Europäische Patentorganisation
European Patent Organisation
Organisation européenne des brevets

CA/20/20

Verwaltungsrat
Administrative Council
Conseil d'administration

Report of the Board of Auditors of the European Patent Organisation on the 2019 accounting period

CA/20/20
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SUBJECT:	Board of Auditors' report on the 2019 accounting period Explanations and reasons supplied by the President of the Office
SUBMITTED BY:	1. Board of Auditors of the European Patent Organisation 2. President of the European Patent Office
ADDRESSEES:	1. Supervisory Board of the RFPSS (for opinion, Article 80 FinRegs) 2. Budget and Finance Committee (for opinion, Article 80 FinRegs) 3. Administrative Council (for approval and discharge, Article 80 FinRegs and Article 49(3) and (4) EPC)

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I. SUMMARY

A. OUR TASK IN BRIEF

1. We, the Board of Auditors, perform our task in accordance with Articles 49 and 50 EPC, our rules of procedure and generally accepted auditing standards.

2. Under Article 50 EPC in conjunction with Article 79 FinRegs, our report contains in particular: an audit opinion on the annual accounts, the results of our audit carried out to ascertain whether the financial management of the Office is sound, and whatever observations we consider necessary as to the appropriateness of the existing budgetary and financial arrangements.

3. Our report is based on information made available by 31 March 2020 at the latest.

B. OPINION ON THE ANNUAL ACCOUNTS

4. In 2005, the EPO began drawing up its annual accounts in accordance with the IFRSs, which have applied in their entirety since deletion of an exception with effect from 1 January 2011 (CA/D 5/11).

5. We have been able to give an unreserved audit opinion without any reservations on the 2019 accounts, which give a true and fair view of the net assets, financial position and results of operations of the EPO.

6. Our report contains comments on the accounting treatment of some important items but these are not to be understood as expressing any doubt as to whether they have been reported in compliance with the IFRSs.

C. OPINION ON FINANCIAL MANAGEMENT

7. Our audit included not only the annual accounts but also management audits concerning in particular the EPO's financial situation, its operations and the RFPSS. These have given rise to the following main findings.

a) **Financial situation**

(i) **Financial reporting**

8. As set out in CA/84/11, the EPO's revision of its financial reporting procedure means that its annual result is now subject to greater volatility.

(ii) **Balance sheet figures**

9. As at 31 December 2019, non-current assets were approx. EUR 13 530m.

10. As at 31 December 2019, non-current liabilities were approx. EUR 35 596m.

11. Current assets were valued at just under 2.1% and current liabilities at just under 2.8% of their non-current counterparts.

12. The negative equity increased year-on-year by EUR 6 828m to EUR 17 632m as at 31 December 2019.

(iii) **Economic situation, factoring in the present value of future national renewal fees**

13. The present value of future national renewal fees cannot be shown under the IFRSs because there is no legal obligation to pay them.

14. If the present value of such fees – put at EUR 5 190m (CA/60/20) – is factored in, there is an imputed shortfall of EUR 15 085m between RFPSS assets and the defined benefit liability. Including the EPOTIF assets (EUR 2 955m), as at 31 December 2019 the shortfall would have been EUR 12 130m.

15. For a long-term view, see also CA/56/19 (joint report of the Actuarial Advisory Group (AAG) to the President of the European Patent Office – actuarial valuation as at 31 December 2018), CA/57/19 (the Office's comments on the joint report of the Actuarial Advisory Group (AAG) – implications for the budget and financing of the RFPSS), CA/46/19 (Financial Study) and CA/83/19 (Financial Study 2019 (Phase II) – Measures assessment).

(iv) Income statement

16. There was an operating loss of EUR 135m.

17. At EUR 1 349m, the financial result was up EUR 2 301m on the previous year as a result of a EUR 1 766m increase in finance revenue and a EUR 535m fall in finance costs.

18. The loss under other comprehensive income was EUR 8 041m, down EUR 9 327m on the previous year's figure.

19. This loss comprises EUR 6 539m resulting from financial assumptions and EUR 1 503m resulting from changes in the demographic assumptions.

(v) Statement of cash flows

20. The inflow from operating activities was EUR 412m, while the outflow from investment activities was EUR 394m.

(vi) Forecast balance sheet figures

21. In CA/D 1/18 (2019 Budget and estimates for 2020-2023), the 2019 IFRS value of the defined benefit liability was forecast to be EUR 11 661m (CA/D 1/18), even though its 2018 IFRS value was already EUR 20 841m.

(vii) Comparison of budget as adopted and as implemented

22. In CA/D 1/18, the AC adopted an authorisation budget within the meaning of Article 25(1)(a) FinRegs totalling EUR 2 383m. The actual outturn was EUR 2 320m, which is 2.7% lower than forecast.

b) Operations

(i) Comments on the annual accounts

1. Post-employment and other long-term benefit obligations

23. We have no objections to the accounting treatment of post-employment and other long-term benefit obligations applied by the Office, but highlight the level of estimate involved and the change in accounting principles.

24. The calculation of the defined benefit obligations is significantly affected by, amongst other factors, the discount rate and the mortality tables.

25. The discount rate for the pension obligation moved from 1.99% (2018) to 1.13% (2019)

26. The mortality table applied by the Office is the International Civil Servants Life Table (ICSLT). For 2019 the new table was used (ICSLT 2018 instead of ICSLT 2013). In particular, the EPO made two changes to the 30-year longevity improvements of the standard ICSLT 2018 table. First, it recalibrated the trend to better match the EPO pensioner population. Second, it reduced the horizon of longevity improvements from 30 years to 10 years.

The impact of applying the ICSLT table 2018 with EPO-specific mortality improvements, as opposed to using the ICSLT table 2018, amounts to a reduction of EUR 1 052m or 4.2% in the pension obligation.

2. EPOTIF

27. The EPOTIF Governance Framework, covering internal policies regarding performance reporting, risk management, compliance control, escalation procedures and the oversight function, was completed in Q1 2019. The EPOTIF oversight regulations were finalised in September 2019

28. Compliance checks are performed on a daily basis by Master-KVG. The execution of compliance checks by Master-KVG is regulated by the German Capital Investment Code (KAGB) and is subject to the supervision of the German Federal Financial Supervisory Authority (BaFin). Any breaches of limits imposed by the investment guidelines and corrective actions taken by asset managers are reported to the EPO within one day and to the BFC in the quarterly EPOTIF performance and risk report.

29. In addition to the Master-KVG, an internal risk and compliance assurance function has been set up to monitor and control the operational risk management.

3. IFRS

30. IFRS 16 replaces the requirements in IAS 17 and mainly contains changes in the accounting treatment for lessees. The EPO applied IFRS 16 for the first time in its financial statements 2019, using the modified retrospective approach. The effect is a minor adjustment in the opening balance.

4. Reporting of subsequent events

31. The spread of the coronavirus constitutes a non-adjusting event under IFRS. If a non-adjusting event is material, the nature of the event must be disclosed in the notes. A note on the potential impact of the coronavirus on the EPO's financial position in 2020 is included in CA/60/20, note 31.

(ii) Comments on financial management

32. There were no transfers under Article 34(3) FinRegs (requiring a decision by the BFC or the AC).

(iii) Internal control system

1. General IT controls

33. We performed our IT audit procedures for the following IT systems: SAP FIPS, EPASYS (MADRAS) and the fee capturing system (FCS). As FCS was replaced by SAP PSCD on 3 October 2019, we also audited the data transfer.

34. Detailed information about findings and recommendations have been given to the Office separately. We had no critical observations on the financial control system.

2. RFPSS governance

35. RFPSS assets are managed appropriately, the procedures and controls implemented function properly and the values of the funds and the results of the funds' management have been calculated correctly.

3. Co-operation with Internal Audit

36. Principal Directorate Internal Audit and Oversight (IAO) co-ordinates its annual and medium-term audit plans with us, and provides us with all its audit reports. In accordance with Article 22 of the Implementing Rules for Articles 21, 21a and 93(2) ServRegs, the investigative unit must submit an annual report on its activities to the Board of Auditors. We have not been provided with this report for 2019.

(iv) Business administration

1. Purchase-to-pay process

37. We performed a comprehensive audit of the purchase-to-pay process. Even if the Office is reviewing and implementing improvements to the process, our key recommendation is to take a step back, and review the entire process. A number of points from the current process should be addressed, like manual steps, duplication of tasks, unclear responsibilities, insufficient integration and underutilisation of electronic tools and development of relevant KPIs.

2. HR – Follow-up audit

38. As part of the follow-up review to the HR audit performed in 2017, access rights and critical authorisations in the SAP system were reviewed. The results were compared with those identified during the 2017audit.

39. As a result, it was identified in general that the Office has taken a number of measures in response to the findings identified during the 2017 audit, including limitation of rights of the personnel in the area of comprehensive maintenance of the master data in payroll process and comprehensive display of all master data that are very critical.

40. However, it was also identified that certain critical combinations and authorisations, such as critical authorisations in respect of the comprehensive maintenance and display of payroll-relevant master data and segregation of duties in the SAP system in respect of some critical combinations are to be further reviewed and analysed by the Office. It should be considered whether the existing rights in these areas should be assigned on a "need-to-know" basis.

3. Analysis of implementation of GDPR requirements in the HR area

41. Since the Office, as an international organisation that does not fall under the EU regulations, is not subject to the General Data Privacy Regulation (hereinafter: "GDPR"), the internal "Guidelines for the protection of personal data" were developed and introduced by the Office with the latest revision in 2014. The abovementioned guidelines are very close to the requirements of the GDPR and Regulation (EU) 2018/1725 and as such are to be implemented and followed by the Office.

42. Accordingly, the audit procedures were carried out in respect of the adherence of the Office to the requirements of the abovementioned guidelines within the HR area.

43. The audit resulted in a number of recommendations, as the Data Protection Registry needs to be updated and kept relevant, while retention and deletion periods and actions for events such as retirement and leaving the Office have to be defined. Additionally, the awareness of the responsibilities of controllers in terms of data protection topics should be raised, and regular training sessions should be held for the HR department, as well as for other departments working with the personal data, to inform them about critical areas in the data protection process.

(v) IT overall

1. New organisational structure

44. IT-related departments formerly in DG 1 (Automation Support) and DG 4 (Information Technology) have been merged to Business Information Technology (BIT) in the new organisational structure.

45. The new organisation is divided between the CTO (PD45) and the CIO (PD46). A new Chief Technology Officer (CTO) role was introduced to complement the existing CIO role. They deputise for each other. The new BIT structure has been fully implemented since 1 January: staff allocation in each directorate has been clarified and all staff have been allocated to their new job with reviewed job specifications inside or outside BIT. Relevant areas of an IT organisation are reflected in the new organisation.

2. Programme organisation and management of goal 2

46. The Strategic Plan 2023 defines the EPO's medium-term objectives and is divided into five goals, of which Goal 2, "Simplify and modernise IT systems", is the most technology-related goal. For other goals too, IT related topics need to be covered and addressed. Programmes and projects throughout the goals are defined independently from each other. Scope definitions are done at a high level, but discussions on operational level are not defined. In general, similar topics might be addressed by different goals and overlapping topics are not recognised early, which might lead to redundant work.

47. The target for Goal 2 is to simplify and modernise the IT systems. With eight key initiatives, out of 32 in total, Goal 2 accounts for the most key initiatives out of all goals. Seven programmes and 52 (including one standalone) projects have been defined. There is no clear definition of strategic projects, tracked activities and operational tasks. The definition is subject to evaluation within BIT (or other directorates).

48. The KPIs are suitable for adequately monitoring the targets of Goal 2.

3. Data centre

49. In the context of the long-term EPO IT security strategy it was decided in November 2016 to outsource the EPO's main data centre in The Hague at a Tier IV campus. The Project P0737 "New Data Centres" was set up, then replaced in 2018 by project "2.8.2.1 New data centre" as part of the infrastructure programme within SP2023. But the new data recovery site sub-project, included in the former project, is now running, with a different scope, under project "2.8.2.2 Enhance the Disaster Recovery Capacity".

50. As at 2 December 2019, EUR 10.6m had been spent within project P0737. Within the project brief the project budget for the Project 2.8.2.1 "New Data Centre" is estimated as involving external costs of EUR 9.5m and internal costs of 5 043 man/days. A budget comparison between the previous project (P0737), at EUR 14.8m, and the current project (P2.8.2.1), at EUR 9.5m, shows a difference of EUR 5.3m.

51. The reduction in the budget is a result of change in scope, as the data centre recovery site is no longer included. As the scope and approach of the data recovery site has changed significantly, a more detailed budget comparison is not possible.

4. Storage/archiving

52. Approx. 98% of filings within the PGP process are done via Online Filing. Paper-based filings are digitalised and electronically stored. Even though all files are stored electronically, the review and processing process is basically paper-based. As a result, files are printed several times during the PGP process before it is closed. Within the corporate area, several document management systems are in place.

53. A general document management strategy does not exist for either the corporate or the PGP area. Each directorate currently defines its document management strategy separately, if needed. An overview of what kind of documents exist in the EPO and where they are stored is not fully available for the whole organisation. As digitalisation is one of the Goals with the SP23 actions are planned to optimise the digitalisation strategy.

5. eDossier project

54. The eDossier was intended to be a key stepping stone in the Patent Grant Process (PGP) programme. The project was carried out as a cornerstone of the programme to create a paperless workflow for the patent granting process.

55. The whole eDossier programme consisted of three projects (Search, Programme and Release). On 15 February 2019, the EPO announced that the eDossier project would be closed by 1 March 2019. The planned advantages and the expected benefits did not materialise.

56. The project end report was drawn up and used to review how the project performed against the original approved version and capture the factors that influenced the project. A "lessons learned" document has been drawn up to summarise mistakes which might have led to the project's closure.

57. As the lessons learned contain some very generic topics, they should be presented also to other areas within EPO.

(vi) Buildings

58. The project management for the Building Investment Program is now starting. Guidelines, processes and templates for the Building Investment Program in general as well as for the individual projects need to be standardised.

59. Based on the current planning, 32 internal project participants are planned to work directly for the Building Investment Program. 15 internal positions are vacant and must be filled by January 2024.

60. As a basis for the individual approval of each project, a sustainability concept and the formulation of concrete (qualitative and quantitative) sustainability goals for each individual project should be prepared.

II. DETAILED REPORT

A. PRELIMINARY REMARKS

61. We, the Board of Auditors of the European Patent Organisation, report herein under Article 79 FinRegs on the 2019 accounting period.

62. The annual accounts reached us on 17 March 2020. The deadline set in Article 70 FinRegs (15 March) was therefore narrowly missed. However, given the exceptional circumstances caused by a pandemic, submission close to the deadline should be highlighted as particularly positive.

63. Under Article 75 FinRegs and following a public invitation to tender, we also commissioned the following audit firms to perform certain tasks:

- KPMG Deutsche Treuhand-Gesellschaft Aktiengesellschaft Wirtschaftsprüfungsgesellschaft, Munich (for the audit of EPO accounts, of business administration, including buildings, and of IT)

- BDO AG Wirtschaftsprüfungsgesellschaft, Hamburg (for the audit of RFPSS and other non-current assets)

64. Pursuant to Article 76(2) FinRegs the checks were intended in particular to establish whether:

- the terms of the budget and other budgetary provisions were adhered to

- the annual accounts as defined in Article 69 FinRegs were properly substantiated and all transactions properly recorded

- securities and cash on deposit accorded with the amounts in the cash accounts

- procedures were efficient and economical and whether work could be performed more efficiently with fewer staff or other resources, or in other ways

65. Pursuant to Article 7(1)(e) of the Regulations for the Reserve Funds for Pensions and Social Security (RFPSS), we recommend that the Fund Administrator be discharged in respect of the 2019 accounting period. Our comments on the RFPSS can be found in section I.C.b.iii.2 of the above summary and in section II.D.b of this detailed report.

66. In accordance with Article 76 FinRegs, we or the above firms carried out checks on the EPO premises. No cash accounts within the meaning of Article 76(2)(c) FinRegs were kept during the audited period.

67. Our report is based on information made available by 31 March 2020 at the latest.

68. We would like to take the opportunity to thank the President and the EPO staff consulted for their help and constructive co-operation.

B. AUDIT OPINION

a) Opinion

69. The Board of Auditors has audited the financial statements as disclosed in CA/60/19, comprising the statement of comprehensive income, the statement of financial position, statement of changes in equity, statement of cash flows and notes (Article 69(1)(a) of the Financial Regulations), together with the bookkeeping system of the European Patent Organisation (EPO) for the accounting period 1 January to 31 December 2019.

70. In our opinion, the accompanying financial statements give a true and fair view of the financial position of the EPO as at 31 December 2019, and its financial performance and its cash flows for the year then ended in accordance with Article 50(g) of the European Patent Convention (EPC) and the Financial Regulations (FinRegs).

b) Basis for opinion

71. We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the "Auditor's Responsibilities for the Audit of the Financial Statements". We are independent of the EPO as required by the ethical standards in accordance with Article 50(g) of the European Patent Convention (EPC) and the Financial Regulations (FinRegs) that are relevant to our audit of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

c) Responsibilities of the President of the EPO for the financial statements

72. The President of the EPO is responsible for the preparation and fair presentation of the financial statements in accordance with Article 50(g) of the European Patent Convention (EPC) and the Financial Regulations (FinRegs). Under Article 1(3) FinRegs, the generally accepted accounting principles of the EPO are the International Financial Reporting Standards (IFRSs) as promulgated by the International Accounting Standards Board (IASB). Furthermore, the President of the EPO is responsible for such internal control as necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

73. In preparing the financial statements, the President of the EPO is responsible for assessing the EPO's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the EPO or to cease operations, or has no realistic alternative but to do so.

d) Auditors' responsibilities for the audit of the financial statements

74. Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' 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 ISAs 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 financial statements.

75. As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also

- Identify and assess the risks of material misstatement of the 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 EPO's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the President of the EPO.

- Conclude on the appropriateness of management'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 EPO's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the 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 auditors' report. However, future events or conditions may cause the EPO to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

e) Other matters

76. The Office has changed the principles for recognising the defined benefit obligations. The change, reducing the booked obligations by EUR 1 052m, is adequately described in paragraph 2.4 in CA/60/19.

77. From March 2020, the coronavirus epidemic has had a major negative impact on both the operations of the Office and the financial value of the assets. The main positions that are affected include the RFPSS assets, the EPO Treasury Investment Fund and the defined benefit liability. This event does not change the financial value as of 31 December 2019, and the long-time effect cannot be reliably estimated.

Munich, 15 April 2020

Board of Auditors

H. Schuh O. Hollum F. Angermann

C. COMMENTS ON THE ACCOUNTS AND FINANCIAL MANAGEMENT

a) The EPO's financial and economic position

(i) Preliminary remarks

78. Each of our reports analyses the EPO's financial situation. Our task under Article 79 FinRegs of ascertaining whether its financial management is sound involves not only verifying compliance with economy, efficiency and effectiveness but also scrutinising its specific self-financing model. The EPO must manage its resources in such a way that it does not need to call on the member states' guarantee.

79. Since 1 January 2011, the EPO has had to apply the financial reporting standards issued by the IASB in their entirety (CA/D 5/11).

80. This change in its financial reporting procedure has had two major effects:

- The RFPSS assets are shown as assets and the defined benefit obligation as a liability, which leads to significantly higher total assets and liabilities.

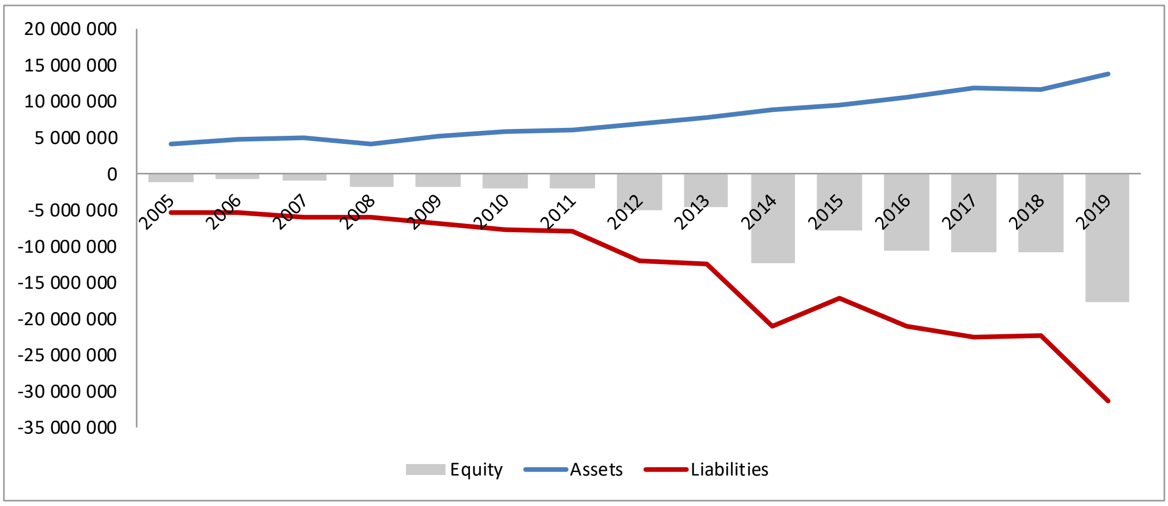
- The "corridor" approach, used when accounting for financial and actuarial fluctuations in the liabilities and assets of the social-security schemes, has been discontinued, making the annual accounts much more volatile.

81. The 2019 estimates and figures are based on CA/60/20 (financial statements) and CA/10/20 (budget implementation statement).

82. For the detailed balance-sheet and income-statement figures, see Annex 1 (1.1 and 1.2), taken from CA/60/20. Annex III compares the budget estimates as adopted in 2018 and subsequently restated ("IFRS forecast") with actual income and expenditure as per CA/10/20.

(ii) Financial statement figures in brief

1. Balance sheet



(EUR '000)	2015	2016	2017	2018	2019
Non-current assets	8 688 702	9 771 005	11 057 701	11 237 136	13 529 511
Current assets	789 967	757 203	664 898	295 041	281 659
Total assets	9 478 669	10 528 208	11 722 599	11 532 177	13 811 170
Non-current liabilities	-16 685 700	-20 512 590	-21 862 320	-21 537 039	-30 596 082
Current liabilities	-587 918	-651 883	-727 102	-799 349	-847 350
Total liabilities	-17 273 618	-21 164 473	-22 589 422	-22 336 388	-31 443 432
Equity	-7 794 949	-10 636 265	-10 866 823	-10 804 211	-17 632 262

83. As at 31 December 2019, non-current assets were approx. EUR 13 530m and thus up approx. EUR 2 292m on the previous year's figure. This increase is primarily attributable to the RFPSS (EUR +1 692m) and the EPOTIF (EUR +495m).

84. As at 31 December 2019, non-current liabilities were approx. EUR 30 596m, a year-on-year increase of EUR 9 059m. The increase in the defined benefit liability was EUR 9 028m.

85. Current assets were valued at just under 2.1% and current liabilities at just under 2.8% of their non-current counterparts.

86. The negative equity has increased year-on-year by EUR 6 828m to EUR 17 632m. Assets increased by EUR 2 279m while liabilities increased by EUR 9 107m.

87. The defined benefit liability accounted for by far the largest share of non-current liabilities.

As at 31 December 2019, the defined benefit liability broke down as follows:

(EUR '000)	Active staff	Staff entitled to deferred pension	Pensioners	Total
Pension liability	17 390 779	165 647	7 519 358	25 075 784
LTC insurance	768 291	2 080	459 460	1 229 831
Health insurance	2 621 389	0	915 240	3 536 629
Death and invalidity	26 636	0	0	26 636
Total	20 807 095	167 727	8 894 058	29 868 880

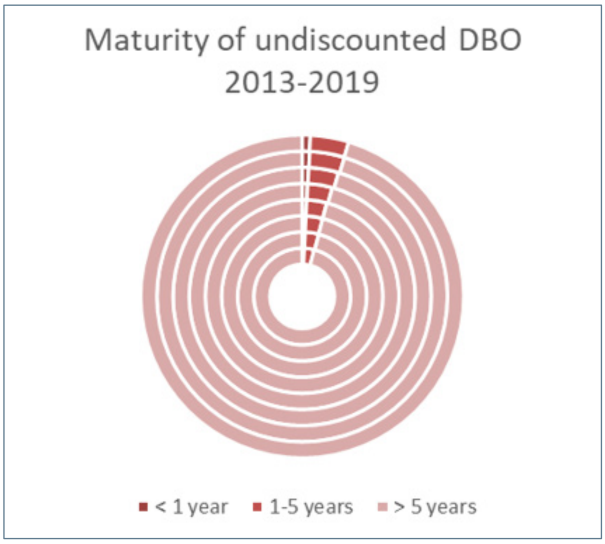
As at 31 December 2019, the pension liability (EUR 25 076m) broke down as follows:

(EUR '000)	2015	2016	2017	2018	2019
Pensions	11 070 268	13 912 195	14 466 473	14 434 061	20 195 362
Tax adjustment/partial compensation	2 349 661	2 926 869	3 068 196	3 020 858	4 031 511
Family allowances	319 892	383 200	596 027	502 189	848 911
Total	13 739 821	17 222 264	18 130 696	17 957 108	25 075 784

88. The year-end figures for the undiscounted defined benefit liability are as follows:

(EUR '000)	2015	2016	2017	2018	2019
Pension liability	27 236 334	27 921 531	23 468 599	24 695 167	28 224 984
LTC insurance	1 524 231	1 582 779	1 638 547	1 711 068	1 836 461
Health insurance	3 580 962	3 222 769	3 742 330	3 917 241	5 084 746
Death and invalidity	41 641	41 740	40 290	41 084	28 335
Undiscounted total	32 383 168	32 768 819	28 889 766	30 364 560	35 174 526
Discounted total	15 828 589	19 716 472	21 087 635	20 840 775	29 868 880

The breakdown of the undiscounted defined benefit liability by maturity is as follows:



(EUR '000)	2015	2016	2017	2018	2019
< 1 year	237 175	251 294	232 507	252 676	282 667
1–5 years	1 095 023	1 154 730	1 081 007	1 174 342	1 357 482
> 1 year	31 183 966	31 362 795	27 576 252	28 937 542	33 534 377
Undiscounted total	32 383 168	32 768 819	28 889 766	30 364 560	35 174 526

89. The higher defined benefit liability was above all down to a decrease in the discount rates.

	2015	2016	2017	2018	2019
Pension liability	2.60%	1.82%	1.71%	1.99%	1.13%
LTC insurance	2.78%	2.00%	1.79%	2.09%	1.20%
Health insurance	2.69%	1.82%	1.71%	2.01%	1.14%
Death and invalidity	1.97%	1.28%	1.23%	1.45%	0.69%

90. From our point of view, these rates are within the general guideline values.

91. For information on the effect of the current ICSLT mortality tables, please refer to section II.C.b.i.3.1 of this report.

92. Unlike the discount rates, which are recalculated annually, the assumption for future salary and pension increases has remained unchanged at 2.5% from the outset.

93. Calculations in CA/60/20 (note 21.1) show that a 0.1% increase in the discount rate would reduce the defined benefit liability by EUR 745m, whereas a 0.1% reduction in the rate would increase it by EUR 782m. For the first time since they were first reported, these calculations are based on the assumption of a change of 0.1% in the discount rate, instead of 1.0% as in the past.

94. A rise in life expectancy of one month would increase the defined benefit liability by EUR 1 263m.

	Current value	0.1% increase	0.1% decrease	1-month increase in life expectancy
Pension liability	25 075 784	24 466 421	25 705 583	26 074 813
LTC insurance	1 229 831	1 191 151	1 270 051	1 342 269
Health insurance	3 536 629	3 440 391	3 647 952	3 691 150
Death and invalidity	26 636	26 405	26 873	23 867
Total	29 868 880	29 124 368	30 650 459	31 132 099
Difference	---	-744 512	781 579	1 263 219

2. Economic situation, factoring in the present value of future national renewal fees

95. The present value of future national renewal fees cannot be shown under the IFRSs because there is no legal obligation to pay them.

96. With no eligible future income to set against the EPO's non-current liabilities from its future business, its balance sheet looks rather lopsided. To counteract that, the present value of future national renewal fees needs to be borne in mind. The figures shown in the table below are taken from CA/60/20.

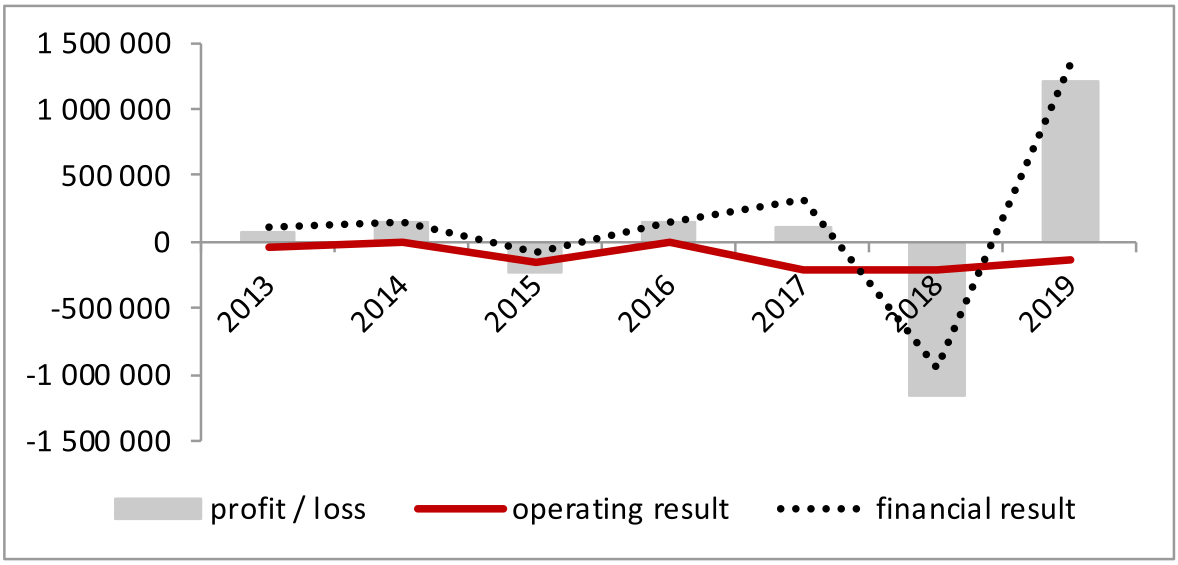
97. If the present value of such fees – put at EUR 5 190m (CA/60/20) – is factored in, there is an imputed shortfall of EUR 15 085m between RFPSS assets and the defined benefit liability.

(EUR '000)	2015	2016	2017	2018	2019
RFPSS net assets	6 591 858	7 292 203	8 193 835	7 901 770	9 593 701
Present value of future national renewal fees	3 878 744	4 025 807	4 311 079	4 697 000	5 190 000
Net business assets	10 470 602	11 318 010	12 504 914	12 598 770	14 783 701
Defined benefit liability	-15 828 589	-19 716 472	-21 087 635	-20 840 775	-29 868 880
Balance	-5 357 987	-8 398 462	-8 582 721	-8 242 005	-15 085 179

98. Including the EPOTIF assets (EUR 2 955m), as at 31 December 2019 the shortfall would have been EUR 12 130m.

99. For a long-term view, see also CA/56/19 (joint report of the Actuarial Advisory Group (AAG) to the President of the European Patent Office – actuarial valuation as at 31 December 2018), CA/57/19 (the Office's comments on the joint report of the Actuarial Advisory Group (AAG) – implications for the budget and the financing of the RFPSS), CA/46/19 (Financial Study) and CA/83/19 (Financial Study 2019 (Phase II – Measures assessment).

3. Income statement



(EUR '000)	2015	2016	2017	2018	2019
Operating result	-145 669	-9 441	-206 975	-205 279	-135 146
Financial result	-75 838	148 862	323 402	-952 330	1 348 533
Profit/loss for the year	-221 507	139 421	116 427	-1 157 609	1 213 387
Other comprehensive income	4 766 714	-2 980 737	-346 985	1 285 661	-8 041 438

100. There was an operating loss of EUR 135m. The loss is due to the fact that the service costs, which are closely linked to the defined benefit liability, are recognised in the operating result.

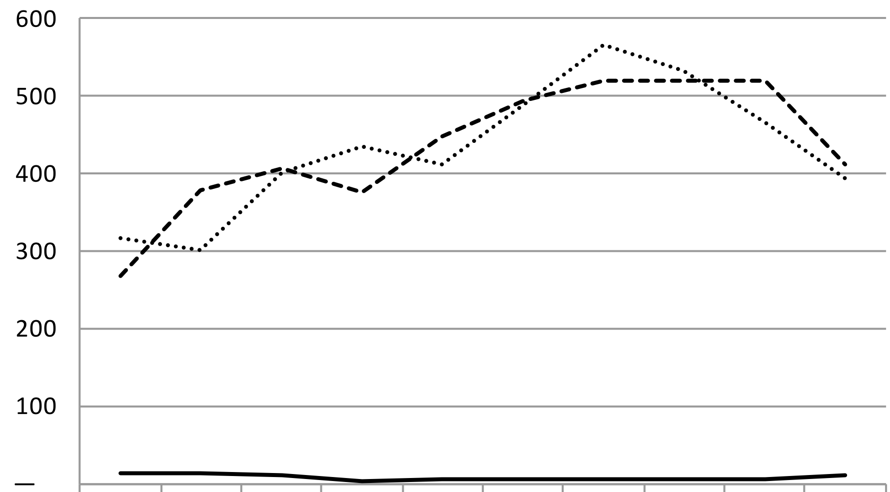
101. At EUR 1 349m, the financial result was up EUR 2 301m on 2018 as a result of a EUR 1 766m increase in finance revenue and a EUR 535m fall in finance costs.

The loss under other comprehensive income was EUR 8 041m, down EUR 9 327m on the 2018 figure.

The loss under other comprehensive income breaks down as follows:

(EUR '000)	Revised financial assumptions	Revised demographic assumptions	Total
Pension liability	5 395 298	879 824	6 275 122
LTC insurance	298 009	15 271	313 280
Health insurance	842 707	620 114	1 462 821
Death and invalidity	2 604	(12 389)	(9 785)
Total	6 538 618	1 502 820	8 041 438

4. Statement of cash flows



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Operating activities	268	379	407	377	447	493	520	521	521	412
Investing activities	317	300	402	436	410	490	566	533	465	394
Financing activities	13	13	10	3	6	6	4	5	4	11

102. The inflow from operating activities was EUR 412m, while the outflow from investment activities was EUR 394m. The inflow from financing activities was EUR 6m.

Cash flows from	2015	2016	2017	2018	2019
Operating activities	493 288	519 642	521 037	521 583	412 041
Investment activities	-489 951	-565 848	-532 872	-465 491	-394 359
Financing activities	-6 156	-4 328	-5 499	-3 508	11 364
Net increase/decrease in cash and cash equivalents	-2 819	-50 534	-17 334	52 584	6 318

b) Specific accounting remarks

(i) Post-employment benefit and other long-term employee benefit obligations

1. 2019 service costs

103. Current service costs are measured using the opening DBO, i.e. the liability as at 31 December 2018. They are determined by applying an actuarial calculation. The current service costs for pension obligations remained almost at the same level as in the prior year (EUR 713m in 2019, compared with EUR 768m in 2018, for DBO) leading to a continuing (negative) operating result of EUR 135m, which is slightly below the previous year's operating loss of EUR 205m. Also, the interest costs on DBO of EUR 355m, which are shown in the financial result, remained almost unchanged compared to the previous year's amount of EUR 308m.

2. Transfer of pensions rights

104. The factors leading to the higher pension obligation as per 31 December 2019 included increases by EUR 7 035 000 (compared with an increase by EUR 8 726 000 as per 31 December 2018) due to transfers of pension rights and by EUR 32 525 000 (compared with EUR 36 234 000 as per 31 December 2018) due to past service costs based on transfers of pension rights. Under the pension schemes (old and new), the employees entering the service of the Office have the possibility to transfer their retirement pension rights accrued under their previous employment pension schemes to the Office; EUR 7 035 000 are the funds the Office received due to this transfer. These funds are converted to current pension obligation (DBO) by determining the number of years of reckonable service with which they will be credited at the EPO. The difference between the funds received and the corresponding DBO makes up the past service costs due to the transfer of pension rights. It varies from year to year, depending on the salary and the age of the employees, the underlying discount rate, etc.

3. Actuarial result – demographic

105. Actuarial assumptions are classified as either financial or demographic assumptions. Demographic assumptions affect the probability of receiving various benefits. Demographic assumptions used for the valuation of the DBO liability are turnover rates, retirement rates, "proportions married," all of which are EPO-specific tables, and the mortality table.

3.1 Mortality table

106. The mortality table applied by the Office is the International Civil Servants Life Table (ICSLT) produced by the ISRP, which provides tables specific to international civil servants based in Europe since 2008.

107. The ICSLT 2013, which was used as an assumption at 31 December 2017, was updated during 2018, using historic population data from a number of international organisations, including the EPO, and reissued in February 2019 for the period 2013 to 2017.

108. In 2018, the EPO decided to retain the ICSLT 2013 for the calculation of the 2018 year-end liabilities in line with its governance processes in the event of material changes in actuarial assumptions e.g. as salary increase, inflation, turnover, mortality table. In 2018, we concurred with this procedure but recommended accomplishing the due process of reviewing the ICSLT 2018 during 2019 as planned.

109. In 2019, the Actuarial Advisory Group (AAG – consisting of three independent actuaries who advise the Office on the conditions to be met in order to ensure the equilibrium of its pension scheme) reviewed the ICSLT 2018 table. First, the AAG compared the base table of ICSLT 2018 with the observed mortality at the EPO and concluded that it was appropriate. In a second step the AAG analysed the mortality improvements projected in the future. The AAG noted that the ICSLT 2018 allowed for mortality improvements over the next 30 years; however, it decided to limit the assumed improvements to the next 10 years and to keep that issue under review in future years.

110. The ICSLT 2018 mortality tables (with EPO-specific mortality improvements) deviate as follows from the 2013 table.

	ICSLT 2013 (2018 projection)	EPO-specific reduced mortality improvements: 2019 projection
Males		
60-year old	26.7	27.6
now 40-year old at 60	27.4	27.7
Females		
60-year old	28.5	30.1
now 40-year old at 60	29.1	30.1

111. We asked the EPO to calculate a sensitivity on the effect of using the ICSLT table 2018 with EPO-specific reduced mortality improvements compared to using the ICSLT 2018 table. The impact of applying the ICSLT 2018 table with EPO-specific mortality improvements, as opposed to using the standard ICSLT 2018 table, on the pension obligation amounts to EUR 1 052m or 4.3%.

3.2 Turnover rates

112. New turnover assumptions were recommended by the AAG and applied by the EPO in 2019. In this context, the EPO changed from applying turnover rates for different ages to applying turnover rates based on years of service.

113. For the majority of staff, the vesting period is 10 years. For pre-vesting periods (0-9 years of service) the leaving probability falls between 1.3% and 0.7%. For post-vesting periods the annual probability of leaving is set at 0.3%.

114. We concur with this procedure of applying turnover rates based on the years of service.

3.3 Retirement rates

115. The probability of retirement reflects the rate at which employees retire on an annual basis. Based on historic experience, new retirement assumptions were used for the accounting assumptions as at 31 December 2019.

116. We concur with this procedure of applying updated retirement rates based on historic experience.

3.4 Proportions married

117. "Proportions married" determines the likelihood of a member having a spouse that is eligible for dependants' benefits. No change in assumptions is applied for 2019 valuation.

4. Actuarial result – financial assumptions and experience

4.1 Discount rate

118. According to IAS 19, the interest rate used for discounting the defined benefit obligations ("DBO") is determined by reference to market yields at the end of the reporting period. In the case of the Office, it is based on the "iBoXX EURO Corporates AA" index and is therefore subject to general market fluctuations. The determination of the discount rate applied by the Office is in line with the requirements of IAS 19.

119. The discount rate used as at 31 December 2019 amounts to 1.13% (compared to the prior year's discount rate of 1.99%) for pension obligations. This decrease is the main reason for the net actuarial losses (re-measurements on defined benefit obligations) of EUR 8 041m that have led to a decrease in equity. The method used for determining the rate has been applied consistently. We consider the discount rate used by the Office appropriate.

4.2 Inflation rate

120. For the 2018 year-end accounting valuation, the long-term inflation rate assumption used was the ECB's inflation target as a reflection of the long-term inflation rate (2.0%). The ECB maintains the same target inflation rate of 2.0%. There was no change in assumption for the 2019 year-end accounting valuation.

121. We concur with the procedure of applying the ECB's long-term inflation target on a constant basis.

4.3 Salary/pension increases

122. The salary and pension increases are maintained at 0.5% above assumed price inflation and reflect the EPO's expectation as to salary and pension regulation.

123. We concur with the procedure of applying the ECB's long-term inflation target +0.5% on a constant basis for salary/pensions increases but recommend updating the due process of reviewing the pension increases on a regular basis.

4.4 Career progression

124. The career progression assumptions were updated by the AAG during 2019, based on historic experience. Annual average career progression rates depend on grade and an employee's current age and range from 0.00% to 3.42% (0.00% to 4.80% in previous years).

125. We concur with the approach taken by the Office for the annual closing 2019.

4.5 Retirement entry

126. The calculation of pensions refers to the most probable retirement entry. In order to provide relevant information, a sensitivity analysis of average retirement age should be made, in order to illustrate the effect of a change in the actual retirement age.

127. Recommendation:

We recommend calculating sensitivities based on different retirement entry scenarios.

4.6 Application of a web-based model for calculation of DBO

128. The ISRP has developed an updated actuarial model – Projection of Pension and Staff Costs ("ProPeSC"). The core calculations remain the same. However, there were some minor changes like adjusting the timing of benefit payments calculated from an annual to a monthly basis or using actual spouse dates of births for where they are available, instead of the assumption of age difference.

129. We asked the EPO to provide us with a sensitivity calculation of the effect of applying the new web-based model compared with applying the excel model as in previous years. This effect amounts to EUR 16m.

130. For our audit of the valuation of DBO, we extended our sample basis compared with prior years. Therefore, we concur with the approach of applying the web-based model on a constant basis.

4.7 Summary

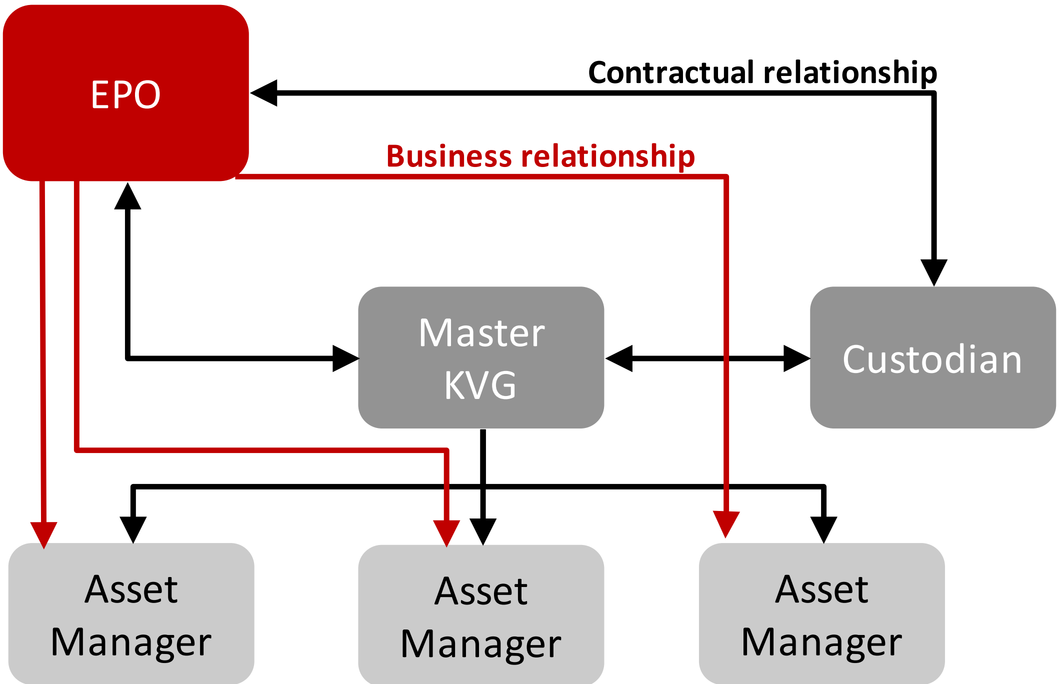
131. To summarise, we have no objections to the accounting treatment for post-employment and other long-term benefit obligations applied by the Office but highlight the level of estimate involved and the change in accounting principles.

5. EPOTIF

5.1 Background

132. The EPO's Budget and Finance Committee (BFC) approved the new EPO investment guidelines (CA/F 18/17 Rev. 1) in December 2017, with the aim of achieving higher returns in the long term and outsourcing the management of investments to external asset managers. The new EPO Treasury Investment Fund (EPOTIF) was launched on 1 July 2018.

133. The investment model is based on a Master-KVG model: the EPO outsources the administration of its investment portfolio to an external capital management company, the Master-Kapitalverwaltungsgesellschaft (short: Master-KVG). The Master-KVG is mandated to handle the interface with the asset managers and the custodian bank. Furthermore, the Master-KVG is responsible for risk management, compliance, regulatory and performance reporting.



134. The asset managers can make strategic investment decisions. The investments need to be in line with the investment guidelines of the EPO. There is no contractual relationship between the Office and the asset managers. However, the Office maintains the power to appoint, assess and dismiss the asset managers. Even though the investment decisions remain with the asset managers, the Master-KVG is legally responsible for the portfolio management process and can be held liable in case of any faults by the asset managers.

135. The Master-KVG is regulated by German law (Kapitalanlagegesetzbuch – KAGB) and subject to oversight by the German Federal Financial Supervisory Authority (BaFin).

5.2 Governance framework

136. For its investments, the EPO intends to implement the same level of control and reporting mechanism as set for the RFPSS, including but not limited to a supervising function, quarterly performance and risk reporting, a compliance function and regular audits.

137. For this reason, the EPO has implemented rules for a governance framework including – besides others – the following items:

138. Asset Class Limits and Financial Instruments

Asset Classes	Maximum percentage of the total portfolio
Equities	Up to 40%
Fixed Income	Up to 60%
Cash	Up to 10%
Commodities	Up to 5%
Real Estate	Up to 15%
Alternatives / Multi-Asset Investments	Up to 15%

139. The maximum risk exposure, defined as Value at Risk (1-year VaR at 95% level of confidence), must be limited to 20% of the total assets' value.

140. The selected company is Universal Investments GmbH (Master KVG), which is the largest market provider. They provide the EPO with online reporting on performance and risk, updating it on a daily basis.

141. The EPOTIF performance and risk reports are issued and submitted to BFC on a quarterly basis.

142. Compliance checks are performed on a daily basis by the Master-KVG. The execution of compliance checks by the Master KVG is regulated by the German Capital Investment Code (KAGB) and is subject to the supervision of the German Federal Financial Supervisory Authority (BaFin). Any breaches of limits imposed by the investment guidelines and corrective actions taken by asset managers are reported to the EPO within one day and to the BFC in the quarterly EPOTIF performance and risk report.

143. The set-up of risk limits is completed (maximum 20% of the portfolio value, at 95% confidence level). The review of risk limits will be performed by the Office and presented to the BFC for approval three years after the launch of the EPOTIF. Definition of the rules for the authorisation budget is completed. The budget for the EPOTIF was presented to and subsequently approved by the AC in December 2018.

144. Risk management is performed, and any breach of limits is reported to the EPO by Master-KVG on a daily basis. Master-KVG is legally obliged to establish and maintain a permanent risk controlling function, which is hierarchically and functionally independent of other operational areas. Any deviation from the Investment Guidelines will be reported to the EPO immediately and corrective actions will be agreed with asset managers. The implementation of corrective actions within the set time limit will be enforced by Master-KVG and followed up by the EPO until full completion. Any breach occurred in the period and corrective action taken will be reported to the BFC in the quarterly report.

145. In addition to the Master-KVG, an internal risk and compliance assurance function has been set up to monitor and control the operational risk management. This function is performed by the EPO's Internal Audit.

146. Monitoring, management and prevention of conflicts of interest is completed with the selection of the Master-KVG model. According to the contract and legal regulations of the German Capital Investment Code (KAGB), Master-KVG is required to take organisational and administrative measures to identify, prevent, resolve and monitor conflicts wherever these could harm the interests of the EPO.

Potential conflicts of interest were also subject to a review by external auditors (PPCmetrics).

147. Two audits were performed:

- External audit of all institutions involved in the EPOTIF set-up, including Master-KVG, custodian bank and asset managers, performed by PPC metrics. The results of the audit were reported to the BFC in October 2019.
- An audit by the EPO's Internal Audit on the implementation of the new treasury management strategy. Internal Audit's audit report has not yet been approved by the President of EPO.

148. The EPOTIF governance framework, covering internal policies regarding performance reporting, risk management, compliance control, escalation procedures and the oversight function, was completed in Q1 2019. The EPOTIF oversight regulations were finalised in September 2019.

149. No recommendation.

6. Leasing under IFRS 16

150. IFRS 16 replaces the requirements in IAS 17, and mainly contains changes in the accounting treatment for lessees. In general, for operating leases, an asset and a corresponding lease liability have to be recognised. The EPO applied IFRS 16 for the first time in its 2019 financial statements, using the modified retrospective approach (also used for IFRS 15).

151. The initial application of IFRS 16 at the EPO resulted in the recognition of additional right-of-use assets and additional lease liabilities in the statement of financial position as at 1 January 2019. The impact of the transition is summarised below:

Impact of IFRS 16 on statement of financial position as at 01.01.2019 (EUR '000)	Opening balance 01.01.2019
Right-of-use assets – Property, plant and equipment	34 920
Lease liabilities	34 920
Total equity	0

152. The EPO applies the practical expedients for low value assets and short-term leases.

153. We performed audit procedures regarding substantive testing of the leases under IFRS 16 identified by EPO and on the disclosures made in the 2019 financial statements regarding the consistency with relevant IFRS requirements.

154. No recommendation.

7. Reporting of subsequent events

155. From March 2020, the coronavirus epidemic has had a major negative impact on both the operations of the Office and the financial value of the assets. The main positions that are affected include the RFPSS assets, the EPO Treasury Investment Fund and the defined benefit liability. This event does not change the financial value as at 31 December 2019, and the long-term effect cannot be reliably estimated.

c) General comments on budget implementation

(i) Forecast income statement (IFRSs)

156. The IFRS plan figures as per CA/D 1/18 and CA/10/20 and the actual ones as per CA/60/20 are juxtaposed in Annex 3.1.

157. The 2019 operating loss of EUR 135m fell EUR 400m short of the forecast profit of EUR 265m. Income was EUR 17m higher than forecast (0.8%); expenses too were higher by EUR 417m (24%).

158. At EUR 1 349m, the financial result was EUR 1 351m higher than forecast. This was because finance revenue was EUR 1 227m higher and finance costs were EUR 436m lower than forecast.

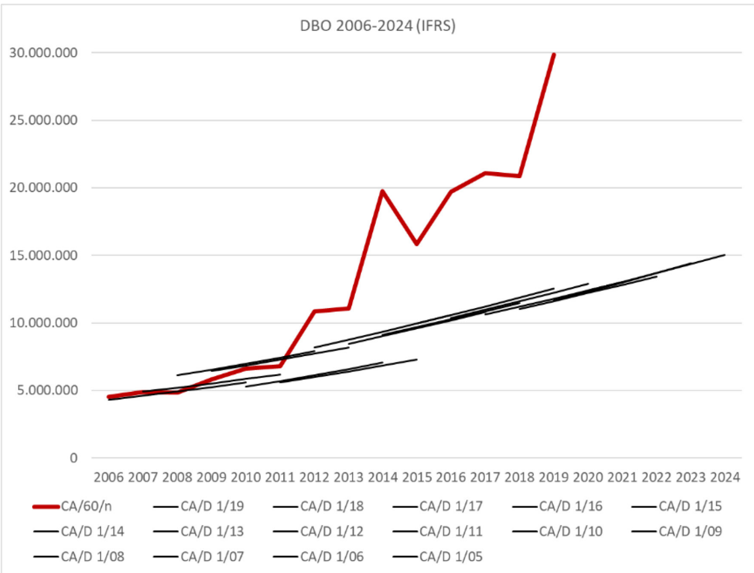
(ii) Forecast balance sheet figures

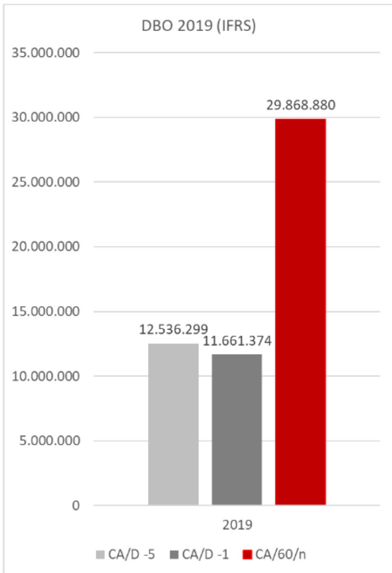
159. The IFRS plan figures as per CA/D 1/18 and CA/10/20 and the actual ones as per CA/60/20 are juxtaposed in Annex 3.2.

160. Assets were EUR 719m higher than forecast (5.5%), with non-current assets EUR 641m (5%) and current assets EUR 78m (38.2%) over plan. RFPSS net assets exceeded the forecast figure by EUR 547m (6%).

161. Liabilities were EUR 18 357m higher than forecast (140.3%). This was almost entirely because the defined benefit liability was higher than expected.

The enormous gap between the forecast defined benefit liability in CA/D 1/18 and the actual amount according to CA/60/20 can be illustrated as follows:





In a five-year forecast, the 2019 IFRS value of the defined benefit liability had been estimated at EUR 12 536m (CA/D 1/14), whereas, in a one-year forecast, it was put at the lower amount of EUR 11 661m (CA/D 1/18), even though its 2018 IFRS value was already EUR 20 841m.

162. Recommendation:

We suggest that, in future, the IFRS figure given for the defined benefit liability in the CA/D 1/n documents should be calculated such as to ensure that the results are far closer to the figure expected in the annual accounts.

(iii) Comparison of budget as adopted and as implemented

163. The basic figures (as per CA/10/20) for comparing the budget as adopted and as implemented are given in Annex 2.

164. In CA/D 1/18, the AC adopted an authorisation budget within the meaning of Article 25(1)(a) FinRegs totalling EUR 2 383m. The actual outturn was EUR 2 320m, which is 2.7% lower than forecast.

165. Income from patents (Chapters 50 to 54) was EUR 44m (2.3%) above budget, while other income (Chapters 55 to 58) was EUR 107m (32%) below budget. The shortfall was almost entirely attributable to financial income.

166. There were underspends in all operating expenditure chapters. The total underspend was EUR 203m. The breakdown of the underspends is as follows: staff EUR 44m, financial expenditure EUR 107m, general operating expenditure EUR 20m and property and equipment EUR 18m.

167. There was a budget surplus (Chapter 49) of EUR 364m. That was EUR 183m above the budgeted surplus of EUR 181m.

168. For the pension and social security schemes, income was EUR 3m (0.8%) above budget and expenditure was EUR 4m (1.4%) below budget.

(iv) Appropriation transfers

169. The appropriation transfers under Article 34 FinRegs are shown in Annex 2.4. The figures are taken from CA/10/20.

170. The only transfer under Article 34(1) FinRegs (transfers within a chapter) was a transfer of EUR 1m within Chapter 30 (Staff).

171. Transfers under Article 34(2) FinRegs (between chapters and not exceeding 20% of the amounts under the chapters concerned) came to a net total of EUR 4m.

172. There were no transfers under Article 34(3) FinRegs (requiring a decision by the BFC or the AC).

Our audit did not reveal any indications of a breach of Article 34(3) FinRegs.

D. INTERNAL CONTROL SYSTEM

a) General IT control (GITC) testing

173. General IT control (GITC) is necessary to form an audit opinion under full compliance with internationally accepted auditing standards (IAS).

174. We performed our IT audit procedures for the following IT systems: SAP FIPS, EPASYS (MADRAS) and Fee Capturing System (FCS).

FCS was replaced by SAP PSCD on 3 October 2019

175. Detailed information about findings and recommendations have been given to the Office separately.

(i) Access to programs and data

176. We audited

- general system security and password settings
- administrative rights and privileged access
- user management and access administration
- user review procedures

177. Recommendation:

In these areas, two recommendations were given to do reviews (SAP, MADRAS). At least one of them is already being implemented.

178. Regarding the finance part of the review procedures, all users with finance-related roles were reviewed.

179. Recommendations:

EPASYS(Madras): We recommend planning enough time and resources to review all users and assigned profiles in FY2020 and traceably document all parts of the review procedures performed.

SAP FIPS: We recommend traceably documenting the generation of initial user and role lists that are used as the basis for the actual user and authorisation reviews performed for HR and Finance. In addition, all manual adjustments and data processing need to be documented in a way that allows full transparency and reproducibility.

(ii) Change management

180. We audited

- change and release management process
- emergency changes

181. Recommendation:

In the area of emergency changes, two recommendations were given to do reviews.

(iii) Computer operations

182. We noted that for 21 financially relevant tables, table logging is not enabled. Compared with the prior year, the amount has reduced as a result of in-depth analysis, including of their usage in SAP FIPS and relevance to the EPO.

(iv) Program development

183. In FY2019 there was a data migration from FCS to SAP PSCD during the year. The SAP PSCD module was integrated into the existing SAP P01, or the P01 was enhanced with the PSCD module (PSCD = Public Sector Cash and Revenue Management).

184. The SAP PSCD went live on 3 October 2019. We reviewed provided documentation in order to understand the scope and procedures performed within the project. The audit focus was on the actual data migration itself. In addition, the corresponding CutOver Plan was reviewed.

185. We performed audit procedures in order to verify the completeness and accuracy of the data migrated by reviewing and retracing the migration files. Based on the performed data reconciliation no deviations were noted.

b) Governance of the RFPSS

(i) Internal control system

186. A sample of transactions was checked to find out whether the books and records match the original documents. All required signatures (front office and back office) are documented on the order forms and all supporting documents were properly kept.

All transactions were properly executed and documented in line with all regulations given.

187. Recommendation:

We recommend moving away from paper documentation to digital documentation. This would require a change in the regulations of the EPO, which explicitly state that there must be a signature on a form.

(ii) Daily compliance checks

188. We have audited all daily compliance checks for the year 2019 until 20 December, the last settlement day for 2019, in order to ensure that such checks were executed every day and signed by the person responsible (compliance officer or in the absence bookkeeping) and all breaches were included in the weekly and quarterly reports.

189. After 20 December 2019 the RFPSS was closed for the rest of the year.

190. The significant reallocation of the portfolio following the new ALM study (i.e. changes of benchmarks) created a number of passive breaches, which were all reported and corrected within the time frame given by the regulations.

191. Daily compliance checks are automated and reflect all limitations given by regulations. They are reviewed by the Chief Compliance Officer and exceptions, if any, are noted and followed up with the portfolio managers.

192. No recommendation.

(iii) Weekly/quarterly reports

193. We have reviewed the Funds Administrator's reports for the first three quarters of 2019 for accuracy, consistency and presentation. Unlike those in prior years, the report contains a summary which gives a clear overview of the development of the fund. The layout of charts and tables has been improved and supports the transparency of the reports. The individual sections and the summary are consistent and in line with the views of other investors and the published reports in the media.

194. Individual descriptions per asset class are produced by the respective portfolio managers and reviewed by the Funds Administrator. The measures are in line with common practice and sufficient detailed.

195. We checked the holding and performance numbers included in the Funds Administrator's report for the third quarter, 2019. The numbers in that report match the records of the fund. Since all numbers are double checked internally, there is little risk of mistake or misstatement.

196. No recommendation.

(iv) Risk management developments

197. We have reviewed the quarterly risk reports for the first three quarters, as well as the annual special report on operational risk and emergency planning dated 29 March 2019.

198. The quarterly risk reports cover market risk, liquidity risk, counterparty risk and stress scenarios. Market risk is monitored by absolute and relative VaR, using a 99% probability for each asset class using a standard software named BarraOne. VaR is usually close to the benchmarks and has increased slightly in the year 2019 due to the change in the strategic asset allocation. Most of the VaR is produced by equity investments including real estate. The risk reports do not cover currency risk, which is limited by a running currency overlay programme. That programme is reviewed in the course of updating the strategic asset allocation every three years.

199. The annual report on operational risk covers all risks of the organisation, the procedures and the systems in detail. The risk policy has been updated based on prior recommendations.

200. No recommendations.

(v) Implementation of the new asset allocation

201. The main change in the asset allocation was the reduction of the domestic bond portfolio from 20% to 16% and the increase of riskier asset classes, in particular equity. In addition, a number of benchmarks have been changed as well. VaR moved up from 4.37% (31 December 2018) to 4.89% (30 September 2019) which is close to the benchmark (4.8%). The implementation effective 1 July 2019 was well prepared and implemented.

202. No recommendations.

(vi) Records of interest and dividend receivables and consecutive payments received

203. We have selected samples and checked the correctness of the interest receivables calculated in the system.

204. No recommendations.

c) Co-operation with Internal Audit

205. Principal Directorate IAO informed us of its general annual audit programme, the one for the RFPSS and its medium-term audit plan, and co-ordinated its annual programmes with our own audit plans in order to avoid any duplication.

206. We received all audit reports. There was no information on the investigation of fraud.

207. Internal Audit audited the EPOTIF in April/May 2019. (See also CA/20/10, paragraph 148). The final report is dated 12 March 2020 and was submitted to us.

208. We welcome the fact that Internal Audit intends to undergo a full external quality audit in 2020.

E. OPERATIONS

a) Purchase-to-pay process

209. The goal of the audit was to perform a review of the whole purchasing process of the EPO and an analysis of the automated and manually performed steps in the process, as well as further analysis in respect of the manpower and time needed for execution of the corresponding manual steps, and benchmark with the best practice. Our audit was mainly performed from the perspective of efficiency.

Additionally, we also reviewed the supplier monitoring process and quality management system in relation to the purchasing process.

210. Although the Office has already digitalised certain process steps and has further plans to focus on this area, the procurement process in the audit period contained certain manual steps. For their execution a high number of manual approvals are required.

211. Recommendations:

We recommend the complete integration of the paper-based forms and approvals (incl. Form B, RaP) in electronic format within the system workflow, and the use of electronic signatures for all internal approvals.

We recommend reducing the number of approval steps in the process, including increasing the approval thresholds to a reasonable extent and setting reasonable deadlines.

We recommend reviewing the whole purchase-to-pay process in order to identify any double steps and approvals and considering accordingly the elimination of steps/approvals already provided for at earlier stages of the process.

212. Further efficiency gains that should be considered by the Office include standardisation of the procurement process as a whole, selection and implementation of the standard reporting options with the representative set of key performance indicators and effective preparation for the implementation of the new ERP system to make sure that all the necessary functionalities are activated there.

213. Also, a number of tools are used in the current process. Some of them are not interfaced to SAP or the new S/4Hana System. In addition, some tools, like the eTendering, are not consistently used by all departments.

214. Recommendation:

We recommended standardising the purchasing process, and reducing the number of the exceptions in the procedures to a reasonable level. The roles and responsibilities of the departments involved should also be reconsidered and clarified.

215. In order to have an understanding of the operations of the procurement function, a systematic tracking of critical data should be in place (KPIs). The introduction of category management by Procurement, and mapping of activities and clustering them, could be the basis for developing and implementing standard reports to track key information about process and cost efficiency (incl. average time and costs of end-to-end procurement process).

216. Recommendations:

We recommend developing a set of KIPs to track the efficiency and operations of the procurement process.

We recommend developing and implementing a formal supplier management system. This has to operate on a continuous basis, using a risk-based approach.

217. In terms of our benchmarking analysis of the duration of the manual steps in the purchasing process at the Office, it was identified that the Office has quite unique steps in the process, such as the existence of a Form B and a RaP, which could not be benchmarked with similar organisations. Therefore, it was not possible to perform a reliable and representative benchmarking analysis in respect of the manpower and time needed for execution of the manual steps within the purchasing process.

218. The Office has been supplied with a detailed report of the findings and further recommendations.

b) HR – Follow-up audit

219. As part of the follow-up review to the HR audit performed in 2017, the review of access rights and critical authorisations in the SAP system were reviewed. The results were compared with those identified during the audit 2017.

The following steps were performed: follow-up review analysis in respect of the maintenance of general and payroll-relevant master data (Can-Do), critical maintenance authorisations (Can-Do), critical maintenance authorisations for changes in payroll-relevant master data (Did-Do), and display authorisations (Can-Do), taking into account relevant changes in the process. Additionally, an analysis of the access rights to the electronic personal file was performed.

220. As a result, it was identified, in general, that the Office has taken a number of measures in response to the findings identified during the 2017 audit, including limitation of rights of the personnel in the area of comprehensive maintenance of the master data in the payroll process and comprehensive display of all master data that are very critical.

221. However, it was also identified that certain critical combinations and authorisations, such as critical authorisations in respect of the comprehensive maintenance and display of payroll-relevant master data and segregation of duties in the SAP system in respect of some critical combinations are to be further reviewed and analysed by the Office. It should be considered whether the existing rights in these areas should be assigned on a "need-to-know" basis. We agree with the Office that the relevant recommendation from CA/20/18 has the status "ongoing".

222. Recommendation:

We recommend activating the technical four-eyes principle within SAP for critical payroll-relevant information types.

c) Analysis of implementation of GDPR requirements in the HR area

223. In terms of the audit of the data protection requirements in the HR area, the analysis was performed in respect of the implementation of the data protection principles and measures in the HR area.

224. The Office is not subject to the General Data Privacy Regulation (GDPR), as it does not fall under the EU regulations. The Office developed and introduced the internal "Guidelines for the protection of personal data" with the latest revision in 2014. These guidelines are very close to the requirements of the GDPR regulation and Regulation (EU) 2018/1725.

225. As a result of the audit, it was identified that the Office has implemented the guidelines on the data protection topic, prescribing the basic principles for handling of personal data. At the same time certain measures intended to ensure that the corresponding principles are followed are to be further enhanced and developed by the Office.

226. One of the most critical measures is the retention and deletion periods in respect of handling with the personal data that are to be defined and documented to ensure that the key requirements in respect of the data quality and storage as prescribed by the abovementioned guidelines are met.

227. Recommendations:

We recommend developing a deletion concept defining the applicable order of data deletion. It should contain the order and regulations on the deletion process for the different types of personal data to make sure that the requirements of Article 4(1)(e) of the Data Protection Guidelines are met.

We recommend reviewing and updating the data protection register. The necessary information, such as a detailed description of the personal data handled, measures in place to ensure the personal data is handled properly and deletion terms, should be provided in the register.

We recommend strengthening the operational support for the controllers for the processing of the entries in the data protection register. It should be ensured that the data protection register is up to date and that it contains all the relevant data. This would additionally raise awareness of the responsibilities of controllers in terms of the data protection topic.

228. Another point that requires attention is the introduction of the data protection risk assessment to be implemented and performed for the high-risk data processing activities concerned.

229. Recommendation:

We recommend performing and documenting the data protection impact assessment for certain high-risk data processing activities.

d) IT

(i) New organisational structure BIT

230. Former IT departments located in DG 1 (Automation Support) and DG 4 (Information Technology) have been merged to form Business Information Technology (BIT) as a new organisational structure, which aims at providing an organisation structure with lower complexity and fewer hierarchical layers resulting in clearer responsibility. The new organisation is divided between the CTO (PD 4.5) and the CIO (PD 4.6). The CIO is in charge of implementing a sustainable strategy for information technology and related operations and services and acts as a custodian for information security elements. The CTO has the strategic lead for the EPO's technology architecture and designs and drives the strategic technological vision for the EPO as a whole, including the co-operation with national patent offices.

231. The aim of our audit was to evaluate how the tasks and responsibilities of the former organisational structure were transformed into BIT (CTO and CIO directorates). Additionally, we performed an analysis of the tasks and responsibilities within BIT and assessed whether any redundant activities/responsibilities have been defined. We also evaluated whether any "shared" responsibility exists.

232. No recommendation.

(ii) Programme organisation and management of Goal 2 of the Strategic Plan 2023

233. The strategic goals and their corresponding key initiatives are translated into a concrete portfolio consisting of

- Programmes: a collection of projects addressing a similar area. Programmes are manged under the governance of SP23 and are monitored by the MAC.
- Projects: they are the main focus of the methodology, and amount to temporary endeavours to create a unique product, service or result.
- Tracked activities: smaller activities which follow a reduced governance structure and include less formalities than projects.

234. For all five goals of the SP2023, 32 key initiatives were defined. These key initiatives were followed by 38 programmes, 159 (including 8 standalone) projects and 92 (including 13 standalone) tracked activities by end of March 2020.

235. Goal 2 of the Strategic Plan 2023 is defined as "Simplify and modernise IT systems". With eight key initiatives, Goal 2 accounts for the most key initiatives of all the goals. These initiatives consist of seven programmes and 52 (including one standalone) projects.

236. We performed a review of all programmes, projects and tracked activities and identified that all programme managers and the majority of project managers had been nominated and approved by end of March 2020. We noted that Goal 2 is the most technology-related goal. Nevertheless, IT-related topics need to be covered and addressed in other goals too.

237. Recommendation:

We recommend a clear definition for overlapping topics covered by different programmes in order to avoid redundancies. A regular reflection on programme managers should be implemented on operational level.

238. Budget use is tracked and reported at both programme and project level, and this also includes an insight into the nature of the expenses incurred. The budget monitoring includes only external costs.

239. Recommendation:

We recommend that internal costs should also be planned within project budgets and should be monitored to gain full transparency. The overall governance and programme monitoring should be adopted accordingly.

240. It can be determined that the KPIs are suitable for adequately monitoring the targets of Goal 2. They are suitable for measuring progress towards the objectives.

241. The project manager defines and captures the project scope, objectives, costs, benefits, risks, stakeholders, timeline and tolerances in a detailed project brief, which is submitted to the goal board for approval. After approval of the project brief, the project team is put together and the project is executed.

242. Recommendation:

We recommend that project managers should be assigned at the earliest possible stage in programme management for all relevant projects to ensure that there are no delays in project delivery due to a lack of responsibilities.

243. We noted that there is no clear definition of strategic projects, tracked activities and operational tasks.

244. Recommendation:

We recommend implementing a clear definition in order to separate projects and tracked activities which are managed under the Strategic Plan from operational tasks which will be managed by each directorate itself.

(iii) Data centre

245. In the context of the EPO's long-term IT security strategy it was decided in November 2016 to outsource the EPO's main data centre in The Hague to a Tier IV campus which offers the highest level of information security based on leading practices. Additionally, it was planned to outsource the recovery site currently located in the Isar building in Munich to another data centre provider in the Munich area. The project "New Data Centres" has been transferred to a new project running under SP2023.

246. The scope, the status and the budget of the project have been audited.

247. The project is currently still in the first of three phases. The lease and PPI agreements with the State of Luxembourg have been signed, and the development work in the data centre facilities and the WAN procurement have been completed on time.

248. In the latest draft business case (version 4), as at November 2018 total project costs of approximately EUR 29.5m (internal costs EUR 4.3m and external costs EUR 25.2m) had been estimated. By year's end 2019, EUR 10.6m had been spent. The project budget 2020-2023 envisages external costs of EUR 9.5m and about 5 000 man/days of internal costs.

249. The reduction in the budget is a result of change in scope, as the data centre recovery site is no longer included. As the scope and approach of the data recovery site has changed significantly, a more detailed budget comparison is not possible.

(iv) Storage/archiving

250. The goal of the audit was a review of the Office's general archiving and document management strategy. Additionally, an analysis of the currently stored paper-based and electronically archived document types, with a focus on the patent granting procedure, was be prepared. In addition, an evaluation of the current status of the digitisation of the patent granting procedure (successes, planned actions and projects) was carried out.

251. Approx. 98% of filings within the PGP process are done via Online Filing and processed within the application "Phoenix". Paper-based filings are digitalised and electronically stored in Phoenix. Even though all files are stored electronically, the review and processing process is basically paper-based. As a result, files are printed several times during the PGP process before it is closed.

252. Within the corporate area, several document management systems are in place.

253. A general document management strategy does not exist for either the corporate or PGP area. Document management strategy is currently defined by each directorate separately, if needed. An overview what kind of documents exist in the EPO and where they are stored is not fully available for the whole organisation.

254. Recommendations:

We recommend defining an organisation-wide document management strategy to ensure a holistic approach for managing (both paper-based and electronic) documents.

We recommend performing a clear analysis of which documents exist within the Office and what requirements for archiving and storage need to be addressed (e.g. retention time). Based on this analysis, the digitalisation strategy needs to be defined.

(v) Follow-up on eDossier project

255. The goals of the audit included the review of the project closure documentation and the evaluation of the decision to close the project prematurely. Additionally, it was analysed how the planned budget vs. the spent budget and the functional services corresponded, and a review and an analysis of achievements and missing functionalities at project closure were carried out.

256. A project end report was drawn up for the eDossier programme and eDossier R5 and for eDossier for search. It was used to review how the project performed against the original approved version of the project initiation document and capture the factors which influenced the project. As part of the closure activities, a list of "lessons learned" was compiled. A document has been produced which presents the following main findings of the eDossier project:

- Non-mainstream technology choices are critical
- Tenders must generate a significant number of bids
- Actively manage project risk
- Total costs matter
- Keep the focus on strategic projects
- Keep control of external suppliers

257. The lessons learned document was presented to the President and all directors, managers and staff within BIT during 2019. Even the lessons learned contain some very generic topics. We noted that it had not been communicated to other areas / directorates within the EPO outside of BIT.

258. Recommendation:

We recommend that the lessons learned should be presented to other areas within the EPO and especially to all programme/project managers within the SP2023.

259. Total expenditure was initially estimated at EUR 22m. According to the two project end reports, the total costs of the project amounted EUR 32m.

260. Recommendation:

We recommend that projects should only be initiated by project managers after projects have been greenlit and all necessary documents have been approved.

e) Building Investment Programme

261. At the 162nd meeting of the Administrative Council the Office presented its preferred scenarios for the Building Investment Program (CA/69/19).

262. The Council unanimously endorsed the proposal to further develop the scenarios recommended in CA/69/19, approved the proposed sequence of projects and noted the estimated project costs and timelines calculated in the feasibility studies. (CA/107/19)

263. With this in mind, the main focus of our audit was on project management, personnel resources, IT project management systems and sustainability.

(i) Project management

264. A programme manager has been appointed to manage the building investment programme. The programme manager is supported by internal and external programme participants. The internal project participants are responsible for project conception, controlling and monitoring, while the operational work (e.g. planning or construction work) is to be carried out by external companies as far as possible.

265. A "Directorate 4.4.0 Planning and Construction" has been set up to manage the Building Investment Program.

266. When further developing the project management fpr the Building Investment Program, we suggest

- defining in detail the responsibilities and tasks of the internal and external project participants
- planning, modelling and implementing an overall project construction process, which should be used for each project as guidance
- transferring the lessons learned from the New Main Project to the Building Investment Program and to take them into account in the uniform cross-project construction process

267. Recommendation:

We recommend defining the decision-making powers according to risk and financial impact as soon as possible

(ii) Personnel resources

268. Based on the current planning, 32 internal project participants are planned to work directly for the Building Investment Program. In total, 17 employees are already working for it, but 15 employment vacancies must be filled by January 2024, and the first one must be filled in 2020. The additional resources required will be mainly covered by staff, which will have to be hired.

269. Recommendations:

We recommend drawing up detailed job descriptions for each position (project manager, civil and MEP engineers, civil and MEP supervisors) as soon as possible.

We recommend the development of a joint recruitment plan to fill the vacant positions and the development of an alternative or interim plan for filling possible job vacancies with external third parties.

(iii) IT / Project Management Systems

270. At the current status, the first projects have just started by selecting a project manager and a planner (January 2020). For this reason, no IT/project management system is actively used to support the project management at present. It is mainly concerned with planning how project management can best be supported by IT/project management system.

271. Recommendations:

We recommend defining a standardised reporting process for the Building Investment Program in general, as well as for the individual projects.

We recommend defining a standardised template for all projects regarding cost/time planning and controlling based on lessons learned or best practice solutions, which are mandatory to use.

(iv) Sustainability aspects

272. The Building Investment Program contributes to goals and key initiatives of the EPO's "Strategic Plan 2023". A significant part of these goals and key initiatives include sustainability aspects.

273. A consultancy company has been commissioned to propose different scenarios within the range between sustainability and comfort in the buildings. Its report is expected after the closing date for this audit report.

274. Another company, working as consultancy and architecture office, has been awarded a contract to advise the EPO on how to create a new working environment. Its report is expected after the closing date for this audit report.

275. Recommendations:

As a basis for the individual approval of each project, we recommend the completion of a sustainability concept and the formulation of concrete (qualitative and quantitative) sustainability goals for each individual project.

As a basis for the individual approval of each project, we recommend the completion of a workplace concept adapted to the key functions in the EPO which can be applied to all projects (common approach).

III. STATUS OF PREVIOUS YEARS' FINDINGS

276. The left two columns give the recommendation reference and title, the third is the EPO implementation report, and the fourth and last reflects the auditors' comment(s).

277. With regard to the auditors' comments:

- "No further comments" means the auditors do not expect any further explanations from the Office, although they could, in future audits, revisit the issues considered.
- "Recommendation closed" means the auditors consider the Office's response has resolved the issue raised.

A. OFFICE'S FOLLOW-UP REPORT ON CA/20/19 (STATUS 31 DECEMBER 2019) AND AUDITORS' RESPONSES

Reference	Auditors' recommendation	Implementation status as at 31 December 2019	Auditors' comments
100	We recommend that the Office continue to update the assessment for each annual closing, based on the latest experience that is gained each year.	Closed. This assumption was updated in the latest actuarial funding valuation run in 2019; see point 45 of CA/56/19: "For this valuation, the weighted average has been changed from 50/50 to 75/25". This assumption will also be reflected in the IFRS financial statements (CA/60/20).	Closed.

Reference	Auditors' recommendation	Implementation status as at 31 December 2019	Auditors' comments
128	We recommend calculating sensitivities based on different retirement entry scenarios for 2019.	Closed. This assumption was updated in the latest actuarial funding valuation run in 2019; see point 49 of CA/56/19: "In view of the observed increase of staff leaving before age 60, the Group decided to adopt an explicit assumption reflecting retirements before age 60."	Closed.
152	A regular review of the EPOTIF governance framework and the internal control system relating to the EPOTIF defined therein should be undertaken.	Closed. The EPOTIF governance framework was approved by the President in March 2019 and presented to the BFC in May 2019. The EPOTIF oversight regulations were issued by the CFO in September 2019. Both documents will be reviewed on an annual basis.	Closed.
183	Active Directory and SAP FIPS password settings should either be aligned with the password policy or the password policy should be reasonably updated.	Closed. The documented standard on passwords has been updated to reflect the stronger password requirement for FIPS.	Closed.
186	A certain remaining functionality for team managers to perform authorisation changes should be revoked.	Closed. The revocation of these rights has been implemented in production in the April release of MADRAS 5.80.	Closed.

Reference	Auditors' recommendation	Implementation status as at 31 December 2019	Auditors' comments
187	A systematic review of all authorisation changes (including newly created users) should be performed on a regular basis.	Closed. A new process has been implemented as of 1 January 2019.	Ongoing. For approximately 1/3 (out of 722) profile assignments in EPASYS (Madras) no written evidence (i.e. JIRA ticket) is available. Further an annual review of users and assigned profiles has initially been established in FY2019. The review procedures were initiated in October 2019. The review procedures performed did not cover all users and roles, since the focus was on teams' part of the latest re-organisation. Due to time and resource constraints imposed by the EPO a subsequent review of the remaining users and profiles was not manageable.
188	A special review of users assigned a certain profile should be performed and the appropriateness of these assignments should be evaluated.	Closed. Review is completed and all inappropriate assignments have been corrected.	Closed.
190	A regular and systematic review by business of users and authorisations covering all SAP FIPS roles and users should be implemented.	Ongoing. Data extractions and review cycles from the business have been implemented. In parallel, the design of a platform for SAP user role assignments and reports has been started. Full review by Finance and HR not yet completed.	Ongoing.
193	The number of users allowed to create transportable change orders and release change orders should be reviewed (and possibly reduced).	Closed. The number of users allowed to create and release these changes has been reduced to the minimum. Unnecessary assignments have been revoked.	Closed.

Reference	Auditors' recommendation	Implementation status as at 31 December 2019	Auditors' comments
195	The reasons for system openings should be reviewed.	Closed. A review has been conducted, highlighting that a consistent set-up of all environments is required to reduce the number of system openings. Until addressed by S/4HANA implementation, the number of system openings will be kept to the necessary minimum.	Ongoing. The number of system openings has decreased from 60 in FY2018 to 36 in FY2019. Nevertheless, for most of the system openings the parameter CCCORACTIV was set to "blank", which results in a lack of audit trail (although the process description has been updated to explicitly state that during system openings the parameter CCCORACTIV has to be set to "1").
198	The specific relevance of the financially relevant tables (according to SAP note 112 388) for the EPO should be reviewed.	Closed. Review has been completed.	Closed.
199	It should be analysed whether additional financially relevant custom tables exist that should also be logged.	Closed. The review has been completed and required changes implemented.	Closed.
210	We recommend issuing a mission statement for the compliance and risk assurance officer. In our experience it is common for the compliance and risk assurance officer to not only monitor the activities but also assess the quality of compliance management and risk management in comparison with best practice and give recommendations for improvement. That should be part of the task of the compliance and risk assurance officer of the RFPSS.	Closed. Implemented.	No further comments.

Reference	Auditors' recommendation	Implementation status as at 31 December 2019	Auditors' comments
220	We recommend considering introducing regular analysis and monitoring of backlog ageing as one of the key KPIs for the Office to prevent an increase in old backlog files in the future.	Closed. EPO BSC timeliness KPIs are under review. The ageing of the examination stock is monitored down to directorate level through the monthly "Age distribution of stocks" report and the old backlog files situation is monitored down to individual level through the weekly "old examination files" report.	Closed.
229	We recommend reconsidering the criteria and processes used in the CASE process to ensure that the quality assessment performed by the examiners corresponds to the defined quality, proper targets are set and the results of the quality assessment contribute to the improvement of the quality of grants.	Closed Proposed actions include: Creating a common definition of quality that will be provided as part of the Commitment to Quality Programme. Monitors to assess the effectiveness of the capture of EPO IP and to leverage opportunities to improve product quality will be provided in the CASE tool. The process for quality assessment within the context of CASE and enhancing collaboration will build on the outcome of the CQI project within the Commitment to Quality Programme.	Ongoing. CASE has been changed to support the identification of the training needs of examiners and is not used for reporting purposes. Additionally, further steps in respect of creation of a common definition of quality and quality assessment are expected to be done within the Commitment to Quality Programme.
248	Providing more transparency in the planning and management of projects within IM is recommended. Stringent project management and follow-up should be implemented.	Closed. The new governance is in place and active with the implementation of the SP2023	Ongoing. Project governance of the SP2023 is only relevant for projects running under SP2023. Projects within BIT not running under SP2023 do not follow the governance model. A governance model of their own has not been defined yet.

Reference	Auditors' recommendation	Implementation status as at 31 December 2019	Auditors' comments
249	For each project a clear product description, a clear business case and related KPIs have to be defined. Project reporting and presentations have to follow comprehensible rules and should be complete.	Closed. The new project process and governance includes the requested descriptions. Benefits realisation tracking is associated with KPIs on the corporate balanced scorecard.	Ongoing. Project process and governance is only defined for projects running under SP2023. For BIT-only projects project governance still needs to be defined.
262	The data protection register needs to be updated and to be completed. The relevant fields must be made mandatory to ensure that all relevant information is available.	Closed. The missing fields of the logs of the online data protection register have been completed. In addition, the online form for registration and explanatory notes have also been entirely revised.	Closed.
264	We recommend including IM much more in the GDPR evaluation to ensure that technical and organisational measures are addressed adequately. Additionally, technical solutions need to be evaluated.	Closed. A default delegate from BIT has been added to the DPO team and attends the weekly DPO meetings.	Closed.
270	The risk statements in the risk register should be revised. For each risk, the origin of the risk must be separated from the actual risk.	Closed. The risk register has been fully revised and all risk statements reviewed and modified where required.	Closed.

Reference	Auditors' recommendation	Implementation status as at 31 December 2019	Auditors' comments
277	For the continuing demolition process, we recommend initiating a detailed asbestos investigation soon, in order to prevent further delays.	Closed. Additional asbestos investigation was launched through a variation request (VR278) in December 2018 and the results were presented to the EPO early February 2019. Based on this investigation, a new variation was presented to the EPO to have this additional asbestos removed (VR287). All known asbestos sources will be removed from the building by the end of this year (2019).	Closed.
282	Technical system settings should be checked regularly in the New Main in The Hague in order to adapt them to the requirements of a new building. Energy consumption, especially heating and cooling costs, should be monitored in the future.	Closed. The monitoring and adaptation of technical systems is an ongoing process handled by relevant PD4.4 departments.	Closed.

B. OFFICE'S FOLLOW-UP REPORT ON CA/20/18 (STATUS 31 DECEMBER 2019) AND AUDITORS' RESPONSES

Reference	Auditors' recommendation	Implementation status as at 31 December2019	Auditors' comments
196	We recommend that the Office reduce the number of users with access rights they do not strictly need.	Ongoing. Significant limitations for write access to salary relevant records have been implemented. Solely users who are accountable for salary-relevant changes are allocated the relevant roles. The allocation of read access requires a deeper analysis, which is currently ongoing.	Ongoing Certain progress has been achieved in respect of decreasing the number of users having certain access rights. However, further steps are expected to be executed, in particular in respect of read access rights.
197	We recommend that the Office installs detection controls in instances where segregation of duties conflicts cannot be avoided.	Ongoing. Request for implementation is being analysed in BIT.	Ongoing.
218	We recommend that the Office implement a contract management system to cover all contracts. In SAP, all invoices relating to contracts should be linked to the relevant contract.	Ongoing. As a result of the Finance 360 preparation, the need for an ICM has been revised and reprioritised. It is being assessed as a structured activity targeting a start in 2020.	Ongoing.
237	We recommend drawing up an action plan during data infringement, describing processes to ensure a quick and efficient response to the breach	Pending. This matter will be addressed through the revision of the data protection legal framework envisaged in the context of the implementation of the SP2023.	Ongoing.
238	We recommend that requests for data transmission within the EPO be approved and stored by a competent authority defined in the data protection guidelines.	Pending. This matter will be addressed through the revision of the data protection legal framework envisaged in the context of the implementation of the SP2023.	Ongoing.

C. OFFICE'S FOLLOW-UP REPORT ON CA/20/17 (STATUS 31 DECEMBER 2019) AND AUDITORS' RESPONSES

Reference	Auditors' recommendation	Implementation status as at 31 December2019	Auditors' comments
228c	We recommend that risks should be registered and managed by using one tool to avoid double work and to ensure a complete overview.	Closed. A single risk register has been implemented which will also include the risks related to security vulnerabilities.	Closed.
228d	We recommend that a systematic approach should be implemented by the Organisation-wide risk management to establish a direct reporting line from IM risk management and to ensure that IM is informed about business risks in a timely manner.	Closed. The risk management process within BIT was implemented at the end of 2019. PD CGS plans to have corporate risk management in place by Q4 2020.	No further comments.
292	The performance measurement system should allow for an improvement in the provision and conditions of training and provide information regarding the impact of the Academy's work and evaluation. Furthermore, the Academy should consider developing a set of performance objectives and indicators that would reflect its ability to reach its strategic goals.	Ongoing. In the context of the implementation of the SP2023, a set of KPIs with annual targets is being defined for the Academy and will be applied as of 2020.	Ongoing.

D. OFFICE'S FOLLOW-UP REPORT ON CA/20/15 (STATUS 31 DECEMBER 2019) AND AUDITORS' RESPONSES

Reference	Auditors' recommendation	Implementation status as at 31 December 2019	Auditors' comments
II.E.3.2	We recommend making values visible in SAP or creating one central list with all sub-delegations for purchasing approvals, including the corresponding issues, in order to make the process more efficient.	Closed. The signatory rules for purchase approvals which were introduced in 2016 are continuously updated manually on the Central Procurement intranet pages. The fully automated solution in SAP will be part of the Finance 360 project.	Closed.
II.E.3.2	We recommend the creation of a supplier evaluation system in order to evaluate suppliers after the order has been placed.	Closed Supplier monitoring is being performed by buyers as part the category management approach for selected suppliers.	Ongoing. Supplier Monitoring System has not been deployed fully, although the concept and Category Management approach were discussed and considered for selected suppliers.
II.E.3.3	The Central Procurement strategic roadmap should be enriched with a market and supplier analysis and in-depth procurement category plans.	Closed. Category management has been deployed and is part of buyer's objectives for 2020. Additionally, several mini-projects are being implemented as part of the CP Health Check initiatives.	Closed.

IV. SUMMARY AND PRIORITY OF OUR RECOMMENDATIONS

278. We list below our main recommendations in this report, together with our assessment of relative priorities on a three-point scale.

1 = top priority; immediate action required

2 = medium priority; to be resolved within three years

3 = low priority; long-term action required

Point	Recommendation	Priority	Office comments
	Accounting		
127	We recommend calculating sensitivities based on different retirement entry scenarios.	2	Agreed. The Office will introduce sensitivities increasing the probabilities for retiring at the earlier ages (e.g. from 60 to 63) and decreasing the probabilities for later ages (e.g. from 65 to 68) as well as an alternative scenario to reverse the pattern described above.
162	We suggest that, in future, the IFRS figure given for the defined benefit liability in the CA/D 1/n documents should be calculated such as to ensure that the results are far closer to the figure expected in the annual accounts.	2	Agreed. The Office will consider adjusting the discount rate for planning purposes so that it is closer to the economic reality and consistent with the Base 2 scenario of the Financial Study, which has been retained as the reference scenario.

179	EPASYS(Madras): We recommend planning enough time and resources to review all users and assigned profiles in FY2020 and traceably document all parts of the review procedures performed.	2	Agreed. BIT will adjust the procedure to record the required audit trails.
179	SAP FIPS: We recommend traceably documenting the generation of initial user and role lists that are used as the basis for the actual user and authorisation reviews performed for HR and Finance. In addition, all manual adjustments and data processing need to be documented in a way that allows full transparency and reproducibility.	2	Agreed. BIT will adjust the procedure to record the required audit trails.
181	Reviews in the area of emergency cases (change management)	2	Agreed. The number of system openings in SAP will be further reduced.
	RFPSS		
187	We recommend moving away from paper documentation to digital documentation. This would require a change in the regulations of the EPO, which explicitly state that there must be a signature on a form.	2	Agreed.

	Purchase-to-pay process		
211	We recommend the complete integration of the paper-based forms and approvals (incl. Form B, RaP) in electronic format within the system workflow, and the use of electronic signatures for all internal approvals.	2	Agreed.
211	We recommend reducing the number of approval steps in the process, including increasing the approval thresholds to a reasonable extent and setting reasonable deadlines.	2	Agreed.
211	We recommend reviewing the whole purchase-to-pay process in order to identify any double steps and approvals and considering accordingly the elimination of steps/approvals already provided for at earlier stages of the process.	2	Agreed.
214	We recommended standardising the purchasing process, and reducing the number of the exceptions in the procedures to a reasonable level. The roles and responsibilities of the departments involved should also be reconsidered and clarified.	1	Agreed.

216	We recommend developing a set of KIPs to track the efficiency and operations of the procurement process.	2	Agreed.
216	We recommend developing and implementing a formal supplier management system. This has to operate on a continuous basis using a risk-based approach.	2	Agreed.
	HR		
222	For critical payroll-relevant information types, the technical four-eyes principle within SAP should be activated.	2	Agreed. An HR/BIT working group has been put in place to assess the feasibility and technical implications of such a change.
227	We recommend developing a deletion concept defining the applicable order of data deletion. It should contain the order and regulations on the deletion process for the different types of personal data to make sure that the requirements of the Article 4(1)(e) of the Data Protection Guidelines are met.	1	Agreed. A data retention policy will be defined by the EPO and will cover the policies for storage and deletion of the EPO documentation.

227	We recommended reviewing and updating the data protection register. The necessary information, such as a detailed description of the personal data handled, measures in place to ensure the personal data is handled properly and deletion terms, should be provided in the register.	1	Agreed. The recommendation will be tackled during the DPO-tracked activity on modernisation and improvement of the EPO DP framework, including taking a full inventory of the processing operations and recording the new ones.
227	We recommended strengthening the operational support for the controllers for the processing of the entries in the data protection register.	2	Agreed. The creation of a network of data protection co-ordinators (DPCs) within the EPO will be tackled during the DPO-tracked activity on modernisation and improvement of the EPO DP framework.
229	We recommended performing and documenting the data protection impact assessment for certain high-risk data processing activities.	2	Agreed. The Office will perform the data protection impact assessment where applicable to the processing operations in question.
	IT		
237	For overlapping topics which are covered by different programmes, a clear structure needs to be defined by the CGS to avoid redundancies. A regular reflection on programme managers should be implemented on operational level.	2	Implemented. A dependency matrix, sharing of the project documentation and regular meetings with additional alignments have been introduced.

239	Internal costs should also be planned within project budgets and should be monitored to gain full transparency. The overall governance and programme monitoring should be adopted accordingly.	2	Agreed. The planned man days identified in the project briefs will be evaluated financially. Their monitoring will take place in close co-operation with the project managers within the framework of the Corporate Governance.
242	Project managers need to be assigned at the earliest possible stage in programme management for all relevant projects to ensure that there are no delays in project delivery due to a lack of responsibilities.	2	Implemented. Project managers are assigned according to the planning of the programmes. The internal recruitment of project managers is conducted in waves for all projects according to the planning of the SP2023.
244	A clear definition should be implemented to define projects and tracked activities which are managed under the Strategic Plan and operational tasks which will be managed by each directorate itself.	2	Implemented. The applied SP2023 implementation governance and the project management methodology allows for clear definition of the programmes, projects and tracked activities.
254	We recommend defining an organisation-wide document management strategy to ensure a holistic approach for managing (both paper-based and electronic) documents.	2	Implemented. Within the Digital Administration Programme, a project has been developed to define the Office-wide strategy for managing administrative documents. A similar project has been set up in the PGP programme for PGP related documents.

254	We recommend performing a clear analysis of which documents exist within the Office and what requirements for archiving and storage need to be addressed (e.g. retention time). Based on this analysis, the digitalisation strategy needs to be defined.	2	Agreed. The recommendation will be addressed within the Document and Knowledge Management Project.
258	The lessons learned should be presented to other areas within EPO and especially to all programme/project managers within the SP2023.	2	Agreed. The CGS in co-operation with BIT will include lessons learned in onboarding sessions for new project managers of all goals.
260	Projects should only be initiated by project managers after they have been greenlit and all necessary documents have been approved.	2	Implemented. Under the new implementation governance, projects are initiated after goal-board approval. Projects started before the launch of the SP2023 have been on-boarded.
	Building investment programme		
267	We recommend defining the decision-making powers according to risk and financial impact as soon as possible.	1	Agreed.

269	We recommend drawing up detailed job descriptions for each position (project manager, civil and MEP engineers, civil and MEP supervisors) as soon as possible.	1	Agreed.
269	We recommend the development of a joint recruitment plan to fill the vacant positions and the development of an alternative or interim plan for filling possible job vacancies with external third parties.	1	Agreed.
271	We recommend defining a standardised reporting process for the Building Investment Program in general, as well as for the individual projects	2	Agreed.
271	We recommend defining a standardised template for all projects regarding cost/time planning and controlling based on lessons learned or best practice solutions use of which is mandatory.	2	Agreed.

275	As a basis for the individual approval of each project, we recommend the completion of a sustainability concept and the formulation of concrete (qualitative and quantitative) sustainability goals for each individual project.	2	Agreed.
275	As a basis for the individual approval of each project, we recommend the completion of a workplace concept adapted to the key functions in the EPO which can be applied to all projects (common approach).	2	Agreed.

Munich, 15 April 2020

Board of Auditors

H. Schuh O. Hollum F. Angermann

V. RECOMMENDATION FOR PUBLICATION

279. This report makes particular reference to:

- CA/10/20 – Accounts for the 2019 accounting period – Budget implementation statement
- CA/60/20 – Accounts for the 2019 accounting period – Financial statements

Unlike CA/60/20, CA/10/20 is not intended for publication.

We consider that our report can be published.

VI. ANNEXES

280. The figures shown in the annexes have been rounded to the nearest thousand euros and so may differ from those given in the source documents.

ANNEX 1 YEAR-ON-YEAR COMPARISON, BALANCE SHEET AND INCOME AND EXPENDITURE ACCOUNT

ANNEX 1.1 Income statement

	2019	2018	2017	2016
Revenue				
Revenue from patent and procedural fees	1 991 003	1 935 703	1 859 900	1 812 892
Other revenue	11 009	68 736	72 823	75 593
Other operating income	20 139	10 689	6 665	8 101
Work performed and capitalised	463	3 047	2 280	2 270
Employee benefit expenses	(1 859 911)	(1 907 840)	(1 879 485)	(1 647 830)
Depreciation and amortisation expenses	(58 772)	(63 060)	(46 353)	(47 247)
Other operating expenses	(239 077)	(252 554)	(222 805)	(213 220)
Collective reward authorised in 2012				
OPERATING RESULT	**(135 146)**	**(205 279)**	**(206 975)**	**(9 441)**
Finance revenue	1 784 557	21 104	695 845	563 345
Finance costs	(436 024)	(973 434)	(372 443)	(414 483)
FINANCIAL RESULT	**1 348 533**	**(952 330)**	**323 402**	**148 862**
PROFIT / (LOSS) FOR THE YEAR	**1 213 387**	**(1 157 609)**	**116 427**	**139 421**
Other comprehensive income:				
Items that will not be reclassified to profit or loss:				
Remeasurement of defined benefit obligations	(8 041 438)	1 285 661	(346 985)	(2 980 737)
Items that may be reclassified subsequently to profit or loss				
TOTAL COMPREHENSIVE INCOME FOR THE YEAR	**(6 828 051)**	**128 052**	**(230 558)**	**(2 841 316)**

ANNEX 1.2 Balance sheet

ASSETS	2019	2018	2017	2016
NON-CURRENT ASSETS				
Property, plant and equipment	733 506	661 847	647 241	576 780
Intangible assets	33 192	38 382	50 444	48 798
RFPSS financial instruments	9 329 007	7 706 874	7 969 841	7 028 156
RFPSS other assets	640	613	845	888
RFPSS restricted cash	264 845	200 583	223 246	272 510
RFPSS financial liabilities	(694)	(5 874)		(9 323)
RFPSS other liabilities	(97)	(426)	(97)	(28)
RFPSS net assets	9 593 701	7 901 770	8 193 835	7 292 203
Investments	2 954 704	2 460 194	1 880 863	1 571 218
Home loans to staff	89 946	88 186	87 230	87 716
Other financial assets	—		58 000	77 000
Other assets	124 462	86 757	140 088	117 290
	13 529 511	11 237 136	11 057 701	9 771 005
CURRENT ASSETS				
Trade and other receivables	192 086	154 920	172 122	162 200
Bonds			379 222	234 942
Home loans to staff	8 161	7 928	7 648	7 392
Other financial assets	—	58 000	87 000	318 000
Prepaid expenses	20 247	19 334	16 615	15 073
Cash and cash equivalents	61 165	54 859	2 291	19 596
	281 659	295 041	664 898	757 203
TOTAL ASSETS	**13 811 170**	**11 532 177**	**11 722 599**	**10 528 208**

EQUITY AND LIABILITIES	2019	2018	2017	2016
EQUITY				
Retained earnings	(1 627 532)	(2 840 919)	(1 617 870)	(1 734 297)
Other components of equity	(16 004 730)	(7 963 292)	(9 248 953)	(8 901 968)
TOTAL EQUITY	**(17 632 262)**	**(10 804 211)**	**(10 866 823)**	**(10 636 265)**
NON-CURRENT LIABILITIES				
Defined benefit liability	29 868 880	20 840 775	21 087 635	19 716 472
Salary Savings Plan obligation	124 117	86 393	79 564	58 245
Other employee-related liabilities	24 455	23 581	38 348	21 732
Finance lease liabilities	65 056	1 854	2 437	2 369
Provisions	—	—	—	—
Prepaid fees	513 574	584 436	654 336	713 772
	30 596 082	21 537 039	21 862 320	20 512 590
CURRENT LIABILITIES				
Other employee-related liabilities	169 790	164 988	155 244	129 067
Trade and other payables	205 685	202 081	219 629	182 395
Finance lease liabilities	16 213	1 085	3 317	4 586
Provisions	9 541	12 776	6 690	7 450
Prepaid fees	446 121	418 419	342 222	328 385
	847 350	799 349	727 102	651 883
TOTAL LIABILITIES	31 443 432	22 336 388	22 589 422	21 164 473
TOTAL EQUITY AND LIABILITIES	**13 811 170**	**11 532 177**	**11 722 599**	**10 528 208**

ANNEX 1.3 Statement of cash flows

	2019	2018	2017	2016
CASH FLOWS FROM OPERATING ACTIVITIES				
Profit/loss for the year	1 213 387	(1 157 160)	116 427	139 421
Adjustments for:				
depreciation and amortisation	58 772	63 060	46 353	47 247
disposal of property, plant, equipment	1 608	469	3 185	3 292
disposal of bonds	—	(14 974)		(307)
other gains and losses	(48 473)	55 241	(20 945)	(14 132)
revaluation of RFPSS financial instruments	(1 606 394)	758 833	(542 765)	(416 480)
net interest	(44 040)	(58 208)	(64 495)	(69 753)
dividend income	(111 993)	(92 749)	(83 220)	(73 975)
changes in net defined benefit liability	986 667	1 038 801	1 024 178	907 147
changes in Salary Savings Plan obligation	37 724	6 828	21 320	14 099
change in provisions	(3 235)	6 086	(760)	(23 464)
changes in prepaid fees	(43 161)	(59 142)	(45 599)	(32 903)
changes in assets and liabilities carried out as working capital	(28 821)	(25 502)	67 358	39 450
Cash flows from operating activities	**412 041**	**521 583**	**521 037**	**519 642**
CASH FLOWS FROM INVESTING ACTIVITIES				
Proceeds from disposal/settlement of:				
- property, plant and equiment	16			354
- bonds / cash receipted upon maturity	—	2 529 528	234 000	286 925
Purchases of:				
- property, plant and equiment	(19 311)	(50 688)	(100 641)	(63 125)
- intangible assets	(5 975)	(14 684)	(16 963)	(9 238)
- bonds	(169 980)	(2 824 301)	(709 755)	(547 318)
Change in bank deposits > 3 months	58 000	87 000	250 000	(119 800)
Home loans granted to staff	(16 800)	(16 800)	(16 987)	(16 841)
Repayment of staff home loans	14 448	15 280	17 037	21 905
Cash outflow from the purchase of RFPSS assets	(3 534 820)	(3 264 542)	(3 069 857)	(2 679 627)
Cash inflow from the sale of RFPSS assets	3 193 868	2 880 368	2 667 204	2 399 805
Cash inflow (outflow) from decrease (increase) in restricted cash	(64 262)	22 663	49 264	(850)
Interest received	38 948	82 453	84 096	89 274
Dividends received	111 509	88 232	79 730	72 688
Cash flows from investing activities	**(394 359)**	**(465 491)**	**(532 872)**	**(565 848)**
CASH FLOWS FROM FINANCING ACTIVITIES				
Interest paid	(949)	(93)	(332)	(527)
Repayment of lease liabilities	(10 415)	(3 415)	(5 167)	(3 801)
Cash flows from financing activities	**(11 364)**	**(3 508)**	**(5 499)**	**(4 328)**
NET INCREASE/DECREASE IN CASH AND CASH EQUIVALENTS	**6 318**	**52 584**	**(17 334)**	**(50 534)**
Cash and cash equivalents net of bank overdrafts at the beginning of the period	54 859	2 291	19 596	70 073
Effect of exchange rate exchanges on cash and cash equivalents	(12)	(16)	29	57
Cash and cash equivalents net of bank overdrafts at the end of the period	61 165	54 859	2 291	19 596

ANNEX 2 COMPARISON OF BUDGETED AND ACTUAL INCOME AND EXPENDITURE (IN EUR '000)

ANNEX 2.1 Income

Chapter	Title	2019 budget	2019 actual	Difference absolute	Difference as %
Income					
Operating transactions					
50	Filing and search	413 730	409 986	-3 744	-0.9%
51	Examination, grant and opposition	354 335	381 129	26 794	7.6%
52	Appeal	8 290	6 707	-1 583	-19.1%
53	Designation, renewal and extension	1 129 865	1 151 951	22 086	2.0%
54	Patent information products	7 710	8 203	493	6.4%
55	General operating income excluding	225 785	226 386	601	0.3%
57	Third-party project funding	135	28	-107	-79.6%
58	Financial income	108 600	1 126	-107 474	-99.0%
	Operating income	**2 248 450**	**2 185 515**	**-62 935**	**-2.8%**
Capital transactions					
60	Net income brought forward	251 540	391 359	139 819	55.6%
61	Disposal of property and equipment	0	0	0	n/a
62	Disposal of IT tangible and intangible assets	0	0	0	n/a
64	Borrowings	0	0	0	n/a
65	Repayment of loans and advances	16 800	14 448	-2 352	-14.0%
69	Authorisation budget deficit	0	0	0	n/a
	Capital income	**268 340**	**405 807**	**137 467**	**51.2%**
	Total income	**2 516 790**	**2 591 322**	**74 532**	**3.0%**

ANNEX 2.2 Expenditure

Article	Chapter	Title	2019 budget	2019 actual	Difference absolute	Difference as %
Expenditures						
Operating transactions						
300		*Basic salaries and allowances*	*1 528 880*	*1 496 444*	*-32 436*	*-2.1%*
301		*Remuneration of other employees*	*8 670*	*7 245*	*-1 425*	*-16.4%*
302		*General staff costs*	*10 380*	*8 171*	*-2 209*	*-21.3%*
303		*Training*	*12 485*	*5 075*	*-7 410*	*-59.4%*
305		*Schools and day-care centres*	*24 310*	*23 972*	*-338*	*-1.4%*
	30	Staff	1 584 725	1 540 906	-43 819	-2.8%
310		*Land and buildings*	*64 735*	*47 360*	*-17 375*	*-26.8%*
311		*Furniture and equipment*	*2 415*	*1 846*	*-569*	*-23.5%*
	31	Property and equipment	67 150	49 207	-17 943	-26.7%
320		*IT maintenance - tangible assets*	*0*	*0*	*0*	*n/a*
321		*IT maintenance - intangible assets*	*110 000*	*112 214*	*2 214*	*2.0%*
	32	IT equipment maintenance	110 000	112 214	2 214	2.0%
	33	Co-operation and meetings	23 660	13 479	-10 181	-43.0%
	34	Patent information and public relations	19 900	13 962	-5 938	-29.8%
350		*Travel*	*8 210*	*4 909*	*-3 301*	*-40.2%*
351		*Supplies*	*5 615*	*2 747*	*-2 868*	*-51.1%*
352		*Services*	*52 100*	*40 105*	*-11 995*	*-23.0%*
353		*Communications*	*4 355*	*4 277*	*-78*	*-1.8%*
354		*Documentation*	*11 705*	*10 411*	*-1 294*	*-11.1%*
359		*Other operating expenditure*	*2 255*	*1 901*	*-354*	*-15.7%*
	35	General operating expenditure	84 240	64 349	-19 891	-23.6%
	37	Project expenditure funded by third parties	135	28	-107	-79.6%
	38	Financial expenditure	107 100	12	-107 088	-100.0%
		Total operating expenditure	**1 996 910**	**1 794 156**	**-202 754**	**-10.2%**
Capital transactions						
	41	Property and equipment (excluding IT)	50 535	10 955	-39 580	-78.3%
	42	IT hardware and software	20 000	13 884	-6 116	-30.6%
	44	Repayment of loans	0	0	0	n/a
	45	Loans and advances to third parties	16 800	16 800	0	0.0%
	48	Cash injection to RFPSS	0	0	0	n/a
	49	Budget surplus	181 005	364 168	183 163	101.2%
		Total capital expenditure	**268 340**	**405 807**	**137 467**	**51.2%**
		Total expenditure	**2 265 250**	**2 199 963**	**-65 287**	**-2.9%**

ANNEX 2.3 Implementation of the budget of the pension and social security schemes

Article	Chapter	Title	2019 budget	2019 actual	Difference absolute	Difference as %
INCOME						
Operating transactions						
		Office contributions	*118 520*	*121 512*	*2 992*	*2.5%*
		Staff contributions	*59 260*	*60 757*	*1 497*	*2.5%*
		Payments from insurance funds	*50*	*139*	*89*	*177.3%*
		Pension rights transferred	*5 000*	*7 035*	*2 035*	*40.7%*
		Office contributions (recruitments after 1.1.2009)	*21 330*	*19 348*	*-1 982*	*-9.3%*
		Staff contributions (recruitments after 1.1.2009)	*10 665*	*9 673*	*-992*	*-9.3%*
		Office contributions (invalids)	*0*	*0*	*0*	*n/a*
		Invalids' contributions	*0*	*0*	*0*	*n/a*
5600		Pension contributions	214 825	218 464	3 639	1.7%
		Office contributions	*12 060*	*12 136*	*76*	*0.6%*
		Staff contributions	*6 030*	*4 868*	*-1 162*	*-19.3%*
5601		Salary Savings Plan	18 090	17 004	-1 086	-6.0%
		Office contributions	*59 730*	*59 270*	*-460*	*-0.8%*
		Staff contributions	*23 615*	*23 123*	*-492*	*-2.1%*
		Pensioner contributions	*6 250*	*6 054*	*-196*	*-3.1%*
		Deferred pension contributions	*0*	*0*	*0*	*n/a*
		Invalids' contributions	*0*	*60*	*60*	*n/a*
		Spouse contributions	*1 300*	*1 503*	*203*	*15.6%*
		Healthcare fund	*90 895*	*90 009*	*-886*	*-1.0%*
		Office contributions	*9 880*	*10 420*	*540*	*5.5%*
		Staff contributions	*3 880*	*4 341*	*461*	*11.9%*
		Pensioner contributions	*1 060*	*1 120*	*60*	*5.6%*
		Invalids' contributions	*0*	*0*	*0*	*n/a*
		Long-term care insurance	*14 820*	*15 880*	*1 060*	*7.2%*
		Office contributions	*1 735*	*1 663*	*-72*	*-4.1%*
		Staff contributions	*815*	*957*	*142*	*17.4%*
		Death and invalidity insurance	*2 550*	*2 620*	*70*	*2.7%*
5605		Social security contributions	108 265	108 510	245	0.2%
	56	**Operating Income**	**341 180**	**343 978**	**2 798**	**0.8%**

Article	Chapter	Title	2019 budget	2019 actual	Difference absolute	Difference as %
EXPENDITURE						
Operating transactions						
3600		Pension payments	214 000	210 507	-3 493	-1.6%
3601		Salary Savings Plan	2 900	1 818	-1 082	-37.3%
		Healthcare insurance	*73 060*	*73 913*	*853*	*1.2%*
		Long-term care insurance	*6 080*	*5 684*	*-396*	*-6.5%*
		Death and invalidity insurance	*2 550*	*2 573*	*23*	*0.9%*
3605		Social security payments	81 690	82 170	107	0.6%
	36	**Operating expenditure**	**298 590**	**294 494**	**-4 096**	**-1.4%**
Capital transactions: Income and expenditure						
6600		*Healthcare insurance*	*17 835*	*16 096*	*-1 739*	*-9.7%*
6600		*Pension scheme*	*825*	*7 958*	*7 133*	*864.6%*
6600		*Long-term care insurance*	*8 740*	*10 196*	*1 456*	*16.7%*
6600		*Death and invalidity insurance*	*0*	*47*	*47*	*n/a*
6600		*Salary Savings Plan*	*15 190*	*15 186*	*-4*	*0.0%*
6600/4610		Surplus for transfer from pension and social-security scheme to RFPSS/balance sheet	42 590	49 484	6 894	16.2%
	66 + 46	**Total (Transfer to RFPSS/balance sheet)**	**42 590**	**49 484**	**6 894**	**16.2%**

ANNEX 2.4 Comparison between original and amended budgets

Article	Chapter	Title	Original budget	Transfer under Art. 34 FinRegs para. 1 intra-chapter	para. 2 inter-chapter (below 20%)	para. 3 Submission to BFC / AC	Amended budget
3000		*Basic salaries*	*992 055*	*-1 000*	*-1 000*		*990 055*
3001		*Allowances and other benefits*	*256 180*				*256 180*
3002		*Social-security contributions*	*81 845*				*81 845*
3003		*Pension contributions*	*151 910*	*1 000*			*152 910*
3004		*Partial compensation*	*46 890*				*46 890*
300		Basic salaries and allowances	1 528 880	0	-1 000	0	1 527 880
301		Remuneration of other employees	8 670				8 670
302		General staff costs	10 380				10 380
303		Training	12 485				12 485
305		Schools and day-care centres	24 310				24 310
	30	**Staff**	**1 584 725**	**0**	**-1 000**	**0**	**1 583 725**
3100		*Rent*	*5 885*				*5 885*
3101		*Cleaning and waste disposal*	*7 055*				*7 055*
3102		*Repairs and maintenance*	*44 095*				*44 095*
3103		*Electricity, gas, heating and water*	*7 700*				*7 700*
	310	Land and buildings – operating costs	64 735				64 735
	311	Furniture and equipment – operating costs	2 415				2 415
	31	**Property and equipment maintenance**	**67 150**	**0**	**0**	**0**	**67 150**
	32	**IT equipment maintenance**	**110 000**	**0**	**4 000**	**0**	**114 000**
	33	**Co-operation and meetings**	**23 660**	**0**	**0**	**0**	**23 660**
	34	**Patent information and communication**	**19 900**	**0**	**0**	**0**	**19 900**
350		Travel	8 210				8 210
351		Supplies	5 615				5 615
3520		*Surveillance and messenger services*	*11 460*				*11 460*
3521		*External experts and studies*	*16 165*				*16 165*
3525		*External audit*	*2 365*				*2 365*
3529		*Miscellaneous contract work*	*22 110*				*22 110*
352		Services	52 100				52 100
353		Communications	4 355				4 355
354		Documentation	11 705				11 705
359		Other operating expenditure	2 255		1 000		3 255
	35	**General operating expenditure**	**84 240**	**0**	**1 000**	**0**	**85 240**
	37	**Project expenditure funded by third parties**	**135**	**0**	**0**	**0**	**135**
	38	**Financial expenditure**	**107 100**	**0**	**0**	**0**	**107 100**
		Operating transactions	**1 996 910**	**0**	**4 000**	**0**	**2 000 910**
		Inward transfers		**0**	**5 000**	**0**	
		Outward transfers		**0**	**(1 000)**	**0**	

Article	Chapter	Title	Original budget	Transfer under Art. 34 FinRegs para. 1 intra-chapter	para. 2 inter-chapter (below 20%)	para. 3 Submission to BFC / AC	Amended budget
410		Land and buildings	47 785				47 785
411		Furniture and equipment	2 750				2 750
	41	**Property and equipment**	**50 535**	**0**	**0**	**0**	**50 535**
	42	**IT tangible and intangible assets**	**20 000**	**0**	**-4 000**	**0**	**16 000**
	45	**Loans and advances**	**16 800**				**16 800**
	49	**Budget surplus**	**181 005**	**0**	**4 000**		**185 005**
		Capital transactions	**268 340**	**0**	**0**	**0**	**268 340**
		Inward transfers		**0**	**0**	**0**	
		Outward transfers		**0**	**0**	**0**	
		Total	**2 265 250**	**0**	**4 000**	**0**	**2 269 250**
		Inward transfers		**0**	**5 000**	**0**	
		Outward transfers		**0**	**-1 000**	**0**	

BUDGET OF THE PENSION AND SOCIAL SECURITY SCHEMES

Expenditure

Article	Chapter	Title	Original budget	Transfer under Art. 34 FinRegs para. 1 intra-chapter	para. 2 inter-chapter (below 20%)	para. 3 Submission to BFC / AC	Amended budget
3600		Pension payments	214 000				214 000
3601		Salary Savings Plan	2 900				2 900
3605		Social-security payments	81 690				81 690
	36	**Pension and social security schemes expenditure**	**298 590**	**0**	**0**	**0**	**298 590**
		Total operating expenditure	**298 590**	**0**	**0**	**0**	**298 590**
Capital transactions							
	46	**Transfer from pension and social-security schemes**	42 590	0	0	0	42 590
		Total capital expenditure	**42 590**	**0**	**0**	**0**	**42 590**
		Total	**341 180**	**0**	**0**	**0**	**341 180**
		Inward transfers		**0**	**0**	**0**	**0**
		Outward transfers		**0**	**0**	**0**	**0**

ANNEX 3 FINANCIAL FORECAST AND ACTUAL INCOME AND EXPENDITURE

ANNEX 3.1 Statement of comprehensive income

(EUR '000)	As per CA/D 1/18	CA/10/20	CA/60/20	Difference between CA/60/20 and CA/D 1/18 absolute	as %
Revenue					
Revenue from patent and procedural fees	1 916 525	1 936 483	1 991 003	74 478	3.9%
Other revenue	76 620	68 334	11 009	(65 611)	-85.6%
Other operating income	7 760	17 333	20 139	12 379	159.5%
Work performed and capitalised	5 000	463	463	(4 537)	-90.7%
Employee-benefit expenses	(1 384 760)	(1 859 911)	(1 859 911)	(475 151)	34.3%
Depreciation and amortisation expenses	(52 390)	(58 772)	(58 772)	(6 382)	12.2%
Other operating expenses	(303 595)	(239 077)	(239 077)	64 518	-21.3%
OPERATING RESULT	**265 160**	**(135 146)**	**(135 146)**	**(400 306)**	
Financial revenue	557 495	1 784 557	1 784 557	1 227 062	220.1%
Finance costs	(559 755)	(436 024)	(436 024)	123 731	-22.1%
FINANCIAL RESULT	**(2 260)**	**1 348 533**	**1 348 533**	**1 350 793**	
PROFIT/LOSS FOR THE YEAR	**262 900**	**1 213 387**	**1 213 387**	**950 487**	**361.5%**
Other	—	(8 041 438)	(8 041 438)	(8 041 438)	
TOTAL	**262 900**	**(6 828 051)**	**(6 828 051)**	**(7 090 951)**	

ANNEX 3.2 Balance sheet

(EUR '000)	As per CA/D 1/18	CA/10/20	CA/60/20	Difference between CA/60/20 and CA/D 1/18 absolute	as %
ASSETS					
NON-CURRENT ASSETS					
Property, plant and equipment	700 081	733 506	733 506	33 425	4.8%
Intangible assets	67 921	33 192	33 192	-34 729	-51.1%
RFPSS net assets	9 046 472	9 593 701	9 593 701	547 229	6.0%
Marketable securities	2 878 476	2 954 704	2 954 704	76 228	2.6%
Home loans to staff	70 310	89 946	89 946	19 636	27.9%
Other assets	124 934	124 462	124 462	-472	-0.4%
	12 888 194	13 529 511	13 529 511	641 317	5.0%
CURRENT ASSETS					
Trade and other receivables	182 090	192 086	192 086	9 996	5.5%
Home loans to staff	6 660	28 407	8 161	1 501	22.5%
Prepaid expenses	0	0	20 247	20 247	n/a
Cash and cash equivalents	15 000	61 165	61 165	46 165	307.8%
	203 750	281 658	281 659	77 909	38.2%
TOTAL ASSETS	**13 091 944**	**13 811 169**	**13 811 170**	**719 226**	**5.5%**
LIABILITIES					
EQUITY					
Retained earnings	(1 779 113)	(1 627 532)	(1 627 532)	151 581	-8.5%
Other reserves	1 784 179	(16 004 730)	(16 004 730)	(17 788 909)	-997.0%
TOTAL EQUITY	**5 066**	**-17 632 262**	**-17 632 262**	**-17 637 328**	**n/a**
NON-CURRENT LIABILITIES					
Defined benefit liabilities	11 661 374	29 868 880	29 868 880	18 207 506	156.1%
Salary savings plan obligations	124 934	124 117	124 117	-817	-0.7%
Trade and other payables	41 670	89 510	24 455	-17 215	-41.3%
Finance lease liabilities	0	0	65 056	65 056	n/a
Prepaid fees	556 405	513 574	513 574	-42 831	-7.7%
	12 384 383	30 596 081	30 596 082	18 211 699	147.1%
CURRENT LIABILITIES					
Trade and other payables	347 120	375 475	375 475	28 355	8.2%
Provisions	8 585	25 754	25 754	17 169	200.0%
Prepaid fees	346 790	446 121	446 121	99 331	28.6%
	702 495	847 350	847 350	144 855	20.6%
TOTAL LIABILITIES	**13 086 878**	**31 443 431**	**31 443 432**	**18 356 554**	**140.3%**
TOTAL EQUITY AND LIABILITIES	**13 091 944**	**13 811 169**	**13 811 170**	**719 226**	**5.5%**

ANNEX 4 Audit expenditure

281. EUR 2.52m was set aside for this under Article 3525 of the 2020 budget.

282. As at 31 March 2020, a total of EUR 383 442 had been committed, and EUR 62 427 already spent. These figures break down as follows:

	Expenditure booked in 2019	2020 to date	
		Committed	Expenditure
Travel expenses and remuneration of auditors and assistants	132 682	87 573	62 427
KPMG AG Wirtschaftsprüfungsgesellschaft	278 886	262 869	
BDO AG Wirtschaftsprüfungsgesellschaft	33 000	33 000	
Total	444 568	383 442	62 427

ANNEX 5 List of abbreviations

AAG	Actuarial Advisory Board
AC	Administrative Council
BaFin	*Bundesanstalt für Finanzdienstleistungsaufsicht* – German Federal Financial Supervisory Authority
BFC	Budget and Finance Committee
BIT	Business Information Technology
BSC	Balanced Scorecard
DBO	defined benefit obligation
DG	directorate-general
EPASYS	European Patent Administration System
EPC	European Patent Convention
EPO	European Patent Organisation or European Patent Office
EPOTIF	EPO Treasury Investment Fund
EU	European Union
EUR	euro
FCS	Fee Capturing System
FinRegs	Financial Regulations
FIPS	finance and personnel system
GDPR	EU General Data Privacy Regulation

HR	Human Resources
IAO	Internal Audit and Oversight
IAS	International Accounting Standards
IASB	International Accounting Standards Board
ICSLT	International Civil Servants Life Table
IFRSs	International Financial Reporting Standards
IM	Information Management (the EPO's former IT department)
ISAs	International Standards on Auditing
KAGB	*Kapitalanlagegesetzbuch* – German Capital Investment Code
LTC	long-term care
MADRAS	Mother of ALL Dossier-Related Application Systems
PPI	Protocol on Privileges and Immunities
RFPSS	Reserve Funds for Pensions and Social Security
VaR	value at risk