As of Dec 31 / € million	2021	2020	Change absolute	Change %
Property, plant and equipment	50,100	47,704	+2,396	+5.0
+ Intangible assets/goodwill	2,387	2,290	+97	+4.2
+ Inventories	2,155	1,937	+218	+11.3
+ Trade receivables	6,476	4,849	+1,627	+33.6
+ Receivables and other assets	3,799	3,345	+454	+13.6
− Receivables from plan assets [1]	-101	-	-101	-
− Financial receivables and earmarked bank deposits (excluding receivables from finance lease)	-541	-625	+84	-13.4
+ Income tax receivables	63	55	+8	+14.5
+ Assets held for sale	0	0	0	-
− Trade liabilities	-8,097	-6,312	-1,785	+28.3
− Miscellaneous and other liabilities	-4,224	-4,042	-182	+4.5
− Income tax liabilities	-252	-191	-61	+31.9
− Other provisions	-7,496	-6,041	-1,455	+24.1
− Deferred income	-1,249	-1,205	-44	+3.7
Capital employed	**43,020**	**41,764**	**+1,256**	**+3.0**

[1] Starting in the year under review, receivables from plan assets are deducted when calculating the capital employed.

For further calculation, the adjusted EBIT and adjusted EBITDA in the following table is derived from the operating profit (EBIT) shown in the statement of income. The corresponding details at the segment level have been calculated using the same method.

€ million	2021	2020	Change absolute	Change %
Operating loss (EBIT)	-298	-4,757	+4,459	+93.7
Income from the disposal of financial instruments	-7	-4	-3	-75.0
Expenses from the disposal of financial instruments	3	0	+3	-
Train-path price subsidy to tackle the Covid-19 pandemic	-2,098	-	-2,098	-
Allocation to provision for ecological burdens	515	-	+515	-
Adjustment of provisions/receivables from tunnel accident	144	59	+85	-
Restructuring/contractual personnel obligations	133	114	+19	+16.7
Adjustment of provisions for restoration obligations and real estate write-ups (DB Netze Track)	-122	79	-201	-
Energy expenses attributable to other periods	19	72	-53	-73.6
Impairment goodwill DB Arriva	-	1,411	-1,411	-100
Other	120	68	+52	+76.5
Operating loss (EBIT) adjusted for special items	**-1,591**	**-2,958**	**+1,367**	**+46.2**
PPA amortization customer contracts (depreciation)	39	55	-16	-29.1
EBIT adjusted	**-1,552**	**-2,903**	**+1,351**	**+46.5**
Scheduled depreciation and impairments	3,804	5,372	-1,568	-29.2
PPA amortization customer contracts (depreciation)	-39	-55	+16	+29.1
Special items for scheduled depreciation, recognized impairments/recoveries	74	-1,412	+1,486	-
EBITDA adjusted	**2,287**	**1,002**	**+1,285**	**+128**

Special items totaling € −1,293 million (previous year: € 1,799 million) were adjusted in EBIT in the year under review. These are mainly attributable to temporary train-path price reductions for long-distance rail passenger transport and rail freight transport included in the Federal Government's Covid-19 support measures (with retroactive effect from March 2020). This was partially offset by additions to provisions from the revaluation of ecological burdens (subsidiaries/other) and for settlement proceedings relating to a tunnel accident (DB Netze Track). Other special items resulting from the adjustment of provisions for real estate risks and restoration obligations and from real estate write-ups (DB Netze Track) and the formation of provisions for obligation surpluses relating to employment agreements (subsidiaries/other). In addition, the amortization of customer and franchise agreements has been reclassified from EBIT; these will be written down mainly at DB Arriva over the remaining term of the respective contracts as a result of being capitalized as intangible assets as part of the process of purchase price allocations (PPA) (€ 39 million; previous year: € 55 million).

The capital employed and the adjusted EBIT have resulted in the following figures for ROCE:

€ million	2021	2020	Change absolute	Change %
EBIT adjusted	-1,552	-2,903	+1,351	+46.5
/ Capital employed as of Dec 31	43,020	41,764	+1,256	+3.0
ROCE (%)	**-3.6**	**-7.0**	**-**	**-**

Notes to the statement of income

GRI 201-1

As a general rule, all income and expenses are reported on an unnetted basis, unless IFRS accounting rules permit or require offsetting.

Expenses are recognized in the income statement at the point at which the service is used or at the point at which the expenses are incurred.

The special items detailed at income and expenses ("Total") are issues that are considered to be unusual either in terms of the amount involved and/or the actual reason behind the issue. Irrespective of the amount involved, this item comprises book profits and losses arising from transactions with investments/financial assets as well as depreciation on long-term customer contracts that have been capitalized as part of the purchase price allocation process in connection with company acquisitions. In addition, the special items recognize individual issues if they are of an exceptional nature, if they are definable for accounting purposes, if they can be measured and if the amount involved is material. In addition to the special items, effects from changes in the scope of consolidation and exchange rate effects are also disclosed separately. The item "Total – comparable" does not involve IFRS figures; instead, it involves additional disclosures in accordance with internal reporting.

(1) REVENUES

Revenues generated in DB Group relate to the provision of passenger transport, freight transport and logistics services, the provision of rail infrastructure, the sale of goods and other services related particularly to rail operations, less value-added tax, discounts and any price reductions. They are recognized with their fair value.

Services provided by DB Group are normally completed within a few hours/days. Accordingly, with the exception of season tickets, revenues in regional and long-distance transport services are recognized at the time at which the tickets are sold. Exceptions in this respect are the DB Regional and DB Arriva segments, where order processing in the form of long-term transport contracts concluded with the contracting organizations of the Federal states in Germany and the franchisers in other European countries are very important for business development. Contractual relations with customers covering several years also exist in the contract logistics line of business in the DB Schenker segment, which accounts for about 6% of Group revenues.

Revenue recognition in accordance with IFRS 15 is based on the principle that revenues are recognized when control over a product or service is transferred to the customers. Revenues generated by the rendering of services are recognized with the amount which is expected as the consideration as soon as control over the services has been transferred.

€ million	2021	2020
Revenues from freight and passenger transport services	41,683	35,058
thereof concession fees for rail transport	7,209	6,529
Revenues from operating track infrastructure	2,224	2,050
Revenues from rental and leasing	332	374
Revenues from sales of products	2,202	1,690
Other revenues	860	805
Revenue discounts	-226	-76
Total	**47,075**	**39,901**
± Special items	175	1
± Effects from changes in scope of consolidation	-39	-6
± Exchange rate effects	-36	0
Total – comparable	**47,175**	**39,896**

The revenues from freight and passenger transport services were generated mainly by companies operating in the DB Schenker, DB Regional, DB Cargo, DB Arriva and DB Long-Distance segments. They include a minor amount of revenues from sub-operating leases in the DB Schenker segment. Revenues from operating track infrastructure related to the segments DB Netze Track and DB Netze Stations. Rental and leasing revenues were generated mainly in the DB Netze Stations segment, and revenues from product sales were mainly generated in the DB Netze Energy and DB Schenker segments. Other revenues related to virtually all segments.

In the year under review, revenues increased by € 7,174 million (+18.0 %) to € 47,075 million. The increase in DB Group revenues resulted largely from the strong revenue development in the DB Schenker segment. The main drivers were significant increases in ocean and air freight rates, as well as volume increases in land transport, air freight and contract logistics. Significant revenue increases were also recorded in the following segments: DB Netze Energy (primarily due to higher volumes in certificate trading and general price effects), DB Regional (due, among other things, to higher concession fees) and DB Cargo (primarily for performance-related reasons).

Revenues include positive exchange rate effects of € 36 million. In the DB Arriva segment, the strong British pound had a particularly positive effect, while the weak US dollar had a negative effect in the DB Schenker segment.

Even when adjusted for special items, effects from changes in the scope of consolidation and exchange rates, revenues were significantly higher than in the previous year (€ +7,279 million, +18.2 %).

Movements in revenues broken down according to business segments and regions are set out in segment reporting 190f.

As was the case in the previous year, revenue discounts from long-term transport contracts (contractual penalties) were netted directly with the revenues of transport and passenger services. The separately disclosed revenue discounts (€ 226 million) also related mainly to revenues from transport and passenger transport services (for instance passenger rights).

The order book of customer contracts with contractually agreed outstanding revenues (secured revenues) was broken down as follows:

ORDER BOOK SECURED AS OF DEC 31 / € million	2021	2020
Passenger transport contracts	74,765	64,142
Logistics and freight transport contracts [1]	221	248
Other contracts [1]	1,195	197
Total	**76,181**	**64,587**

[1] Contracts with a duration of at least 12 months and a total volume of at least € 5 million.

Most of the secured order book will be fulfilled within a period of ten years, with percentages declining over a period of time.

The increase in the order book for passenger transport contracts only affected the DB Regional segment; the order book in the DB Arriva segment declined slightly. In terms of other contracts, there was a significant increase in the Subsidiaries/Other segment.

The exemption regulation of IFRS 15.121 (a) has been used for the logistics contracts and the other contracts.

Variable considerations of transport contracts as well as price escalation clauses or contractual penalty are only taken into consideration in the estimation of secured revenues if they are highly likely.

Claims relating to contractual assets [1] were recognized together with the other receivables and assets and developed as follows:

CONTRACTUAL ASSETS / € million	2021	2020
As of Jan 1	35	29
Currency translation differences	0	0
Additions	147	131
Impairments	0	–
Fulfillment/payment	-24	-55
Other changes	-140	-70
Changes in the scope of consolidation	12	–
As of Dec 31	**30**	**35**

In particular, the clearing of advance payments received was included in the other changes. A figure of € 9 million (as of December 31, 2020: € 15 million) was attributable to long-term contractual assets.

The contractual liabilities in DB Group include advance payments received as well as other payments received in advance in relation to revenues for subsequent periods (for example for season tickets). Obligations from contractual liabilities were shown under the trade liabilities and deferred items and have developed as follows:

[1] The contractual assets include claims relating to work-in-progress from long-term orders.

CONTRACTUAL LIABILITIES / € million	2021	2020
As of Jan 1	1,120	1,308
Currency translation differences [1]	7	- 9
Additions	2,655	2,353
Fulfillment of liabilities [1]	- 2,726	- 2,500
Other changes	37	- 32
Changes in the scope of consolidation	8	-
As of Dec 31	**1,101**	**1,120**
thereof long-term	110	111

[1] Previous year figure adjusted.

(2) INVENTORY CHANGES AND OTHER INTERNALLY PRODUCED AND CAPITALIZED ASSETS

€ million	2021	2020
Inventory changes	- 3	1
Other internally produced and capitalized assets	3,887	3,563
Total	**3,884**	**3,564**
± Special items	-	-
± Effects from changes in scope of consolidation	- 6	1
± Exchange rate effects	0	-
Total – comparable	**3,878**	**3,565**

Own investments relate mainly to construction and project business in rail infrastructure and also the modernization of vehicles as well as the processing of appropriate spare parts. The increase compared with the previous year was attributable to a higher construction volume in track infrastructure.

(3) OTHER OPERATING INCOME

€ million	2021	2020
SERVICES FOR THIRD PARTIES AND SALE OF MATERIALS		
Income from maintenance and repair	1	3
Sale of materials and energy	158	98
Other services for third parties	520	527
	679	**628**
Leasing and rental income	169	176
Income from compensations for damages and refund of expenses	211	174
INCOME FROM GOVERNMENT GRANTS		
Federal Government compensation payments	99	94
Other investment grants	0	0
Income from reversal of deferred items	72	143
Other Government grants	3,412	1,181
	3,583	**1,418**
Income from the disposal of property, plant and equipment and intangible assets	147	121
Income from the disposal of non-current financial instruments	7	4
Income from the reversal of provisions	252	130
OTHER INCOME		
Income from third-party fees	19	21
Income from remediation of ecological burdens	48	51
Utilization of provisions for impending losses	197	152
Miscellaneous other income	589	564
	853	**788**
Total	**5,901**	**3,439**
± Special items	2,179	- 48
± Effects from changes in scope of consolidation	- 1	- 5
± Exchange rate effects	- 9	-
Total – comparable	**3,712**	**3,386**

Adjusted for special items, effects from changes in scope of consolidation and exchange rate effects, other operating income was higher than the previous year (€ +326 million).

The increase before the adjustment for special items, effects from changes in the scope of consolidation and exchange rate effects was almost entirely attributable to income from other Government grants. The grants mainly included temporary train-path price subsidies from the Federal Government to deal with the consequences of the Covid-19 pandemic for long-distance rail passenger transport and rail freight transport (€ 2,098 million; retroactively from March 2020), of which € 1,826 million was attributable to the DB Long-Distance segment and € 272 million to the DB Cargo segment. In addition, subsidiaries of DB Group were awarded Covid-19 grants to compensate for the lack of revenues from fares among other things, particularly in the DB Regional and DB Arriva segments. Additional Government grants for which the application and approval process to receive Covid-19 aid had not been completed as of the end of the year under review were accounted for at the expected funding amount. The final approval may result in deviations from the estimated amount.

The increase in income from the sale of materials and energy was mainly due to higher income from the sales of scrap in connection with construction work (DB Netze Track).

The leasing and rental income included subletting income of € 35 million (previous year: € 23 million).

The miscellaneous other income comprises the reversal of liabilities as well as a range of individual issues that are individually of a minor nature.

(4) COST OF MATERIALS

€ million	2021	2020
EXPENSES FOR RAW MATERIALS AND SUPPLIES AND OF PURCHASED PRODUCTS		
ENERGY EXPENSES		
Electricity	2,259	1,906
Electricity tax	148	145
Diesel, other fuel [1]	995	805
Other energies	294	185
Energy price derivatives [1]	- 51	78
	3,645	**3,119**
Other supplies and purchased goods	539	647
Price adjustments and impairments for materials	- 20	- 31
	4,164	**3,735**
EXPENSES FOR PURCHASED SERVICES		
Purchased transport services	17,206	12,470
Cleaning, security, disposal, winter service	499	410
Commissions	92	80
EXPENSES FOR UTILIZATION OF INFRASTRUCTURE		
Train-path usage	348	367
Station usage	58	63
Use of local installations	0	3
	406	**433**
Other purchased services	826	849
	19,029	**14,242**
Expenses for maintenance and production	5,226	4,780
Total	**28,419**	**22,757**
± Special items	- 20	- 74
± Effects from changes in scope of consolidation	- 8	- 3
± Exchange rate effects	13	-
Total – comparable	**28,404**	**22,680**

[1] Previous year figure adjusted.

Adjusted for special items, effects from changes in scope of consolidation and exchange rate effects, the cost of materials increased by € 5,724 million compared with the previous year (+25.2 %).

The impairments on inventories recognized in cost of materials amount to € 43 million (previous year: € 87 million).

The energy expenses increased in the year under review as a result of price and volume effects. In addition to higher procurement prices, the increased volume produced in the DB Cargo and DB Long-Distance segments also led to a higher demand for traction current.

The expenses for purchased services increased significantly by € 4,787 million compared with the previous year (+33.6 %). The purchased transport services were higher than the corresponding previous year level mainly due to sharp Covid-19-related increases in ocean and air freight rates at DB Schenker. In the DB Cargo segment, purchased transport services were also above the previous year's level due to the increased traffic to China.

The expenses for maintenance and production increased by € 446 million (+9.3 %), and were mainly attributable to the DB Netze Track and DB Long-Distance segments.

(5) PERSONNEL EXPENSES AND EMPLOYEES

€ million	2021	2020
WAGES AND SALARIES		
for employees	14,682	13,836
for assigned civil servants	778	856
	15,460	**14,692**
SOCIAL SECURITY EXPENSES		
for employees	2,771	2,594
for assigned civil servants	189	204
Expenses for personnel adjustment	155	155
Retirement benefit expenses	644	652
	3,759	**3,605**
Total	**19,219**	**18,297**
± Special items	- 93	- 130
± Effects from changes in scope of consolidation	- 34	- 1
± Exchange rate effects	- 36	-
Total - comparable	**19,056**	**18,166**

The figure stated for personnel expenses (social security expenses) included expenses of € 1,293 million for defined contribution plans (previous year: € 1,238 million).

The amount shown for personnel adjustment mainly comprises expenses for restructuring costs, obligation surpluses relating to employment agreements as well as costs of severance packages and semi-retirement agreements.

The retirement benefit expenses related to active persons as well as persons who are no longer employed in DB Group or their surviving dependents. They were attributable primarily to service costs, employers' contributions to the company top-up benefit scheme as well as the contributions to Pensions-Sicherungs-Verein aG (pension backing association). The interest expense resulting from compounding the pension obligations and the expected income from plan assets is shown in financial result. For detailed explanations regarding the development of pension obligations, please refer to Note (31) 221 ff. The activities of civil servants in DB Group are based on statutory allocation under article 2, section 12 of the Rail Restructuring Act (Eisenbahnneuordnungsgesetz; ENeuOG). For the work of the allocated civil servants, DB AG reimburses the Federal Railroad Fund (Bundeseisenbahnvermögen; BEV) those costs which would be incurred if an employee covered by collective bargaining arrangements were to be employed instead of the allocated civil servant (pro forma calculation).

The increase in wages and salaries in Germany was largely influenced by the 2020/2021 collective bargaining agreement: it ruled that, for the period from March to November, a Covid-19 premium of € 300 to € 600 (Railway and Transport Workers Union (Eisenbahn- und Verkehrsgewerkschaft; EVG): € 600; German Train Drivers' Union (Gewerkschaft Deutscher Lokomotivführer; GDL): € 300 to € 600 depending on the pay grade) would be paid; these premiums were paid out in December 2021. A collective scheme called "Fonds Wohnen und Mobilität (Wo-Mo-Fonds)" (Housing and Mobility Fund) was established, and the endowments for the existing collective schemes (the social security fund and the "FairnessPlan") were increased. Furthermore, wage increases had the effect of increasing expenses.

In addition, performance-related bonuses in the DB Schenker segment increased as a result of the positive business development.

In addition, a slight increase in the number of employees in Germany led to an increase in personnel expenses.

In the 2021 financial year, pension expenses included income from the plan payments amounting to € 69 million.

The development in the number of employees in DB Group, converted to full-time employees (FTE) in each case, is shown in the following:

	as of Dec 31		annual average	
FTE	2021	2020	2021	2020
Employees	309,402	306,131	308,123	303,925
Civil servants	14,314	16,637	15,482	17,964
Employees	**323,716**	**322,768**	**323,605**	**321,889**
Trainees and dual degree students	13,173	12,796	11,782	11,201
Total	**336,889**	**335,564**	**335,387**	**333,090**

In the event of changes in the scope of consolidation, the employees are included on a pro rata basis up to the time of deconsolidation or after the date of initial consolidation.

At the end of the year under review, the number of persons employed in DB Group was slightly higher than at the end of the previous year. This increase can be seen at segment level at DB Schenker as a result of business development. In the Integrated Rail System, the number of employees increased, particularly in the DB Netze Track segment in maintenance/construction projects and in operational services, as well as through the purchase of SIGNON Deutschland GmbH. A higher project volume within the framework of the Performance and Financing Agreement (Leistungs- und Finanzierungsvereinbarung; LuFV) III resulted in an increase in the number of employees, especially relating to construction projects in the DB Netze Stations segment. In the Subsidiaries/Other segment, the number of employees increased as a result of an increased order volume and the expansion of innovative areas, in particular at DB Fahrzeuginstandhaltung GmbH, DB E.C.O. Group and DB Systel GmbH. This was offset by a lower number of employees in the DB Arriva segment as a result of the effects of the Covid-19 pandemic.

The development in the number of employees, based on the number of natural persons (NP), is shown in the following:

	as of Dec 31	
NP	2021	2020
Employees	322,261	319,185
Civil servants	14,729	17,093
Employees	**336,990**	**336,278**
Trainees and dual degree students	13,173	12,796
Total	**350,163**	**349,074**

(6) SCHEDULED DEPRECIATION AND IMPAIRMENTS

In the case of property, plant and equipment, depreciation is recognized using the straight-line method over the expected useful life of the assets or, in the case of leased assets, over the shorter contract duration. The following useful-service lives for the main groups of property, plant and equipment are taken as a basis:

	Years
Permanent way structures, tunnels, bridges, railway crossings	15-100
Track infrastructure	13-30
Buildings, halls, roofs	10-85
Other structures	5-60
Signaling equipment	7-40
Telecommunications equipment	5-20
Traction current installations	10-52
Rolling stock	10-30
Other technical equipment, machinery and vehicles	5-40
Operating and business equipment	3-15

The appropriateness of the chosen depreciation method and the useful lives is subject to an annual review. Our expectations regarding the residual value are also updated annually.

Intangible assets are depreciated using the straight-line method. The following useful lives are used as the basis for scheduled depreciation:

	Years
Franchises, rights, etc.	Duration of contract
Trademarks	Economic life
Customer base	Economic life
Purchased software	3-10
Software produced in-house	3-25

Goodwill arises as a positive difference between the acquisition costs of purchasing the shares and the fair values of the individually acquired assets, absorbed liabilities and contingent liabilities. It, like brand names, is not depreciated; instead, it is subject to an annual impairment test. Impairment losses in relation to goodwill are not reversed.

The adequacy of the depreciation method and the useful life are subject to an annual review.

Impairment of assets

IAS 36 governs the impairment test for substantial and intangible assets with a certain useful life, which is carried out using a so-called indicator-based asset impairment test. Such an asset impairment test has to be carried out when indicators (so-called triggering events) indicate a possible loss of value. In addition, according to IAS 36, goodwill as well as intangible assets with an indefinite useful life have to be subjected at least once a year to an impairment test.

DEFINITION OF CASH-GENERATING UNITS

Goodwill impairment tests have to be carried out at the level of individual assets as part of the asset impairment test. If it is not possible to determine future cash flows, which are to a large extent independent, for an individual asset, so-called cash-generating units (CGUs) have to be formed as an aggregation of assets whose future cash flows depend on each other. With no changes compared to the previous year, the CGU structure is fully in line with the planning and reporting structure of DB Group.

Due to the congruence between management structure and legal structure, the identified CGUs also always consist of at least one legal unit. This means that the data necessary for the asset impairment test can be derived from annual financial statements and planning data.

The impairment test for goodwill is carried out at the level of the CGU or group of CGUs to which the goodwill has been allocated. This is applicable for the operating segments. Significant goodwill currently exists in the DB Schenker CGU. However, a small amount of goodwill is also recognized in the DB Netze Track, DB Regional, DB Cargo and Subsidiaries/Other segments. With regard to the recognition of goodwill for each CGU, please also refer to Segment information according to segments 190 f.

METHOD

In the impairment test in accordance with IAS 36, the carrying amount of an asset or a CGU has to be compared with the corresponding recoverable amount. If the positive carrying amount is no longer covered by the recoverable amount, this results in a corresponding impairment requirement.

The carrying amount of a CGU is established by adding the carrying amounts of the assets less the liabilities which are related to the relevant assets (net position). In addition, for determining the carrying amount of a CGU, it is also necessary to recognize corporate assets and corporate liabilities jointly used by several CGUs, and the working capital necessary for the corresponding CGU must also be taken into consideration.

The recoverable amount is defined as the higher of the fair value less costs of disposal and the value in use. In the impairment tests carried out in DB Group, the recoverable amount is represented by the value in use. The value in use is established as the present value of the free cash flows before interest and after tax attributable to the continuation of a CGU. A flat tax rate of 30.5% has again been used in relation to EBIT. The forecast of cash flows reflects previous experience, and takes account of corporate management expectations with regard to future market developments. This cash flow forecast is based on the medium and long-term planning adopted by the Management Board of DB AG, which covers a planning horizon that extends until 2030. If cash flow forecasts are necessary beyond the planning horizon, a sustainable free cash flow is derived from the planning and is extrapolated on the basis of a growth rate related to the specific market development. As was the case in the previous year, a uniform average growth rate of 1% p.a. has been assumed in DB Group.

A weighted average cost of capital is used for discounting the free cash flows; this reflects the capital market interest rate request for providing debt capital and shareholders equity to the relevant CGU. Because free cash flow after taxes has been calculated, a cost-of-capital rate after tax has also been used. Risks of free cash flows are recognized by a risk-equivalent capitalization rate.

The Weighted Average Cost of Capital (WACCs) of the CGUs that are applicable for the 2020 and 2021 annual financial statements are detailed in the following table:

	2021		2020	
%	Before taxes	After taxes	Before taxes	After taxes
DB Long-Distance	6.2	4.3	6.7	4.7
DB Regional	5.3	3.7	5.6	3.9
DB Cargo	8.3	5.8	8.2	5.7
DB Netze Track	4.6	3.2	4.8	3.4
DB Netze Stations	6.1	4.2	5.8	4.0
DB Netze Energy	4.0	2.8	4.0	2.8
DB Arriva	5.8	4.0	6.1	4.2
DB Schenker	8.3	5.8	8.4	5.9

The changes in the WACCs compared with the previous year are attributable to current expectations of medium- to long-term developments in the capital market.

ASSET IMPAIRMENT TEST

Processes that comply with the specific requirements of IAS 36 have been implemented in order to carry out the asset impairment test. The useful lives of the individual CGUs used for the asset impairment test are based on the useful life of the asset or a group of homogeneous assets which is most significant for the particular CGU.

In addition, the process of establishing the value in use disregards assets or future cash flows that result from major structural changes, disinvestment measures or extension capital expenditures. Resultant adjustments to the original plans relate mainly to the major new and expansion infrastructure projects, where it is assumed that the construction process will be completed beyond the observation period (beyond 2030) and for which most of the intended DB funds have not yet been invested. The cash flow forecasts take account of internal transfer prices within DB Group on the basis of arm's length assessments of the companies involved. The published infrastructure prices are applicable for service relationships between transport and infrastructure segments; price increases in the forecast period have also been taken into consideration.

The calculation takes account of a long-term growth rate of 1.0% in relation to the capital employed. The purpose of growth retention is to present an inflation-adjusted reinvestment rate. This ensures that a steady state is reflected in the perpetual yield in the extrapolation of cash flows.

After completion of planning, a regular check is carried out to assess whether it is necessary for impairments to be recognized at the CGU level. In addition to this annual cycle, a test is also performed if current issues arising from business development or changes in assumptions indicate that there has been a major deterioration in the value in use.

At the DB Cargo CGU, there is a shortfall in the value in use compared with the carrying amount of the assets employed as of the balance sheet date. In this case, it is also necessary for the fair value less the costs to sell to be determined for the affected assets. If this exceeds the carrying amount of the assets, there is no need for impairment. In 2021, DB Cargo determined market values for most of its assets (in particular locomotives and freight cars). Overall, no shortfall in the carrying amounts was identified, meaning that no impairment had to be recognized as of the balance sheet date.

In the observed period, all CGUs, with the exception of DB Cargo, were able to cover their carrying amounts with the usage value.

Independently of the impairment tests carried out in relation to the CGUs, impairments are recognized in relation to individual assets that are no longer capable of being utilized fully. These impairments are shown under the disclosures for the respective balance sheet item.

GOODWILL IMPAIRMENT TEST

A goodwill impairment test must be carried out annually for all CGUs to which goodwill can be allocated. Because the goodwill which arises in DB Group as a result of acquisitions is generally allocated to a CGU, this goodwill impairment test is an integral element of the asset impairment test that is always carried out annually for all CGUs.

The goodwill impairment tests carried out for the segments which are carrying goodwill did not identify any impairment requirement for the CGUs.

The respective recoverable amount is represented by the value in use of the CGU, which in turn has been derived from the planning of the relevant segments. The details relating to methods presented above are thus applicable correspondingly. At DB Schenker it should also be borne in mind that separate assumptions relating to the development of the economy, market and competitive environment as well as currency relations have been made for the relevant international markets. These assumptions have been based on the external and internal expert assessments available at the time of planning.

CRITICAL ESTIMATIONS AND ASSESSMENTS

Impairment of cash-generating units (CGUs)

Within the framework of the impairment test, the key premises and assumptions that have an impact on the impairment of a CGU were reviewed in the form of standardized sensitivity analyses. As was the case in the previous year, the sensitivity analysis at the DB Cargo CGU was carried out in relation to the fair values established for the main assets. Similar to the situation in the previous financial year, it can be assumed that there is no impairment requirement even in conjunction with a reduction of 10% in relation to the market value.

Infrastructure CGUs are also exposed to risks relating to the extent of long-term investment grants for replacement capital expenditures in the existing network and the related scope of own funds at the infrastructure companies. The investment grants included in the medium- and long-term planning are based on the Performance and Financing Agreement signed by the Federal Ministry for Digital and Transport (Bundesministerium für Digitales und Verkehr; BMDV, formerly the Federal Ministry of Transport and Digital Infrastructure (Bundesministerium für Verkehr und digitale Infrastruktur; BMVI)) and DB Group as well as the project and financing concept agreed between the Federal Government and DB Group for setting out the objectives of the Climate Action Program 2030.

The sensitivities shown in the following relate merely to an impairment test on the basis of the value in use. If a shortfall is identified in the course of the scenario analyses, this does not necessarily result in an impairment requirement. If the assumption set out in the respective scenario analysis materializes, a second step would be to analyze the coverage of carrying amounts via the fair values (fair value less costs of disposal). The scenario analyses detailed here do not make any statement regarding the development of the fair values or a risk in the development of fair values.

EBIT margin

For the scenario analysis of profit shortfalls, the risk of a 10% reduction in EBIT margin was considered. This model calculation identified a shortfall at the DB Long-Distance (€ −89 million), DB Regional (€ −825 million), DB Netze Track (€ −1,560 million) and DB Netze Stations (€ −613 million) CGUs; this means that the value in use for these CGUs no longer provides adequate cover for the carrying amount of the capital employed. The DB Long-Distance CGU can withstand a reduction of up to 9.7% in the EBIT margin; the corresponding figures applicable for other CGUs are up to 6.5% (DB Regional), up to 7.4% (DB Netze Track) and up to 3.4% (DB Netze Stations). The rest of the CGUs report stable surplus coverage even if the EBIT margin is reduced by 10%.

Average real growth rate of cash flows

A reduction of 10% in the long-term growth rate was simulated in order to assess the sensitivity of the impairment test result in relation to the assumed long-term growth rate of cash flows (1%). As was the case in the previous year, no impairment requirement was identified for any of the CGUs considered in this scenario.

Weighted average cost of capital

Risks relating to the assumptions of the capitalization rate, which is normally used for calculating the present value of the value in use, were analyzed by simulating the impairment of each CGU in conjunction with a capital cost markup of 10%. The basis for this simulation was the current weighted cost of capital (after taxes). This model calculation resulted in a shortfall for the DB Netze Stations CGU (€ −287 million). The maximum capital cost markup for which DB Netze Stations covers the carrying amount is 5%.

Useful life and residual value

With regard to the assumptions relating to useful life and residual value, the effect of a 10% reduction in the residual value at the end of useful life (terminal value) was analyzed. This model calculation resulted in a shortfall for the DB Netze Stations CGU (€ −112 million). DB Netze Stations shows surplus cover upon a reduction in the residual value at the end of the useful life of up to 7.4%. All other CGUs show stable surplus cover in the scenario analysis.

Depreciation was broken down as follows in the year under review:

€ million	2021	2020
Scheduled depreciation	3,881	3,828
Recognized impairments	14	1,558
Recognized reversals	- 91	- 14
Total	**3,804**	**5,372**
± Special items	35	1,467
± Effects from changes in scope of consolidation	- 6	0
± Exchange rate effects	- 6	-
Total - comparable	**3,827**	**3,905**

In the year under review, depreciation – even taking into account the complete write-down of the goodwill previously recognized by DB Arriva (€ 1,411 million) in the previous year – was below the previous year's figure and mainly related to property, plant and equipment used as rail infrastructure as well as rolling stock. It is shown in the statement of income less any reversals recognized in the reporting period. The recorded reversals of € 75 million related to write-ups of real estate in the DB Netze Track segment.

Further explanations on the development of property, plant and equipment or intangible assets can be found under Notes (13) 205 ff. and (14) 207 f.

(7) OTHER OPERATING EXPENSES

€ million	2021	2020
LEASING, RENT AND LEASES		
Leasing expenses [1]	741	751
Variable leasing expenses [1]	9	7
	750	**758**
Legal, consultancy and audit costs	222	219
Fees and contributions	212	221
Insurance expenses	171	159
Advertising and sales promotion expenses	148	115
Printing and stationery expenses	56	57
Travel and representation expenses	234	243
Research and non-capitalized development costs	44	40
OTHER PURCHASED SERVICES		
Purchased IT services	654	580
Other communication services	57	51
Other services	931	790
	1,642	**1,421**
Expenses for compensation for damages	358	239
Impairments recognized in relation to receivables and other assets [2]	76	91
Losses from the disposal of property, plant and equipment and intangible assets	270	217
Expenses from disposal of non-current financial instruments	3	0
Other operating taxes	87	73
OTHER EXPENSES		
Grants for third-party facilities	126	127
Concession fees for passenger transport	9	24
Other personnel-related expenses	230	260
Miscellaneous other expenses	1,078	971
	1,443	**1,382**
Total	**5,716**	**5,235**
± Special items	- 672	- 230
± Effects from changes in scope of consolidation	- 1	- 3
± Exchange rate effects	- 19	-
Total - comparable	**5,024**	**5,002**

[1] Previous year figure adjusted.
[2] Including payments for receivables written down in the previous year.

Other operating expenses rose by a total of € 481 million (+9.2%), particularly as a result of higher expenses for purchased services and compensation for damage.

The increase in other purchased services resulted from higher purchased IT services across almost all segments and a greater need for temporary employees in the DB Schenker segment as a result of the positive business development.

The increase in expenses for compensation for damages resulted from provisions in connection with an accident (DB Netze Track segment).

The increase in miscellaneous other expenses resulted, among other things, from additions to provision from the revaluation of ecological burdens (Subsidiaries/Other segment). This was offset by lower expenses for the creation of provisions for impending losses (DB Regional and DB Arriva segments). Adjusted for these circumstances, miscellaneous other expenses were at the same level as the previous year.

Expenses from leasing, rent and leases were at the same level as the previous year and, in addition to the service element of capitalized leasing arrangements, also related to short-term leases (€ 210 million; previous year: € 233 million) and also leased assets of minor value (€ 58 million; previous year: € 48 million).

Travel and representation expenses were at the low level of the previous year due to Covid-19-related factors and the increased use of Web and video conferences.

The concession fees for passenger transport declined because the contracting organizations of The Chiltern Railway Company Limited, Sunderland/United Kingdom, and XC Trains Limited, Sunderland/United Kingdom (both segments of DB Arriva) waived their entitlement to part of the concession fees in 2021 as a result of contractual adjustments relating to Covid-19.

The fees for the Group auditor amounted to € 22.1 million (previous year: € 20.9 million); this figure comprised auditing services of € 7.9 million (previous year: € 8.8 million), other certification services of € 7.9 million (previous year: € 7.3 million), tax advice services of € 0.2 million (previous year: € 0.3 million) as well as other services costing € 6.1 million (previous year: € 4.5 million). Of the figure shown for the other rendered services, € 3.5 million (previous year: € 2.8 million) were attributable to services provided by affiliated companies of the auditor of the consolidated financial statements.

(8) NET PROFIT FROM INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD

The following contributions to profits are recognized in the statement of income as a result of shares in companies over which significant influence can be exercised or which are managed as joint ventures:

€ million	2021	2020
JOINT VENTURES		
Trieste Trasporti S.P.A., Trieste/Italy	1	1
Intercambiador de Transportes Principe PIO S. A., Madrid/Spain	2	2
Other	–	1
	3	**4**
ASSOCIATED COMPANIES		
EUROFIMA European Company for the Financing of Railroad Rolling Stock (EUROFIMA), Basel/Switzerland	4	6
Barraqueiro SGPS SA, Lisbon/Portugal	-3	-4
GHT Mobility GmbH, Berlin [1]	-18	-32
Other	4	5
	-13	**-25**
Total	**-10**	**-21**

[1] In the previous year, the cumulative losses (€ 32 million) in excess of the acquisition costs of the shares were deducted from the financial receivables due from GHT Mobility GmbH.

(9) NET INTEREST INCOME

€ million	2021	2020
INTEREST INCOME		
Net interest income from pension provisions	2	5
Other interest and similar income	29	25
Income from securities	1	1
Operating interest income	**32**	**31**
Interest income from the reversal of deferred items and other interest income	23	83
	55	**114**
INTEREST EXPENSES		
Other interest and similar expenses	-430	-427
Net interest expenses for pension provisions	-28	-65
Interest expenses for leasing liabilities	-80	-81
Operating interest expenses	**-538**	**-573**
Compounding of long-term provisions and liabilities	-45	-156
	-583	**-729**
Total	**-528**	**-615**
± Special items	42	1
± Effects from changes in scope of consolidation	0	0
± Exchange rate effects	1	–
Total - comparable	**-485**	**-614**
For information only:		
Operating interest balance	-506	-542

Interest income and interest expenses are recognized in the income statement using the effective interest method in the period in which the income arises.

The decline in interest income from the reversal of deferred items and other interest income is mainly attributable to the adjustment of the discount rate for provisions for ecological burdens in the previous year.

The decline in net interest expenses for pension provisions resulted from the adjustment of the discount rate. Both the net pension provisions in the year under review and the previous year's interest rate applicable to the respective net interest expense fell.

The reduction in the expenses for the compounding of long-term provisions and liabilities was mainly attributable to the adjustment to the discount rate for the provision for the rectification of ecological burdens as well as the discontinuation of the effects from a provision for the pro rata costs relating to the decommissioning of a joint power generation plant in the previous year.

(10) OTHER FINANCIAL RESULT

€ million	2021	2020
Result from subsidiaries	2	1
Result from exchange rate effects	-268	120
Result from currency-related derivatives	295	-145
Result from other derivatives	9	-2
Result from disposal of financial instruments	0	0
Fair value change of financial instruments	32	-11
Impairments on financial instruments	–	-45
Other financial result	-22	-9
Total	**48**	**-91**
± Special items	–	–
± Effects from changes in scope of consolidation	0	0
± Exchange rate effects	2	–
Total - comparable	**50**	**-91**

Dividend income is recognized at the point at which the right to receive the payment arises.

The result from exchange rate effects was attributable to the conversion of foreign currency liabilities and receivables with an impact on the income statement using the spot rate applicable on the balance sheet date (IAS 21). The result from exchange rate effects has to be netted with the result from currency-related derivatives. The strong exchange rate fluctuations in the year under review are mainly attributable to the development of the exchange rate between the euro and the British pound and the Swiss franc. The result from currency-related derivatives comprises reclassifications of currency-related changes in the market value of cash flow hedges recognized under shareholders' equity with no impact on profit and loss. The result from other derivatives relates to the development in the market value of derivatives that are not classified as effective hedges in accordance with IFRS 9 (Financial Instruments).

The changes in the fair value of financial instruments related to the positive performance from the fair value assessment of other investments.

(11) TAXES ON INCOME

€ million	2021	2020
Actual tax expense	-321	-213
Income due to discontinuation of tax obligations	19	33
Actual taxes on income	**-302**	**-180**
Deferred tax income (previous year: deferred tax expense)	179	-43
Taxes on income	**-123**	**-223**

The actual taxes on income in the year under review were incurred mainly at foreign Group companies. The increase compared with the previous year is attributable to higher contributions to profits made by some international Group companies as well as lower income from the discontinuation of tax obligations. Deferred taxes resulted in income (previous year: expense). This is due to the increased anticipated future utilization of tax losses carried forward, whereas deferred tax income from the extension of the planning horizon was reported in the previous year.

Starting with the net profit/loss of DB Group before taxes on income and the imputed taxes on income calculated using an imputed tax rate of 30.5 %, the tax reconciliation to the actual income taxes is presented below:

€ million	2021	2020
Loss before taxes on income	-788	-5,484
Group tax rate (%)	30.5	30.5
Anticipated tax income	**240**	**1,673**
Adjustment of the expected future use of loss carry-forwards and new temporary differences that have arisen and loss carry-forwards	-411	-1,398
Income not subject to tax	34	24
Tax effects related to IAS 12.33	40	40
Expenses not deductible for tax purposes	-35	-372
Differences in tax rates for foreign companies	63	-154
Other effects	-54	-36
Taxes on income as reported	**-123**	**-223**
Effective tax rate (%)	-15.6	-4.1

In the year under review, there were new tax loss carryforwards for which deferred tax assets were not recognized in full, as at the time of the forecast period sufficient taxable income was not expected for the loss carryforwards and temporary differences that existed in the previous year.

The reconciliation amount as detailed in IAS 12.33 related exclusively to additional tax write-downs resulting from the fact that tax-free grants in the IFRS financial statements have been deducted directly from the asset acquisition costs. It is not permissible for deferred taxes to be created in relation to these temporary differences.

In the year under review, the other effects included in particular effects attributable to the difference in the assessment bases of different income tax bases, and additional local income taxes outside Germany.

(12) EARNINGS PER SHARE

Under IAS 33 (earnings per share), undiluted earnings per share are calculated by dividing the net profit/loss of DB Group attributable to the shareholders of DB AG by the weighted average number of shares in issue during the year under review. Undiluted earnings per share correspond to diluted earnings per share.

€ million	2021	2020
Net loss for the year	-911	-5,707
thereof due to shareholders of DB AG	-946	-5,710
thereof attributable to providers of hybrid capital	26	26
thereof attributable to non-controlling interests	9	-23
Number of issued shares as of Dec 31	430,000,000	430,000,000
EARNINGS PER SHARE (€/SHARE)		
Undiluted	-2.20	-13.28
Diluted	-2.20	-13.28