ETH BOARD

FINANCIAL REPORT OF THE ETH BOARD ON THE ETH DOMAIN 2019

Rounding differences: The figures presented in this document may not correspond precisely to the total amounts presented in the tables. Changes are calculated on unrounded amounts and may differ from a figure that is based on the rounded amounts presented in the tables.

Financial Report of the ETH Board on the ETH Domain 2019

Report on the 2019 Financial Year of the ETH Domain

Principles of and remarks to the consolidated financial statements

Basis of accounting

The consolidated financial statements of the ETH Domain comprise the statement of financial performance, balance sheet, cash flow statement, statement of changes in equity, and the Notes. They have been prepared and audited in accordance with the International Public Sector Accounting Standards (IPSAS).

Relationship between the consolidated financial statements and the financing statement

The consolidated financial statements below are based on the concept of consumption of resources: the revenue and expenses are accrued, to the period to which they belong. In addition to the financial performance, the financial statements also show the financial position and the net assets.

The situation is different with the financing statement, which can be found from page 102 of the Annual Report. Receipts and expenditure are shown there and allocated to the period in which the funds flow.

Ownership arrangements of the ETH Domain's real estate

The consolidated financial statements reflect the actual legal ownership of the ETH Domain's real estate: the vast majority of the real estate used by the ETH Domain is owned by the Federal Government and is, therefore, not included in these financial statements.

The Federal Government has transferred the management of the state-owned real estate used to the ETH Domain. Investments, triggered and monitored by the ETH Domain in the state-owned real estate concerned are explained in the Annual Report, from page 97 onwards. The investment credit for the real estate owned by the Federal Government and the Federal financial contribution are shown in the financing statement under 'Total federal contribution from the expenditure ceiling'. Therefore, the financing statement of the ETH Domain comprehensively reflects the political control exercised by the Federal Government.

In contrast, in the consolidated financial statements of the ETH Domain, Total federal contribution (see Note 7) is made up of the federal financial contribution and the federal contribution to accommodation. Premises costs, i.e. a rent, for the use of this real estate owned by the Federal Government are recognised under operating expenses to the same extent, so that these two items cancel each other out in the surplus or deficit.

Investments in real estate owned by the ETH Domain are financed from the Federal financial contribution and form part of the consolidated financial statements.

Comparability with previous years

The 2019 financial statements are directly comparable with the previous years, 2018 and 2017. There are three effects to be taken into account when comparing with the 2016 financial statements: (1) The strategic objectives set for the ETH Domain by the Swiss Federal Council for the ERI 2017–2020 period have applied since 2017. (2) The revised IPSAS standard for net defined benefit liabilities (IPSAS 39; in particular, change to the net interest approach) was applied for the first time in 2017. (3) Transitional provisions were in place until 2016. IPSAS was applied fully from 2017 onwards. The implementation of one of these requirements led to a significant expansion in the scope of consolidation: up to the end of 2016, the consolidated financial statements comprised exclusively the six institutions of the ETH Domain and the ETH Board. Since 1 January 2017, all the entities have been included which are controlled by or can be significantly influenced by the institutions of the ETH Domain or by the ETH Board. ETH Zurich and EPFL control fully consolidated entities (Quantity: 6). The two universities and the PSI include the investments values of the significantly influenced entities or associated entities in their financial statements (Quantity: 10).

Key developments in 2019 at a glance

The ETH Domain uses the funds received prudently, and with great cost awareness.

In line with the Federal Council's strategic objectives for the ETH Domain, the 2019 consolidated financial statements show the following significant developments that could have been directly influenced by the ETH Domain:

- Revenue from third-party funding remained slightly below the level of the high volume of the previous year.
- There was a modest rise in personnel expenses, and other operating expenses were down.
- Depreciation remained unchanged at a high level due to the investments made in previous years.

The operating result was balanced and remained positive, mainly due to the subsequent budgetary increase in the financial contribution of CHF 30m. This amount is reserved for use in 2020. The surplus of CHF 140m (CHF 50m in 2018) was mainly due to the good net finance income and the high share of surplus of the associated entities.

Net defined benefit liabilities

The net defined benefit liabilities of the ETH Domain show the obligations from the pension plans of the ETH Domain, which provide benefits upon retirement, death and disability. The majority of insured persons and pensioners from the ETH Domain are insured with PUBLICA in the ETH Domain pension scheme.

In contrast to static accounting under Swiss pension law, the annual calculation of net defined benefit liabilities under IPSAS 39 is based, among other things, on actuarial assumptions that take account of future developments. Their change leads to annual fluctuations in equity, and the impact on personnel expenses as well as on the surplus or deficit is not so pronounced. The annual return on plan assets at PUBLICA is for the most part not recognised in surplus or deficit in the consolidated financial statements of the ETH Domain, but rather directly in equity. Therefore, some developments in the 2019 annual financial statements can only be understood if these effects are taken into consideration:

1. In the reporting period, the discount rate and the interest rate on retirement savings were adjusted downwards. The negative impact on equity was high (total actuarial losses in 2019: CHF 725m).
2. The high return on pension assets at PUBLICA was only partially able to compensate for this markdown (CHF 618m), resulting in a total revaluation loss in equity (CHF 107m).
3. The net defined benefit liabilities themselves increased by CHF 185m compared with the previous year to CHF 2,423m due to the effects described above.

Consolidated statement of financial performance

CHF millions	2019	2018	2017	2016
Operating revenue	**3,676**	**3,714**	**3,698**	**3,598**
Changes to previous year	–1%	0%	3%	4%
Operating expenses	**3,637**	**3,631**	**3,515**	**3,314**
Changes to previous year	0%	3%	6%	2%
NET FINANCE INCOME / EXPENSE	**28**	**–22**	**13**	**5**
SURPLUS (+) OR DEFICIT (–)	**140**	**50**	**209**	**289**
Third-party funds relative to operating revenue	29%	29%	28%	29%
Personnel expenses relative to operating revenue	65%	63%	62%	58%

Operating revenue

The ETH Domain is expanding its financing base gradually. It raises third-party funding successfully and in line with its strategic objectives.

Operating revenue decreased by CHF 38m to CHF 3,676m in the reporting period.

Federal financing, the **total federal contribution** (see Note 7), accounted for 71% of the operating revenue, as it had done in the previous year. It consisted of the federal financial contribution of CHF 2,373m (2018: CHF 2,357m) and the federal contribution to accommodation of CHF 244m (2018: CHF 269m). Compared to the previous year, the total federal contribution (consolidated financial statements perspective) declined by CHF 9m. However, with regard to the financing statement – also refer to the section on Ownership status of the ETH Domain's real estate on page 4 above – the ETH Domain had more funds available to it in the reporting period from the total federal contribution (credits from the expenditure ceiling perspective). Compared to the previous year, however, there was a pro rata shift from financial contributions to investment credits.

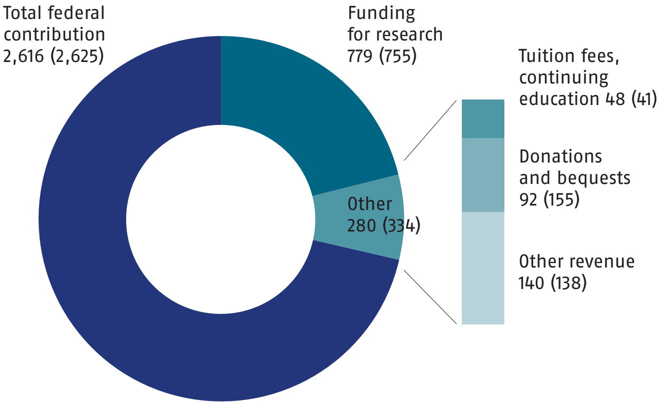
Revenue from third-party funds (see Notes 8, 9, 10, 11), once again with regard to the consolidated financial statements, fell by CHF 30m or -3% to CHF 1,059m compared with the previous year. In the reporting period, they accounted as in the previous year for 29% of the operating revenue. The decline in income from third-party funding is related to the significantly lower income from donations and bequests.

The **revenue from research contributions, mandates and scientific services**, which amounts to CHF 779m (2018: CHF 755m) or a share of 21% is the second most important component of the operating revenue. These are mainly multi-year research projects. Revenue is recognised on the basis of the work completed. It is determined on the basis of the actual project costs incurred (cost-of-completion method) and can, therefore, vary widely. During the reporting period, revenue rose by a total of CHF 24m or 3%.

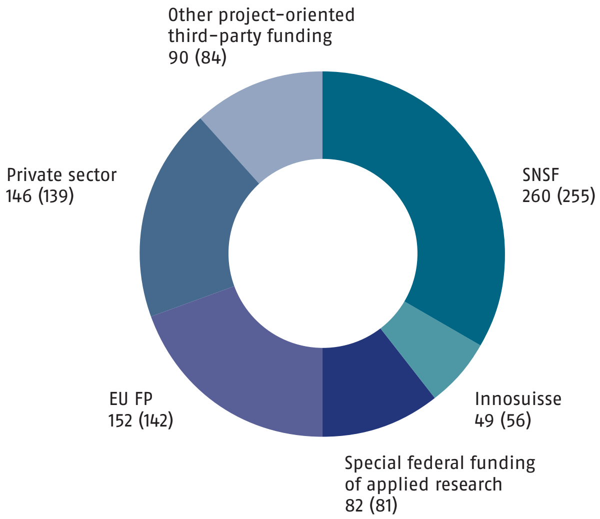
In most categories of research grants and contract research, significantly higher project progress and thus revenue was achieved in 2019, except for projects supported by Innosuisse and special federal funding of applied research.

Revenue from the **EU Framework Programmes for Research and Innovation (EU FP)** recorded the highest increase in the reporting period, up CHF 10m or 7%, partly as a result of the successful and competitive acquisition of grants in the previous year (see also the section on obtained grants below). The Horizon 2020 projects (2014–2020) are well under way, while projects from the 7th EU FP (2007–2013) have largely been closed or are being phased out.

Operating revenue in 2019 in CHF m
CHF 3,676m (previous year: CHF 3,714m)



Research contributions in 2019 in CHF m
CHF 779m (previous year: CHF 755m)



The increase in revenue from **industry-oriented research** (+CHF 7m, +5%) is related to increased project progress and increased project volume, particularly at EPFL. The higher revenue from **other project-oriented third-party funding** is a result of the good progress in project activities at ETH Zurich, EPFL and Empa (+CHF 7m, +8%).

In the projects of the **Swiss National Science Foundation (SNSF)**, one of the Federal Government's funding agencies, the degree of realisation was higher than in the previous year, particularly in the case of the PSI. Revenue increased by CHF 5m (+2%) overall. Researchers from the ETH Domain are involved, among other things, in research activities in the National Research Programmes (NRPs), the National Centres of Competence in Research (NCCRs) and in Sinergia, the programme for collaborative and interdisciplinary research.

While **special federal funding of applied research** showed varying trends in revenue, overall revenue for the ETH Domain remained at the previous year's level. While project progress at ETH Zurich led to higher revenue, revenue at the other entities weakened due to projects only just started, project delays and lower project volumes.

The funding of **research projects by Innosuisse**, another federal funding agency, was down on the previous year again (–CHF 6m, –11%). Among other things, it reflects the lower volume of new projects for the operation of networked inter-university competence centres for energy research, i.e. Swiss Competence Centers for Energy Research (SCCER), as part of the action plan "Coordinated Energy Research Switzerland". The ETH Domain is involved in all eight SCCER projects, seven of them in a leading capacity. Grants obtained for new projects recovered in the reporting period, also refer to the following section, which will only be reflected in revenue in subsequent years.

Third-party funding also includes the following components of operating revenue. They have developed as follows:

Revenue from donations and bequests remained below the previous year's high value (2019: CHF 92m; 2018: CHF 155m). The growth in the number of students and the gradual increase in tuition fees was reflected, among other things, in higher **revenue from tuition fees, continuing education** (2019: CHF 48m; 2018: CHF 41m). **Other revenue** more or less remained at the previous year's level (2019: CHF 140m; 2018: CHF 138m).

Obtained grants

The analysis of the balance sheet, which is explained in more detail below, and the diagram on page 8 show that receivables and dedicated third-party funds increased in 2019 compared with previous years. From this it can be deduced that the revenue from research contributions will remain at a high level or even tend to rise. This trend can also be supported by the grants obtained in the reporting period and in the previous years by the Swiss National Science Foundation (SNSF), the EU Research Framework Programmes for Research and Innovation (EU FPs) and Innosuisse. In 2019 the total was CHF 443m, in 2018 CHF 512m and in 2017 CHF 422m. It should be noted that double counting is possible for these values due to the structure of the leading house contracts contained therein. In the previous year, the obtained grants were exceptionally high, mainly due to the successful acquisition of "Future and Emerging Technologies" (FET) projects and prestigious awards such as the ERC grants, whereas this could not have been repeated to the same extent in 2019 (–CHF 59m in EU FP grants). The SNSF committed CHF 261m in research funding to the ETH Domain in 2019, 6% down on the previous year, but on a par with 2017. Funding from Innosuisse is on an upward trend again after the sharp decline in the previous year. Grants committed in 2019 rose from CHF 23m to CHF 31m.

The commitment shown by the ETH Domain in teaching and research costs money. It leads to excellence and takes Switzerland and science a step further.

Operating expenses

Operating expenses increased by CHF 6m in the reporting period. Research and teaching are personnel-intensive and require continuous investment.

Personnel expenses is the largest item of expense (2019: 66%; 2018: 64%). Compared to the previous year, it rose by a total of CHF 54m to CHF 2,386m.

The increase in salaries and wages of CHF 52m reflects the compensation measures decided upon by the ETH Board for 2019 and the increase in the percentage of FTEs. The average headcount in the whole ETH Domain in 2019 was 18,915 full-time equivalents (FTEs), excluding apprentices. This is just under 3% up on the previous year’s figure of 18,453 FTEs.* The net pension costs were only minimally affected by the effects of the calculation of the net defined benefit liabilities (CHF 8m on the previous year, see explanations above in the section on net defined benefit liabilities). As the claims from untaken leave and overtime decreased, expenses were lower than in the previous year. The other items of personnel expenses were at the previous year's level.

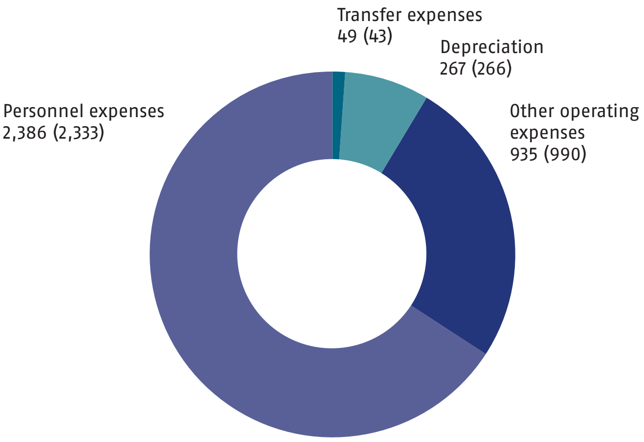
The **other operating expenses** amounted to CHF 935m (CHF 990m in the previous year). The reduction of CHF 55m is due to higher capitalisation of leasehold improvements at ETH Zurich and lower premises costs for the use of Federal Government-owned real estate. Energy costs, on the other hand, increased due to consumption and market conditions; expenses for consulting and expertise also rose, for example for strategic university development at ETH Zurich. Since 2018, a portion of the revenue from the transfer of use of real estate owned by the Federal Government has had to be paid to the Federal Government. As in the previous year, this amounted to CHF 2m and is included in other operating expenses.

Depreciation remained at the previous year's high level with a figure of CHF 267m (2018: CHF 266m). This is a consequence of the high investments made in previous years in strategically relevant large-scale research facilities and technical equipment.

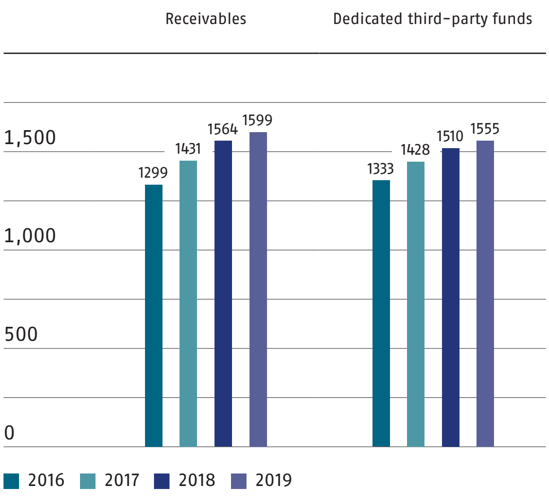
Transfer expenses rose due to the higher contributions for collaborative research projects (2019: CHF 49m; 2018: CHF 43m).

* The annual report does not show the annual average value but the year end figure. This is 19,440.2 FTEs (including apprentices). The figure in the annual report also excludes the FTEs of the controlled entities.

Operating expenses in 2019 in CHF m
CHF 3,637m (previous year: CHF 3,631m)



Receivables and dedicated third-party funds



Consolidated balance sheet

CHF millions	31.12.2019	31.12.2018	31.12.2017	31.12.2016
Current assets	**3,099**	**2,913**	**2,771**	**2,149**
Non-current assets	**3,272**	**3,354**	**3,066**	**2,892**
TOTAL ASSETS	**6,371**	**6,267**	**5,837**	**5,041**
Liabilities	**5,370**	**5,261**	**4,626**	**4,918**
Valuation reserves	–1,470	–1,364	–1,109	–1,717
Dedicated reserves	1,365	1,123	949	812
Free reserves	856	967	965	886
Other equity	249	280	407	142
Equity	**1,001**	**1,006**	**1,212**	**123**
TOTAL LIABILITIES AND EQUITY	**6,371**	**6,267**	**5,837**	**5,041**

The total assets for the ETH Domain were up CHF 104m or 2% on the previous year. The increase is mainly due to the higher level of cash and cash equivalents and the increase in investments in associated entities. However, there was a decline in property, plant and equipment, as well as in provisions.

Receivables and dedicated third-party funds

As in the previous year, receivables from non-exchange transactions and dedicated third-party funds in liabilities each accounted for around one quarter of total assets.

These third-party funds flow from funding organisations, the public sector, industry and donors. This enables the ETH Domain to finance and promote some of its project and research activities. With each payment made to finance the progress of a project, these receivables decrease over the course of the year; newly concluded contracts and obtained grants increase them. Therefore, the balance of receivables reflects the outstanding financing framework for current projects and granted donations. The balance of dedicated third-party funds, however, corresponds to the outstanding performance obligations from current research projects and orders.

The diagram for "Receivables and dedicated third-party funds" in the bottom right of page 8 illustrates how these variables have developed. By the end of 2019, receivables irrespective of maturity amounted to CHF 1,599m (2018: CHF 1,564m). Receivables from the SNSF, receivables from EU FP research projects as well as receivables from donations made up the largest share of them.

The receivables from project transactions still outstanding at the end of 2019 were matched by dedicated third-party funds of CHF 1,555m (2018: CHF 1,510m). The rise of CHF 45m or 3% shows that at the end of 2019 there was a higher volume of projects or research available, for which services still have to be provided in the coming years.

Property, plant and equipment

The balance sheet value of property, plant and equipment stood at CHF 1,898m at the end of 2019, down CHF 125m. A gross figure of CHF 253m was invested in property, plant and equipment in 2019 (see cash flow statement). The property, plant and equipment were paid for from the ETH Domain's own resources, i.e. from the total federal contribution and from third-party funding. The value of the change in the provision for the dismantling of accelerator facilities was reduced as a non-cash transaction directly in the acquisition costs of the accelerator facilities (–CHF 83m). The property, plant and equipment account for almost one-third of the total assets.

Investments held in associated entities

The increase of CHF 73m reflects the aggregated surplus / deficit of the associated entities in the reporting period. It was mainly due to a bequest and to the positive net finance income achieved by the ETH Zurich Foundation.

Financial assets

Financial assets with a balance of CHF 1,472m (2018: CHF 1,441m) include third-party funds received that are not used immediately. On the basis of the prevailing treasury agreement between the FFA and the ETH Domain, these funds are placed with the Federal Government or on the market. CHF 1,173m of the total financial assets were invested with the Federal Government, and CHF 283m with financial institutions. CHF 10m was paid into the deposit accounts with the Federal Government in the reporting period. Third-party funds placed on the market rose by CHF 18m as asset management mandates in 2019 benefited from the good performance on the financial markets. Financial assets also account for almost one-quarter of the total assets.

Provisions

Provisions totalling CHF 723m (2018: CHF 813m) include provisions set aside for the dismantling of the accelerator facilities and the disposal of radioactive waste at the PSI amounting to CHF 543m (2018: CHF 631m). The additional payments to Nagra capitalised in the previous year as part of the updated total cost estimate of the Federal Government will now be taken over by the Federal Government with the approval of the 2020 budget (December 2019). Due to the changes in circumstances, the provision was reduced by CHF 84m.

Equity and reserves

The ETH Domain's sustainable financing strengthens Switzerland as a centre of research

The increase in negative revaluation reserves from net defined benefit liabilities reduced equity, as explained above on page 5 in the section on Net defined benefit liabilities. This decrease was offset by the surplus of CHF 140m, so that the equity in the reporting year ultimately amounted to CHF 1,001m, CHF 5m less than in the previous year.

Dedicated reserves increased by CHF 242m to CHF 1,365m. Free reserves decreased by CHF 110m to CHF 856m. The reduction in free reserves related, in particular, to the promotion of strategic initiatives and projects by governing bodies (ETH Board, Executive Boards, Directorates). The increase in dedicated reserves is due, on the one hand, to federal funds received but not yet used for the Strategic Focus Areas (SFAs) and research infrastructures, and, on the other hand, to financial commitments made by the governing bodies. Examples of this are (a) the financing of additional professorships, such as at the new Cryo-EM centre at EPFL in collaboration with the University of Lausanne (also known as the Dubochet Center, after the 2017 Nobel Prize laureate in Chemistry from the University of Lausanne), (b) funding for scientific equipment and high-performance information technology, such as for quantum computing and new generations of supercomputers, or (c) funds for strategic initiatives and programmes such as ETH+ at ETH Zurich and SwissForestLab, EnviDat and Climate Change Impacts on Alpine MassMovements (CCAMM) at WSL. In the case of the ETH Board, CHF 21m from the budget increase in 2019 by Parliament, were dedicated in reserves to cover the budgeted expenditure surplus in 2020.

Adequate free reserves provide the necessary room for manoeuvre in order to assume responsibility for teaching and research autonomously. For example, they make it possible to respond quickly when national or international development opportunities arise for which financing is to be secured. The ETH Domain uses the available funds in line with its strategy and cost-effectively.

Consolidated cash flow statement

In the 2019 reporting period, the total **cash flow from operating activities** amounted to CHF 368m (2018: CHF 388m) and was composed of the surplus of CHF 140m adjusted for non-cash expenses and revenues in the statement of financial performance (depreciation, etc.), as well as the relevant changes from the balance sheet.

The balance of **cash flow from investing activities** amounted to -CHF 261m in 2019 (2018: -CHF 260m) and was thus at the same level as the previous year. Reallocations within the cash flow from investing activities (investments / divestments) are shown in the consolidated cash flow statement (Table 4 of the consolidated financial statements).

At CHF 253m (2018: CHF 211m), the majority of investments flowed into movable and immovable property, plant and equipment.

Particular mention should be made of the following from the 2019 investment programme:

- ETH Zurich: Larger investments in movable property, plant and equipment relate to the Orbitrap Fusion and Orbitrap Eclipse mass spectrometers (total CHF 3m). CHF 2m was spent on the expansion of the Euler Cluster (Euler VI) at the CSCS. Further major investments in information technology hardware were made at CSCS for data storage (CHF 2m) and servers (CHF 3m). ETH Zurich invested CHF 27m on larger user-specific fixtures and equipment, as well as leasehold improvements. They involved leasehold improvements for the new building on Gloriastrasse (health sciences and medical technology), the renovation of the machine laboratory (Department of Mechanical and Process Engineering), the new BSS building in Basel (systems biology and synthetic biology), the renovation of the LCA building in Lugano and for the AgroVet-Strickhof (joint project between ETH Zurich, the University of Zurich and the Canton of Zurich).
- EPFL: The largest acquisition in the area of movable property, plant and equipment was the Helios G4 microscope (CHF 1m). In terms of IT procurement, EPFL particularly invested in the SCITAS Helvetios computer cluster (CHF 4m; financed by third-party funds). In addition, leasehold improvements were carried out, particularly on the BCH/Batochime building in Lausanne (CHF 4m) and the Microcity building in Neuchâtel (CHF 2m).
- PSI: The greater part was invested in technical facilities such as the user-specific expansion of the ATHOS / SwissFEL beamline (CHF 14m) and the SINQ Upgrade (CHF 7m).
- WSL: Various analytical instruments
- Empa: In particular, CHF 2m for the NEST research and innovation building, financed by third-party funds.
- Eawag: Procurement of mass spectrometers and other equipment (CHF 1m).

The **cash flow from financing activities** was used for payments from finance leases of around CHF 10m, in particular.

This leaves a net **cash flow of CHF 98m**. Cash and cash equivalents increased by this amount compared to the previous year.

Consolidated financial statements

Consolidated statement of financial performance

Table 1: Statement of financial performance of the ETH Domain (consolidated)

CHF millions	Notes	Budget 2019	Actual 2019	Actual 2018	Change to Actual absolute
Federal financial contribution		2,373	2,373	2,357	16
Federal contribution to accommodation		244	244	269	−25
Total federal contribution	7	**2,616**	**2,616**	**2,625**	**−9**
Tuition fees, continuing education	8	**41**	**48**	**41**	**7**
Swiss National Science Foundation (SNSF)		261	260	255	5
Swiss Innovation Agency (Innosuisse)		68	49	56	−6
Special federal funding of applied research		79	82	81	1
EU Framework Programmes for Research and Innovation (FP)		144	152	142	10
Industry-oriented research (private sector)		132	146	139	7
Other project-oriented third-party funding (incl. cantons, municipalities, international organisations)		71	90	84	7
Research contributions, mandates and scientific services	9	**756**	**779**	**755**	**24**
Donations and bequests	10	**95**	**92**	**155**	**−63**
Other revenue	11	**115**	**140**	**138**	**3**
Operating revenue		**3,624**	**3,676**	**3,714**	**−38**
Personnel expenses	12, 28	2,352	2,386	2,333	54
Other operating expenses	13	962	935	990	−55
Depreciation	21, 23	241	267	266	1
Transfer expenses	14	173	49	43	7
Operating expenses		**3,727**	**3,637**	**3,631**	**6**
OPERATING RESULT		**−104**	**39**	**83**	**−44**
NET FINANCE INCOME / EXPENSE	15	**9**	**28**	**−22**	**50**
Share of surplus / deficit of associated entities and joint ventures	20	–	74	−11	85
SURPLUS (+) OR DEFICIT (−)		**−95**	**140**	**50**	**90**

Consolidated balance sheet

Table 2: Balance sheet of the ETH Domain (consolidated)

CHF millions	Notes	31.12.2019	31.12.2018	Change absolute
CURRENT ASSETS				
Cash and cash equivalents	16	950	852	98
Current receivables from non-exchange transactions	17	612	558	54
Current receivables from exchange transactions	17	48	36	12
Current financial assets and loans	22	1,430	1,409	21
Inventories	18	10	10	–
Prepaid expenses and accrued income	19	49	48	1
Total current assets		**3,099**	**2,913**	**187**
NON-CURRENT ASSETS				
Property, plant and equipment	21	1,898	2,023	–125
Intangible assets	21	63	67	–4
Non-current receivables from non-exchange transactions	17	939	970	–31
Non-current receivables from exchange transactions	17	–	–	–
Investments in associated entities and joint ventures	20	208	135	73
Non-current financial assets and loans	22	42	32	10
Co-financing	23	123	128	–4
Total non-current assets		**3,272**	**3,354**	**–82**
TOTAL ASSETS		**6,371**	**6,267**	**104**
LIABILITIES				
Current liabilities	24	154	179	–25
Current financial liabilities	25	15	16	–2
Accrued expenses and deferred income	26	150	142	8
Short-term provisions	27	102	109	–7
Short-term liabilities		**421**	**446**	**–25**
Dedicated third-party funds	29	1,555	1,510	45
Non-current financial liabilities	25	350	361	–11
Net defined benefit liabilities	28	2,423	2,239	185
Long-term provisions	27	621	705	–83
Long-term liabilities		**4,950**	**4,815**	**135**
Total liabilities		**5,370**	**5,261**	**110**
EQUITY				
Valuation reserves		–1,470	–1,364	–106
Dedicated reserves		1,365	1,123	242
Free reserves		856	967	–110
Co-financing	23	123	128	–4
Reserves from associated entities	20	208	135	73
Accumulated surplus (+) / deficit (–)		–82	17	–99
Total equity		**1,001**	**1,006**	**–5**
TOTAL LIABILITIES AND EQUITY		**6,371**	**6,267**	**104**

Consolidated statement of changes in equity

Table 3: Statement of changes in equity for the ETH Domain (consolidated)

CHF millions	**Valuation reserves**	Donations and bequests	Teaching and research reserves	Infrastructure and administration reserves	**Dedicated reserves**	**Free reserves**	**Co-financing**	**Reserves from associated entities**	**Accumulated surplus (+) / deficit (–)**	**Total equity**
2018										
Value as of 01.01.2018	**–1,109**	**512**	**350**	**86**	**949**	**965**	**125**	**147**	**135**	**1,212**
Surplus (+) or deficit (–)									**50**	**50**
Items directly recognised in equity:										
Revaluation of financial assets	**–2**									**–2**
Revaluation of defined benefit liability	**–253**									**–253**
Hedging transactions	**–**									**–**
Total items directly recognised in equity	**–255**									**–255**
Changes in investments in associated entities directly recognised in equity								**–1**	**–**	**–1**
Increase (+) / decrease (–) in reserves	**–**	90	82	2	**174**	**2**	**3**	**–11**	**–168**	**–**
Currency translations									**–**	**–**
Total changes	**–255**	**90**	**82**	**2**	**174**	**2**	**3**	**–12**	**–118**	**–206**
Value as of 31.12.2018	**–1,364**	**603**	**432**	**88**	**1,123**	**967**	**128**	**135**	**17**	**1,006**
2019										
Changes from restatement as of 01.01.	**–**	–	–	–	**–**	**–**	**–**	**–**	**–39**	**–39**
Value as of 01.01.2019	**–1,364**	**603**	**432**	**88**	**1,123**	**967**	**128**	**135**	**–21**	**967**
Surplus (+) or deficit (–)									**140**	**140**
Items directly recognised in equity:										
Revaluation of financial assets	**1**									**1**
Revaluation of defined benefit liability	**–107**									**–107**
Hedging transactions	**–**									**–**
Total items directly recognised in equity	**–106**									**–106**
Changes in investments in associated entities directly recognised in equity								**–1**	**–**	**–1**
Increase (+) / decrease (–) in reserves		–20	240	22	**242**	**–110**	**–4**	**74**	**–201**	**–**
Currency translations									**–**	**–**
Total changes	**–106**	**–20**	**240**	**22**	**242**	**–110**	**–4**	**73**	**–60**	**33**
Value as of 31.12.2019	**–1,470**	**583**	**673**	**110**	**1,365**	**856**	**123**	**208**	**–82**	**1,001**

In the reporting period, equity remained at the previous year's level (2019: CHF 1,001m; 2018: CHF 1,006m). The increase due to the annual surplus of CHF 140m was offset by two factors: (a) the addition to the negative revaluation reserve from net defined benefit liabilities of -CHF 107m and (b) the restatement of -CHF 39m recognised at the beginning of the year from the critical review of the useful life of the PSI accelerator facilities (see also Note 21 Property, plant and equipment). The entire equity is attributed to the Confederation.

Valuation reserves

The main components of negative valuation reserves comprise the accumulated actuarial and investment net losses on defined benefit pension plans (-CHF 1,473m). Details can be found in Note 28 Net defined benefit liabilities.

The revaluation reserves for financial assets according to IPSAS 29 have risen by CHF 1m to CHF 3m. As hedge accounting is not applied in the ETH Domain, there are also no items recognised under the reserves from hedging transactions.

Dedicated reserves

The dedicated reserve for donations and bequests was down by CHF 20m, as fewer new donation contracts were concluded than funds consumed.

The dedicated teaching and research reserves contain "election commitments" of CHF 142m in the total figure at the end of 2019 (the 2018 figure was CHF 128m). The increase in this reserve category totalled CHF 240m, partly due to federal funds received but not yet used for the strategic focus areas and research infrastructures, and partly – and largely – due to financial awards by the governing bodies (ETH Board, Executive Boards, directorates) to promote strategic initiatives and projects. The grants at the two Federal Institutes of Technology were used to finance additional professorships (CHF 42m), scientific equipment (Department of Biosystems in Basel at ETH Zurich (CHF 25m), Discovery Learning Labs and High Performance Information and Nanotechnology at EPFL (CHF 12m). In addition, CHF 30m were added for the ETH-PSI Center for Quantum Computing and CHF 32m for the HPCN strategy (new generation of supercomputers). At WSL, funds totalling CHF 6m were granted to support the three strategic programmes SwissForestLab, EnviDat and Climate Change Impacts on Alpine MassMovements (CCAMM). In the case of the ETH Board, CHF 21m from the budget increase in 2019 by Parliament, were reserved dedicated to cover the budgeted expenditure surplus in 2020.

Free reserves

Free reserves mainly originate from self-generated revenue and from surpluses from completed research projects. They were down by CHF 110m in the reporting period. The drawdown in free reserves related in particular to the promotion of strategic initiatives and projects by governing bodies (ETH Board, Executive Boards, Directorates) and to the appropriation for the accumulated deficit as well as the start of construction on the Eawag campus. On the other hand, there were savings for the implementation of the Master Plan construction project at Empa, as well as an increase at the ETH Board from strategic funds that had not yet been allocated.

Co-financing

The institutions of the ETH Domain use co-financing as a means of becoming involved in construction projects for state-owned real estate through the provision of third-party funding. The change in the reporting period is explained in Note 23 Co-financing.

Accumulated surplus / deficit

The accumulated deficit of CHF 82m as of 31 December 2019 is the residual amount of total equity less the reserve items shown separately. It shows the status of the accumulated results on the reporting date and includes the surplus or deficit carried forward, the annual surplus or deficit, as well as the increase or decrease in reserves in the equity.

Consolidated cash flow statement

Table 4: Cash flow statement of the ETH Domain (consolidated)

CHF millions	Notes	2019	2018	Change absolute
CASH FLOWS FROM OPERATING ACTIVITIES				
Surplus (+) or deficit (–)		**140**	**50**	**90**
Depreciation	21, 23	267	266	1
Share of surplus / deficit of associated entities and joint ventures	20	–74	11	–85
Net finance income / expense (non-cash)	15	–26	13	–39
Increase / decrease in net working capital		–84	12	–96
Increase / decrease in net defined benefit liabilities	28	78	91	–14
Increase / decrease in provisions	27	–89	205	–294
Increase / decrease in non-current receivables	17	17	–146	163
Increase / decrease in dedicated third-party funds	29	63	101	–38
Reclassification and other (non-cash) income		78	–216	294
Cash flows from operating activities		**368**	**388**	**–19**
CASH FLOWS FROM INVESTING ACTIVITIES				
Investments				
Purchase of property, plant and equipment	21	–253	–211	–43
Purchase of intangible assets	21	–2	–3	1
Increase in co-financing	23	–	–7	7
Increase in loans	22	–1	–1	1
Increase in current and non-current financial assets	22	–89	–58	–31
Total investments		**–345**	**–281**	**–65**
Divestments				
Disposal of property, plant and equipment	21	–	4	–3
Disposal of intangible assets	21	–	–	–
Decrease in co-financing	23	–	–	–
Decrease in loans	22	–	–	–
Decrease in current and non-current financial assets	22	84	16	68
Total divestments		**84**	**20**	**64**
Dividends received from associated entities and Joint Ventures	20	–	1	–
Cash flows from investing activities		**–261**	**–260**	**–**
CASH FLOWS FROM FINANCING ACTIVITIES				
Increase in short-term and long-term financial liabilities	25	1	1	–
Decrease in short-term and long-term financial liabilities	25	–10	–10	–1
Cash flows from financing activities		**–9**	**–9**	**–**
Total cash flow		**98**	**118**	**–20**
Cash and cash equivalents at the beginning of the period	16	**852**	**733**	**118**
Total cash flow		**98**	**118**	
Cash and cash equivalents at the end of the period	16	**950**	**852**	**98**
Net effect of currency translation on cash and cash equivalents		–	–	–
Contained in the cash flows from operating activities:				
Dividends received		4	3	1
Interest received		–	2	–2
Interest paid		–9	–9	1

Notes to the consolidated financial statements

1 Business Activity

The ETH Domain includes the two Federal Institutes of Technology ETH Zurich and EPFL, and the four research institutes Paul Scherrer Institute (PSI), the Swiss Federal Institute for Forest, Snow and Landscape Research (WSL), Swiss Federal Laboratories for Materials Testing and Research (Empa), and the Swiss Federal Institute of Aquatic Science and Technology (Eawag). The six institutions are public law organisations of the Swiss Confederation with a legal personality. The ETH Domain also includes the Board of the Swiss Federal Institutes of Technology (ETH Board) as the strategic governing and regulatory body, and the Internal Appeals Commission of the ETH.

Detailed information on the business activity, management and reporting of the ETH Domain is provided in the chapter on Governance (see Annual Report, p. 35 ff.).

2 Basis of Accounting

These financial statements are consolidated financial statements covering the reporting period from 1 January 2019 to 31 December 2019. The reporting date is 31 December 2019. The report is prepared in Swiss francs (CHF). All figures are shown in millions of Swiss francs (CHF million) unless indicated otherwise.

Legal basis

The legal basis of ETH Domain's accounting is formed of the version of the following (including directives and regulations) in effect in the reporting period:

- Federal Act on the Federal Institutes of Technology of 4 October 1991 (ETH Act; SR 414.110) (Systematische Rechtssammlung, SR; classified compilation of the Swiss federal law)
- Ordinance on the Domain of the Swiss Federal Institutes of Technology of 19 November 2003 (Ordinance on the ETH Domain; SR 414.110.3)
- Ordinance on the Finance and Accounting of the ETH Domain of 5 December 2014 (SR 414.123)
- Accounting Manual for the ETH Domain (version 6.3)

Accounting standards

The annual consolidated financial statements of the ETH Domain have been prepared in accordance with the International Public Sector Accounting Standards (IPSASs). The underlying accounting provisions are set out in the Accounting Manual for the ETH Domain (Art. 34, Ordinance on the Finance and Accounting of the ETH Domain, SR 414.123).

The following standards were newly adopted in the reporting period:

Standard	**Titel**	**Effective Date**
IPSAS 40	Public Sector Combinations	01.01.2019
Various	Improvements to IPSAS, 2018	01.01.2019

The standard IPSAS 40 is applied prospectively, whereby no combination took place in the reporting period. The amendments to IPSAS 2018 had solely a minor impact on the disclosures concerning financial liabilities (see Note 25 Financial liabilities).

IPSAS issued but not yet applied

The following IPSAS was issued before the reporting date.

Standard	Titel	Effective Date
IPSAS 41	Financial Instruments (replaces IPSAS 29)	01.01.2022
IPSAS 42	Social Benefits	01.01.2022
Improvements to IPSAS 36 Investments in Associates and Joint Ventures and IPSAS 41 Financial Instruments		01.01.2022

The above-mentioned standards and improvements to the IPSAS have not been applied early in these annual consolidated financial statements. The ETH Domain systematically analyses the effects on its annual consolidated financial statements. No material impact on the consolidated financial statements is currently expected. There are no further changes or interpretations which are not yet compulsory to apply and which would have a significant impact on the ETH Domain.

3 Accounting policies

The accounting policies are derived from the basis of accounting. The annual consolidated financial statements present a true and fair view of ETH Domain's financial position, financial performance and cash flows.

The consolidated financial statements are based on historical cost. Exceptions to this rule are described in the following presentation of the accounting principles.

Consolidation

The annual consolidated financial statements of the ETH Domain comprise the financial statements of the two Federal Institutes of Technology, the four research institutes, the ETH Board, as well as the financial statements of all the entities over which the aforementioned institutions or the ETH Board exercise direct or indirect control. The carrying amounts of investments in associated entities are also included in the consolidated financial statements.

Control means that, through its involvement with the entity, the institution or the ETH Board has the power to direct the relevant activities of the entity and thus the ability to affect the nature and amount of benefits. At the same time, the controlling entity is exposed, or has rights, to variable benefits. The institution or the ETH Board normally has control if it directly or indirectly holds more than 50% of the voting rights or potential voting rights of the entity. These entities are fully consolidated.

Entities are consolidated on the basis of the single-entity financial statements of the institutions, the ETH Board and the controlled entities. Receivables, liabilities, revenue and expenses from transactions between the consolidated entities as well as ownership interests and unrealised intra-economic entity surpluses are eliminated on consolidation. All financial statements are prepared in accordance with uniform policies and normally at the same reporting date. Due to time constraints, it is sometimes necessary to use prior-year financial statements for controlled entities rather than the financial statements as at 31 December of the reporting period. The prior-year financial statements used make up an insignificant portion of the consolidated financial statements of ETH Domain and are adjusted for significant transactions between the prior-year reporting date and 31 December of the reporting period.

Investments in entities newly acquired in the course of the reporting period are included in the annual consolidated financial statements if they meet the consolidation criteria and exceed the thresholds defined in the Ordinance on the Finance and Accounting of the ETH Domain two years in succession. Entities which are sold are included up until the date on which control is lost, which is usually the date of disposal.

There are no non-controlling interests to consider or report in the ETH Domain.

Associated entities are entities where the institution or the ETH Board has significant influence, but not control. The institution or the ETH Board normally has significant influence over an associated entity if it holds a 20% to 50% share of the voting rights. These investments are not consolidated, but are instead accounted for using the equity method and recognised as investments in associated entities. Under the equity method, the value of the investment corresponds to the acquisition value, which is subsequently adjusted for any changes in the net assets of the associated entity.

An overview of the controlled and associated entities can be found in section 35 Relationships with controlled and associated entities.

Currency translation

Transactions in a currency other than the functional currency are translated using the exchange rate at the transaction date.

At the reporting date, monetary items in foreign currencies are translated at the closing rate and non-monetary items using the exchange rate at the transaction date. The resulting currency translation differences are recognised as finance income or finance expense.

Assets and liabilities of controlled entities with a different functional currency are translated at the closing rate, and the statement of financial performance and cash flow statement at the average rate. Translation differences arising on the translation of net assets and statements of financial performance are recognised in equity.

The principal currencies and their exchange rates are:

Table 5: Principal currencies

		Closing rate as of		Average rate	
Currency	Unit	31.12.2019	31.12.2018	2019	2018
EUR	1	1.0866	1.1265	1.1125	1.1549
USD	1	0.9676	0.9855	0.9937	0.9780
GBP	1	1.2828	1.2523	1.2683	1.3055
JPY	1,000	8.9080	8.9600	9.1190	8.8500
SGD	1	0.7190	0.7205	0.7284	0.7250

Revenue recognition

Each inflow of funds is assessed to determine whether it is an exchange transaction (IPSAS 9) or a non-exchange transaction (IPSAS 23). In the case of an exchange transaction (IPSAS 9), the revenue is generally recognised when the goods are delivered or the services rendered. For project agreements, the performance obligation not yet performed is allocated to liabilities. The revenue is recorded and reported by reference to the stage of completion of the project, based on the costs incurred in the reporting period.

In the case of a non-exchange transaction (IPSAS 23), a distinction is made between whether or not there is a performance or repayment obligation. If there is such an obligation, the corresponding amount is recognised as a liability at inception of the agreement and released to surplus or deficit according to the stage of completion based on the resources consumed.

If there is neither an exchange nor a performance or repayment obligation in accordance with IPSAS 23, revenue is recognised in surplus or deficit in full in the reporting period and net assets / equity increased accordingly. This is usually the case with donations.

Revenue is structured as follows:

Total federal contribution

The contributions granted by the Federal Government to the ETH Domain include the federal financial contribution (in the narrower sense) and the federal contribution to accommodation. Both types of revenue are classified as non-exchange transactions (IPSAS 23).Federal contributions are recognised in the year in which they are paid. Unused funds from federal financial contributions result in reserves under equity.

The contribution to accommodation is equal to the accommodation expense, which is equal in amount to an imputed rent for the buildings owned by the Federal Government and used by the institutions of the ETH Domain. Accommodation expense is reported within other operating expenses.

Tuition fees, continuing education
Revenue from tuition fees, cost contributions to continuing education and further training as well as administration fees is classified as an exchange transaction (IPSAS 9). As a rule, revenue is accounted for on an accrual basis when the goods are delivered or the services rendered.

Research contributions, mandates and scientific services
Project-related contributions are given to the institutions of the ETH Domain by various donors with the aim of promoting teaching and research. Project financing primarily relates to multi-year projects. Depending on the nature of the contributions, they are classified as either an exchange or a non-exchange transaction.

Donations and bequests
Revenue from donations and bequests is classified as a non-exchange transaction (IPSAS 23). Such grants where there is no conditional repayment risk are usually recognised as revenue in full when the agreement is signed.

Donations also include goods and services in-kind, which are distinguished as follows:

– **Goods In-kind** are recognised as assets in accordance with the applicable provisions when the agreement is signed.
– **Donated rights** to use assets in the sense of an operating lease are recognised as revenue and expense. Donated rights to use assets in the sense of a finance lease are measured at their fair value at inception of the agreement, if this is known, and depreciated over their useful life. If a performance obligation exists, it is stated as a liability and revenue recognised annually according to the services received. If there is no performance obligation, revenue is recognised upon recognition of the asset as a whole.
– **Services In-kind** received are not recognised but are instead disclosed and commented upon in the Notes if they are material.

Due to the high number and the difficulty in elicitation, separability and measurement of rights of use and services in-kind within research agreements, these are not recognised. There is only a general description of the research activity in the Notes section.

Other revenue
Among other items, other revenue includes other service revenue and real estate revenue. This revenue is classified as an exchange transaction (IPSAS 9). As a rule, revenue is accounted for on an accrual basis when the goods are delivered or the services rendered.

Cash and cash equivalents
Cash and cash equivalents comprise cash-in-hand, demand and term deposits with financial institutions and funds invested with the Federal Government if their total term or the remaining term to maturity at the time of acquisition is less than 90 days. Cash and cash equivalents are measured at their nominal amount.

Receivables
Receivables from exchange (from goods and services) and non-exchange transactions are presented separately in the balance sheet.

In the case of receivables from non-exchange transactions (IPSAS 23), such as on SNSF and EU projects and from other donors, it is probable that there will be an inflow of funds in relation to the total contractual project volume. Therefore, the total amount of the project is usually recognised as a receivable at inception of the agreement if the fair value can be measured reliably. If the recognition criteria cannot be met, information is disclosed under contingent assets. Non-current receivables of over CHF 10m are stated at amortised cost using the effective interest method. Current receivables are stated at cost.

Value adjustments are recognised on receivables on the basis of experience and a case-by-case assessment.

Inventories

Inventories are measured at the lower of cost and net realisable value. Cost is calculated using the weighted average cost method. Appropriate value adjustments are recognised for slow-moving inventories.

Property, plant and equipment

Items of property, plant and equipment are stated at cost less accumulated depreciation. They are depreciated over their estimated useful life using the straight-line method. The estimated useful lives are as follows:

Table 6: Useful life of the asset categories

Asset category	Useful life ETH Zurich / EPFL	Useful life Research Institutes
Immovable assets		
Property	unrestricted	unrestricted
Leasehold improvements < = CHF 1 million	10 years	10 years
Leasehold improvements > CHF 1 million	according to components [1]	according to components [1]
Buildings and structures	according to components [2]	according to components [2]
Biotopes and geotopes	unrestricted	unrestricted
Movable assets		
Machinery, equipment, tools, devices	5 years	5–10 years
Passenger vehicles, delivery vehicles, trucks, aircraft, ships, etc.	5 years	4–7 years
Furnishings	5 years	5–10 years
IT and communication	3 years	3–7 years
Large scale research plants and equipment	–	10–40 years [3]

1 In the case of items of property, plant and equipment with a value of CHF 1 million or above, it is checked whether components (with a value that is significant in relation to the total value) need to be recognised and depreciated separately because they have a different useful life (components approach).
2 Useful life depends on the type of building, its purpose and the fabric of the building (20–100 years). Assets under construction are not depreciated.
3 This practice is deviated from in exceptional cases.

Capitalised leasehold improvements and installations in leased premises are depreciated over the estimated useful life or over the term of the lease if shorter.

In the event of additions to property, plant and equipment, checks are made as to whether components with a value that is significant in relation to the total value need to be recognised and depreciated separately because they have a different useful life (components approach).

Investments that have future economic benefits or are of public interest over several years and can be measured reliably are recognised as assets and depreciated over the estimated useful life.

The residual value of property, plant and equipment that is scrapped or sold is derecognised at the time of the asset's physical disposal. The gains or losses resulting from the derecognition of an item of property, plant and equipment are recognised as operating revenue or operating expenses.

Movable cultural items and works of art are not recognised as assets. An inventory of these items is kept.

Intangible assets

Intangible assets are recognised at cost. Standard software is amortised over three years using the straight-line method. Other intangible assets with an amortisation period required to be determined individually are amortised over their estimated useful life using the straight-line method.

Impairments (property, plant and equipment and intangible assets)

Property, plant and equipment and intangible assets are reviewed annually for indications of impairment. If specific indications are identified, an impairment test is performed. If the carrying amount permanently exceeds the value in use or net realisable value, an impairment is recognised in surplus or deficit in the amount of the difference. If the main purpose of an investment is to generate a commercial return, the impairment is calculated using IPSAS 26 (Impairment of cash-generating assets). For all other investments, any impairment is calculated in accordance with the provisions of IPSAS 21 (Impairment of non-cash-generating assets). The main criteria for the judgement are the original motives behind the respective investments and the significance of the planned cash inflows.

Leases

Leases for real estate, equipment, other movable assets and vehicles where the ETH Domain substantially assumes all the risks and rewards incidental to ownership are treated as finance leases. At inception of the lease, the assets and liabilities under a finance lease are recognised at the fair value of the leased property or, if lower, the present value of the minimum lease payments. Each lease payment is apportioned between the reduction of the outstanding liability and the finance charge. The reduction is deducted from the recognised lease liability. The depreciation of the leased goods occurs over whichever is the shorter of the useful life or the lease term, if the transfer of ownership is not certain by the end of the lease term.

Other leases where the ETH Domain acts as the lessee or lessor are recognised as operating leases. They are not carried in the balance sheet, but instead recognised as an expense in the statement of financial performance on an accrual basis.

Long-term leases of real estate are assessed separately depending on whether they are for plots of land or buildings.

Financial assets and loans

Financial assets are recognised at fair value if they are acquired with the intention of generating a profit from short-term fluctuations in price or if they are designated as financial assets at fair value (e.g. investments held without significant influence). Changes in value are recognised in surplus or deficit.

Other non-current financial assets that are held for an indefinite period and may be sold at any time for liquidity reasons or in response to changes in market conditions are classified as available for sale and stated at fair value or at cost if the fair value cannot be determined reliably. Unrealised gains and losses are recognised in equity and only transferred to surplus or deficit when the financial asset is sold or an impairment occurs. For instance, investments where there is neither control nor significant influence are recognised as available for sale.

Originated loans and fixed deposits are stated either at amortised cost (nominal value of less than CHF 10m, and current loans and fixed deposits of over CHF 10m) or at amortised cost using the effective interest method (non-current loans and fixed deposits of over CHF 10m). The effective interest method allocates the difference between the acquisition cost and the repayment amount (premium / discount) over the term of the asset, using the net present value method. Impairment losses are recognised based on a case-by-case assessment.

Derivative financial instruments are used primarily for hedging or as a strategic position. Without exception, they are measured at fair value. Changes in value are usually recognised in surplus or deficit.

Investment property

Investment property is only reported separately if it is material. Otherwise, it is recognised in the balance sheet as property, plant and equipment and disclosed accordingly.

Co-financing

Co-financing is third-party funding acquired by the ETH Domain that is used to finance construction projects in property owned by the Federal Government.

Co-financing is measured based on the valuation of the underlying property, which the Federal Government recognises at cost less accumulated depreciation. A property's ongoing depreciation reduces the value of the co-financing to the same degree as the underlying property.

Co-financing is reported with the same amounts on both the assets and the equity and liabilities side (in equity) of the balance sheet.

Current liabilities

Current liabilities are usually recognised on receipt of the invoice. This item also includes current accounts with third parties (including social insurance institutions). Current liabilities are measured at their nominal amount.

Financial liabilities

Financial liabilities include monetary liabilities resulting from financing activities as well as negative replacement values from derivative financial instruments. Monetary liabilities are usually interest-bearing. Liabilities that are due for repayment within twelve months of the reporting date are current. They are generally measured at amortised cost. Derivative financial instruments are measured at their fair value.

Provisions

Provisions are recognised when a past event gives rise to a present obligation, an outflow of resources is probable and the amount can be estimated reliably.

Net defined benefit liabilities

Net defined benefit liabilities presented in the balance sheet are measured in accordance with IPSAS 39. They correspond to the present value of the defined benefit obligations (DBO), less the fair value of the plan assets. A description of the pension scheme and the insured persons of the ETH Domain can be found in Note 28 Net defined benefit liabilities.

The defined benefit obligations and the service costs are determined annually by external experts using the actuarial valuation method Projected Unit Credit-method. The calculation is made based on information about the beneficiaries (salary, vested benefits, etc.) and using both demographic (retirement rates, disability rates, mortality rates, etc.) and financial (salary or pension trends, returns, etc.) assumptions. The amounts calculated are discounted to the valuation date by applying a discount rate. Changes in estimates of economic conditions can significantly affect defined benefit obligations.

The defined benefit obligations were measured based on the current membership base of the ETH Domain's pension scheme as of 31 October 2019, using actuarial assumptions as of 31 December 2019 (e. g. BVG 2015 actuarial tables), and the plan provisions of the ETH Domain pension scheme. The results were then adjusted using estimated pro rata cash flows as of 31 December 2019. The fair value of the plan assets is used including estimated performance as of 31 December 2019.

Current service cost, past service cost resulting from plan amendments, gains and losses on settlement, administrative costs and interest on the net defined benefit liabilities are presented in the statement of financial performance within personnel expenses.

Plan amendments and settlements are recognised immediately in surplus or deficit in the period in which they occur provided they result in vested benefits.

Actuarial and investment gains and losses on defined benefit plans are recognised directly in equity in the reporting period in which they occur.

Dedicated third-party funds

Liabilities from dedicated projects that arise from non-exchange transactions (IPSAS 23) are presented in the balance sheet as dedicated third-party funds. They are allocated solely to non-current liabilities because the projects usually last for several years and the current portion of the liability cannot be determined in most cases due to the nature of the projects.

They are measured based on the outstanding performance obligations at the reporting date, which are calculated from the total contractual project volume less services performed up to the reporting date.

Equity

Net assets / equity is the residual interest in the assets of an entity after deducting all its liabilities. In the ETH Domain, equity is structured as follows:

Valuation reserves (recognition in equity):

- **Revaluation reserves for available-for-sale financial assets:** recognised at fair value. Fair value changes are recognised in equity until the financial assets are sold.
- **Revaluation reserves for net defined benefit liabilities:** actuarial and investment gains and losses on defined benefit obligations or plan assets are recognised in equity.
- **Valuation reserves from hedging transactions:** if hedge accounting is used, positive and negative replacement values from hedging transactions are recognised in equity and released to surplus or deficit when the underlying hedged transaction affects surplus or deficit.

Dedicated reserves

- **Donations and bequests:** this item includes unused funds from donations and bequests that have certain conditions attached, but are not required to be classified as liabilities.
- T**eaching and research reserves:** this item indicates that various internal and external commitments exist and appropriate reserves were recognised to cover them. They comprise reserves for teaching and research projects as well as "election commitments", i.e. funds granted to newly elected professors under contractual arrangements for the purpose of setting up their professorship.
- **Infrastructure and administration reserves (value fluctuations, construction projects):** these include reserves for fluctuations in the value of the securities portfolio (risk capital) and for delayed construction projects.

Dedicated reserves must (with the exception of election / appointment commitments) have been generated. They are recognised and released within the equity.

Free reserves

Unused funds for which there are no contractual or internal provisions in accordance with IPSASs are presented as free reserves. They are not restricted in terms of time or purpose.

Reserves from associated entities

This item comprises reserves from the inclusion of the share of equity of investments in associated entities that are accounted for using the equity method. These reserves cannot be accessed directly and they are dedicated.

Accumulated surplus / deficit

The accumulated surplus or deficit shows the cumulative results at the reporting date. It comprises the surplus / deficit carried forward, the surplus / deficit for the period and increases or decreases in reserves.

The surplus / deficit carried forward is accumulated annually as part of the appropriation of surplus / deficit. The surplus / deficit for the period includes the portion of the result not yet distributed. If currency translation differences arise on foreign, fully consolidated entities on consolidation, they are recognised in equity, without affecting surplus or deficit.

Contingent liabilities and contingent assets

A contingent liability is either a possible obligation that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of an uncertain future event not wholly within the control of the entity; or a present obligation that arises from past events but is not recognised because of its low probability of occurrence (less than 50%) or because the obligation cannot be measured reliably, as a result of which the criteria for recognising a provision are not met.

A contingent asset is a possible asset that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of an uncertain future event not wholly within the control of the entity.

Financial commitments

Financial commitments are presented in the Notes if they are based on events prior to the reporting date, they will definitely lead to obligations to third parties after the reporting date and their amount can be measured reliably.

Cash flow statement

The cash flow statement shows the cash flows from operating activities, investing activities and financing activities. It is presented using the indirect method, i.e. cash flows from operating activities are based on the surplus or deficit for the period, adjusted for the effects of transactions of a non-cash nature. Total cash flow represents the change in the balance sheet item Cash and cash equivalents.

Segment reporting

The two sub-consolidated Federal Institutes of Technology, the four research institutes and the ETH Board are defined as segments in the ETH Domain. The segments reflect the operational independence of the institutions. The ETH Board includes eliminations and unallocated transactions. The intersegment transfers are based on the cost structure.

4 Estimation uncertainty and management judgements

Estimation uncertainty in the application of accounting policies

Preparation of the annual consolidated financial statements is dependent on assumptions and estimates in connection with accounting principles, where management has a certain margin of discretion. Although these estimates are based on management's best knowledge, actual results may differ from those estimates.

This applies to the following items in particular:

Useful life and impairment of plant, property and equipment

The useful life of plant, property and equipment is defined and periodically reviewed bearing in mind the current technical environment and past experience. A change in the estimate may affect the future amount of the depreciation charges and the carrying amount.

Estimates that could lead to a reduction in the carrying amount (impairment) are likewise made in the course of the regular impairment test.

Provisions

These involve a higher degree of estimation than other balance sheet items and therefore may lead to a higher or lower cash outflow depending on the actual outcome of a past event.

Net defined benefit liabilities

The net defined benefit liabilities are calculated based on long-term actuarial assumptions for the defined benefit obligations and for the expected returns on plan assets. These assumptions may differ from actual future developments. The discount rate and future salary trends are key components in the actuarial valuation.

Recognition of donations

The ETH Domain regularly receives donations in the form of assets. Under IPSASs, donations must be recognised initially at fair value. The determination of that fair value requires management to make estimates.

Discount rates

Uniform discount rates have been defined for use in discounting non-current receivables, liabilities and provisions. They are based on a risk-free rate and a premium for credit risk. However, because of the current interest rate situation these discounting rates are subject to some uncertainties.

Management judgements in the application of accounting policies

Finance lease
When accounting for two long-term lease contracts, EPFL applied the following significant management judgements in 2017, which remain unchanged:
- Both leases are classified as finance leases because the main risks and rewards incidental to ownership have been transferred to EPFL.
- Termination of the lease after 30 years is currently seen as the most likely scenario. This hypothesis does not impose any formal obligation upon the EPFL to terminate the leases and does not determine who is to finance the buy-back or who will lease the objects following termination.

Property, plant and equipment
A review of the effective useful life of the accelerator facilities at the PSI revealed a value of 45 years. Large scale research plants and equipment is generally depreciated over a period of between 10 and 40 years. In exceptional cases, however, this can be deviated from. From a technological point of view and based on experience to date, a longer useful life is appropriate in this case.

Provisions
Provisions set aside at the PSI for dismantling the accelerator facilities and the disposal of the radioactive waste amounting to CHF 543m (previous year: CHF 631m, see Note 27 Provisions) are based on the discussion paper entitled "Financing the disposal of radioactive waste within the responsibility of the Federal Government", the decision adopted by the Swiss Federal Council in April 2015.

The amount is based on estimates of the Federal Government's and the ETH Domain's disposal costs on the basis of the cost study for deep geological disposal issued by Swissnuclear in 2016 (KS16). It was duly noted by the Federal Council on 30 November 2018. This amount corresponds to the current estimate of the total costs to be expected up to and including storage in the deep geological repository at today's value.

In the previous year, provisions included additional payments to the National Cooperative for the Disposal of Radioactive Waste (Nagra) in the amount of CHF 84m. It was assumed that these must be borne by the ETH Domain. In the reporting period, with the approval of the 2020 budget (December 2019), the credit for the subsequent payment of the Federal Government's cooperative contributions to Nagra was increased in order to balance the accumulated debts and adjust the annual contribution of the Federal Government. The non-recurring additional payment to the ETH Domain cannot be offset back. In accordance with IFRIC 1 (Changes in existing decommissioning, restoration and similar liabilities), provisions and movable fixed assets are therefore reduced by CHF 84m.

No inflation rate is taken into account, nor is a simultaneous discounting of the provisions being considered, as this would not allow a more reliable statement to be made. Both inflation and the expected cash outflow depend to a large extent on when final storage takes place.

The assessment of the total cost for the radioactive waste of the Federal Government is updated every five years.

5 Comparison with the budget

Table 7: Statement of financial performance for the ETH Domain (consolidated) – Comparison between the 2019 statement and the final 2019 budget

CHF millions	Budget 2019			Actual 2019	Changes to B2019 Final absolute
	Approved	Reconciliation of federal financial contribution / IPSAS effects	Final		
Federal financial contribution	2,365	7	2,373	2,373	–
Federal contribution to accommodation	244	–	244	244	–
Total federal contribution	**2,609**	**7**	**2,616**	**2,616**	**–**
Tuition fees, continuing education	**41**	**–**	**41**	**48**	**7**
Swiss National Science Foundation (SNSF)	261	–	261	260	–2
Swiss Innovation Agency (Innosuisse)	68	–	68	49	–19
Special federal funding of applied research	79	–	79	82	3
EU Framework Programmes for Research and Innovation (FP)	144	–	144	152	8
Industryoriented research (private sector)	132	–	132	146	14
Other project-oriented third-party funding (incl. cantons, municipalities, international organisations)	71	–	71	90	19
Research contributions, mandates and scientific services	**756**	**–**	**756**	**779**	**23**
Donations and bequests	**95**	**–**	**95**	**92**	**–3**
Other revenue	**115**	**–**	**115**	**140**	**25**
Operating revenue	**3,617**	**7**	**3,624**	**3,676**	**52**
Personnel expenses	2,269	82	2,352	2,386	35
Other operating expenses	962	–	962	935	–27
Depreciation	241	–	241	267	25
Transfer expenses	166	7	173	49	–124
Operating expenses	**3,638**	**90**	**3,727**	**3,637**	**–90**
OPERATING RESULT	**–21**	**–82**	**–104**	**39**	**142**
NET FINANCE INCOME / EXPENSE	**9**	**–**	**9**	**28**	**19**
Share of surplus / deficit of associated entities and joint ventures	–	–	–	74	74
SURPLUS (+) OR DEFICIT (–)	**–12**	**–82**	**–95**	**140**	**235**

Table 8: Reallocation of funds ETH Domain Budget 2019

CHF millions	ETH-Board	ETH Zurich	EPFL	PSI	WSL	Empa	Eawag	Total Credit
Status as at 01.01.2019 (federal decree Ia as of 13.12.2018)	**121.6**	**1,136.4**	**610.6**	**294.0**	**54.8**	**100.3**	**47.8**	**2,365.4**
Changes:								
Credit reallocation: flexibility								
(Credit reallocation debited to Credit A202.0134 constructions of ETH Domain in acc. with FHV Art. 20 para. 5)	–	−5.0	4.0	5.3	−0.2	0.7	2.4	7.2
Assignments by ETH Board:								
Strategic Proposals Teaching and Research	−22.6	8.3	6.3	–	–	8.0	–	–
Credit allocation ETH Board: increased Base Budget	–	–	–	–	–	–	–	–
Credit reallocations within Strategic Focus Areas								**–**
Personalized Health and Related Technologies	−14.0	14.5	−0.4	−0.2	–	0.2	–	–
Advanced Manufacturing	−2.5	0.8	0.6	0.4	–	0.7	–	–
Data Science	−7.9	3.7	3.4	0.1	0.3	0.1	0.2	–
Various credit reallocations	**–**	**−0.6**	**0.2**	**0.1**	**0.2**	**0.5**	**−0.5**	**–**
Status as of 31.12.2019	**74.7**	**1,158.1**	**624.6**	**299.7**	**55.1**	**110.6**	**49.9**	**2,372.6**

The consolidated surplus or deficit of the proposed budget for 2019, according to the ETH Board's 2019 budget report for the ETH Domain (June 2018) amounted to −CHF 12m. The approved 2019 budget contains the increase in the federal financial contribution by +CHF 30m to CHF 2,365m authorised by federal decree Ia on the 2019 budget (Volume 3 of the federal decrees).

The final budget for 2019 shows an adjustment compared to the approved budget for 2019, which led to the budgeted annual deficit of −CHF 95m for 2019. This relates to the recognition of net pension costs of CHF 82m under personnel expenses in accordance with IPSAS 39.

By contrast, the following adjustments had no effect on the budgeted surplus or deficit for 2019, as revenue and expenses also increased to the same extent:

- Reallocation of funds within the ETH Domain.
- Budget-neutral credit reallocation of +CHF 7m (2018: +CHF 24m) from the ETH Domain investment credit for buildings (credit A202.0134, AU 620 FOBL) to the ETH Domain's financial contribution; the latter corresponds to credit A202.0181 (AU 701 EO-EAER). The credit reallocation took place within the scope of the flexibility between the two credits within the expenditure ceiling for 2017–2020 of the ETH Domain and based on Art. 4(4) federal decree Ia on the 2019 budget.

In the budgeting process, those entities controlled or significantly influenced by ETH Zurich, EPFL and the PSI are not included in the consolidated financial statements. This leads to one of the discrepancies between the annual financial statement and the budget for 2019.

The other figures in the 2019 budget reflect the approved budget in accordance with the 2019 Budget Report issued by the ETH Board for the ETH Domain.

6 Segment reporting

In the ETH Domain, the two sub-consolidated ETH Institutes of Technology and the four research institutes are defined as segments. The ETH Board also includes the consolidation entries.

Statement of financial performance by segments

Table 9: Statement of financial performance 2019 by segment

	2019							
CHF millions	ETH Zurich	EPFL	PSI	WSL	Empa	Eawag	ETH-Board *	ETH Domain
Federal financial contribution	1,158	625	300	55	111	50	75	2,373
Federal contribution to accommodation	140	61	21	4	13	4	1	244
Total federal contribution	**1,298**	**686**	**321**	**59**	**124**	**54**	**75**	**2,616**
Tuition fees, continuing education	**28**	**16**	**4**	**–**	**–**	**–**	**–**	**48**
Swiss National Science Foundation (SNSF)	125	94	20	6	8	5	–	260
Swiss Innovation Agency (Innosuisse)	21	14	4	–	9	–	–	49
Special federal funding of applied research	36	12	8	15	7	5	–1	82
EU Framework Programmes for Research and Innovation (FP)	67	62	11	3	7	1	–	152
Industry-oriented research (private sector)	61	56	15	–	15	1	–2	146
Other project-oriented third-party funding (incl. cantons, municipalities, international organisations)	46	31	9	2	3	3	–5	90
Research contributions, mandates and scientific services	**357**	**271**	**67**	**27**	**49**	**16**	**–7**	**779**
Donations and bequests	**64**	**26**	**1**	**–**	**–**	**–**	**–**	**92**
Other revenue	**42**	**58**	**50**	**2**	**8**	**1**	**–20**	**140**
Operating revenue	**1,789**	**1,056**	**442**	**88**	**182**	**71**	**49**	**3,676**
Personnel expenses	1,172	688	272	68	121	55	9	2,386
Other operating expenses	496	263	99	20	43	19	–6	935
Depreciation	110	76	64	2	12	4	–	267
Transfer expenses	27	22	1	1	1	–	–3	49
Operating expenses	**1,804**	**1,049**	**436**	**91**	**177**	**78**	**1**	**3,637**
OPERATING RESULT	**–15**	**7**	**6**	**–3**	**4**	**–8**	**48**	**39**
NET FINANCE INCOME / EXPENSE	**33**	**–6**	**–**	**–**	**–**	**–**	**–**	**28**
Share of surplus / deficit of associated entities and joint ventures	75	–2	1	–	–	–	–	74
SURPLUS (+) OR DEFICIT (–)	**93**	**–1**	**7**	**–3**	**4**	**–8**	**48**	**140**

* including consolidation entries

Table 10: Statement of financial performance 2018 by segments

	2018							
CHF millions	ETH Zurich	EPFL	PSI	WSL	Empa	Eawag	ETH-Board *	ETH Domain
Federal financial contribution	1,177	633	297	57	101	59	33	2,357
Federal contribution to accommodation	149	71	24	4	16	4	–	269
Total federal contribution	**1,326**	**704**	**320**	**61**	**117**	**63**	**33**	**2,625**
Tuition fees, continuing education	**24**	**13**	**3**	**–**	**–**	**–**	**–**	**41**
Swiss National Science Foundation (SNSF)	124	95	16	5	8	6	–	255
Swiss Innovation Agency (Innosuisse)	22	18	4	–	10	–	–	56
Special federal funding of applied research	26	12	13	16	9	5	–1	81
EU Framework Programmes for Research and Innovation (FP)	64	59	10	1	7	2	–	142
Industry-oriented research (private sector)	60	42	21	1	16	1	–1	139
Other project-oriented third-party funding (incl. cantons, municipalities, international organisations)	42	29	8	2	2	3	–4	84
Research contributions, mandates and scientific services	**337**	**256**	**72**	**26**	**52**	**17**	**–5**	**755**
Donations and bequests	**136**	**19**	**1**	**–**	**–**	**–**	**–1**	**155**
Other revenue	**44**	**60**	**35**	**3**	**8**	**1**	**–13**	**138**
Operating revenue	**1,868**	**1,052**	**431**	**90**	**178**	**82**	**13**	**3,714**
Personnel expenses	1,133	673	272	66	119	54	16	2,333
Other operating expenses	536	278	99	19	46	20	–8	990
Depreciation	104	76	49	2	12	4	19	266
Transfer expenses	23	20	2	1	–	–	–3	43
Operating expenses	**1,795**	**1,048**	**423**	**87**	**178**	**78**	**23**	**3,631**
OPERATING RESULT	**72**	**5**	**8**	**3**	**–**	**4**	**–10**	**83**
NET FINANCE INCOME / EXPENSE	**–9**	**–13**	**–**	**–**	**–**	**–**	**–**	**–22**
Share of surplus / deficit of associated entities and joint ventures	–11	–1	1	–	–	–	–	–11
SURPLUS (+) OR DEFICIT (–)	**53**	**–9**	**9**	**3**	**–**	**4**	**–10**	**50**

* including consolidation entries

Balance sheet by segments

Table 11: Balance sheet as of 31 December 2019 by segments

	31.12.2019							
CHF millions	ETH Zurich	EPFL	PSI	WSL	Empa	Eawag	ETH-Board *	ETH Domain
CURRENT ASSETS								
Cash and cash equivalents	168	349	103	51	106	63	110	950
Current receivables from non-exchange transactions	306	206	37	23	33	8	–1	612
Current receivables from exchange transactions	24	16	8	1	5	1	–6	48
Current financial assets and loans	1,063	248	21	33	41	25	–	1,430
Inventories	6	2	2	–	–	–	–	10
Prepaid expenses and accrued income	22	13	10	–	1	2	–	49
Total current assets	**1,588**	**834**	**182**	**109**	**186**	**98**	**102**	**3,099**
NON-CURRENT ASSETS								
Property, plant and equipment	477	406	926	10	59	20	–	1,898
Intangible assets	4	57	1	–	–	–	–	63
Non-current receivables from non-exchange transactions	604	229	74	36	19	4	–27	939
Non-current receivables from exchange transactions	–	–	–	–	–	–	–	–
Investments in associated entities and joint ventures	168	35	5	–	–	–	–	208
Non-current financial assets and loans	5	7	2	–	1	–	27	42
Co-financing	47	70	–	–	7	–	–	123
Total non-current assets	**1,304**	**804**	**1,007**	**45**	**86**	**25**	**–**	**3,272**
TOTAL ASSETS	**2,893**	**1,638**	**1,188**	**154**	**272**	**123**	**102**	**6,371**
LIABILITIES								
Current liabilities	68	64	14	5	5	5	–7	154
Current financial liabilities	–	14	–	–	–	–	–	15
Accrued expenses and deferred income	74	39	28	2	6	2	–	150
Short-term provisions	48	26	14	5	6	3	1	102
Short-term liabilities	**190**	**144**	**56**	**11**	**17**	**9**	**–6**	**421**
Dedicated third-party funds	776	530	97	75	61	16	–	1,555
Non-current financial liabilities	19	337	–	–	–	–	–6	350
Net defined benefit liabilities	1,145	631	337	82	153	56	19	2,423
Long-term provisions	31	18	563	3	5	2	–	621
Long-term liabilities	**1,970**	**1,515**	**998**	**160**	**219**	**74**	**13**	**4,950**
Total liabilities	**2,160**	**1,659**	**1,053**	**171**	**236**	**83**	**7**	**5,370**
EQUITY								
Valuation reserves	–699	–361	–219	–49	–98	–33	–12	–1,470
Dedicated reserves	978	247	45	16	33	21	25	1,365
Free reserves	331	210	42	49	97	57	71	856
Co-financing	47	70	–	–	7	–	–	123
Reserves from associated entities	168	35	5	–	–	–	–	208
Accumulated surplus (+) / deficit (–)	–92	–221	262	–33	–4	–5	11	–82
Total equity	**733**	**–21**	**135**	**–17**	**36**	**40**	**95**	**1,001**
TOTAL LIABILITIES AND EQUITY	**2,893**	**1,638**	**1,188**	**154**	**272**	**123**	**102**	**6,371**

* including consolidation entries

Table 12: Balance sheet as of 31 December 2018 by segments

CHF millions	ETH Zurich	EPFL	PSI	WSL	Empa	Eawag	ETH-Board *	ETH Domain
	31.12.2018							
CURRENT ASSETS								
Cash and cash equivalents	183	315	81	51	96	64	62	852
Current receivables from non-exchange transactions	241	217	42	21	35	11	−8	558
Current receivables from exchange transactions	18	13	7	1	3	1	−7	36
Current financial assets and loans	1,011	281	21	31	40	25	–	1,409
Inventories	5	2	2	–	–	–	–	10
Prepaid expenses and accrued income	27	5	11	–	1	3	–	48
Total current assets	**1,485**	**833**	**164**	**104**	**176**	**103**	**47**	**2,913**
NON-CURRENT ASSETS								
Property, plant and equipment	441	427	1,081	10	61	22	−19	2,023
Intangible assets	5	62	–	–	–	–	–	67
Non-current receivables from non-exchange transactions	627	246	31	33	26	6	–	970
Non-current receivables from exchange transactions	–	–	–	–	–	–	–	–
Investments in associated entities and joint ventures	93	37	5	–	–	–	–	135
Non-current financial assets and loans	4	7	2	–	–	–	19	32
Co-financing	48	72	–	–	7	–	–	128
Total non-current assets	**1,218**	**851**	**1,118**	**43**	**95**	**29**	**–**	**3,354**
TOTAL ASSETS	**2,703**	**1,685**	**1,282**	**147**	**271**	**132**	**47**	**6,267**
LIABILITIES								
Current liabilities	60	104	17	5	5	3	−15	179
Current financial liabilities	–	15	1	–	–	–	–	16
Accrued expenses and deferred income	75	41	17	2	5	2	–	142
Short-term provisions	49	31	15	4	6	3	1	109
Short-term liabilities	**185**	**191**	**49**	**11**	**17**	**7**	**−13**	**446**
Dedicated third-party funds	726	539	89	68	68	21	–	1,510
Non-current financial liabilities	19	342	–	–	–	–	–	361
Net defined benefit liabilities	1,056	579	315	75	143	52	19	2,239
Long-term provisions	28	17	650	3	5	2	–	705
Long-term liabilities	**1,829**	**1,476**	**1,054**	**145**	**216**	**75**	**19**	**4,815**
Total liabilities	**2,014**	**1,668**	**1,103**	**156**	**233**	**82**	**6**	**5,261**
EQUITY								
Valuation reserves	−650	−330	−206	−43	−92	−31	−13	−1,364
Dedicated reserves	798	229	26	11	36	19	4	1,123
Free reserves	483	185	45	53	86	71	44	967
Co-financing	48	72	–	–	7	–	–	128
Reserves from associated entities	93	37	5	–	–	–	–	135
Accumulated surplus (+) / deficit (−)	−84	−176	310	−30	1	−9	6	17
Total equity	**689**	**17**	**179**	**−9**	**38**	**50**	**41**	**1,006**
TOTAL LIABILITIES AND EQUITY	**2,703**	**1,685**	**1,282**	**147**	**271**	**132**	**47**	**6,267**

* including consolidation entries

Cash flow statement by segments

Table 13: Cash flow statement 2019 by segments

	2019							
CHF millions	ETH Zurich	EPFL	PSI	WSL	Empa	Eawag	ETH-Board *	ETH Domain
CASH FLOWS FROM OPERATING ACTIVITIES								
Surplus (+) or deficit (–)	**93**	**–1**	**7**	**–3**	**4**	**–8**	**48**	**140**
Depreciation	110	76	64	2	12	4	–	267
Share of surplus / deficit of associated entities and joint ventures	–75	2	–1	–	–	–	–	–74
Net finance income / expense (non-cash)	–25	–1	–	–	–	–	–	–26
Increase / decrease in net working capital	–60	–41	13	–2	1	6	–	–84
Increase / decrease in net defined benefit liabilities	39	21	9	2	4	2	–	78
Increase / decrease in provisions	1	–4	–86	1	–1	–	–	–89
Increase / decrease in non-current receivables	27	–1	–24	–2	7	2	8	17
Increase / decrease in dedicated third-party funds	50	9	9	7	–7	–5	–	63
Reclassification and other (non-cash) income	–6	–	83	–	–	–	–	78
Cash flows from operating activities	**153**	**59**	**74**	**4**	**21**	**1**	**56**	**368**
CASH FLOWS FROM INVESTING ACTIVITIES								
Investments								
Purchase of property, plant and equipment	–138	–52	–50	–2	–10	–2	–	–253
Purchase of intangible assets	–1	–	–1	–	–	–	–	–2
Increase in co-financing	–	–	–	–	–	–	–	–
Increase in loans	–	–	–	–	–	–	–	–1
Increase in current and non-current financial assets	–76	–	–	–2	–	–	–11	–89
Total investments	**–215**	**–52**	**–51**	**–4**	**–11**	**–2**	**–11**	**–345**
Divestments								
Disposal of property, plant and equipment	–	–	–	–	–	–	–	–
Disposal of intangible assets	–	–	–	–	–	–	–	–
Decrease in co-financing	–	–	–	–	–	–	–	–
Decrease in loans	–	–	–	–	–	–	–	–
Decrease in current and non-current financial assets	47	35	–	–	–	–	3	84
Total divestments	**47**	**35**	**–**	**–**	**–**	**–**	**3**	**84**
Dividends received from associated entities and Joint Ventures	–	–	–	–	–	–	–	–
Cash flows from investing activities	**–168**	**–17**	**–51**	**–4**	**–10**	**–2**	**–8**	**–261**
CASH FLOWS FROM FINANCING ACTIVITIES								
Increase in short-term and long-term financial liabilities	–	1	–	–	–	–	–	1
Decrease in short-term and long-term financial liabilities	–	–9	–1	–	–	–	–	–10

Continuation of Table 13: Cash flow statement 2019 by segments

	2019							
CHF millions	ETH Zurich	EPFL	PSI	WSL	Empa	Eawag	ETH-Board *	ETH Domain
Cash flows from financing activities	**–**	**–8**	**–1**	**–**	**–**	**–**	**–**	**–9**
Total cash flow	**–15**	**34**	**22**	**–**	**10**	**–1**	**48**	**98**
Cash and cash equivalents at the beginning of the period	**183**	**315**	**81**	**51**	**96**	**64**	**62**	**852**
Total cash flow	**–15**	**34**	**22**	**–**	**10**	**–1**	**48**	**98**
Cash and cash equivalents at the end of the period	**168**	**349**	**103**	**51**	**106**	**63**	**110**	**950**
Net effect of currency translation on cash and cash equivalents	–	–	–	–	–	–	–	–
Contained in the cash flows from operating activities:								
Dividends received	4	–	–	–	–	–	–	4
Interest received	–	–	–	–	–	–	–	–
Interest paid	–1	–7	–	–	–	–	–	–9

* including consolidation entries

Table 14: Cash flow statement 2018 by segments

CHF millions	ETH Zurich	EPFL	PSI	WSL	Empa	Eawag	ETH-Board *	ETH Domain
	2018							
CASH FLOWS FROM OPERATING ACTIVITIES								
Surplus (+) or deficit (–)	**53**	**−9**	**9**	**3**	**–**	**4**	**−10**	**50**
Depreciation	104	76	49	2	12	4	19	266
Share of surplus / deficit of associated entities and joint ventures	11	1	−1	–	–	–	–	11
Net finance income / expense (non-cash)	11	3	–	–	–	–	–	13
Increase / decrease in net working capital	−25	48	−12	2	−1	–	–	12
Increase / decrease in net defined benefit liabilities	41	28	11	3	5	2	1	91
Increase / decrease in provisions	−1	−4	209	–	–	–	–	205
Increase / decrease in non-current receivables	−131	−13	7	−16	7	1	–	−146
Increase / decrease in dedicated third-party funds	63	39	−6	15	−8	−2	–	101
Reclassification and other (non-cash) income	1	−8	−209	−1	–	–	–	−216
Cash flows from operating activities	**127**	**161**	**58**	**8**	**16**	**9**	**10**	**388**
CASH FLOWS FROM INVESTING ACTIVITIES								
Investments								
Purchase of property, plant and equipment	−99	−49	−47	−1	−12	−2	–	−211
Purchase of intangible assets	−3	–	–	–	–	–	–	−3
Increase in co-financing	–	−7	–	–	–	–	–	−7
Increase in loans	−1	–	–	–	–	–	–	−1
Increase in current and non-current financial assets	−48	−1	–	−2	–	–	−8	−58
Total investments	**−151**	**−57**	**−47**	**−3**	**−13**	**−2**	**−8**	**−281**
Divestments								
Disposal of property, plant and equipment	–	–	3	1	–	–	–	4
Disposal of intangible assets	–	–	–	–	–	–	–	–
Decrease in co-financing	–	–	–	–	–	–	–	–
Decrease in loans	–	–	–	–	–	–	–	–
Decrease in current and non-current financial assets	15	–	–	–	–	–	1	16
Total divestments	**15**	**1**	**3**	**1**	**–**	**–**	**1**	**20**
Dividends received from associated entities and Joint Ventures	–	–	1	–	–	–	–	1
Cash flows from investing activities	**−135**	**−56**	**−44**	**−3**	**−13**	**−2**	**−8**	**−260**
CASH FLOWS FROM FINANCING ACTIVITIES								
Increase in short-term and long-term financial liabilities	–	1	–	–	–	–	–	1
Decrease in short-term and long-term financial liabilities	–	−8	−1	–	–	–	–	−10

Continuation of Table 14: Cash flow statement 2018 by segments

	2018							
CHF millions	ETH Zurich	EPFL	PSI	WSL	Empa	Eawag	ETH-Board *	ETH Domain
Cash flows from financing activities	**–**	**−8**	**–1**	**–**	**–**	**–**	**–**	**−9**
Total cash flow	**−9**	**97**	**13**	**5**	**3**	**7**	**2**	**118**
Cash and cash equivalents at the beginning of the period	**192**	**218**	**68**	**46**	**93**	**57**	**60**	**733**
Total cash flow	**−9**	**97**	**13**	**5**	**3**	**7**	**2**	**118**
Cash and cash equivalents at the end of the period	**183**	**315**	**81**	**51**	**96**	**64**	**62**	**852**
Net effect of currency translation on cash and cash equivalents	–	–	–	–	–	–	–	–
Contained in the cash flows from operating activities:								
Dividends received	3	–	–	–	–	–	–	3
Interest received	2	1	–	–	–	–	–	2
Interest paid	–1	−8	–	–	–	–	–	−9

* including consolidation entries

7 Total federal contribution

Federal financial contribution

Table 15: Federal financial contribution

CHF millions	2019	2018	Change absolute
Federal financial contribution	**2,373**	**2,357**	**16**

The available funds from the approved expenditure ceiling of the ETH Domain for the years 2017–2020 are processed via the two credit items, federal financial contribution and investment credit for ETH Domain buildings. The federal financial contribution credit is allocated to the Federal Department of Economic Affairs, Education and Research (EAER) (AU 701 EO EAER). The investment credit for building ETH Domain is allocated by the Federal Department of Finance (FFA) (AU 620 FOBL).

In contrast to investment credit for building ETH Domain (Confederation as parent), the federal financial contribution forms part of the consolidated financial statements of the ETH Domain.

The financial contribution is used for the strategic objectives set by the Swiss Federal Council in accordance with ERI Dispatch for 2017–2020 (FCD dated 5 April 2017 / 25 April 2018) and amounted to CHF 2,373m in 2019. The increase compared to 2018 (+CHF 16m, +1%) is largely due to higher contributions to national research infrastructures and the contribution to the Digitalisation Action Plan.

The federal financial contribution allocated to the entities is largely comprised of the base budget and strategic funds (incentive and seed capital funding) for projects in teaching and research.

The base budget for 2019 amounted to CHF 2,229m (2018: CHF 2,203m). The reporting period includes funds already received from the budgetary increase by Parliament in 2019 (CHF 30m), which are reserved to cover the excess expenditure of the 2020 base budget. The ETH Board had decided in 2017 to waive the performance-based award from 2019 onwards (2018: CHF 43m). The funds available for the strategic initiatives were as follows:

- the strategic focus areas in research:
  CHF 24m for “Personalized Health and Related Technologies”, “Data Science” as well as “Advanced Manufacturing” (2018: CHF 24m).
- CHF 14m for the implementation of the Digitalisation Action Plan
- the major research infrastructure of national and international importance in accordance with Objective 3 of the strategic objectives (Notes on ERI Dispatch for 2017–2020):
  - CHF 23m for the “Sustained scientific user lab for simulation based science” at the CSCS in Lugano (ETH Zurich) (2018: CHF 23m).
  - CHF 21m for the “Blue Brain Project” at EPFL (2018: CHF 23m) which is the Swiss contribution to the European “Future and Emerging Technologies” (FET) flagship initiative Human Brain Project (HBP);
  - CHF 16m for the ATHOS / SwissFEL beamline at the PSI (2018: CHF 8m);
  - CHF 3m on the upgrade of the CMS detectors at CERN (2018: CHF 2m)
- as well as the contribution of CHF 3m to the Swiss Plasma Center (2018: CHF 3m)
- and a total of CHF 25m for incentive and seed capital funding for strategic proposals for teaching and research (2018: CHF 11m).

The Federal Government is also financing the dismantling of the accelerator facilities and the disposal of radioactive components at the PSI. According to the most up-to-date cost estimate by the Federal Government for 2018, the total costs shall amount to CHF 543m for the PSI (for activities up to and including deep geological disposal). The annual savings contribution in 2019 was CHF 11m (2018: CHF 8m) (see Note 27 Provisions).

The employer contributions to support the funding ratio of the ETH Domain pension fund with PUBLICA for five years starting from 2015 (CHF 3.5m per annum). This funding is aligned to the funding ratio stipulated in Section 44 BVV 2, and is not related to the net defined benefit liabilities under IPSAS 39.

Federal contribution to accommodation

Table 16: Federal contribution to accommodation for the ETH Domain

CHF millions	2019	2018	Change absolute
Federal contribution to accommodation	**244**	**269**	**–25**

The federal contribution to accommodation is used to cover the expenses for the rental of real estate owned by the government. The credit is not part of the credits taking into account the expenditure ceiling of the ETH Domain. It affects financing, but not expenditure (no cash flow as a result of it). The calculations are based on the depreciation and capital costs for state-owned real estate.

The credit is considered as an expense in the EAER and as a revenue in the Federal Office for Buildings and Logistics (FOBL).

The decrease of CHF 25m is mainly due to the reduction of the imputed rate of return on average capital invested (2019: 1.5%; 2018: 1.75%).

8 Tuition fees, continuing education

Table 17: Tuition fees, continuing education

CHF millions	2019	2018	Change absolute
Tuition fees, continuing education	**48**	**41**	**7**

Tuition fees and attendance fees for studies and continuing education programmes as well as other fees are regulated in the Ordinance on Fees in the Domain of Federal Institutes of Technology (SR 414.131.7 of 31 May 1995; as amended on 1 September 2018).

The item Tuition fees and continuing education contains all revenue received by the ETH Domain for its educational services. In the reporting period, CHF 28m (2018: CHF 24m) was attributable to ETH Zurich, CHF 16m (2018: CHF 13m) to EPFL and CHF 4m (2018: CHF 3m) to PSI.

Revenue from tuition fees for Bachelor's and Master's programmes amounted to CHF 27m (ETH Zurich CHF 18m; EPFL CHF 10m) in the reporting period and CHF 24m in the previous year. The increase of CHF 3m compared to 2018 is related to the growth in the number of students and the increase in tuition fees. The number of Bachelor's and Master's students rose compared to 2018, where the number of doctoral students remained constant (see Annual Report, Monitoring Table, p. 84 et seq.). The annual tuition fees are set to increase gradually by a total of CHF 300 from autumn 2019 onwards (Pt. 1. Tuition Fees Notes to the Fee Ordinance, +CHF 80 for the 2019 autumn semester and 2020 spring semester; a further +CHF 70 from the 2020 autumn semester onwards).

At both Federal Institutes of Technology, the range of continuing education programmes was expanded, which also led to growth in revenue from tuition fees and continuing education in the reporting period. Revenue from the PSI came from the PSI training centre, consisting of the reactor school, the school of radiation protection and the PSI academy.

The total revenue also includes administration fees, in particular registration and examination fees or fees for the use of the libraries. They amounted to CHF 5m in the reporting period.

Tuition fees and revenue from continuing education at both ETH Zurich and EPFL equate to just under 2% of the respective operating revenue in 2019.

9 Research contributions, mandates and scientific services

Revenue from research contributions, mandates and scientific services increased in almost all revenue categories; only the revenue from projects for the Swiss Innovation Agency Innosuisse was down. This can be attributed to the change in system from CTI to Innosuisse.

Of the total revenue volume, CHF 631m or 81% was attributable to non-exchange transactions (IPSAS 23), generally research grants, and CHF 148m or 19% to exchange transactions (IPSAS 9), generally contract research and scientific services. The two shares have behaved the same over the years.

The trend in the individual categories is as follows:

The high project revenue from the Swiss National Science Foundation (SNSF), as in the previous year, increased by CHF 5m to CHF 260m in 2019 as a result of more research services, especially at the PSI. Just under 85% of the revenue was once again allocated to the two Federal Institutes of Technology (ETH Zurich: CHF 125m; EPFL: CHF 94m).

Innosuisse finances and regulates, among other things, the operation of networked inter-university research centres for energy research, i.e. Swiss Competence Centres for Energy Research (SCCER), as part of the action plan "Coordinated Energy Research Switzerland". The ETH Domain participates in projects on all eight SCCER programmes, seven of them in a leading capacity. The decline in Innosuisse's 2019 revenue is a consequence of the lower number of new projects awarded in the previous year. The highest shares were once again recognised by ETH Zurich (2019: CHF 21m; 2018: CHF 22m), EPFL (2019: CHF 14m; 2018: CHF 18m) and Empa (2019: CHF 9m; 2018: CHF 10m).

There was positive growth for ETH Zurich in the volume of revenue from projects and mandates for special federal funding of applied research. By contrast, the other entities generated lower revenue than in the previous year, as projects were only in their initial phase or progressed at a slower pace due to delays. WSL generates a significant proportion (CHF 15m or a share of 17% in 2019) of its operating revenue from applied research mandates from government agencies. They include large projects with the FOEN on a variety of topics such as forestry and climate change, as well as projects within the scope of the continual data collection for the Swiss National Forest Inventory (NFI).

The high level of implementation of the EU Framework Programmes for Research and Innovation (EU FP) again significantly exceeded the previous year's level (2019: CHF 152m; 2018: CHF 142m). Among other things, the high level of funding and ERC grants received in the previous year had an impact in 2019.

Table 18: Research contributions, mandates and scientific services

CHF millions	2019	of which revenues (IPSAS 23)	of which revenues (IPSAS 9)	2018	of which revenues (IPSAS 23)	of which revenues (IPSAS 9)	Change absolute
Swiss National Science Foundation (SNSF)	260	260	–	255	255	–	5
Swiss Innovation Agency (Innosuisse)	49	49	–	56	56	–	–6
Special federal funding of applied research	82	58	24	81	51	29	1
EU Framework Programmes for Research and Innovation (FP)	152	152	–	142	142	–	10
Industry-oriented research (private sector)	146	47	99	139	50	89	7
Other project-oriented third-party funding (incl. cantons, municipalities, international organisations)	90	66	25	84	60	24	7
Total research contributions, mandates and scientific services	**779**	**631**	**148**	**755**	**613**	**142**	**24**

Although Switzerland has been a full associate of Horizon 2020 since the beginning of 2017, the total revenue for the reporting period still includes revenue from the implementation of projects which had been financed in previous years via the SERI from federal funding (2019: CHF 19 m; 2018: CHF 28m). Revenue in 2019 reflected the good progress of the EU FP Horizon 2020 projects (2014–2020), while projects from the 7th EU FP were in the final phase. Almost all institutions recognised higher revenue from the EU FPs. Various projects at EPFL are linked to the FET flagship Human Brain Project (HBP).

Revenue from cooperation with the private sector was up CHF 7m compared with 2018. The increase was mainly attributable to EPFL; in contrast, there was a decline at the PSI due to delays in projects. The other entities recognised revenue at the previous year's level or recognised slightly lower revenue. Research projects which are mainly based on projects with exchange transactions (IPSAS 9) have proved to be very volatile in a long-term comparison with corresponding fluctuations in revenue.

The other project-oriented third-party funds are contributions from the cooperation with cantons, universities and international organisations. As a result of the progress of ongoing projects at ETH Zurich, EPFL and Empa, revenue was up by CHF 7m compared with 2018.

Information on receivables from non-exchange transactions and their development, as well as on dedicated third-party funding in connection with the projects financed by the relevant third-party funding category, can be found in Notes 17 and 29.

10 Donations and bequests

Table 19: Donations and bequests

CHF millions	2019	2018	Change absolute
Donations and bequests	**92**	**155**	**–63**

Fewer donations were agreed in the reporting period than in the previous year. The volume of revenue from donations, particularly at ETH Zurich, fell from CHF 136m in the previous year to the current figure of CHF 63m. EPFL concluded more donation agreements than in the previous year, with revenue in 2019 amounting to CHF 22m (2018: CHF 15m).

These donation agreements concluded in 2019 were recognised almost exclusively in the surplus or deficit in the year the contract was concluded.

The research institutes also benefited from donations. Their volume totalled CHF 2m in the reporting year after having been less than CHF 1m in the previous year.

As in the previous year, CHF 4m of the revenue from in-kind contributions of CHF 5m arising from the donated rights most notably concerns EPFL for the "Microcity" building in Neuchâtel as well as "Industry 17" in Sion.

Table 20: In-kind contributions

CHF millions	2019	2018	Change absolute
Goods in-kind	–	–	–
Donated rights	5	4	1
Total in-kind contributions recognised as revenue	**5**	**4**	**1**
Services in-kind	–	–	–
Total in-kind contributions not recognised as revenue	**–**	**–**	**–**
Total in-kind contributions received	**5**	**4**	**1**

11 Other revenue

Table 21: Other revenue

CHF millions	2019	2018	Change absolute
Licences and patents	8	11	−2
Sales	18	13	5
Refunds	6	15	−8
Other services	47	43	5
Real estate revenue	34	33	1
Revenue from real estate owned by the Federal Government left for use	4	4	–
Profit from disposals (property, plant and equipment)	–	1	–
Own work capitalised	1	–	1
Other miscellaneous revenue	21	18	3
Total other revenue	**140**	**138**	**3**

The difference compared to 2018 was mainly due to the additional revenue from sales and to compensate for this, the loss of revenue from licences and patents. The PSI was able to sell additional detectors to various institutes worldwide and increase its sales revenue significantly. In the revenue from licences and patents, the PSI was not able to replicate the particular success of the previous year with a new licence in the radiopharmaceutical sector.

In the previous year, the refunds largely included the allocation of costs for dismantling, which were recognised in the reporting period under Other services.

The revenue from real estate owned by the Federal Government left for use has been separated in the above table since 2018. This is in accordance with Section 2b of the Ordinance on Accounting (SR 414.123), Transfer for Use. The associated charge to the Federal Government is included in Other operating expenses (see Note 13).

About CHF 32m of other revenue is attributable to the entities fully consolidated since 2017 (EPFL sub-consolidation), in particular Société du Quartier Nord de l'EPFL (SQNE), Société du Quartier de l'Innovation (SQIE) and EPFL Innovation Park Foundation (FEIP).

12 Personnel expenses

Table 22: Personnel expenses

CHF millions	2019	2018	Change absolute
Professors	209	205	4
Scientific personnel	923	907	16
Technical and administrative personnel, apprentices, trainees	769	736	32
IC, Suva and other refunds	–10	–10	–
Total salaries and wages	**1,891**	**1,839**	**52**
Social insurances OASI / DI / IC / MB	118	115	3
Net pension costs	309	317	–8
Accident and sickness insurance Suva (BU / NBU / KTG)	7	8	–
Employer's contribution to Family Compensation Fund (FAK / FamZG)	30	27	3
Total social insurance schemes and pension expenses	**464**	**466**	**–2**
Other employer contributions	–	–	–
Temporary personnel	9	11	–2
Change in provisions for untaken leave and overtime	–2	5	–8
Change in provisions for contributions to long-service awards	5	–10	14
Other personnel expenses	19	20	–1
Total personnel expenses	**2,386**	**2,333**	**54**

Total salaries and wages rose due to the growth in jobs and on account of the compensation measures decided upon by the ETH Board in coordination with the Confederation for 2019. 1.2 % of the total salary payments were at the disposal of employees under the Salary System (NSS) for individual salary adjustments. Inflation in 2018 was offset by 0.9 % in 2019.

There was an average of 18,915 full-time equivalents (FTEs) (excluding apprentices) in the reporting period (previous year: 18,453 FTEs). It rose by just under 3 %.*

The detailed composition of the net pension costs is set out in detail in the Note 28 Net defined benefit liabilities.

There was a change in estimates made in the previous year to determine the provision for contributions to long-service awards. The non-recurring effect of this adjustment was recognised prospectively in accordance with IPSAS 3 and resulted in a CHF 8m reduction in expenses in 2018. It is included in the amount of the –CHF 10m change in provisions for contributions to long-service awards.

* The annual report does not show the annual average value but the year end figure. This is 19,440.2 FTEs (including apprentices). The figure in the annual report also excludes the FTEs of the controlled entities.

13 Other operating expenses

Table 23: Other operating expenses

CHF millions	2019	2018	Change absolute
Expenses for goods and materials	140	144	−5
Premises costs	350	406	−56
Energy costs	64	56	7
IT expenses	93	98	−5
Expenses for consultations, expertises and guest lecturers	96	85	11
Library expenses	33	31	2
Other operating costs	160	168	−9
Total other operating expenses	**935**	**990**	**−55**

70% (previous year 66%) of the premises costs comprise the accommodation expenditure for the state-owned real estate used by the institutions of the ETH Domain. This contribution to accommodation was reduced by CHF 25m compared to the previous year (for explanations, see note 7 Total federal contribution). In addition, the maintenance, repair and upkeep costs of the real estate included in premises costs fell by a net figure of CHF 31m (42%) despite increased construction activity for leasehold improvements. This is due in particular to higher capitalisation in the area of leasehold improvements at ETH Zurich, as the capitalisation practice was adjusted within the guidelines in the reporting period.

The costs in the area of energy rose in particular at the PSI and ETH Zurich due to consumption and market conditions.

The lower expenses for IT compared to the previous year can be attributed to fewer acquisitions by the universities. In addition, EPFL was able to capitalise a large portion of the purchased network hardware.

Most of the increase in expenses for consultations, expertise and guest lecturers came from ETH Zurich (in particular for real estate projects), EPFL and the PSI.

Other operating costs mainly include costs for expenses, other services for third parties and the maintenance, repair and upkeep of movable assets.

In the reporting period, a charge was paid to the Federal Government again from the transfer of use of state-owned real estate to third parties (Ordinance on Finance and Accounting of the ETH Domain, section 2b). The charge was included in other operating costs and amounted to CHF 2m in the reporting period. The corresponding revenue of CHF 4m is disclosed under other revenue (see Note 11).

14 Transfer expenses

Table 24: Transfer expenses

CHF millions	2019	2018	Change absolute
Scholarships and grants to students and doctoral students	21	20	1
Contributions to research projects	16	12	5
Other transfer expenses	12	11	1
Total transfer expenses	**49**	**43**	**7**

Transfer expenses are contributions for which no direct payment is invoiced. ETH Zurich (+CHF 2m) and EPFL (+CHF 2m) in particular reported higher contributions to research projects and collaborations in the reporting period.

15 Net finance income / expense

Table 25: Net finance income/expense

CHF millions	2019	2018	Change absolute
FINANCE INCOME			
Interest income	5	6	−2
Income from investments	4	3	2
Changes in fair value of financial assets	33	1	31
Foreign currency gains	5	5	–
Other finance income	–	–	–
Total finance income	**47**	**16**	**31**
FINANCE EXPENSE			
Interest expense	9	10	–
Other financing costs for provision of capital	–	–	–
Changes in fair value of financial assets	1	18	−17
Foreign currency losses	8	9	−1
Impairment of loans and fixed deposits	–	–	–
Other finance expense	1	1	–
Total finance expense	**20**	**38**	**−19**
Total net finance income / expense	**28**	**−22**	**50**

The good development on the financial markets led to a positive performance on the investment capital employed in the reporting period. The unfavourable development in exchange rates dampened the positive financial result.

The interest income includes interest from the compounding of the receivables and loans to the tune of CHF 4m (previous year: CHF 4m).

Interest expenses mainly comprise interest expenses from finance leases. Further information about finance leases can be found in Note 25 Financial liabilities.

16 Cash and cash equivalents

Table 26: Cash and cash equivalents

CHF millions	31.12.2019	31.12.2018	Change absolute
Cash	2	1	–
Swiss Post	258	205	53
Bank	39	62	−23
Short-term deposits (<90 days)	651	583	68
Total cash and cash equivalents	**950**	**852**	**98**

CHF 650m or 99.9% of the short-term deposits are with the Federal Treasury, based on the agreement of 29 November 2007 between the Federal Finance Administration and the ETH Domain on the treasury relationships. This figure was CHF 573m in the previous year. These funds will be used for teaching and research in the future.

17 Receivables

Table 27: Receivables

CHF millions	31.12.2019	31.12.2018	Change absolute
RECEIVABLES FROM NON-EXCHANGE TRANSACTIONS			
Receivables from project contracts and donations	1,544	1,522	22
Other receivables	8	6	1
Value adjustments	–	–	–
Total receivables from non-exchange transactions	**1,551**	**1,528**	**23**
of which current	612	558	54
of which non-current	939	970	−31
RECEIVABLES FROM EXCHANGE TRANSACTIONS			
Trade accounts receivable	49	37	12
Other receivables	1	1	–
Value adjustments	−2	−2	–
Total receivables from exchange transactions	**48**	**36**	**12**
of which current	48	36	12
of which non-current	–	–	–

The receivables from non-exchange transactions comprise the remaining amounts from contractually agreed project totals or from granted donations which had not been called or paid by the end of the year. Compared to 2018, credit due from third-party donors grew by CHF 23m.

Compared to the previous year, receivables from the SNSF, from special federal funding for applied research and from municipalities, cantons and international organisations increased, while receivables from Innosuisse, EU FP and private sector funding categories decreased.

The other receivables from non-exchange transactions essentially included the assets from the settlement with social security institutions.

Due dates of the receivables:

Table 28: Maturity analysis

CHF millions	Total receivables	Not past due	Past due up to 90 days	Past due 91 to 180 days	Past due more than 180 days
			31.12.2019		
Gross amount	**1,601**	**1,566**	**20**	**6**	**9**
Receivables from non-exchange transactions	1,551	1,530	11	5	5
Receivables from exchange transactions	50	36	9	1	4
Value adjustments	**−2**	**–**	**–**	**–**	**−2**
Of which individually impaired	−1				
			31.12.2018		
Gross amount	**1,566**	**1,547**	**14**	**1**	**4**
Receivables from non-exchange transactions	1,528	1,522	5	1	1
Receivables from exchange transactions	38	25	9	1	3
Value adjustments	**−2**	**−1**	**–**	**–**	**−1**
Of which individually impaired	−1				

Value adjustments of receivables

Value adjustments of an unchanged CHF 2m were recognised for at-risk trade accounts receivable at the end of 2019. No value adjustment is to be reported on receivables from non-exchange transactions.

18 Inventories

Table 29: Inventories

CHF millions	31.12.2019	31.12.2018	Change absolute
Inventories purchased	10	10	–
Inventories self-produced	–	–	–
Total inventories	**10**	**10**	**–**

Basically, the ETH Domain does not have considerable inventories or its own products to sell. The inventories consist of recurring stock items such as chemicals, laboratory materials and materials for experiments that are used in teaching and in research. An annual physical inventory is done for stocks with a total value of more than CHF 100,000.

19 Prepaid expenses and accrued income

Table 30: Prepaid expenses and accrued income

CHF millions	31.12.2019	31.12.2018	Change absolute
Interest	–	–	–
Prepaid expenses	29	34	–4
Other prepaid expenses and accrued income	20	14	6
Total prepaid expenses and accrued income	**49**	**48**	**1**

The largest deferrals for prepaid expenses concerned the library (CHF 8m), rental payments in advance (CHF 11m) and information technology services (CHF 3m).

Other prepaid expenses and accrued income in turn include accrued income in connection with IPSAS 9 transactions (revenue from exchange transactions), which amounted to CHF 12m, in particular.

20 Investments in associated entities and joint ventures

Details about the significant associated entities can be found in the tables below. All associated entities can be found in Note 35 Relationships with controlled and associated entities.

There were no joint ventures in the ETH Domain in the reporting period.

Investments in associated entities changed as follows over the course of the year, as shown in Table 31:

Table 31: Change in associated entities

CHF millions	2019	2018
As of 01.01.	**135**	**147**
Additions	–	–
Disposals	–	–
Dividends	–	–1
Share of the annual surplus or deficit	74	–11
Share of items directly recognised in equity	–1	–1
As of 31.12.	**208**	**135**

The summarising financial information about the material associated entities is indicated below. The statements and the amounts shown there were adjusted for the purposes of recognition in accordance with the equity method with simplifications in line with the accounting practices of the ETH Domain.

Table 32: Material associated entities – aggregated financial information

CHF millions	ETH Zurich Foundation *	Albert Lück Foundation	Student Housing Foundation	Fondation Les Bois Chamblard	Fondation Campus Biotech Geneva
31.12.2019					
Reporting date used	31.12.2019	31.12.2018	31.12.2018	31.12.2018	31.12.2019
Current assets	330	1	5	11	12
Non-current assets	224	51	109	15	12
Short-term liabilities *	1	7	1	–	8
Long-term liabilities *	2	28	52	–	6
Revenue	118	6	13	–	21
Surplus (+) or deficit (–)	73	1	4	–1	–1
Dividends received from the associated entity	–	–	–	–	–
31.12.2018					
Reporting date used	31.12.2018	31.12.2017	31.12.2017	31.12.2017	31.12.2018
Current assets	264	1	4	12	15
Non-current assets	226	53	107	15	14
Short-term liabilities *	–	5	–	–	9
Long-term liabilities *	2	33	54	–	9
Revenue	131	6	11	–	21
Surplus (+) or deficit (–)	–12	1	2	–	–2
Dividends received from the associated entity	–	–	–	–	–

* Dedicated capital funds and liabilities from awards are eliminated from the liability items of the ETH Zurich Foundation. They are credited to Equity of ETH Zurich as an essential part of the item Dedicated reserves from donations and bequests.

Table 33: Aggregated information for individually immaterial associated entities

CHF millions	2019	2018
Revenue	38	38
Tax expense	1	1
Surplus (+) or deficit (–)	2	4

Unrecognised share of losses of associated entities:
There is no unrecognised share of losses of associated entities, either in the reporting period or on a cumulative basis.

21 Property, plant and equipment and intangible assets

Movable assets

Large-scale research plants and equipment, machinery, furnishings, vehicles, advance payments, movable assets under construction:

Purchases in this category amounted to CHF 86m in the reporting period. Examples of major investments this year are mass spectrometers and microscopes at the two universities, investments in SwissFEL (ARAMIS and ATHOS beamlines) at the PSI and extensions to the "NEST" research and innovation building at Empa.

The reclassifications of CHF 21m relate to movable assets under construction, which were definitely allocated to this asset category in the reporting period and will be depreciated in the future.

The decrease in purchase values includes a non-cash one-off effect at the PSI amounting to CHF 84m. In accordance with IFRIC 1, the costs for the dismantling and disposal of the PSI's accelerator facilities are included in the purchase values. The additional payments to Nagra capitalised in the previous year as part of the updated total cost estimate of the Confederation will now be taken over by the Federal Government with the adoption of the 2020 budget (December 2019). Due to the changes in circumstances, the accelerator facilities and the associated provision were reassessed in accordance with IFRIC 1, resulting in a reduction of CHF 84m each (see explanations in Note 4 Estimation uncertainty and management judgements and Note 27 Provisions. The carrying amount of the accelerator facilities as at 31 December 2019 amounts to CHF 474m (it had been CHF 611m in the previous year).

Adjusted for this one-off effect, disposals amount to CHF 32m (scrapped / derecognised or sold assets). The corresponding accumulated depreciation amount to CHF 30m.

Table 34: Change in property, plant and equipment and intangible assets in 2019

CHF millions	Large scale research plants and equipment, machinery, furnishings, vehicles	Information and communication	Advance payments, movable assets under construction	Total movable assets	Property, buildings	Assets under construction	Total immovable assets	Total property, plant and equipment	Total intangible assets
PURCHASE VALUE									
Changes from restatement as of 01.01.	–	–	–1	–1	–	–	–	–1	–
Value as of 01.01.2019	**2,821**	**401**	**84**	**3,306**	**773**	**141**	**915**	**4,221**	**96**
Additions	86	28	53	167	12	80	92	259	2
Reclassifications	21	2	–23	–	20	–20	–	–	–
Disposals	–116	–13	–2	–131	–5	–	–5	–136	–
Value as of 31.12.2019	**2,812**	**418**	**113**	**3,343**	**801**	**201**	**1,002**	**4,345**	**98**
ACCUMULATED DEPRECIATION									
Changes from restatement as of 01.01.	39	–	–	39	–	–	–	39	–
Value as of 01.01.2019	**1,609**	**334**	**–**	**1,943**	**295**	**–**	**295**	**2,238**	**29**
Depreciation	162	44	–	206	49	–	49	255	6
Impairments	–	–	–	–	–	–	–	–	–
Reversed impairments	–	–	–	–	–	–	–	–	–
Reclassifications	–	–	–	–	–	–	–	–	–
Disposals value adjustments	–30	–13	–	–43	–4	–	–4	–47	–
Value as of 31.12.2019	**1,741**	**365**	**–**	**2,107**	**340**	**–**	**340**	**2,447**	**35**
Balance sheet value as of 31.12.2019	**1,070**	**53**	**113**	**1,236**	**461**	**201**	**662**	**1,898**	**63**
thereof leased assets				–			209	209	–

Information and communication:
The information technology hardware and communications equipment acquired in the reporting period, amounting to CHF 28m, relates mainly to high-performance computers/servers purchased by ETH Zurich and EPFL.

The reclassifications of CHF 2m are for movable assets under construction, which were definitely allocated to this asset category in the reporting period and will be depreciated in the future.

The disposals (–CHF 13m) relate to scrapped / derecognised or sold assets. The corresponding derecognised accumulated depreciations amount to CHF 13m.

Immovable assets
Most of the real estate is owned by the Federal Government, so it is mainly leasehold improvements that are reported. Leasehold improvements under construction (assets under construction) show additions of CHF 80m in the reporting period. The increase in the volume of capitalisation (previous year CHF 35m) was mainly due to the change in capitalisation practice as of 1 January 2019 and to increased construction activity at ETH Zurich. The property, plant and equipment leased in the amount of CHF 209m relates largely to the SQIE and SQNE entities controlled by EPFL.

Intangible assets
Intangible assets include capitalised licences, patents, rights, software and donated rights. The net carrying amount of CHF 63m consists largely of the rights of use for the Microcity building at EPFL (CHF 55m). The additions in the reporting period relate in particular to software acquired by the PSI and ETH Zurich.

All asset categories are depreciated using the principles described in Note 3. Possible impairments are disclosed separately in Tables 34 and 35.

Table 35: Change in property, plant and equipment and intangible assets in 2018

CHF millions	Large scale research plants and equipment, machinery, furnishings, vehicles	Information and communication	Advance payments, movable assets under construction	Total movable assets	Property, buildings	Assets under construction	Total immovable assets	Total property, plant and equipment	Total intangible assets
PURCHASE VALUE									
Value as of 01.01.2018	**2,523**	**386**	**84**	**2,994**	**762**	**132**	**894**	**3,888**	**93**
Additions	306	30	51	386	5	35	40	426	4
Reclassifications	44	4	–48	–	25	–25	–	–	–
Disposals	–51	–19	–1	–72	–18	–	–19	–91	–1
Value as of 31.12.2018	**2,821**	**401**	**86**	**3,308**	**773**	**141**	**915**	**4,223**	**96**
ACCUMULATED DEPRECIATION									
Value as of 01.01.2018	**1,452**	**311**	**–**	**1,763**	**262**	**–**	**262**	**2,025**	**25**
Depreciation	165	42	–	207	48	–	48	255	5
Impairments	1	–	–	1	–	–	–	1	–
Reversed impairments	–	–	–	–	–	–	–	–	–
Reclassifications	–	–	–	–	–	–	–	–	–
Disposals value adjustments	–48	–19	–	–67	–15	–	–15	–82	–1
Value as of 31.12.2018	**1,570**	**334**	**–**	**1,905**	**295**	**–**	**295**	**2,199**	**29**
Balance sheet value as of 31.12.2018	**1,251**	**66**	**86**	**1,403**	**479**	**141**	**620**	**2,023**	**67**
thereof leased assets				–			220	220	–

22 Financial assets and loans

Table 36: Financial assets and loans

CHF millions	31.12.2019	31.12.2018	Change absolute
CURRENT FINANCIAL ASSETS AND LOANS			
Securities, fixed deposits and investment funds	283	231	52
Positive replacement values	–	–	–
Other financial assets	1,146	1,178	−32
Loans	1	1	–
Total current financial assets and loans	**1,430**	**1,409**	**21**
NON-CURRENT FINANCIAL ASSETS AND LOANS			
Securities and fixed deposits	–	–	–
Other financial assets	40	30	10
Loans	1	1	–
Total non-current financial assets and loans	**42**	**32**	**10**

Current financial assets are especially financed with third-party funds that are not used immediately. On the basis of the prevailing treasury agreement between the FFA and the ETH Domain, these funds are placed on the market or with the Federal Government. The third-party funds placed on the market are managed under asset management mandates with Swiss banks. From 2019, real estate funds will be reported for the first time under the item Securities, fixed deposits and investment funds. In the comparative period, the real estate funds are part of the item Other financial assets, as in the previous year's report. In addition to this reallocation (CHF 34m), positive performance and a new asset management mandate at ETH Zurich led to a higher portfolio of securities, fixed deposits and investment funds. At EPFL, on the other hand, a large portion of the portfolio was sold.

Other current financial assets primarily include the deposit accounts with the Federal Government with a total or remaining term at the time of acquisition of three to twelve months (+CHF 2m).

Other non-current financial assets include investments which are available for sale (CHF 13m) and the non-current Federal Government deposit account (CHF 27m), to which CHF 8m net was allocated. This deposit account is accumulated annually in order to finance the future dismantling of the accelerator plant at the PSI (see Note 27 Provisions). The investments which are available for sale mainly contain participations in spin-offs with a shareholding of less than 20% in the accounts of ETH Zurich, the ETH Board (on behalf of the ETH Domain; held in trust by EPFL) and the PSI. They are measured at their fair values.

One quarter of the current and non-current loans, which totalled CHF 2m, consist of concessionary loans given to students, doctoral students and spin-offs. Loans to students and doctoral students are to be paid back within a year (current) or in instalments within six years of completion of the studies (non-current). There were no significant overdue loans as of 31 December 2019. A slight value adjustment was recognised in respect of a loan to a spin-off at the PSI.

Of the total financial assets at the end of 2019 (CHF 1,472m), CHF 1,173m (2018: CHF 1,163m) was invested with the Federal Government and CHF 283m (2018: CHF 265m) was placed with financial institutions.

23 Co-financing

Table 37: Co-financing

CHF millions	2019	2018	Change absolute
PURCHASE VALUE			
As of 01.01.	**164**	**156**	**7**
Additions	–	7	–7
Disposals	–	–	–
As of 31.12.	**164**	**164**	**–**
ACCUMULATED DEPRECIATION			
As of 01.01.	**36**	**32**	**4**
Depreciation	4	4	–
Disposals	–	–	–
As of 31.12.	**40**	**36**	**4**
Balance sheet value as of 31.12.	**123**	**128**	**–4**

There were no additions or disposals in the 2019 reporting period. After the depreciation of the co-financing (2019: -CHF 4m) a carrying amount of CHF 123m resulted as of the end of 2019.

24 Current liabilities

Table 38: Current liabilities

CHF millions	31.12.2019	31.12.2018	Change absolute
Trade payables	41	48	–7
Liabilities to social insurance institutions	37	28	9
Other current liabilities	76	104	–27
Total current liabilities	**154**	**179**	**–25**

The reduction in trade payables is made up of two effects. Firstly, EPFL recognised a reduction of CHF 12m, mainly due to transfers to partners for the FET flagship HBP project. Secondly, there was an increase of CHF 7m at ETH Zurich, as all trade payables had been paid due to a change of SAP system in the previous year.

The other current liabilities mainly reflect financial obligations towards the research partners involved in projects in which the institutions of the ETH Domain are the leading houses. In the reporting period, EPFL in particular had passed on payments to project partners, which lowered the liabilities significantly.

25 Financial liabilities

Table 39: Current and non-current financial liabilities – Summary

CHF millions	31.12.2019	31.12.2018	Change absolute
CURRENT FINANCIAL LIABILITIES			
Liabilities to financial institutes	–	–	–
Finance lease liabilities	9	9	–
Negative replacement values	–	1	–1
Other financial liabilities	6	7	–1
Total current financial liabilities	**15**	**16**	**–2**
NON-CURRENT FINANCIAL LIABILITIES			
Finance lease liabilities	276	285	–9
Other financial liabilities	74	76	–2
Total non-current financial liabilities	**350**	**361**	**–11**

Table 40: Current and non-current financial liabilities – Changes in 2019

	2019		
CHF millions	Current	Non-current	Total
Financial liabilities as of 01.01.	**16**	**361**	**377**
Increase in short-term and long-term financial liabilities	1	–	1
Decrease in short-term and long-term financial liabilities	–10	–	–10
Total cash transactions	**–9**	**–**	**–9**
Changes in fair values	–1	–	–1
Reclassifications	11	–11	–
Other changes	–3	–	–3
Total non-cash transactions	**8**	**–11**	**–3**
Financial liabilities as of 31.12.	**15**	**350**	**365**

The finance lease liabilities decrease by the proportion of the annual lease payments paid back. Other financial liabilities include the payment commitment for the right of use received by EPFL in connection with the Microcity building, which was recognised as a finance lease (CHF 55m, previous year: CHF 58m). The annual decrease corresponds to a service received periodically and is recognised as non-cash revenue from donations.

Table 41: Finance leases

CHF millions	Future minimum leasing payments 2019	Future financial expenses 2019	Present value of future minimum leasing payments 2019	Future minimum leasing payments 2018	Future financial expenses 2018	Present value of future minimum leasing payments 2018
Due dates						
Due within 1 year	17	8	9	17	8	9
Due within 1 to 5 years	68	30	38	68	31	37
Due after more than 5 years	311	73	238	328	80	248
As of 31.12.	**396**	**111**	**285**	**413**	**119**	**294**

	2019	2018
LEASING EXPENSES		
Contingent lease payments expensed in period	–	–
ADDITIONAL DETAILS		
Future revenue from sublease (from non-cancellable contracts)	36	42

The finance leases at EPFL relate to real estate belonging to the simple partnerships SQIE and SQNE. EPFL has made various assumptions with regard to the recognition of these lease agreements, which are set out in Note 4 Estimate uncertainty and management judgements. The lease agreements both include a clause linking the rent to general price trends (underlying consumer price index). The present value of minimum lease payments as of the end of the reporting period is CHF 170m with SQNE and CHF 99m with SQIE (30-year lease). The finance lease for ETH Zurich concerns real estate on the Hönggerberg campus (total present value of future minimum leasing payments is CHF 16m). The building was occupied in September 2015, and the lease will run until 2045. There are no options for extension or purchase. The net rent is indexed at 80% and can be adjusted at the end of each year.

26 Accrued expenses and deferred income

Table 42: Accrued expenses and deferred income

CHF millions	31.12.2019	31.12.2018	Change absolute
Interest	–	–	–
Deferred income	105	94	11
Other accrued expenses and deferred income	45	48	–3
Total accrued expenses and deferred income	**150**	**142**	**8**

Deferred income received in advance especially includes service agreements and commissioned research from exchange transactions in accordance with IPSAS 9 (2019: CHF 98m; 2018: CHF 82m). Due to the generally higher order volume under IPSAS 9, the amounts received in advance also increased.

Other accrued expenses and deferred income mainly consist of deferrals in connection with withholding taxes and with deferrals of expenses for central procurement for operations, for construction projects or for the purchase of IT equipment. The total is divided between ETH Zurich (CHF 17m), EPFL (CHF 13m), the PSI (CHF 13m) and Empa (CHF 2m).

27 Provisions

Table 43: Provisions – Summary

CHF millions	31.12.2019	31.12.2018	Change absolute
Provisions for untaken leave and overtime	99	102	−2
Other long-term employee benefits (IPSAS 39)	71	66	5
Dismantling	551	638	−88
Guarantees and warranties	–	–	–
Litigations	2	2	–
Other provisions	–	5	−5
Total provisions	**723**	**813**	**−91**

Provisions were reduced by CHF 91m in the reporting period. In particular, long-term provisions for dismantling were down.

Provisions for untaken leave and overtime are calculated on the basis of the actual hourly balances per employee. This employees' credit is classified as current.

Other long-term employee benefits (IPSAS 39) include the acquired long-service awards / jubilee, which are measured by independent actuaries using the projected unit credit method. The creation (incl. increase) and appropriation of this provision are to be recognised separately.

The amount for dismantling includes CHF 543m (2018: CHF 631m) for the dismantling of the accelerator facilities and the disposal of radioactive waste at the PSI (see explanations in Note 4 Estimate uncertainty and management judgements and Note 21 Property, plant and equipment). The annual addition to the deposit account with the Federal Government, earmarked for financing these costs, (see Note 22 Financial assets and loans) amounts to CHF 11m from 2019 onwards. The PSI also has provisions of CHF 4m each for the dismantling of Gantry 3 (radiotherapy facility) and the SwissFEL.

In the previous year, the item Other provisions included a provision of CHF 5m for repayment risks from EU projects at EPFL. CHF 2m of this was appropriated and CHF 3m was reversed.

Table 44: Provisions – Changes 2019

CHF millions	Provisions for untaken leave and overtime	Other long-term employee benefits (IPSAS 39)	Dismantling	Guarantees and warranties	Litigations	Other provisions	Total provisions
Changes from restatement as of 01.01.	–	–	–1	–	–	–	–1
Value as of 01.01.2019	**102**	**66**	**637**	**–**	**2**	**5**	**812**
Creation (incl. increase)	1	13	–	–	1	–	14
Reversal	–2	–	–84	–	–1	–3	–90
Appropriation	–1	–8	–2	–	–	–2	–14
Reclassifications	–	–	–	–	–	–	–
Increase in present value	–	–	–	–	–	–	–
Value as of 31.12.2019	**99**	**71**	**551**	**–**	**2**	**–**	**723**
of which current	99	–	–	–	2	–	102
of which non-current	–	71	550	–	–	–	621

Table 45: Provisions – Changes 2018

CHF millions	Provisions for untaken leave and overtime	Other long-term employee benefits (IPSAS 39)	Dismantling	Guarantees and warranties	Litigations	Other provisions	Total provisions
Value as of 01.01.2018	**96**	**76**	**429**	**–**	**1**	**6**	**608**
Creation (incl. increase)	5	5	209	–	1	2	222
Reversal	–	–5	–	–	–	–2	–8
Appropriation	–	–9	–	–	–	–	–9
Reclassifications	–	–	–	–	–	–	–
Increase in present value	–	–	–	–	–	–	–
Value as of 31.12.2018	**102**	**66**	**638**	**–**	**2**	**5**	**813**
of which current	102	–	–	–	2	5	109
of which non-current	–	66	638	–	–	–	705

28 Net defined benefit liabilities

Most employees and pensioners of the institutions of the ETH Domain, as well as the staff and the President of the ETH Board, are insured under the pension scheme the ETH Domain maintains at the collective institution "Swiss Federal Pension Fund PUBLICA" (PUBLICA). There are no other significant pension schemes at the controlled entities, therefore any further statements in the text refer to the pension scheme the ETH Domain maintains at PUBLICA.

However, the existing balance for net defined benefit liabilities as of 31 December 2019 includes obligations under other pension plans outside the ETH Domain's pension fund at PUBLICA amounting to CHF 4m (previous year: CHF 4m).

Legal framework and responsibilities

Legal requirements

Swiss pension plans must be run through a legally separate, trustee-administered pension institution. The law prescribes minimum benefits.

Organisation of the pension scheme

PUBLICA is an independent, state-run institution under public law.

The Board of Directors (*Kassenkommission*) is PUBLICA's most senior governing body. In addition to management, it is also responsible for the oversight and supervision of PUBLICA's Executive Board. The Board of Directors has 16 members, eight representing the insured employees and eight representing the employers, from among all the affiliated pension plans. This means that PUBLICA's most senior governing body is made up of an equal number of employee and employer representatives.

Each pension scheme has its own governing body made up of equal numbers of representatives. Among other things, it is involved in concluding the affiliation contract and decides on the appropriation of any surpluses. Each governing body is made up of nine employer representatives and nine employee representatives from the entities.

Insurance plan

In accordance with IPSAS 39, insurance plans are classified as defined benefit plans.

The pension plan is defined in the terms of the ETH Domain pension scheme applicable to employees and professors, which form part of the affiliation contract with PUBLICA. The pension plan provides benefits in excess of the minimum benefits required by law in the event of disability, death, old age and departure; i.e. it is what is known as an "enveloping" plan (obligatory and extraordinary benefits).

The employer and employee savings contributions are set as a percentage of the insured salary. A risk premium is charged for death and disability insurance. The administrative costs are paid by the employer.

The old-age pension is calculated from the credit balance in the retirement fund at the retirement date multiplied by the conversion rate specified in the terms. Employees have the option of drawing the retirement benefits as a lump sum. There are pension plans for different groups of insured persons. In addition, employees have the option of making additional savings contributions.

The risk benefits are determined depending on the projected savings capital, which attracts interest, and on the conversion rate.

Investment of assets

Investments are made by PUBLICA for all pension schemes (with the same investment profile) collectively.

As PUBLICA's most senior governing body, the Board of Directors bears overall responsibility for asset management. It is responsible for issuing and amending the investment policy and determines the investment strategy. The Investment Committee advises the Board of Directors on investment-related issues and oversees compliance with the investment policy and strategy.

Responsibility for implementing the investment strategy rests with PUBLICA's Asset Management. Asset Management also makes tactical decisions to deviate temporarily from the investment strategy weightings in order to generate added value compared to the existing strategy. Where individual asset classes are built up or reduced over a number of years, a pro rata strategy is calculated so as to enable transactions to be diversified over time.

Risks for the employer

The governing body of the ETH Domain's pension scheme made up of equal numbers of representatives can change the funding system (contributions and future benefits) at any time. The governing body may collect restructuring contributions from the employer if the scheme is underfunded within the meaning of pension law (Article 44 Occupational Pension Ordinance (BVV 2)) and if other measures are without success. If these are used to fund benefits in excess of the statutory minimum, the employer must indicate their agreement with this.

The definitive funding ratio in accordance with the Occupational Pensions Act (BVG) was not yet available at the time the annual consolidated financial statements were authorised for issue. The provisional regulatory funding ratio for the ETH Domain's pension scheme at PUBLICA, in accordance with the Occupational Pension Ordinance (BVV 2), was 105.7% at the end of 2019 (2018: 101.8%, definitive). The provisional economic funding ratio for the ETH Domain's pension scheme at PUBLICA was 87.2% at the end of the year (2018: 84.7%, definitive).

Special events

There were no plan amendments, curtailments or settlements to be considered in the current reporting period. The adjustments to the technical interest rate and the conversion rate as of 1 January 2019, approved by the Federal Council on 25 April 2018, were recognised as past service cost in 2018.

Table 46: Net defined benefit liabilities

CHF millions	31.12.2019	31.12.2018
Present value of defined benefit obligations	−9,842	−9,033
Fair value of plan assets	7,419	6,795
Recognised net defined benefit liabilities	**−2,423**	**−2,239**

The CHF 185m increase in net defined benefit liabilities was mainly due to the reduction in the discount rate (2019: -0.2% / 2018: 0.3%), which was compensated for to a large extent by positive returns on plan assets.

Of the total, CHF 4m (2018: CHF 4m) of the net defined benefit liabilities relate to pension plans outside the ETH Domain's pension fund at PUBLICA.

Table 47: Net pension costs

CHF millions	2019	2018
Current service cost (employer)	291	297
Past service cost	6	9
Gains (–) / losses (+) from plan settlements	–	–
Interest expense from defined benefit obligations	27	27
Interest income from plan assets	–20	–21
Administrative costs (excl. asset management costs)	4	4
Other	–	–
Total Net pension costs incl. interest expense recognised in statement of financial performance	**308**	**317**

The ETH Domain's net pension costs for the reporting period are CHF 308m (2018: CHF 317m), of which CHF 1m (2018: CHF 2m) relate to pension plans outside the ETH Domain's pension plan at PUBLICA.

Net pension costs are down CHF 9m on the previous year. The CHF 6m decrease in current service cost can be attributed to the actuarial assumptions adjusted in the previous year (2018 vs. 2017). The past service cost includes the acquisitions (CHF 6m) made by professors at ETH Zurich and EPFL. In the previous year, this also included the effect (CHF 2m) from the adjustment of the technical interest rate and the conversion rate at PUBLICA.

Interest expenses from the defined benefit obligations remained constant and interest income from plan assets was down by CHF 1m. These minimal changes are due to the constant discount rate as of 01.01 (2019: 0.3% vs. 2018 0.3%). Deposits amounting to CHF 3.5m (2018: CHF 8.5m) were transferred from the ETH Board to the ETH Domain's pension plan in the reporting period.

Employer's contributions of CHF 222m and employees' contributions of CHF 121m are expected for the coming financial year.

Table 48: Revaluation recognised in equity

CHF millions	31.12.2019	31.12.2018
Actuarial gains (–) and losses (+)		
from change in financial assumptions	659	–40
from change in demographic assumptions	–1	–37
from experience adjustments	67	76
Return on plan assets excl. interest income (gains (–) / losses (+))	–618	253
Other	–	–
Revaluation amount recognised in equity	**107**	**253**
Cumulative amount of revaluation recognised in equity (gain (–) / loss (+))	**1,473**	**1,366**

The revaluation loss recognised in equity in 2019 amounted to CHF 107m (2018: revaluation loss of CHF 253m). This results in a cumulative accrued loss of CHF 1,473m as of 31 December 2019 (2018: CHF 1,366m). Of which, revaluation profits of CHF 1m (2018: CHF 1m) relate to pension plans outside the ETH Domain's pension fund at PUBLICA. The actuarial losses from changes in financial assumptions result from a reduction in the discount rate and were cushioned slightly by the lower interest on retirement savings. The return on plan assets recognised in equity is attributable to the higher positive return of over 9% generated compared with the expected return (corresponds to a discount rate of 0.3%).

Table 49: Change in present value of defined benefit obligations

CHF millions	2019	2018
Present value of defined benefit obligations as of 01.01.	**9,033**	**8,918**
Current service cost (employer)	291	297
Interest expense from defined benefit obligations	27	27
Employee contributions	126	116
Benefits paid in (+) and paid out (−)	−367	−334
Past service cost	6	9
Gains (−) / losses (+) from plan settlements	–	–
Actuarial gains (−) / losses (+)	725	−1
Other	–	–
Present value of defined benefit obligations as of 31.12.	**9,842**	**9,033**

The weighted average term arising from defined benefit obligations is 15.6 years as of 31 December 2019 (2018: 14.8 years).

Table 50: Change in the fair value of plan assets

CHF millions	2019	2018
Fair value of plan assets as of 01.01.	**6,795**	**7,024**
Interest income from plan assets	20	21
Employer contributions	231	225
Employee contributions	126	116
Benefits paid in (+) and paid out (−)	−367	−334
Gains (+) / losses (−) from plan settlements	–	–
Administrative costs (excl. asset management costs)	−4	−4
Return on plan assets excl. interest income (gains (+) / losses (−))	618	−253
Other	–	–
Fair value of plan assets as of 31.12.	**7,419**	**6,795**

Table 51: Transition of net defined benefit liabilities

CHF millions	2019	2018
Net defined benefit liabilities as of 01.01.	**−2,239**	**−1,894**
Net pension costs incl. interest expense recognised in statement of financial performance	−308	−317
Revaluation amount recognised in equity	−107	−253
Employer contributions	231	225
Obligations paid directly by the entity	–	–
Other	–	–
Net defined benefit liabilities as of 31.12.	**−2,423**	**−2,239**

Table 52: Major categories of plan assets (in percentage)

Percentage	31.12.2019 Listed	31.12.2019 Not listed	31.12.2019 Total	31.12.2018 Listed	31.12.2018 Not listed	31.12.2018 Total
Liquidity	5	–	6	3	–	2
Bonds (in CHF) Confederation	6	–	5	7	–	6
Bonds (in CHF) ex. Confederation	12	–	10	13	–	12
Government bonds (in foreign currencies)	29	–	26	28	–	26
Corporate bonds (in foreign currencies)	12	–	11	15	–	14
Mortgages	–	–	–	–	–	–
Shares	30	–	27	31	–	28
Real estate	3	53	8	1	65	7
Commodities	3	–	2	2	–	2
Other	–	47	5	–	35	3
Total plan assets	**100**	**100**	**100**	**100**	**100**	**100**

PUBLICA bears the actuarial and investment risks itself. The investment strategy is defined in such a way that benefits under the policy can be provided at maturity.

There is no known pension plan property used by the employer.

Table 53: Principal actuarial assumptions used as at the reporting date (in percentage)

Percentage	2019	2018
Discount rate as of 01.01.	0.30	0.30
Discount rate as of 31.12.	−0.20	0.30
Expected salary development	0.50	0.50
Expected pension development	0.00	0.00
Interest on retirement savings	0.00	0.30
Life expectancy at age 65 – women (no. of years)	24.65	24.54
Life expectancy at age 65 – men (no. of years)	22.61	22.50

The discount rate is based on the spot interest rates for federal bonds published by the Swiss National Bank on a monthly basis and the expected cash flows of the ETH Domain's pension scheme at PUBLICA in accordance with existing prior-year data. The expected future rate of salary increase is based on reference economic variables. The rate of pension increase is the rate of pension increase expected for the average remaining term based on the financial position of the pension plan. The generation tables in BVG 2015 are applied for assumptions about life expectancy.

Table 54: Sensitivity analysis (effect on present value of defined benefit obligations)

CHF millions	31.12.2019 Increase in assumption	31.12.2019 Decrease in assumption	31.12.2018 Increase in assumption	31.12.2018 Decrease in assumption
Discount rate (change +/– 0.25%)	−372	398	−323	346
Expected salary development (change +/– 0.25%)	41	−40	35	−34
Expected pension development (change +/– 0.25%)	307	n/a	267	n/a
Interest on retirement savings (change +/– 0.25%)	61	n/a	55	−54
Life expectancy (change +/– 1 year)	358	−362	308	−311

The adjustment in defined benefit obligations upon adjustment of the actuarial assumptions is determined in the sensitivity analysis. Only one of the assumptions is adjusted at at time, while the other parameters remain unchanged.

The discount rate and the assumptions made on salary development have been increased or lowered by fixed percentage points. The assumptions made on pension development and on the interest on retirement savings have been increased but not lowered for the reporting period, as a reduction of the pension benefit or of the interest on retirement savings is not possible. The sensitivity to life expectancy has been calculated by lowering or increasing life expectancy by a flat-rate factor, as a result of which the life expectancy of most age categories has been increased or reduced by about one year.

29 Dedicated third-party funds

Table 55: Dedicated third-party funds

CHF millions	31.12.2019	31.12.2018	Change absolute
Swiss National Science Foundation (SNSF)	644	573	70
Swiss Innovation Agency (Innosuisse)	64	79	–16
EU Framework Programmes for Research and Innovation (FP)	423	430	–7
Special federal funding of applied research	115	110	4
Industry-oriented research (private sector)	115	136	–21
Other project-oriented third-party funding	86	70	16
Donations and bequests	110	111	–1
Total dedicated third-party funds	**1,555**	**1,510**	**45**

The dedicated third-party funds correspond to the outstanding performance obligations on current research projects and mandates from contracts with non-exchange transactions. The increase of CHF 45m or +3% is positive; it reflects increased availability of third-party funding to promote research in the ETH Domain.

Virtually all the institutions successfully bid for a larger quantity of new projects from the SNSF in 2019 and the contract amounts were immediately recognised. Because the projects only started towards the end of the year, the dedicated third-party funds rose sharply with regards to the SNSF, compared with last year.

The amount of dedicated third-party funds from Innosuisse declined, on the one hand, because existing projects progressed according to plan and, on the other hand, because grants for new projects were slow to pick up again. Performance obligations only increased at Empa.

Dedicated third-party funds from EU research contributions decreased at all institutions except ETH Zurich. The latter was able to record an increase in project volumes during the reporting period, especially in ERC grants.

A four-year contract for avalanche warning, which WSL concluded with the FOEN in 2019, significantly increased the volume of special federal funding of applied research. At EPFL, the performance obligation towards special federal funding of applied research also increased, while at all other institutions it decreased due to the progress of existing projects.

The decline in third-party funding from the private sector in most units is mainly due to the reduction in performance obligations due to project progress.

Dedicated third-party funds in the category ‘Other project-oriented third-party funding’ increased at the PSI in the main due to increasing project volumes awarded by foundations, local and cantonal authorities, as well as by scientific institutes.

30 Financial risk management and additional information about financial instruments

General

Financial risk management is embedded in the general risk management of the ETH Domain, in respect of which annual reports are made to the ETH Board (see Annual Report, chapter on Risk Situation and Risk Management, p. 46).

Financial risk management primarily addresses credit risk (default risk) and liquidity risk as well as market risk (interest rate, foreign currency and other price risk).

The focus of risk management remains on credit risk. There are guidelines governing the investment of financial resources in order to reduce credit and market risk. The counterparties to a large proportion of the receivables and claims arising from financial assets are of high credit standing and solvency. Risk concentrations only exist in respect of those counterparties, which is why credit risk is regarded as low. Furthermore, there are receivables and financial assets in foreign currencies which are hedged according to prevailing circumstances in order to minimise the risk.

Compliance with and the effectiveness of the guidelines are ensured by the internal control system (ICS).

Credit and default risk

The maximum exposure to credit risk corresponds to the carrying amounts in the balance sheet. The actual risk is very low due to the fact that the counterparties to a large proportion of the financial assets are the Federal Government and other public-sector institutions. Table 56 shows the maximum exposure to credit risk.

Table 56: Maximum exposure to credit risk

CHF millions	Total	Federal Government	European Commission FP *	SNSF, Innosuisse, OASI social service, Suva	SNB and banks with government guarantee	Postfinance and other banks	Other counter-parties
	31.12.2019						
Cash and cash equivalents	950	651	–	–	17	281	–
Receivables from non-exchange transactions	1,551	117	338	524	–	–	573
Receivables from exchange transactions	48	3	–	–	–	–	45
Financial assets and loans	1,472	1,173	–	–	–	20	279
Prepaid expenses and accrued income	20	1	–	–	–	–	19
Total	**4,041**	**1,946**	**338**	**524**	**17**	**301**	**915**
	31.12.2018						
Total previous period	**3,871**	**1,850**	**358**	**493**	**21**	**274**	**874**

* The remaining receivables due from the Federal Government (State Secretariat for Education, Research and Innovation SERI) under the bridging programme for Horizon 2020 and the receivables from European universities arising from EU research framework programmes are shown in the column headed European Commission.

Liquidity risk

The ETH Domain has processes and principles in place which guarantee that adequate liquidity is available to settle current and future obligations. This includes maintaining an adequate reserve of liquidity and tradeable securities.

Financial liabilities arise, most notably, from current operating liabilities and leasing liabilities. Under normal circumstances, expenses and investments are financed with self-generated funds. In some cases, investments are financed through lease agreements. Financial liabilities include a liability due to the donated right at EPFL (Microcity) which is recognised in the balance sheet. It is treated as a finance lease but does not represent a liquidity risk.

Table 57 shows the maturities of the financial liabilities.

The entities controlled by the institutions of the ETH Domain may raise funds on the financial market.

All financial liabilities are covered by liquidity and by short-term deposits with the Federal Government. Liquidity risk is low.

Table 57: Contractual maturities of the financial liabilities

CHF millions	Total carrying amount	Total contract value	Up to 1 year	1–5 years	More than 5 years
			31.12.2019		
Non-derivative financial liabilities					
Current liabilities	154	154	154	–	–
Leasing liabilities	285	396	17	68	311
Financial liabilities	79	79	6	21	53
Accrued expenses and deferred income	45	45	45	–	–
Derivative financial liabilities	**–**	**–**	**–**	**–**	**–**
Total	**563**	**674**	**222**	**89**	**364**
			31.12.2018		
Total previous period	**605**	**724**	**252**	**90**	**382**

Market risk

Interest rate and price risk

Interest rate risk is not hedged. A one percentage point increase or decrease in the interest rate would increase or reduce surplus or deficit by around CHF 18m.

The bonds under the asset management mandates are also taken into account in analysing interest rate risk. The other trading positions (excluding bonds) largely consist of equity funds holding both international and Swiss equities. A 10% decrease in price would reduce surplus or deficit by CHF 27m.

Most of the trading positions exposed to a price risk are held under asset management mandates with Swiss banks.

The ETH Board issued the investment guidelines based on Art. 34*c* paragraph 2 of the ETH Act (SR 414.110), which came into effect on 1 January 2008. The two Federal Institutes of Technology and the four research institutes defined their own investment strategies on this basis. A model is operated for the selection of the relevant portfolio optimised for the investment strategy of the asset management mandate. This model is used to reconcile the risk associated with the assets and the risk capability of ETH Zurich and a value fluctuation reserve is formed accordingly. EPFL reviews the defined strategy quarterly.

Foreign currency risk

Most foreign currency receivables are in euros and US dollars; they are hedged using derivative financial instruments according to prevailing circumstances. Most foreign currency risks in asset management mandates are hedged. Net of hedges, a fluctuation in the exchange rate of these two currencies of +/– 10% would impact on the statement of financial performance as follows:

Table 58: Sensitivity to foreign currency risk

	31.12.2019					31.12.2018				
CHF millions	Total	CHF	EUR	USD	Other	Total	CHF	EUR	USD	Other
Net currency balance	**2,819**	**2,767**	**16**	**8**	**28**	**2,595**	**2,598**	**–29**	**10**	**16**
Sensitivity affecting financial performance +/– 10%			2	1				–3	1	
Closing rate			1.0866	0.9676				1.1265	0.9855	

The net currency balance for the other currencies category is primarily related to the asset management mandates and the consolidated entity in Singapore, controlled by ETH Zurich.

Capital management

Managed capital is defined as equity excluding valuation reserves. The ETH Domain seeks to create a solid equity base. This base will enable the implementation of the performance mandate to be guaranteed. Legal regulations prohibit the institutions of the ETH Domain and the ETH Board from raising funds in the capital market.

Estimation of fair value

Because of their short-term maturity, the carrying amount of cash and cash equivalents and the carrying amounts of current loans, fixed deposits, receivables and current liabilities are a reasonable approximation of fair value.

The fair value of non-current receivables from non-exchange transactions and non-current loans is calculated on the basis of the payments falling due in the future, which are discounted at market interest rates.

The fair value of available-for-sale financial assets is based on actual values, provided they can be determined reliably, or reflects their costs.

The fair value of fixed-interest financial liabilities which are not traded publicly is estimated on the basis of payments due in the future and discounted at market interest rates. The fair value of fixed-interest financial assets and liabilities which are traded publicly is based upon stock market quotations on the reporting date.

The fair value of finance lease liabilities is estimated on the basis of payments falling due in the future, which are discounted at market interest rates.

Classes and categories of financial instruments, by carrying amount and fair value

Table 59: Classes and categories of financial instruments

CHF millions	Loans and receivables	At fair value through surplus or deficit	Available for sale	Financial liabilities measured at amortised cost	Total carrying amount	Total fair value
	31.12.2019					
Cash and cash equivalents	950				950	950
Receivables from non-exchange transactions	1,551				1,551	1,551
Receivables from exchange transactions	48				48	48
Financial assets and loans	1,175	283	13		1,472	1,472
Prepaid expenses and accrued income	20				20	20
Financial liabilities *	–	–	–	563	563	563
	31.12.2018					
Financial assets **	3,595	265	12	–	3,871	3,871
Financial liabilities *	–	1	–	604	605	605

* Current liabilities, Leasing liabilities, Financial liabilities, Accrued expenses and deferred income
** Cash and cash equivalents, Receivables from non-exchange transactions, Receivables from exchange transactions, Financial assets and loans, Prepaid expenses and accrued income

The ETH Domain does not hold any held-to-maturity financial assets.

Hierarchy levels of the financial instruments measured at the fair value

Financial instruments measured at fair value are required to be disclosed within a three-level valuation hierarchy:

- Level 1: quoted prices in an active market for identical assets and liabilities;
- Level 2: valuation techniques where all significant inputs are based on observable market data;
- Level 3: valuation techniques where significant inputs are not based on observable market data.

Table 60: Fair value hierarchy

	31.12.2019				31.12.2018			
CHF millions	Carrying amount/fair value	Level 1	Level 2	Level 3	Carrying amount/fair value	Level 1	Level 2	Level 3
Financial assets	295	283	6	6	276	265	6	5
Financial liabilities	–	–	–	–	1	–	1	–

Net surplus or deficit by category

Table 61: Net surplus or deficit by category

CHF millions	31.12.2019 Loans and receivables	At fair value through surplus or deficit	Available for sale	Financial liabilities
Interest income (+) / interest expense (–)	4	–		–9
Income from investments		4	–	
Change in fair value		31		
Currency translation differences, net	–3	–		–
Impairments	–		–	
Reversal of impairment	–			
Gains and losses reclassified from equity to the statement of financial performance			1	
Net surplus or deficit recorded in the statement of financial performance	**1**	**35**	**1**	**–9**
Net surplus or deficit recognised in equity	**–**	**–**	**1**	**–**
Total net surplus or deficit by category	**1**	**35**	**2**	**–9**
	31.12.2018			
Total net surplus or deficit by category previous year	**–**	**–11**	**–3**	**–10**

Changes in fair value and interest expense of the financial liabilities have had the biggest impact on net income. Further information can be found in Note 15 Financial Result.

31 Contingent liabilities and contingent assets

Contingent liabilities

Table 62: Contingent liabilities

CHF millions	31.12.2019	31.12.2018	Change absolute
Guarantees	–	–	–
Warranties	1	1	–
Litigations	–	–	–
Other	260	265	–5
Total contingent liabilities	**261**	**267**	**–5**

There are still two warranties for the total amount of CHF 1m at EPFL to cover possible foreign customs demands within the scope of cross-border transactions. They are not limited by time.
EPFL shows the following other contingent liabilities:

- Biotech Campus: CHF 231m and repairs CHF 14m: EPFL, the University of Geneva and the Fondation Campus Biotech Geneva foundation hold joint and several liability from leasing relationships until 30 June 2043.
- Joint and several liability in respect of rental payments for the Agora building. This amount corresponds to the risk for EPFL if both parties (CHUV, UNIL) were to default (CHF 5m) by 31 May 2026.
- There is a risk regarding the eligibility of certain project costs to be charged to the European Commission. An extrapolation of these facts led to an estimated maximum risk of CHF 9m.

Contingent assets

Table 63: Contingent assets

CHF millions	31.12.2019	31.12.2018	Change absolute
Off-balance sheet receivables	–	2	–2
Other	–	–	–
Total contingent assets	**–**	**2**	**–2**

ETH Zurich had unquantifiable contingent assets at the end of 2019. This particularly entails the donation by Hansjörg Wyss for the Wyss Translational Center Zurich, as well as the remaining inheritance from Dr Branco Weiss for the Society in Science Programme (The Branco Weiss Fellowship) to support young researchers.

32 Financial commitments

Table 64: Financial commitments

CHF millions	31.12.2019	31.12.2018	Change absolute
Financial commitments <= 1 year	70	62	8
Financial commitments from 1 to 5 years	11	14	–3
Financial commitments > 5 years	–	–	–
No due date / indefinite	–	–	–
Total financial commitments	**81**	**76**	**5**

The financial commitments relate in particular to plant construction projects in the area of the SwissFEL / ATHOS, ESS and SINQ upgrade at the PSI (totalling CHF 56m, -CHF 4m).

Financial commitments for the acquisition of technical-scientific equipment have been reported by ETH Zurich (CHF 13m), EPFL (CHF 7m), Empa (CHF 5m) and Eawag (CHF 1m).

In addition, EPFL has contractually undertaken to bear the following costs:

- 40% of the cost of the Centre Wyss at the Wyss Center for Bio- and Neuroengineering Foundation in Geneva.
- Expenses for major maintenance work, as well as conversion and renovation costs for the interior fittings and operating facilities of the Microcity building in Neuchâtel.

33 Operating lease

Table 65: Operating lease

CHF millions	2019	2018	Change absolute
DUE DATES			
Due within 1 year	42	30	11
Due within 1 to 5 years	127	83	44
Due after more than 5 years	318	149	169
Future minimum payments for non-cancellable operating lease as of 31.12.	**487**	**262**	**224**
LEASING EXPENSES			
Minimum lease payments	36	33	3
Payments from subleasing	1	1	–
Leasing payments of current period	**37**	**34**	**3**
ADDITIONAL DETAILS			
Future revenue from sublease (from non-cancellable contracts)	4	1	2

In the reporting period, the PSI concluded a lease agreement for office, laboratory and workshop space in a building yet to be constructed (planned occupation from 1 January 2024 for a term of 23 years). Consequently, the future minimum lease payments at the PSI increased by CHF 130m. Other lease agreements affecting ETH Zurich (future minimum lease payments of CHF 215m, +CHF 88m), EPFL (future minimum lease payments of CHF 138m, +CHF 8m), and Empa (future minimum lease payments of CHF 4m, –CHF 1m). This primarily involves the rental of various real estate.

The leasing payments of the current period are mainly divided between ETH Zurich (CHF 26m), EPFL (CHF 9m) and Empa (CHF 2m).

34 Remuneration of key management personnel

Table 66: Remuneration of key management personnel (rounded values)

CHF millions	2019	2018	Change absolute
ETH Board	1	1	–
Directorate	2	2	–
Remuneration of key personnel	**3**	**3**	**–**

Table 67: Key personnel

Full-time equivalent	2019	2018	Change absolute
ETH Board *	1.89	2.16	−0.27
Directorate **	6.00	6.00	–
Number of persons (in full-time positions)	**7.89**	**8.16**	**–**

* Workload: President of the ETH Board: 60% (prior year 80%), Vice President of the ETH Board: 16%, one member of the ETH Board: 70%, remaining four (until 30 April 2019: five) members of the ETH Board without management functions: 10% each

** Board members with management functions and the directors of the other research institutes.

35 Relationships with controlled and associated entities

Controlled entities

The following institutions, the ETH Board and the units listed in table 68 are fully consolidated.

Institutions and ETH Board:

- Board of the Federal Institutes of Technology (ETH Board), Zurich and Bern
- ETH Zurich, Zurich
- EPFL, Lausanne
- Paul Scherrer Institute (PSI), Villigen
- Swiss Federal Institute for Forest, Snow and Landscape Research (WSL), Birmensdorf and Davos
- Swiss Federal Laboratories for Materials Testing and Research (Empa), Dübendorf, St Gallen and Thun
- Swiss Federal Institute of Aquatic Science and Technology (Eawag), Dübendorf and Kastanienbaum

Table 68: Controlled entities

	Legal form	Nature of collaboration / business activity	Domicile	Jurisdiction	Currency	Proportion of voting rights or participating share (in %) 31.12.2019[1]		Reporting date used
ETH Singapore SEC Ltd.	Ltd.	Strengthening the global position of Switzerland and Singapore in the field of environment / sustainability and engaging in appropriate research cooperation	Singapore	Singapore	SGD	100	100	31/03/2019
Rübel Geobotanical Research Institute Foundation[2]	Foundation	Promoting geobotanical science (plant sociology, plant ecology, plant propagation, vegetation history)	Zurich	Switzerland	CHF	57	100	31/12/2018
Fondation pour les Etudiants de l'EPFL	Foundation	The foundation supports students at EPFL if their financial circumstances are making it much more difficult for them to complete their degree	Lausanne	Switzerland	CHF	60	100	31/12/2019
EPFL Innovation Park Foundation	Foundation	The foundation owns and maintains buildings for promising start-ups (technology park)	Ecublens (VD)	Switzerland	CHF	45	100	31/12/2019
Société du Quartier de l'Innovation (SQIE)	Simple partnership	The simple partnership maintains buildings on a finance lease basis for larger technology companies	Ecublens (VD)	Switzerland	CHF	100	100	31/12/2019
Société du Quartier Nord de l'EPFL (SQNE)[3]	Simple partnership	The simple partnership maintains various buildings on a finance lease basis and operates a convention centre, student halls of residences, shops and a hotel	Ecublens (VD)	Switzerland	CHF	80	100	31/12/2019

1 With the exception of EPFL Innovation Park Foundation (42% of the voting rights in the previous year), the figures are unchanged compared to the previous year.

2 The remaining 43% of the voting rights in the Rübel Geobotanical Research Institute Foundation are held by people determined by the founder. However, ETH Zurich has a 100% share in the capital of the foundation.

3 EPFL has a stake of 100% in SQNE. EPFL has a direct holding of 90% and an indirect holding of 5% through the fully consolidated EPFL Innovation Park Foundation. The other 5% are held by the associated entity Foundation Les Bois Chamblard in which EPFL holds substantial interest with a stake of 100%. Due to the interest of 100% in the Foundation Les Bois Chamblard, SQNE is fully consolidated without consideration and presentation of non-controlling interests.

Associated entities

All associated entities listed are entered in the balance sheet on the basis of the equity method.

Table 69: Associated entities

	Legal form	Nature of collaboration / business activity	Domicile	Jurisdiction	Currency	Proportion of voting rights or participating share (in %) 31.12.2019[1]	
ETH Zurich Foundation[2]	Foundation	Promoting research and teaching at the Swiss Federal Institute of Technology Zurich	Zurich	Switzerland	CHF	15	100
Albert Lück Foundation	Foundation	Promoting teaching, research and study in the field of building and construction at ETH Zurich, initially in the current Department of Civil, Environmental and Geomatic Engineering and in its successor unit	Zurich	Switzerland	CHF	20	100
Student Housing Foundation	Foundation	Providing and operating low-cost housing for students in Zurich	Zurich	Switzerland	CHF	22	50
Archives of Contemporary History Foundation	Foundation	Promoting, safeguarding the long-term existence of and extending ETH Zurich's Archives of Contemporary History as a documentation and research centre for general and Swiss contemporary history	Zurich	Switzerland	CHF	43	100
Foundation for Contemporary Jewish History	Foundation	Setting up and promoting a documentation centre for contemporary Jewish history within ETH Zurich's Archives of Contemporary History	Zurich	Switzerland	CHF	20	100
Fondation Les Bois Chamblard	Foundation	The foundation provides infrastructure for the organisation of workshops and conferences.	Buchillon	Switzerland	CHF	20	100
Fondation Campus Biotech Geneva	Foundation	The Biotech Campus is a centre of excellence in biotechnology and in life science research	Geneva	Switzerland	CHF	25	50
Fondation du Centre universitaire protestant de Lausanne	Foundation	The foundation provides accommodation for students from EPFL and from the University of Lausanne	Lausanne	Switzerland	CHF	43	60
Fondation "Institut d'Imagerie Moléculaire Translationnelle IIMT"	Foundation	The foundation contributes to the development of new programmes in translational research and technological innovation in the area of molecular imaging	Geneva	Switzerland	CHF	50	50
DECTRIS LTD	Public limited company	Development and production of electronic measuring instruments for scientific and industrial applications	Baden	Switzerland	CHF	21	21

1 With the exception of the Archives of Contemporary History Foundation (25 % of the voting rights in the previous year) and the Fondation du Centre universitaire protestant de Lausanne (29 % of the voting rights in the previous year), the figures are unchanged compared to the previous year.

2 Even though ETH Zurich has less than 20 % of the voting rights in the ETH Zurich Foundation, ETH Zurich can still exercise considerable influence over the foundation and is also the sole beneficiary. For this reason, the ETH Zurich Foundation has been classified as an associated entity.

Restrictions

The ETH Domain does not have any access rights to the assets of the controlled or associated entities listed above. For instance, it cannot arrange a transfer of liquidity or access the funds of the units in any other way.

Controlled and associated entities under the threshold according to the Ordinance on Finance and Accounting of the ETH Domain (OFA)

Details about the consolidation are specified in the Ordinance on Finance and Accounting of the ETH Domain. This Ordinance also defines thresholds to be taken into account in the consolidated financial statements. Units which meet the criteria for consolidation or for equity valuation but which come under these thresholds are to be disclosed as follows in accordance with Note 2 of the Ordinance on Finance and Accounting of the ETH Domain and are excluded from the consolidated financial statements of the ETH Domain:

Table 70: Entities below the thresholds according to the Finance and Accounting Regulations of the ETH Domain

	31.12.2019	31.12.2018
Controlled entities		
Quantity	9	8
Total assets (CHF million)	20	19
Associated entities		
Quantity	15	14
Total assets (CHF million)	51	48

36 Events after the reporting date

The ETH Board agreed the 2019 consolidated financial statements of the ETH Domain on 5 March 2020. No significant events have occurred prior to that date in the ETH Domain that would necessitate any disclosure regarding the consolidated financial statements of the ETH Domain as of 31 December 2019 or any adjustment thereto.

Auditors' report

EIDGENÖSSISCHE FINANZKONTROLLE
CONTRÔLE FÉDÉRAL DES FINANCES
CONTROLLO FEDERALE DELLE FINANZE
SWISS FEDERAL AUDIT OFFICE

Reg. Nr. 1.20183.932.00348.002

Report of the statutory auditor

to the Federal Council and the ETH Board

Consolidated financial statements of the Domain of the Swiss Federal Institutes of Technology for the year 2019

Report on the audit of the consolidated financial statements

Opinion

We have audited the consolidated financial statements of the Domain of the Swiss Federal Institutes of Technology (ETH Domain) which comprise the consolidated statement of financial performance 2019, the consolidated balance sheet as of 31 December 2019, the consolidated statement of changes in equity and the consolidated cash flow statement for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion the consolidated financial statements (pages 12 to 73) present fairly, in all material respects, the consolidated financial position of the ETH Domain as of 31 December 2019, and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with the International Public Sector Accounting Standards (IPSAS) and legal requirements and the Accounting Manual for the ETH Domain.

Basis for Opinion

We conducted our audit in accordance with Swiss Law, International Standards on Auditing (ISAs), Swiss Auditing Standards and article 35a*ter* of the Federal Act on the Federal Institutes of Technology (SR 414.110). Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the consolidated financial statements section of our report. We are independent based on the Federal Auditing Act (SR 614.0) and the requirements of the audit profession and we have fulfilled our other ethical responsibilities in accordance with these requirements.

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

Other information in the Annual Report

The ETH Board is responsible for the other information in the annual report. The other information comprises all information included in the annual report, but does not include the consolidated financial statements and our auditor's report thereon.

Our opinion on the consolidated financial statements does not cover the other information in the annual report and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information in the annual report and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. In this context, please refer to the section Report on other legal and regulatory requirements at the end of this report.

Responsibilities of the ETH Board for the consolidated financial statements

The ETH Board is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with the International Public Sector Accounting Standards (IPSAS) and the legal requirements (Ordinance on the ETH Domain, SR 414.110.3; Ordinance on the Finance and Accounting of the ETH Domain, SR 414.123; Accounting Manual for the ETH Domain), and for such internal control as the ETH Board determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the ETH Board is responsible for assessing the ETH Domain's ability to continue as a going concern, disclosing, as applicable, matters related to going concern.

Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Swiss law, ISAs and Swiss Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with Swiss law, ISA's and Swiss Auditing Standards, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the ETH Domain's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made.
- Conclude on the appropriateness of the ETH Board's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the ETH Domain's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the notes to the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the ETH Domain to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the ETH Domain to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the audit of the consolidated financial statements. We remain solely responsible for our audit opinion.

We communicate with the Audit Committee of the ETH Board regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Report on other legal and regulatory requirements

In accordance with the Federal Auditing Act and Swiss Auditing Standard 890, we confirm that an internal control system exists, which has been designed for the preparation of the consolidated financial statements according to the instructions of the ETH Board.

In accordance with Art. 21 par. 2 of the Ordinance on the Finance and Accounting of the ETH Domain, we confirm that no contradictions exist between the personnel reporting in the annual report (management report) and the consolidated financial statements. Likewise, we confirm that no contradictions exist between the financial figures in the annual report (management report) and the consolidated financial statements.

Furthermore, in accordance with Art. 21 par. 2 of the Ordinance on the Finance and Accounting of the ETH Domain, we confirm that risk management has been appropriately conducted according to the instructions of the ETH Board.

We recommend that the consolidated financial statements submitted to you be approved.

Berne, 5 March 2020

SWISS FEDERAL AUDIT OFFICE

E.S.

Eric-Serge Jeannet
Licensed audit expert

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Rounding differences: the figures presented in this document may not correspond precisely to the total amounts presented in the tables. Changes are calculated on unrounded amounts and may differ from a figure that is based on the rounded amounts presented in the tables.

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