,000	285,000
QTE transaction	41,850	34,954	55,071	47,614
Derivative financial instruments	1,320	0	791	0
Financial debt from the capital investments of the investment entity	856	0	601	0
Finance lease liabilities	0	0	15	0
	266,526	232,454	366,478	357,614

Bonds and debenture loans						
Term	Currency	Nominal value	Nominal interest rate	Effective interest rate	31 Dec 2017	31 Dec 2016
		€'000			€'000	€'000
2003 to 2018	EUR	25,000	4.840%	4.840%	25,000	25,000
Bonds		25,000			25,000	25,000
2010 to 2017	EUR	87,500	2.564%		0	87,500
2010 to 2020	EUR	87,500	3.007%		87,500	87,500
2013 to 2023	EUR	110,000	2.308%		110,000	110,000
Debenture loans		285,000			197,500	285,000

The DFS Group repaid €87.50 million to investors for a debenture loan that had fallen due in October 2017.

The QTE transaction with foreign investors was basically terminated. DFS agreed with the remaining contracting parties to keep up the domestic cash flows (for additional disclosures on the QTE transaction see Note 21).

More disclosures on the capital contribution through the investment entity can be found in Note 23.

Future minimum lease payments from finance lease liabilities				
	Up to 1 year	1 to 5 years	More than 5 years	Total
31 Dec 2017	€'000	€'000	€'000	€'000
Future minimum lease payments	0	0	0	0
Interest component	0	0	0	0
Finance lease liabilities (present value)	0	0	0	0
31 Dec 2016	€'000	€'000	€'000	€'000
Future minimum lease payments	15	0	0	15
Interest component	0 ⁸⁾	0	0	0
Finance lease liabilities (present value)	15	0	0	15

⁸⁾ Under €1 thousand

29 Trade payables

	31 Dec 2017	31 Dec 2017	31 Dec 2016	31 Dec 2016
	Total	Remaining term more than 1 year	Total	Remaining term more than 1 year
	€'000	€'000	€'000	€'000
Germany	9,962	27	20,155	0
Abroad	8,342	0	3,760	0
Creditors with debit balances	16,666	0	6,422	0
Amounts withheld	2,411	731	878	593
Maastricht unit	0	0	99	0
	37,381	758	31,314	593

Trade payables in foreign currencies amount to €932 thousand (previous year: €175 thousand) on the balance sheet date. Due to the low impact on the results (less than €15 thousand), there was no currency valuation.

Trade payables are regularly secured by means of reservation of title clauses until payment is made in full.

30 Other liabilities

	31 Dec 2017	31 Dec 2017	31 Dec 2016	31 Dec 2016
	Total	Remaining term more than 1 year	Total	Remaining term more than 1 year
	€'000	€'000	€'000	€'000
Staff costs	26,228	0	30,635	0
Outstanding invoices	8,802	0	9,743	0
Interest payable	4,833	0	5,679	0
Share of en-route charges: German Meteorological Service	953	0	2,193	0
Amounts owed to Shareholder	3,365	0	462	0
Liabilities to investments	2,389	0	709	0
Liabilities from the capital investments of the investment entity	463	0	250	0
Remaining	1,480	0	873	0
Other liabilities (financial)	48,513	0	50,544	0
Staff costs	24,757	0	22,416	0
Amounts owed to tax authorities	14,453	0	20,213	0
Remaining	24,066	19,873	11,535	5,674
Other liabilities (non-financial)	63,276	19,873	54,164	5,674
	111,789	19,873	104,708	5,674

Offsetting of financial assets and liabilities			
	Financial assets (+)	Financial liabilities (-)	Assets (+) and liabilities (-) as reported on the balance sheet
	€'000	€'000	€'000
31 Dec 2017			
Shareholder	3,661	-7,026	3,365
Investments			
FCS	71	-2,446	-2,375
GroupEAD	42	-47	-5
BILSODA	0	-9	-9
31 Dec 2016	€'000	€'000	€'000
Shareholder	7,096	-7,558	-462
Investments			
FCS	71	-729	-658
GroupEAD	5	-28	-23
BILSODA	0	-28	-28

The fair values of the offset financial assets and liabilities correspond to their carrying amounts. The DFS Group did not receive collateral for the financial assets nor did it provide collateral for the financial liabilities.

31 Current tax assets and obligations

	Current tax assets		Income tax obligations	
	31 Dec 2017	31 Dec 2016	31 Dec 2017	31 Dec 2016
	€'000	€'000	€'000	€'000
Long-term				
Corporation tax	0	0	18,092	18,092
Trade tax	0	0	12,777	12,777
Foreign taxes	0	0	0	0
Short-term				
Corporation tax	4,886	904	0	0
Trade tax	2,156	23	0	0
Foreign taxes	46	32	100	100
Other taxes	0	103	0	0
	7,088	1,062	30,969	30,969

Non-current income tax obligations relate to provisions from the tax audit from the years 2003 to 2011.

Additional disclosures

32 Segment reporting

Segment reporting is based on the internal management and reporting systems. Commercial management and reporting have been based on cost units and contribution margins since the start of economic regulation. This enhances the transparency as well as the planning and control of the individual divisions.

Within the scope of segment reporting, the Board of Managing Directors as the chief operating decision-maker allocates company funds and assesses the performance of the operating segments. The operating result (operating EBIT) is an important performance indicator for the DFS Group. EBIT is used for resource allocation and to measure the profitability of the segments. Further data are neither collected nor communicated to the chief operating decision-makers.

Regulated business

The main business of the DFS Group (see section 1.2 in the Group management report) is the provision of air navigation services and the directly associated support activities. The DFS Group defines these activities as the 'regulated business'. This is divided into the Control Centre and Tower divisions.

Commercial business

The commercial business comprises all Group activities that are not allocated to the regulated business. The focus is on products and services offered internationally on the free market, namely air navigation services, consultancy services, the sale of air traffic control systems, as well as analysis, simulation and project management activities, and the sale of publications and energy. DFS International Business Services bundles the commercial business and ensures its successive expansion through its investments where it holds a controlling interest held directly or indirectly, namely DFS Aviation Services, Air Navigation Solutions, R. Eisenschmidt and Kaufbeuren ATM Training.

The determination of segment data is based on the following premises:

- The assets and liabilities of DFS Energy are included as part of the operating assets in the cost-base for determining charges. Consequently, in the reconciliation to the Group results, the expenses and income of DFS Energy are disclosed separately.
- Financial indicators (IFRS and HGB) are used for the planning and control of the commercial business.
- The financial result and income taxes are assigned to the business financed by air navigation charges for reasons of simplicity.

Information on the business segments by cost type				
	Regulated business	Commercial business	Consolidation/ reconciliation	Group earnings
2017	€'000	€'000	€'000	€'000
External revenues	1,140,958	79,712		1,220,670
Intersegment revenues	27,753	-13,252	-27,753	-13,252
Other operating income	15,303	1,514	-4,691	12,126
Own work capitalised / changes in inventory	25,435	-2,030		23,405
Total operating revenues and income	1,209,449	65,944	-32,444	1,242,949
Staff costs	830,041	20,238		850,279
Material costs	123,413	16,210	-238	139,385
Depreciation and amortisation	114,071	3,116	-927	116,260
Project costs	14,407			14,407
Intersegment costs		27,753	-23,561	4,192
Reconciliation			-297	-297
Total costs	1,081,932	67,317	-25,023	1,124,226
Internal results for the period	127,517	-1,373	-7,421	118,723
Carry-over current business year	-72,926			-72,926
Earnings before interest and taxes (EBIT)	54,591	-1,373	-7,421	45,797
Interest	-18,097	-533	-5,090	-23,720
Catch-up effects	-55,230		55,230	0
Income taxes ⁹⁾	4,563	4,132		8,695
Net income (+) / loss (-)	-14,173	2,226	42,719	30,772
2016	€'000	€'000	€'000	€'000
External revenues	1,158,387	52,919		1,211,306
Intersegment revenues	22,681		-22,681	0
Other operating income	22,978	452		23,430
Own work capitalised / changes in inventory	3,047	-50	23	3,020
Total operating revenues and income	1,207,093	53,321	-22,658	1,237,756
Staff costs	841,858	14,223		856,081
Material costs	88,610	13,882	118	102,610
Depreciation and amortisation	107,049	1,845		108,894
Project costs	13,269			13,269
Intersegment costs		22,681	-22,681	0
Reconciliation			-16,516	-16,516
Total costs	1,050,786	52,631	-39,079	1,064,338
Internal results for the period	156,307	690	16,421	173,418
Carry-over current business year	-42,279			-42,279
Earnings before interest and taxes (EBIT)	114,028	690	16,421	131,139
Interest	-35,995	407	-3,216	-38,804
Catch-up effects	-53,352		53,352	0
Income taxes	-7,523	118	1,657	-5,748
Net income (+) / loss (-)	17,158	1,215	68,214	86,587

⁹⁾ Of which in the commercial business €5,077 thousand deferred tax assets from a one-off effect at DFS International Business Services

Information on business segments with reconciliation from charges-related result before interest and taxes to IFRS Group earnings before interest and taxes

	EBIT 2017 €'000	EBIT 2016 €'000
Terminal services	-45,264	10,707
En-route services	93,886	94,861
Commercial business	6,938	193
Other regulated and commercial business	6,591	9,208
Earnings before interest and taxes from a charges-related perspective	62,151	114,969
Reconciliation to DFS earnings before interest and taxes under IFRS		
Occupational pensions from a charges-related perspective	106,626	85,340
Occupational pensions under IAS/IFRS	-177,341	-137,833
Change in equity relevant to charges (closing deficit)	57,698	70,168
Consolidation/reconciliation	-3,337	-1,505
Group earnings before interest and taxes under IFRS	45,797	131,139
Depreciation and amortisation	116,260	108,913
Group earnings before interest, taxes depreciation and amortisation under IFRS	162,057	240,052

Information on important external customers

	2017 €'000	2017 ln %	2016 €'000	2016 ln %
DFS total revenues ¹⁰⁾	1,122,891	100.00	1,180,486	100.00
Deutsche Lufthansa	170,167	15.15	187,087	15.85
Ryanair	65,991	5.88	63,975	5.42
Eurowings	63,102	5.62	62,509	5.30
Federal Ministry of Defence	60,015	5.34	62,530	5.30
Air Berlin	39,107	3.48	69,286	5.87
easyJet Airline	36,583	3.26	36,885	3.12
British Airways	32,134	2.86	34,853	2.95
KLM Royal Dutch Airlines	32,039	2.85	34,131	2.89
Emirates	26,369	2.35	28,143	2.38
Wizz Air Hungary	26,170	2.33	25,868	2.19

¹⁰⁾ Comprising terminal and en-route revenues as well as revenues from military operational air traffic

33 Cash flow statement

The cash flow statement shows the change in liquid funds between two balance sheet dates to show the movements in cash and cash equivalents for the DFS Group. Cash inflows and outflows are divided into operating, investing and financing activities and only show cash flows from continuing operations. There are no discontinued operations.

Short overview of the consolidated cash flow statement		
	31 Dec 2017	31 Dec 2016
	€'000	€'000
Cash inflow from operating activities	265,897	336,356
Cash outflow from investing activities	-108,894	-81,257
Cash inflow/outflow from financing activities	139,111	-25,098
Changes to cash in the business year	296,114	230,001
Cash and cash equivalents at the beginning of the year	944,247	714,246
Cash and cash equivalents at the end of the year	1,240,361	944,247

Cash inflow from operating activities was calculated using the indirect method by adjusting net income for changes in inventory, receivables, other assets and borrowings as well as depreciation and amortisation and other non-cash income and expenses. The cash flows from income taxes relate to all three of the above areas of activity. However, owing to the time that would be involved in assigning the cash flows from income taxes to the individual activities, for the purpose of the cash flow statement they were allocated to operating activities.

The DFS Group does not present the cash flows from operating activities according to the direct method (IAS 7.19).

Cash outflows from investing and financing activities are presented using the direct method.

Cash and cash equivalents at the end of the year are made up as follows:

	31 Dec 2017	31 Dec 2016
	€'000	€'000
Short-term securities	963,440	557,243
Cash in hand and cheques	40	42
Cash at bank	276,881	386,962
Cash and cash equivalents at the end of the year	1,240,361	944,247

34 Financial instruments

Financial assets by category

	Carrying amount	At fair value through profit or loss	Held-to-maturity	Loans and receivables	Available-for-sale	Fair value	Level
31 Dec 2017	€'000	€'000	€'000	€'000	€'000	€'000	
Loans to investments	2,760			2,760		2,760	3
Investments	4,121				4,121	4,121	3
Derivative financial instruments	2,306				2,306	2,306	2
Trade receivables	155,796			155,796		155,796	3
Future receivables from construction contracts	6,185			6,185		6,185	3
QTE transaction	41,042		41,042			41,042	2
Capitalised value	3,046				3,046	3,046	2
Receivables from EU grant funding	24,341			24,341		24,341	3
Interest receivables	1,463			1,463		1,463	2
Trusteeship (<i>Treuhandverein</i>)	5,918			5,918		5,918	2
Creditors with debit balances	16,666			16,666		16,666	3
Other assets of level 3	822			822		822	3
Securities	963,440				963,440	963,440	2
Liquid funds	276,921			276,921		276,921	2
	1,504,827	0	41,042	490,872	972,913	1,504,827	
31 Dec 2016	€'000	€'000	€'000	€'000	€'000	€'000	
Loans to investments	3,524			3,524		3,524	3
Investments	4,178				4,178	4,178	3
Derivative financial instruments	1,765				1,765	1,765	2
Trade receivables	167,148			167,148		167,148	3
Future receivables from construction contracts	6,774			6,774		6,774	3
Under-recovery	105			105		105	3
QTE transaction	53,856		53,856			53,856	2
Capitalised value	2,813				2,813	2,813	2
Receivables from EU grant funding	2,763			2,763		2,763	3
Interest receivables	1,718			1,718		1,718	2
Trusteeship (<i>Treuhandverein</i>)	5,743			5,743		5,743	2
Creditors with debit balances	6,427			6,427		6,427	3
Other assets of level 3	1,021			1,021		1,021	3
Securities	557,243				557,243	557,243	2
Liquid funds	387,004			387,004		387,004	2
	1,202,082	0	53,856	582,227	565,999	1,202,082	

Valuation technique

Cost approach: For loans to investments, the DFS Group assumes they can be sold for at least their carrying amounts in the short term and sets their fair values at the same level. The fair values of the investments can be calculated reliably and backed up with financial calculations. The Group values the stake in FCS using the equity method, with the total carrying amount reflecting the proportionate changes in equity.

Due to the predominately short-term nature of trade receivables, other receivables and assets as well as of liquid funds, the carrying amounts at the balance sheet date do not differ significantly from their fair values. The Group therefore assumes that these assets can be sold for at least their carrying amounts in the short term and sets their fair values at the same level.

Market approach: The fair values of securities and financial assets are determined completely or partially using recognised valuation models or the valuations of third parties based on the market conditions prevailing at the balance sheet date (interest and exchange rates) using external sources or market prices. In determining the fair value of derivatives, compensating effects from the primary transaction (pending business or anticipated transactions) are excluded.

Present value method: The fair value of the QTE transaction is determined based on discounting future expected cash flows.

Unobservable inputs

Discount rate, nominal value of investments as well as other receivables and assets

Observable inputs

Security prices, market interest rates

Relationship between inputs and fair value

The estimated fair value would increase if

- the risk-adjusted discount rate was lower
- the nominal values were higher
- the security prices were higher
- the market interest rates were higher

Reconciliation of the fair values of level 2 and 3

	Level 2	Level 3	Level 2	Level 3
	31 Dec 2017	31 Dec 2017	31 Dec 2016	31 Dec 2016
	€'000	€'000	€'000	€'000
As at 1 Jan	1,010,142	191,940	782,331	254,018
Ongoing gains (+) and losses (-)	-16,685	-7,954	5,990	-512
Gains (+) and losses (-) recognised in other comprehensive income	5,063	0	11,080	0
Additions (+) and disposals (-)	295,616	26,705	210,741	-61,566
Transfers in and out of levels	0	0	0	0
As at 31 Dec	1,294,136	210,691	1,010,142	191,940

Financial liabilities by category with disclosures on fair value

	Carrying amount	At fair value through profit or loss	Amortised cost	Fair value	Level
31 Dec 2017	€'000	€'000	€'000	€'000	
Bonds	25,000		25,000	25,113	1
Debenture loans	197,500		197,500	216,203	2
QTE transaction	41,850		41,850	41,850	2
Derivative financial instruments	1,320	1,320		1,320	2
Financial debt from the capital investments of the investment entity	856		856	856	2
Trade payables	37,381		37,381	37,381	3
Staff costs	26,228		26,228	26,228	3
Amounts owed to Shareholder	3,365		3,365	3,365	3
Liabilities to investments	2,389		2,389	2,389	3
Outstanding invoices	8,802		8,802	8,802	3
Interest payable	4,833		4,833	4,833	2
Liabilities from the capital investments of the investment entity	463		463	463	3
Share of charges: German Meteorological Service	953		953	953	3
Remaining financial liabilities	1,480		1,480	1,480	3
	352,420	1,320	351,100	371,236	
31 Dec 2016	€'000	€'000	€'000	€'000	
Bonds	25,000		25,000	26,346	1
Debenture loans	285,000		285,000	311,386	2
QTE transaction	55,071		55,071	55,071	2
Derivative financial instruments	791	791	791	791	2
Financial debt from the capital investments of the investment entity	601		601	601	2
Finance leases	15		15	15	3
Trade payables	31,314		31,314	31,314	3
Staff costs	30,635		30,635	30,635	3
Amounts owed to Shareholder	462		462	462	3
Liabilities to investments	709		709	709	3
Outstanding invoices	9,743		9,743	9,743	3
Interest payable	5,679		5,679	5,679	2
Liabilities from the capital investments of the investment entity	250		250	250	3
Share of charges: German Meteorological Service	2,193		2,193	2,193	3
Remaining financial liabilities	873		873	873	3
	448,336	791	448,336	476,068	

Valuation technique

Cost approach: Due to the predominately short-term nature of trade payables and other liabilities, the carrying amounts at the balance sheet date do not differ significantly from their fair values. The DFS Group assumes that the fair values of these liabilities are at least equal to the settlement value from a current obligation.

Market approach: The fair values of debenture loans and financial debt are determined completely or partially using recognised valuation models or the valuations of third parties based on the market conditions prevailing at the balance sheet date (interest and exchange rates) using external sources or market prices. In determining the fair value of derivatives, compensating effects from the primary transaction (pending business or anticipated transactions) are excluded. The fair value of the bonds is determined using market listings on public markets.

Present value method: The fair value of finance leases and the QTE transaction is determined by discounting future expected cash flows using prevailing market interest rates.

Unobservable inputs

Discount rate, settlement value of other liabilities and liabilities

Observable inputs

Exchange prices, exchange rates, market interest rates

Relationship between inputs and fair value

The estimated fair value would increase if

- the risk-adjusted discount rate was lower
- the settlement values were higher
- the exchange prices were higher
- the exchange rates were higher
- the market interest rates were higher

Reconciliation of the fair values of level 2 and 3

	Level 2	Level 3	Level 2	Level 3
	31 Dec 2017	31 Dec 2017	31 Dec 2016	31 Dec 2016
	€'000	€'000	€'000	€'000
As at 1 Jan	373,528	76,194	541,926	70,015
Ongoing gains (+) and losses (-)	0	0	568	0
Gains (+) and losses (-) recognised in other comprehensive income	0	0	0	0
Additions (+) and disposals (-)	-108,466	4,867	-168,966	6,179
Transfers in and out of levels	0	0	0	0
As at 31 Dec	265,062	81,061	373,528	76,194

Assets (+) and liabilities (-) at fair value				
	As at 1 Jan	Change in value 2017	Cumulative change in value	As at 31 Dec
31 Dec 2017	€'000	€'000	€'000	€'000
Futures	1,765	541	2,306	2,306
Futures	-791	-529	-1,320	-1,320
	974	12	986	986
31 Dec 2016	€'000	€'000	€'000	€'000
Futures	0	1,765	1,765	1,765
Interest rate swap 918388L	899	-899	-899	0
Futures	0	-791	-791	-791
Interest rate swap 918135L	-568	568	568	0
	331	643	643	974

The Group determines the net results by measurement category for financial instruments that were recognised and measured at the reporting date:

- At fair value through profit or loss: The net loss is made up of the remeasurement of the interest rate swaps used at market prices and the resulting interest expenses.
- Held-to-maturity: The net gain relates to the interest income of the interest-bearing receivable (fixed) from the remaining QTE transaction.
- Loans and receivables: The net result includes interest income from customer receivables, fixed-rate loans to associated companies and current account balances with fixed interest rates. The result considers the proportionate gains and losses from capital investments of the investment entity. Allowances for doubtful accounts and the write-off of trade receivables reduce the net result. In addition, the result contains the incidental costs and administration fees of credit institutions.
- Available-for-sale: The net result is made up of the proportionate gains and losses from current measurement, administration, disposals and currency translation from the capital investment of the investment entity. In addition, income from investments is included.
- Amortised cost: The net result is made up of the income from currency translation of the foreign loan and the incidental costs and administration fees of credit institutions. In addition, the interest expense for the loan, the debenture loans, the QTE liability, the suppliers and the finance leases are recognised.

Net results of financial instruments by measurement category					
	Assets				Liabilities
	At fair value through profit or loss	Held-to-maturity	Loans and receivables	Available-for-sale	Amortised cost
31 Dec 2017	€'000	€'000	€'000	€'000	€'000
Income (+) from investments				603	
Losses (-) from foreign currency translation			-1,234	-16,389	
Gains (+) and losses (-) from remeasurement			68	909	
Gains (+) and losses (-) from disposals			1,818	24,153	
Expenses (-) from impairments			-7,965	-183	
Interest income (+)		1,354	1,190	7,525	
Interest expense (-)			-1	-13	-9,219
Other financial expenses (-)			-909	-1,602	-268
Gains (+) and losses (-)	0	1,354	-7,033	15,003	-9,487
Recognised directly in other comprehensive income	0	0	0	5,063	0
31 Dec 2016	€'000	€'000	€'000	€'000	€'000
Income (+) from investments				296	
Income (+) from foreign currency translation			59	1,127	691
Gains (+) and losses (-) from remeasurement	-331		48	920	
Gains (+) and losses (-) from disposals			44	833	
Expenses (-) from impairments			-3,607	-5	
Interest income (+)		1,512	833	3,670	59
Interest expense (-)	-368		0	-2	-10,056
Other financial expenses (-)			-627	-759	-234
Gains (+) and losses (-)	-699	1,512	-3,250	6,080	-9,540
Recognised directly in other comprehensive income	0	0	0	11,079	0

The expenses from impairments and other financial expenses are reported under other operating expenses. All other expenses and income are allocated to the financial result.

35 Derivative financial instruments

The DFS Group is exposed to market risks in the form of interest and currency fluctuations (see Note 36 and section 6.2.2 in the Group management report). The Group uses derivative financial instruments to manage these risks.

In addition, the DFS Group is exposed to default risk. To minimise this risk, it concludes derivative transactions exclusively with its principal bankers, who have good credit ratings.

Speculative transactions with derivative instruments where there is no underlying transaction are forbidden.

Derivative financial instruments					
	Remaining term	Nominal volume	Fair value	Nominal volume	Fair value
		31 Dec 2017	31 Dec 2017	31 Dec 2016	31 Dec 2016
		€'000	€'000	€'000	€'000
Positive fair value					
Futures and interest rate swaps	Up to 1 year	2,306	2,306	1,765	1,765
		2,306	2,306	1,765	1,765
Negative fair value					
Futures	Up to 1 year	-1,320	-1,320	-791	-791
		-1,320	-1,320	-791	-791

The futures were concluded as part of the capital investments through the investment entity and are due by Mach 2018 at the latest.

36 Financial risks

Financial risks arise in the form of liquidity risks, default risks and market price risks. The DFS Group provides disclosures in the Group management report in section 6.2.2 on the required qualitative disclosures under IFRS 7 about the type and means by which risks from financial instruments arise as well as the procedures for the management of these risks.

36.1 Liquidity risks

Liquidity risk describes the risk that the DFS Group may not be in the position to settle its financial liabilities as contractually required through the delivery of cash or other financial assets.

Maturities of undiscounted principal and interest payments from financial liabilities					
	Up to 3 months	4 to 12 months	1 to 5 years	More than 5 years	Total
31 Dec 2017	€'000	€'000	€'000	€'000	€'000
Non-derivative financial liabilities					
Bonds	25,000	0	0	0	25,000
Debenture loans	0	0	87,500	110,000	197,500
Interest	3,749	2,631	15,417	2,539	24,336
QTE transaction	6,896	0	34,954	0	41,850
Financial debt from the capital investments of the investment entity	856	0	0	0	856
Trade payables	35,222	1,401	758	0	37,381
Other liabilities	41,070	7,443	0	0	48,513
Derivative financial liabilities					
Derivatives	1,320	0	0	0	1,320
	114,113	11,475	138,629	112,539	376,756
31 Dec 2016	€'000	€'000	€'000	€'000	€'000
Non-derivative financial liabilities					
Bonds	0	0	25,000	0	25,000
Debenture loans	0	0	175,000	110,000	285,000
Interest	3,749	4,875	19,258	5,078	32,960
QTE transaction	7,457	0	25,355	22,259	55,071
Financial debt from the capital investments of the investment entity	0	601	0	0	601
Finance lease liabilities	10	5	0	0	15
Trade payables	29,072	1,649	593	0	31,314
Other liabilities	42,332	8,212	0	0	50,544
Derivative financial liabilities					
Derivatives	791	0	0	0	791
	83,411	15,342	245,206	137,337	481,296

36.2 Default risks

The DFS Group is exposed to default risks from financial receivables that result from the possible default on the obligations of a party to a contract. The maximum value equals the positive fair value or market value of the financial instrument.

Default risk by category	31 Dec 2017 €'000	31 Dec 2016 €'000
At fair value through profit or loss	0	0
Held-to-maturity	41,042	53,856
Loans and receivables	490,872	582,227
Available-for-sale	972,913	565,999
	1,504,827	1,202,082

With the exception of trade receivables, there are no financial assets that were overdue or impaired. Trade receivables were written down to the amount that could be recovered as soon as information on the insolvency of customers was available. The Group demands security deposits from customers with relevant sales volumes when defined warning thresholds are exceeded. In addition, there are no indications that the debtors whose receivables are overdue will not be able to fulfil their obligations.

As regards financial investing, the Group only enters into transactions with counterparties who either have a long-term rating of at least A+ (Standard & Poor's) or A1 (Moody's), short-term A-2 (Standard & Poor's) or P-2 (Moody's), or a correspondingly high creditworthiness or other form of collateral.

Business dealings with a select group of principal bankers are conducted using uniform standards and existing reciprocal cash flows are continuously improved.

36.3 Market risks

Market risk is defined as the risk that the fair values or future cash flows of a primary or derivative financial instrument change due to fluctuations in market prices (interest rate risk and currency risk). Interest rate risk arises primarily when refinancing with variable rates. Currency risks result from exchange rate fluctuations for transactions in foreign currencies.

Interest rate risk for financial liabilities	31 Dec 2017 Nominal value €'000	31 Dec 2017 Nominal value €'000
Fixed-rate bonds	25,000	25,000
Fixed-rate debenture loans	197,500	285,000
	222,500	310,000

Net risk by currency				
	31 Dec 2017 Nominal value	31 Dec 2017 Value at reporting date	31 Dec 2016 Nominal value	31 Dec 2016 Value at reporting date
	\$'000	€'000	\$'000	€'000
Primary transactions	1,205	1,016	304	278
Derivative financial instruments	0	0	0	0
Planned hedges	0	0	0	0
	£'000	€'000	£'000	€'000
Primary transactions	1	1	0 ¹¹⁾	0 ¹¹⁾
Derivative financial instruments	0	0	0	0
Planned hedges	0	0	0	0
	CHF'000	€'000	CHF'000	€'000
Primary transactions	10	9	2	2
Derivative financial instruments	0	0	0	0
Planned hedges	0	0	0	0

¹¹⁾ Under £1 thousand or €1 thousand

The value-at-risk analysis conducted determines the currency and interest risk, which is based on a sensitivity model used for internal planning and control. The analysis shows the loss which will not be exceeded with a probability of 95.00 percent when the holding period is ten days.

Value-at-risk				
	31 Dec 2017 Foreign exchange risk €'000	31 Dec 2017 Interest rate risk €'000	31 Dec 2016 Foreign exchange risk €'000	31 Dec 2016 Interest rate risk €'000
By currency				
USD (\$)	25	0	11	0
EUR	0	1,130	0	2,706
By line item				
Money market	0	26	0	116
Capital market	0	1,151	0	2,794
Hedge	25	3	11	1
Overall risk	Value at year end €'000	Highest value €'000	Lowest value €'000	Annual average €'000
2017	1,121	3,817	709	1,873
2016	2,707	3,488	423	1,311

Foreign exchange risks that impact the balance sheet arise due to monetary items that are not in the functional currency. As the primary monetary financial instruments are held mainly in the

functional currency or converted into the functional currency by means of derivatives, changes in exchange rates therefore have no material impact on the result or equity.

Interest rate risk results mainly from the sensitivity of financial instruments. Liquidity is ensured by means of money market and capital market programmes with long maturities that have fixed and variable interest rates. The use of derivative financial instruments, such as interest rate swaps and cross-currency interest rate swaps, secures fixed interest rates and thus limits interest rate risk. The changes in interest rates therefore have no material impact on the result or equity.

The obligation and plan assets for DFS Group occupational pensions are exposed to interest rate risk. The discount rate for pensions and similar obligations is based on the market yields for high-quality fixed-rate corporate bonds. The continued decline in the level of interest rates would lead to a further increase in the obligation. The low returns that can currently be earned on the market mean that the pension plan assets cannot yield substantial income, which reduces the speed at which the assets for occupational pensions may grow.

37 Capital management

As regards commercial considerations, the capital of the Group is managed first of all from a charges-related/regulatory perspective (for further disclosures see section 2.6.3.1 in the Group management report). This perspective takes additional elements into account when contrasted with the accounting principles under IAS/IFRS (for further disclosures see section 2.2.2 in the Group management report):

- Consideration of the catch-up effects from the conversion to IAS/IFRS not included in the financial statements
- Inclusion of the model to finance occupational pensions approved by the regulatory authority
- Law on the Implementation of the Mutual Assistance Directive as well as on the Change to Tax Regulations (*Amtshilferichtlinie-Umsetzungsgesetz*)
- Integration of DFS Energy
- Integration of the commercial business
- Consideration of uncontrollable costs.

The integration of the commercial business improves the quality of the information about intra-Group relationships and allows a transparent separation between the regulated and commercial business. The commercial business should make an above-average contribution to net income and the build-up of equity as its profits are not subject to regulation.

The 'regulated' perspective includes the future flow of charges approved by the supervisory authorities and delivers a clear picture of the capital structure, debts and cash flows. Assets and liabilities that are subject in full or in part to economic regulation are transferred to a regulatory asset base, i.e. an accounting of the results and financial position from the perspective of economic regulation.

This view of the DFS Group is supported by the supplement to Section 31b(3) of the German Aviation Act (LuftVG). This regulation obliges the Group to determine its taxes based on the charges-related result.

37.1 Reconciliation and indicators of the regulated business

Reconciliation of the regulated equity		
	31 Dec 2017	31 Dec 2016
	€'000	€'000
Group equity recognised on the balance sheet	-681,304	-1,127,625
Catch-up effects not yet accounted for	264,478	325,773
Deferred taxes on this amount	-3,346	-2,967
Occupational pensions from a charges-related perspective	1,304,067	1,377,798
Change in equity relevant to charges (closing deficit)	297,124	393,178
Consolidation/reconciliation	-12,245	-8,751
Regulated equity	1,168,774	957,406

Indicators of the regulated business		
	31 Dec 2017	31 Dec 2016
	€'000	€'000
Equity ratio	28.50%	23.76%
Return on equity	2.63%	9.04%
Net income	30,772	86,587
EBIT	45,797	131,139
Borrowings	2,932,532	3,071,824
Debt ratio	71.50%	76.24%
Return on total assets	0.76%	2.15%
Leverage ratio	-23.74%	-14.34%
Liquid funds	276,921	387,004
Short-term securities	963,440	557,243
Non-current financial liabilities	232,454	357,614
of which QTE transaction	34,954	47,614
Current financial liabilities	34,072	8,864
of which QTE transaction	6,896	7,457
Financial net assets (+)	973,835	577,769

The assessment of the consolidated financial risks of the DFS Group is given by the rating awarded by the rating agencies.

Ratings			
	Long-term	Short-term	Outlook
Standard & Poor's	AAA	A-1+	Stable
Moody's	Aa3	P-1	Stable

38 Contingent liabilities and other financial obligations

38.1 Contingent liabilities

Maturities of sureties					
	Up to 1 year	1 to 5 years	More than 5 years	Indefinite term	Total
	€'000	€'000	€'000	€'000	€'000
2017	109	499	0	275	883
2016	329	499	0	245	1,073

No provisions were recognised for the obligations shown because the risk of use was deemed to have a low probability. There are no uncertainties as regards the amount or maturity of the contingent liabilities.

Sureties relate to guarantees for prepayments, warranties, contract fulfilment and tender guarantees for simulation, radar data and air navigation facilities. At the end of the business year, there were no obligations for the issuance or endorsement of guarantees covering bills of exchange and cheques.

38.2 Other financial obligations

Due dates of other financial obligations				
	Up to 1 year	1 to 5 years	More than 5 years	Total
31 Dec 2017	€'000	€'000	€'000	€'000
Intercompany credit lines to associated companies	1,500	0	0	1,500
of which taken up	0	0	0	0
Capital expenditure commitments for the acquisition of				
intangible assets	15,588	47,206	2,325	65,119
property, plant and equipment	39,324	31,186	2,184	72,694
other	53,832	69,619	962	124,413
Rental, leasing, tenancy, maintenance	7,257	9,493	4,894	21,644
Bank guarantee	0	10,000	0	10,000
	117,501	167,504	10,365	295,370

Due dates of other financial obligations				
	Up to 1 year	1 to 5 years	More than 5 years	Total
31 Dec 2016	€'000	€'000	€'000	€'000
Intercompany credit lines to associated companies	1,500	0	0	1,500
of which taken up	0	0	0	0
Capital expenditure commitments for the acquisition of				
intangible assets	16,319	38,295	3,130	57,744
property, plant and equipment	44,062	12,411	2,845	59,318
other	57,463	45,101	1,311	103,875
Rental, leasing, tenancy, maintenance	8,679	10,915	6,508	26,102
Bank guarantee	0	10,000	0	10,000
	128,023	116,722	13,794	258,539

No provisions were recognised for the obligations shown because the risk of use was deemed to have a low probability. No uncertainties exist as regards the amount or maturity of the other financial obligations.

To cover liquidity needs, the associated company was granted an intercompany credit line which can be taken up daily as part of the cash pool. By doing so, the Group optimises its conditions for cash investments and loans and exploits the advantages of a central, systematic financial planning.

Capital expenditure obligations relate to the contractual obligations for the purchase of intangible assets as well as property, plant and equipment.

39 Contingent assets

There are two separate abstract acknowledgements of debt (*abstrakte Schuldanerkenntnisse* – a standard German law acknowledgement of a borrower’s indebtedness) between DFS and FCS:

Effective from	26 April 2006	29 September 2008 and 6 October 2008, respectively
Collateral	Registration of a charge	Registration of a charge
Legal basis	Section 1 LuftfzG (Law on Rights regarding Aircraft – <i>Gesetz über Rechte an Luftfahrzeugen</i>)	Section 1 LuftfzG (Law on Rights regarding Aircraft – <i>Gesetz über Rechte an Luftfahrzeugen</i>)
Beneficiary	DFS	DFS
Object	Hawker Beechcraft Super King Air 350	Hawker Beechcraft Super King Air 350
Serial number	FL-473 D-CFMD	FL-626 D-CFME
Local Court	Braunschweig	Braunschweig
Registration	22 August 2006	16 September 2009
Basis	Loan agreement dated March 2006	Loan agreement dated September 2008 / October 2008
Parties to the contract	DFS IBS and FCS	DFS IBS and FCS
Loan 1	€5.50 million for the aeroplane FL-473 D-CFMD with a term until 31 December 2022	€4.30 million for the aeroplane FL-626 D-CFME with a term until 31 December 2025
Loan 2	€3.00 million for the flight inspection system (type Aerodata AeroFIS) with a term until 31 December 2016	€1.70 million for the flight inspection system (type Aerodata AeroFIS) with a term until 30 December 2019
Miscellaneous	The loan for the aeroplane is collateralised over its entire maturity by an abstract acknowledgement of debt in favour of DFS by means of a liability of €8.50 million. €7.10 million of the volume of the loan have been taken up.	The loan for the aeroplane is collateralised over its entire maturity by an abstract acknowledgement of debt in favour of DFS by means of a liability of €6.00 million. €5.20 million of the volume of the loan have been taken up.

40 Post-balance-sheet-date events

The DFS Group saw no additional post-balance-sheet-date events of material importance, whether individually or as a group, which impact the results and financial position of the Group.

41 Auditor's fees

Total fees of the auditor under Section 314(1)(9) of the German Commercial Code (HGB)		
	31 Dec 2017	31 Dec 2016
	€'000	€'000
Audit of the annual financial statements	150	181
Other assurance services	41	31
Tax advice	0	0
Other services	4	0
	195	212

42 Service concession arrangements

Under Section 27c of the German Aviation Act (LuftVG), the DFS Group is obliged to perform its sovereign tasks (see section 1.2 in the Group management report). The details of these tasks are regulated by an indefinite framework agreement with the Federal Republic of Germany.

The law and the framework agreement authorise the Group as the current entrusted air navigation service provider to require the airports under Section 27d of the German Aviation Act (LuftVG) to:

- establish and maintain the necessary facilities and take the necessary structural measures in these facilities; make the necessary facilities available and allow cables to be laid, connected and maintained on the premises,
- enable the air navigation services personnel to use the infrastructure at aerodromes,
- ensure that the buildings and rooms made available by the aerodrome operator are provided with power, thermal energy, heating and air-conditioning; perform other utility services and ensure that waste disposal services are rendered.

In return, the DFS Group reimburses the airports for these costs. If another air navigation service provider is entrusted with these Group duties, the legal and contractual rights and obligations transfer to this air navigation service provider.

Charges levied are the main source of revenues at the DFS Group and they should cover the planned costs.

42.1 Control Centre division

Since 1 January 2012, the European Commission has regulated en-route services by means of a performance scheme for air navigation services and network functions. It has laid down performance targets and alert thresholds for the whole European Union for the areas of safety, environment, capacity and cost-efficiency for one reference period. Each reference period comprises five years. To gather experience in the introductory phase, the first reference period was limited to three years (2012-2014).

The German national supervisory authority, the Federal Supervisory Authority for Air Navigation Services (BAF), then draws up a performance plan at the national or functional airspace block level that is aligned with the performance targets of the European Union. Upon proposal of the national supervisory authorities, Member States adopt their performance plans and communicate them to the Commission. The Commission evaluates the performance plans and suggests, or takes, corrective measures.

With the start of economic regulation, the business risk for the DFS Group has risen. The cost risks that arise within a reference period impact the profits of the Group directly. However, the traffic risk is spread between the Group and the airspace users. Section 3.1.3 in the Group management report contains information on the split of risks stemming from variances in traffic volume.

The variances are determined by the Federal Supervisory Authority for Air Navigation Services (BAF) and reported to the European Commission and EUROCONTROL. EUROCONTROL checks the differences and submits the adjustments to the representatives of the Member States in the Enlarged Committee for Route Charges. This Committee prepares the adjusted unit rates for en-route services after consultation with the airspace users. These are submitted to the enlarged Commission for final approval.

The Federal Ministry of Transport and Digital Infrastructure (BMVI) publishes the unit rate for en-route services in the Federal Law Gazette on the basis of the German Ordinance on Route Charges of the Air Navigation Services (FSStrKV) and taking into consideration the EU Regulations on a common charging scheme for air navigation services.

42.2 Tower division

Since 2015, terminal services have also been subject to a regime of economic regulation. The Federal Ministry of Transport and Digital Infrastructure (BMVI) lays down a unit rate each year on the basis of the German Ordinance on Terminal Charges of the Air Navigation Services (FSAAKV) and taking into consideration the EU Regulations on a common charging scheme for air navigation services.

To this end, the DFS Group sends the national supervisory authority, the Federal Supervisory Authority for Air Navigation Services (BAF), a preliminary cost estimate for the coming year. The cost estimate is based on the costs of the last business year and the estimates of the cost development in the current and following business year. The unit rate is calculated from the quotient between the planned costs and the planned traffic volume.

43 Related party disclosures

43.1 Related parties – entities

In the normal course of business, services are also rendered to related entities. Group companies render services to the DFS Group as well. Within the Group, there are some billing agreements with reciprocal service provision charged as cost allocations. These extensive delivery and service relationships are conducted at market prices or using the cost-plus method and are no different from the business relationships with other companies.

During consolidation, the DFS Group eliminates the balances and transactions between the ultimate parent company and the consolidated subsidiaries (related parties). These are not disclosed in the Notes.

Outstanding balances			
	Shareholder	Associated companies	Investments
2017	€'000	€'000	€'000
Financial assets		4,108	2,773
Other assets	3,661	71	42
Other liabilities	-7,026	-2,446	-56
2016	€'000	€'000	€'000
Financial assets		4,872	2,830
Other assets	7,095	71	5
Other liabilities	-7,558	-729	-56

Income (+) and expenses (-)			
	Shareholder	Associated companies	Investments
2017	€'000	€'000	€'000
Revenues	78,988	476	232
Purchased services		-3,919	
Employee expenses	-8,455		
Other operating expenses		-3,379	-152
Interest income		166	
Income from investments			603
2016	€'000	€'000	€'000
Revenues	75,584	524	307
Purchased services		-2,863	
Employee expenses	-22,879		
Other operating expenses		-3,394	-141
Interest income		200	
Income from investments			296

The DFS Group maintains business relations with the sole controlling Shareholder, the Federal Republic of Germany, and with other companies controlled by it as part of the entrusted sovereign functions for air navigation services. These transactions are conducted at arm's length and are no different from the delivery and service relationships with other companies. DFS avails itself of the exemption in IAS 24.25 and does not disclose information on outstanding balances and transactions with government-related entities.

The DFS Group aims to exert material influence on the Single European Sky (SES) initiative of the European Commission as part of its strategic orientation. To this end, the Group has been an active member of the SESAR Joint Undertaking (SJU) since June 2009, along with other leading organisations. This initiative developed and updated the requirements on air traffic management networks, the most suitable technologies and procedures. Since 2014, the SESAR development process has moved to the long-term phase of technical implementation and the setting up of air traffic management (ATM) procedures (deployment management). As part of a cross-industry partnership, the DFS Group won the contract to plan, coordinate and implement a comprehensive modernisation of European airspace within the scope of the deployment management for the time period 2014 to 2020. The task is financed out of the European funding programme, where a total of roughly €3 billion is earmarked for deployment management. The Group is thus able to influence the introduction of new technologies and benefits from the considerable funding as well as from the avoidance of incorrect cost allocation and flawed capital expenditures.

43.2 List of shareholdings

List of shareholdings under Section 313(2)(4) German Commercial Code (HGB)

Consolidated companies

	Registered office	Percentage of shareholding in %	Equity €'000	Net income €'000
DFS International Business Services	Langen, Germany	100.00	34,559	916
DFS Energy	Langen, Germany	100.00	5,132	0 ¹²⁾
DFS Aviation Services	Langen, Germany	100.00	11,794	0 ¹³⁾
R. Eisenschmidt	Egelsbach, Germany	100.00	168	0 ¹³⁾
Kaufbeuren ATM Training	Kaufbeuren, Germany	100.00	100	0 ¹³⁾
Air Navigation Solutions	London, United Kingdom	100.00	£1,860 thousand	-£1,820 thousand

¹²⁾ There is a profit-and-loss transfer agreement with DFS

¹³⁾ There are profit-and-loss transfer agreements with DFS International Business Services

Associated companies and investments

	Registered office	Percentage of shareholding in %	Equity €'000	Net income €'000
Associated companies – measurement using equity method:				
FCS	Braunschweig, Germany	55.00	3,608 ¹⁴⁾	618 ¹⁴⁾
Investments – measurement using cost method:				
GroupEAD	Madrid, Spain	36.00	2,032 ¹⁴⁾	279 ¹⁴⁾
BILSODA	Pullach, Germany	24.90	2,830 ¹⁴⁾	-89 ¹⁴⁾
ESSP SAS	Toulouse, France	16.67	11,252 ¹⁴⁾	3,353 ¹⁴⁾
TATS	Madrid, Spain	50.00	1,003 ¹⁴⁾	--

¹⁴⁾ Values as at 31 December 2016

43.3 Related parties – persons

Related parties (persons) cover primarily the Board of Managing Directors, Level 1 executives, the Supervisory Board and their family members. There were no material or, in their form or character, atypical reportable transactions between the DFS Group and people in key positions of management and their close families that go beyond existing employment, service or purchasing relationships and their contractual compensation. Note 44 contains disclosures on the emoluments of the Board of Managing Directors and the Supervisory Board.

44 Organs of the parent company

44.1 Board of Managing Directors

Prof Klaus-Dieter Scheurle, Frankfurt am Main,
Chairman and Chief Executive Officer

Robert Schickling, Bad Homburg vor der Höhe,
Managing Director Operations

Dr Michael Hann, Bad Dürkheim,
Managing Director Human Resources

See section 1.3 in the Group management report for the distribution of responsibilities of the Board of Managing Directors.

Payments due in the short term for members of the Board of Managing Directors			
	Fixed components (including benefits in kind)	Performance- related components	Total emoluments
2017	€'000	€'000	€'000
Prof Klaus-Dieter Scheurle (Chairman)	353	177	530
Robert Schickling	292	155	447
Dr Michael Hann	302	155	457
	947	487	1,434
2016	€'000	€'000	€'000
Prof Klaus-Dieter Scheurle (Chairman)	356	179	535
Robert Schickling	295	156	451
Dr Michael Hann	308	156	464
	959	491	1,450

The DFS Group did not grant any advance payments, loans or benefits to members of the Board of Managing Directors or former Managing Directors on their termination. In addition, it paid no remuneration from consultancy or service contracts.

Post-employment benefits			
	Pension benefits	Pension payments	Expenses for pension benefits earned in the current year¹⁵⁾
2017	€'000	€'000	€'000
Prof Klaus-Dieter Scheurle (Chairman)	1,384	0	288
Robert Schickling	2,473	0	136
Dr Michael Hann	1,280	0	222
Former Managing Directors	14,931	769	256
	20,068	769	902
2016	€'000	€'000	€'000
Prof Klaus-Dieter Scheurle (Chairman)	1,113	0	255
Robert Schickling	2,413	0	129
Dr Michael Hann	1,085	0	347
Former Managing Directors	15,421	749	335
	20,032	749	1,066

¹⁵⁾ Service cost and interest cost

There were no other long-term benefits due or share-based compensation.

44.2 Supervisory Board

Shareholder representatives

Dr Martina Hinricher

Chairperson

Ministerialdirektorin

Federal Ministry of Transport and Digital
Infrastructure

Carmen von Bornstaedt-Radbruch

Ministerialrätin

Federal Ministry of Defence

Antje Geese

Ministerialdirigentin

Federal Ministry of Transport and Digital
Infrastructure

Andreas Hoppe

Colonel (G.S.)

Federal Ministry of Defence

Dr Angelika Kreppein

Regierungsdirektorin

Federal Ministry of Finance

Dr Edeltraud Leibrock

Consultant

(Member of Supervisory Board until
31 July 2017)

Dr Carl-Stefan Neumann

Management consultant

(Member of Supervisory Board from
1 August 2017)

Staff representatives

Markus Siebers

Deputy Chairperson

Air traffic controller

Catja Gräber

Senior expert data communication service

Volker Möller

Air traffic controller

Peter Schaaf

Chairperson Central Staff Council

Air traffic controller

Andrea Wächter

Head of Tower Branch Hamburg

Dirk Wendland

Systems engineer

In the business year, there were four scheduled ordinary meetings and one extraordinary meeting of the Supervisory Board.

Remuneration of the Supervisory Board		
	31 Dec 2017	31 Dec 2016
	€'000	€'000
Carmen von Bornstaedt-Radbruch	0.70	0.80
Antje Geese	1.00	0.60
Catja Gräber	0.80	0.80
Dr Martina Hinricher	0.80	0.90
Andreas Hoppe	0.90	0.90
Dr Angelika Kreppein	1.10	0.70
Dr Edeltraud Leibrock	0.40	0.70
Volker Möller	1.10	0.90
Dr Carl-Stefan Neumann	0.60	0.00
Peter Schaaf	0.40	0.40
Markus Siebers	0.80	1.10
Andrea Wächter	1.00	0.80
Dirk Wendland	1.00	0.60
Members who left in the previous year	0.00	0.00
	10.60	9.20

The articles of association determine the level of remuneration of the Supervisory Board. The benefits received are made up of a fee for meeting attendance of €80.00 per meeting and a daily allowance of €26.00 per meeting.

The members of the Supervisory Board received no advances, loans or remuneration from consultancy or service contracts.

45 Disclosures on the Public Corporate Governance Code (PCGK)

The DFS Group is subject to the Public Corporate Governance Code of the Federation (PCGK). The Board of Managing Directors and the Supervisory Board jointly issue a compliance statement each year and publish the corporate governance report on the website of the company.

Responsibility statement

The Board of Managing Directors of DFS Deutsche Flugsicherung GmbH issues the following statement, pursuant to Section 37y(1) of the Securities Trading Act (WpHG) in conjunction with Sections 297(2)(4), 315(1)(6) and 315a(1) of the German Commercial Code (HGB).

To the best of our knowledge, and in accordance with the applicable reporting principles, the consolidated financial statements give a true and fair view of the results and financial position of the Group, and the Group management report includes a fair review of the development and performance of the business and the position of the Group, together with a description of the principal opportunities and risks associated with the expected development of the Group.

Langen, 21 March 2018

Prof Klaus-Dieter Scheurle
Chairman and CEO

Robert Schickling
Managing Director
Operations

Dr Michael Hann
Managing Director
Human Resources

Following the result of our audit, we have issued the consolidated financial statements as at 31 December 2017 and the group management report of DFS Deutsche Flugsicherung GmbH, Langen, the following

Auditor's report*

We have audited the consolidated financial statements of DFS Deutsche Flugsicherung GmbH (DFS) – consisting of the balance sheet, statement of comprehensive income, statement of changes in equity, cash flow statement and notes to the consolidated financial statements – together with the group management report for the business year from 1 January to 31 December 2017. The preparation of the consolidated financial statements and the group management report in accordance with the IFRS to be applied within the EU and provisions to be additionally applied according to Section 315a(1) of the German Commercial Code (HGB) are the responsibility of the Company's management. Our responsibility is to express an opinion on the consolidated financial statements and on the group management report based on our audit.

We conducted our audit of the consolidated financial statements in accordance with Section 317 HGB and German generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Those standards require that we plan and perform the audit such that misstatements materially affecting the presentation of the net assets, financial position and results of operations in the consolidated financial statements in accordance with the applicable financial reporting framework and in the group management report are detected with reasonable assurance. Knowledge of the business activities and the economic and legal environment of the Group and expectations as to possible misstatements are taken into account in the determination of audit procedures. The effectiveness of the accounting-related internal control system and the evidence supporting the disclosures in the consolidated financial statements and the group management report are examined primarily on a test basis within the framework of the audit.

The audit includes assessing the annual financial statements of those entities included in the consolidation, the determination of the entities to be included in consolidation, the accounting and consolidation principles used and significant estimates made by the Company's Board of Management, as well as evaluating the overall presentation of the consolidated financial statements and the group management report. We believe that our audit provides a reasonable basis for our opinion.

Our audit has not led to any reservations.

In our opinion, based on the findings of our audit, the group financial statements comply with IFRS as adopted by the EU, the additional requirements of German commercial law pursuant to Section 315a(1) HGB and give a true and fair view of the net assets, financial position and results of operations of the Group in accordance with these requirements. The group management report is consistent with the consolidated financial statements, complies with the legal provisions, as a whole provides a suitable view of the Group's position and suitably presents the opportunities and risks of future development.

Frankfurt am Main, 21 March 2018

Mazars GmbH & Co. KG
Wirtschaftsprüfungsgesellschaft
Steuerberatungsgesellschaft

Susanne Schorse
Auditor

Martin Lächele
Auditor

*Courtesy translation; see page 3

DFS Deutsche Flugsicherung GmbH

Acronyms and abbreviations

AD	Airbus Deutschland
AfA	Official German Schedule for Deductions for Depreciation – <i>Absetzung für Abnutzung</i>
AG	Public Limited Company – <i>Aktiengesellschaft</i>
AIM	Aeronautical Information Management
AIP	Aeronautical Information Publication
AIS	Aeronautical Information Service
AmtshilfeRLUmsG	German Law on the Implementation of the Mutual Assistance Directive as well as on the Change to Tax Regulations – <i>Amtshilferichtlinie-Umsetzungsgesetz</i>
ANA	L'Administration de la Navigation Aérienne du Luxembourg (Luxembourg air navigation service provider)
ANS	Air Navigation Solutions Limited, London, United Kingdom
ANSP	Air Navigation Service Provider
AS	Aeronautical Solutions (former division of DFS)
ATC	Air Traffic Control
ATCAS	Air Traffic Control Automation System
ATM	Air Traffic Management
ATS	Air Traffic Services
AUC	Assets under Construction
ATZ-TV	Collective Agreement on Partial Retirement at DFS– <i>Altersteilzeit-Tarifvertrag</i>
AUSTRO CONTROL	Austro Control Österreichische Gesellschaft für Zivillufffahrt mbH, Vienna, Austria (Austrian air navigation service provider)
BAF	Federal Supervisory Authority for Air Navigation Services – <i>Bundesaufsichtsamt für Flugsicherung</i>
BDL	German Aviation Association – <i>Bundesverband der Deutschen Luftverkehrswirtschaft</i>
BFS	Federal Administration of Air Navigation Services – <i>Bundesanstalt für Flugsicherung</i>
BGBI	German Federal Law Gazette – <i>Bundesgesetzblatt</i>
BilReG	German Accounting Law Reform Act – <i>Bilanzrechtsreformgesetz</i>
BILSODA	BILSODA GmbH & Co. KG, Pullach, Germany
BMF	Federal Ministry of Finance – <i>Bundesministerium der Finanzen</i>
BMVg	Federal Ministry of Defence – <i>Bundesministerium der Verteidigung</i>
BMVI	Federal Ministry of Transport and Digital Infrastructure – <i>Bundesministerium für Verkehr und digitale Infrastruktur</i>
BMWi	Federal Ministry for Economic Affairs and Energy – <i>Bundesministerium für Wirtschaft und Energie</i>
CAA	Civil Aviation Authority, UK
CEF	Connecting Europe Facility
CHF	Swiss Franc
CMS	Compliance Management System
CNS	Communications, Navigation and Surveillance
Co.	Compagnie
COOPANS	CO-OPERation of Air Navigation Service Providers (International partnership between five air navigation service providers from Austria, Sweden, Ireland, Denmark and Croatia)
DAS	DFS Aviation Services GmbH, Langen, Germany
DCF	Discounted Cash Flow
de	Country Code Domain for Germany
DFS	DFS Deutsche Flugsicherung GmbH, Langen, Germany
DFS Energy	DFS Energy GmbH, Langen, Germany

DFS IBS	DFS International Business Services GmbH, Langen, Germany
DFS U-Kasse	DFS Unterstützungskasse GmbH, Langen, Germany (Benevolent Fund)
DIW	German Institute for Economic Research – <i>Deutsches Institut für Wirtschaftsforschung</i>
DLH	Lufthansa German Airlines – <i>Deutsche Lufthansa</i>
DM	Deutschmark – German Mark
DRS	Dresden International Airport
DSNA	Direction des Services de la Navigation Aérienne (French air navigation service provider)
DVOR	Doppler VHF (Very High Frequency) Omnidirectional Radio Range
DWD	German Meteorological Service – <i>Deutscher Wetterdienst</i>
EAD	European AIS Database
EAL	Edinburgh Airport Ltd.
EANPG	European Air Navigation Planning Group (ICAO)
EASA	European Aviation Safety Agency
EBIT	Earnings before Interest and Taxes
EBITDA	Earnings before Interest, Taxes, Depreciation & Amortisation
EBT	Earnings before Taxes
EC	European Community
EGNOS	European Geostationary Navigation Overlay System Services
Eisenschmidt	R. Eisenschmidt GmbH, Egelsbach, Germany
EMU	Economic and Monetary Union
ENAIRE	Entidad Pública Empresarial Aeropuertos Españoles y Navegación Aérea, Madrid, Spain (Spanish air navigation service provider)
ENAV	ENAV S.p.A. - Società Nazionale per l'Assistenza al Volo (Italian air navigation service provider)
ERP	Enterprise Resource Planning
ERF	Erfurt Weimar Airport
ESSP SAS	European Satellite Services Provider Société par Actions Simplifiée, Toulouse, France
ETV	Collective Agreement on the Grading System at DFS – <i>Eingruppierungstarifvertrag</i>
EU	European Union
EUR	Euro
EURIBOR	Euro InterBank Offered Rate
EUROCONTROL	European Organisation for the Safety of Air Navigation, Brussels, Belgium
EUROSTAT	Statistical Office of the European Union
e.V.	Registered Association – <i>eingetragener Verein</i>
FAB(EC)	Functional Airspace Block (Europe Central)
FCS	FCS Flight Calibration Services GmbH, Braunschweig, Germany
FIR	Flight Information Region
FMC	Flughafen Magdeburg-Cochstedt GmbH
FSAAKV	German Ordinance on Terminal Charges of the Air Navigation Services – <i>Flugsicherungs-An- und Abflug-Kostenverordnung</i>
FS-AuftragsV	German Regulation concerning the Commissioning of an Air Navigation Services Enterprise – <i>Verordnung zur Beauftragung eines Flugsicherungsunternehmens</i>
FS-DiensteVO	German Service Provision Regulation – <i>Flugsicherungsdienste-Verordnung</i>
FS-DurchführungsV	German Air Navigation Services Regulation – <i>Verordnung über die Durchführung der Flugsicherung</i>
FSStrKV	German Regulation on Route Charges – <i>Flugsicherungs-Streckenkostenverordnung</i>

FührposGleichberG	German Law on the Equal Participation of Women and Men in Management Positions in the Private Sector and in Public Service – <i>Gesetz für die gleichberechtigte Teilhabe von Frauen und Männern an Führungspositionen in der Privatwirtschaft und im öffentlichen Dienst</i>
GAL	Gatwick Airport Limited
GBP	Pound Sterling (£)
GdF	Air Navigation Services Union - <i>Gewerkschaft der Flugsicherung</i>
GDP	Gross Domestic Product
GEAD	GroupEAD Europe S.L., Madrid, Spain
GEAD AP	GroupEAD Asia-Pacific Ltd., Wellington, New Zealand
GmbH	Limited Liability Company – <i>Gesellschaft mit beschränkter Haftung</i>
GoB	German Principles of Proper Accounting – <i>Grundsätze ordnungsmäßiger Buchführung</i>
GPS	Global Positioning System
GroupEAD	GroupEAD Europe S.L., Madrid, Spain
HGB	German Commercial Code – <i>Handelsgesetzbuch</i>
HRB	Commercial Register B – <i>Handelsregister Abteilung B</i>
i. L.	In Liquidation
IAS	International Accounting Standards
IASB	International Accounting Standards Board
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisation
iCAS	iTEC (interoperability Through European Collaboration) Centre Automation System
ICS	Internal Control System
IDW PS	Auditing Standards (<i>Prüfungsstandards</i>) from the Institute of Public Auditors in Germany (IDW)
Ifo	Leibniz Institute for Economic Research at the University of Munich – <i>Leibniz-Institut für Wirtschaftsforschung an der Universität München e. V.</i>
IFR	Instrument Flight Rules
IFRIC	International Financial Reporting Interpretations Committee
IFRS	International Financial Reporting Standards
ISIS-XM	Improved Speech Integrated System
ISO	International Organisation for Standardisation
iTEC	interoperability Through European Collaboration
IWH	Halle Institute for Economic Research – <i>Leibniz-Institut für Wirtschaftsforschung Halle</i>
JPY	Japanese Yen
KAT	Kaufbeuren ATM Training GmbH, Kaufbeuren, Germany
KfW	Kreditanstalt für Wiederaufbau (German government-owned development bank)
KG	Partnership – <i>Kommanditgesellschaft</i>
KTV	Collective Agreement on Health and Long-term Care Insurance at DFS – <i>Kranken- und Pflegeversicherungstarifvertrag</i>
LBA	Federal Aviation Office - <i>Luftfahrt-Bundesamt</i>
LEJ	Leipzig Halle Airport
Ltd.	Limited
LufABw	German Military Aviation Authority – <i>Luftfahrtamt der Bundeswehr</i>
LuftfzG	German Law on Rights regarding Aircraft – <i>Gesetz über Rechte an Luftfahrzeugen</i>
LuftVG	German Aviation Act – <i>Luftverkehrsgesetz</i>
LuftVStAbsenkV	German Ordinance on Decreasing the Air Transport Tax – <i>Luftverkehrsteuer-Absenkungsverordnung</i>
LuftVStFestV	German Law Laying Down German Air Transport Tax – <i>Luftverkehrsteuer-Festlegungsverordnung</i>
LuftVStG	German Air Transport Tax – <i>Luftverkehrsteuergesetz</i>

MaRS	Modernisation and Replacement of Surveillance Infrastructure (at DFS)
MTV	Collective Framework Agreement at DFS– <i>Manteltarifvertrag</i>
MUAC	Maastricht Upper Area Control Centre
n	Represents the Current Business Year
No.	Number
NATS	National Air Traffic Services, United Kingdom (UK air navigation service provider)
NORACON	NORth European and Austrian CONSortium (International consortium of nine air navigation service providers from Austria, Denmark, Estonia, Finland, Iceland, Ireland, Norway and Sweden)
NORD/LB	Norddeutsche Landesbank (<i>Landesbank</i> of Lower Saxony and Saxony-Anhalt)
NOTAM	Notice to Airmen
NZD	New Zealand Dollar
OAT	Operational Air Traffic
OCI	Other Comprehensive Income
OECD	Organisation for Economic Co-operation and Development
P.	Page
P1	Project 1
PCGK	German Public Corporate Governance Code – <i>Public Corporate Governance Kodex</i>
PEI	Paul Ehrlich Institute
QTE	Qualified Technological Equipment
RASUM	Radio Site Upgrade and Modernisation (at DFS)
R&D	Research & Development
RMC	Risk Management Committee
RMS	Risk Management System
RP	Reference Period
RTC	Remote Tower Control
RWI	RWI - Leibniz Institute for Economic Research – <i>RWI - Leibniz-Institut für Wirtschaftsforschung</i>
S.A.	Société Anonyme
S-ATM	Sectorless Air Traffic Management
SDA	SESAR Deployment Alliance
SES	Single European Sky
SESAR	Single European Sky Air Traffic Management Research
SJU	SESAR Joint Undertaking
SKYNAV S.A.	SKYNAV Société Anonyme, Awans, Belgium
S.L.	Sociedad de Responsabilidad Limitada
SSC	Single Sky Committee
STATFOR	Statistics and Forecast Service (at EUROCONTROL)
StrukturTV	Collective Agreement on Structural Measures and Early Retirement at DFS – <i>Tarifvertrag über Strukturmaßnahmen und Vorruhestand</i>
TATS	Tower Air Traffic Services S.L., Madrid, Spain
TranspRLG	Transparency Directive Implementation Act – <i>Transparenzrichtlinie-Umsetzungsgesetz</i>
TVöD	Collective Agreement for the Public Service – <i>Tarifvertrag für den öffentlichen Dienst</i>
UAS	Unmanned Aircraft System
USD	United States Dollar (\$)
ÜVerSTV	Collective Agreement on Pensions and Transitional Payments at DFS – <i>Übergangsversorgungstarifvertrag</i>
VAFORIT	Very Advanced Flight Data Processing Operational Requirements Implementation
VaR	Value at Risk
VerSTV	Collective Agreement on Pensions at DFS – <i>Versorgungstarifvertrag</i>

VFR	Visual Flight Rules
VHF	Very High Frequency
WACC	Weighted Average Cost of Capital
WpHG	German Securities Trading Act – <i>Wertpapierhandelsgesetz</i>

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