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Verwaltungsrat

Administrative Council

Conseil d'administration



Report of the Board of Auditors of the European Patent Organisation on the 2018 accounting period

CA/20/19

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SUBJECT: Board of Auditors' report on the 2018 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. <u>SUMMARY</u>

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 2019 at the latest.

B. OPINION ON THE ANNUAL ACCOUNTS

- 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 2018 accounts, which give a true and fair view of the net assets, financial position and results of operations of the EPO.
- 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.

1. FINANCIAL SITUATION

1.1. Financial reporting

8) As set out in CA/84/11, the EPO's revision of its financial reporting procedure with effect from 1 January 2011 means that its annual result is now subject to greater volatility.

1.2. Balance sheet figures

- 9) As at 31 December 2018, non-current assets were approx. EUR 11 237m and so roughly the same as for 2017. They included RFPSS net assets of approx. EUR 7 902m, which were down by EUR 292m on their 2017 value. Non-current bonds not held as part of the RFPSS increased in value by EUR 579m to reach EUR 2 460m, while short-term bonds fell by EUR 379 m to EUR 0.
- As at 31 December 2018, non-current liabilities were approx. EUR 21 537m and so roughly the same as for 2017. They included EUR 20 841m for the defined benefit liability (pensions and similar obligations), which is EUR 247m less than for 2017. However, the value of the defined benefit liability can be expected to increase significantly in the 2019 financial statements owing to the use of the 2018 mortality tables instead of those from 2013.
- 11) Current assets were valued at just under 3% and current liabilities at just under 4% of their non-current counterparts.

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

- The present value of future national renewal fees cannot be shown under the IFRSs because there is no legal obligation to pay them.
- However, if the present value of such fees put at EUR 4 697m (CA/60/19) is factored in, there is an imputed shortfall of EUR 8 242m between RFPSS assets and the defined benefit liability.

For a long-term view, see the actuarial valuation as at 31 December 2016 (CA/61/17), the Office's comments on it (CA/62/17) and the financial study in CA/79/16 (including Add. 1 and Add. 2), as well as the updated information to be made available in forthcoming documents.

1.4. Income statement

- There was an operating loss of EUR 205m, which is roughly the same as that reported for 2017.
- At EUR -952m, the financial result was down by EUR 1 276m on 2017 as a result of a EUR 675m fall in finance revenue and a EUR 601m increase in finance costs.
- 17) The profit under other comprehensive income was EUR 1 286m. This EUR 1 633m increase over 2017 is attributable entirely to changes in financial assumptions, in particular an increased discount rate for the defined benefit liability.

1.5. Statement of cash flows

The inflow from operating activities was EUR 521m, while the outflow from investment activities was EUR 465m. The outflow from financing activities was EUR 4m.

1.6. Budget and forecasting accuracy

19) In CA/D 1/17, the AC adopted an authorisation budget within the meaning of Article 25(1)(a) FinRegs totalling EUR 2 280m. The actual outturn was EUR 2 384m, which is 4.5% higher than forecast.

2. OPERATIONS

2.1. Comments on the annual accounts

(a) Post-employment and other long-term benefit obligations

- We concur with the accounting treatment of post-employment and other long-term benefit obligations applied by the Office, but highlight the level of estimation involved. The calculation of the defined benefit obligations is significantly affected by, amongst other factors, the discount rate, the mortality tables, the loading factor of the tax adjustment and the assumption as to the last salary at career end as well as by the probability of becoming a pensioner for health reasons.
- The new International Civil Servants Life Table (ICSLT) 2018 mortality tables deviate quite significantly from the tables from 2013.
- Since all demographic assumptions remained unchanged compared to the previous year's assumptions, no accounting effect is recorded as at 31 December 2018. In 2019, we expect effects on the defined benefit obligations from using the new mortality tables.

(b) EPOTIF

- The rules for the governance framework were approved by the BFC in December 2017. On 2 July 2018 the EPO launched the EPO Treasury Investment Fund (EPOTIF). The set-up of the *Master-KVG* model and of the internal structures and processes relating to the EPOTIF are market practice.
- 24) However, the governance structures were not completely in place either when the EPOTIF was launched on 1 July 2018 or at the end of 2018.
- The official guideline, the EPOTIF Governance Framework, still needs to be approved by the President.

(c) IFRSs

26) The financial statements are consistent with the new IAS/IFRS requirements.

2.2. Comments on financial management

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

2.3. Internal control system

(a) General IT controls

- We performed our IT audit procedures for the following IT systems: SAP FIPS, EPASYS (MADRAS) and the fee capturing system (FCS).
- 29) Detailed information about findings and recommendations has been given to the Office separately. We had no critical observations on the financial control system.

(b) RFPSS governance

30) RFPSS assets are well managed, the procedures and controls implemented function properly and the values of the funds and the results of the funds' management have been calculated correctly. The compliance and risk assurance officer is still not working based on a written mission statement, defining precisely his role and mission in relation to the RFPSS.

(c) Co-operation with Internal Audit

31) Principal Directorate Internal Audit and Oversight (IAO) co-ordinates its annual and medium-term audit plans with us, provides us with all its audit reports and informs us of any fraud audits.

2.4. Business administration

(a) Patent grant process

As a result of the audit performed we have identified that the productivity and efficiency levels of the patent grant process as a whole increased in 2018 compared to the previous years. That is also in line with the strategy of the Office set by the management. In particular, the processing time per file (product) decreased by 3.7% from 2016 to 2018 and the products processed per examiner increased by 7.4% from 2016 to 2018.

- The backlog has also decreased in recent years as a result of the increased productivity and the implementation of the Early Certainty prioritisation. The overall backlog decreased from 222 115 files as at 31 December 2016 to 155 885 files as at 31 December 2018, which represents a significant reduction of approx. 30%.
- The quality KPIs, such as quality of search and quality of grants, determined as a result of the audits performed by Directorate Quality Audit, decreased significantly from the second half of the year 2017 on. As at 30 September 2018 the quality of grants KPI was 76.6%, with the target set at 87%.
- From the year 2019 on the strategy of the Office will be focused more on quality. The production plan for the year 2019 is 417 000 files, in order, among other reasons, to enable the examiners to devote adequate time to the processing of files. This is a reduction from the production in 2018 of 430 000 files.

(b) Purchase-to-pay process

- We performed a follow-up review to prior years' audit results (CA/20/17), taking into account the changes in the purchasing process that have taken place. This includes a review of the KPIs, which relate to efficiency measures, based on the process mining analysis and a review of the measures taken by the Office in response to prior years' findings.
- The Office has implemented some changes in the procedures, for example OCR scanning of invoices, and also other procedural changes.
- In summary, the implemented changes have not led to a very different situation from that reported in CA/20/17. There is room for improvement both in efficiency and transparency, in order to be on a par with the best practice of large enterprises.
- We have been informed that the lack of progress is a result of the priorities of the Office.

(c) IT overall

(1) IT roadmap and Strategic Plan 2023

- 40) In document CA/56/18, "IT Roadmap Final report", it was stated that the IT roadmap was entering its final phase. For 2019 an additional budget of EUR 1m is planned to finish delivery of the Hosted Filing Submission project.
- 41) IT strategy will be included in the Strategic Plan 2023, which is currently being developed and will be presented to the Administrative Council in June 2019. The operational plan for 2019-2021 will be aligned with the Strategic Plan 2023.

(2) IM operational plan

- The Strategic Plan 2023 will include a multi-annual work programme for the EPO from which the activities for IM will be derived. To bridge the intervening period, IM restructured its operational plan in October 2018 to present the current challenges in IT to the President, differentiating strategic IT initiatives from operational ones.
- According to IM, some operational projects were not included in the plan presented in October 2018 on purpose. Operational projects listed as active projects with a higher budget estimate were excluded, whilst projects with smaller budget estimates were included in the operational plan presented.

(d) Data centre transition

- 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 to a Tier IV campus. Additionally it was planned to outsource the recovery site currently located in the Isar building in Munich to a data centre provider in the Munich area.
- The project is currently in phase one of three. The lease and PPI agreements with the State of Luxembourg have been signed, and development works in the data centre facilities as well as the WAN procurement were completed on time.

- As part of the EPO Strategic Plan currently under development, the President put on hold the decision as to the future location of the data recovery site. In the meantime, action plans have already been defined to ensure that the current data recovery sites continue to be operational at all times.
- 47) In the 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) were estimated.

(e) IT risk management

- IM has established a new IT risk management framework based on international standards such as COSO ERM and COBIT for risk. Implementation of IT risk management is being performed in three phases: (a) introduce and explain, (b) guide and strengthen and (c) embed and refine.
- 49) The first phase, "introduce and explain", started in the course of 2017. The aim of the phase was to generate a common understanding of risk management terms, concepts and processes.
- The goal of the second phase, "guide and strengthen", is to complete a risk register for all IT areas. IM started this phase in the area of Service Operations. All other IT areas should be covered by the end of 2019.
- The purpose of the third phase, "embed and refine", is the consistent implementation of the established risk management system. IT risk management is still at an early stage.

2.5. Buildings

(a) "New Main building" project in The Hague

- 52) Project management for the "New Main building" development project in The Hague can be regarded as adequate and successful.
- The uncertainty over the amount of asbestos in the old main building has been known for several years. As yet, a detailed asbestos investigation has not been performed; only surface inspections have been performed. Hence, the economic uncertainty has not been reduced.

(b) Energy consumption

The annual environmental reports offer a high level of transparency regarding sustainability/energy consumption for existing buildings. The Shell building in The Hague as well as the PschorrHöfe and the main building in Munich are of a certain age. However, the energy consumption of all EPO buildings is continually monitored. Management decisions regarding energy efficiency measures are supported by suitable energy management software.

II. <u>DETAILED REPORT</u>

A. PRELIMINARY REMARKS

- We, the Board of Auditors of the European Patent Organisation, report herein under Article 79 FinRegs on the 2018 accounting period.
- The annual accounts reached us on 15 March 2019, i.e. by the deadline prescribed in Article 70 FinRegs.
- 57) 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).
- 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.
- 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 2018 accounting period. Our comments on the RFPSS can be found in section I.C.2.3 of the above summary and in section II.D.2 of this detailed report.

- 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.
- Our report is based on information made available by 31 March 2019 at the latest.
- 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

1. OPINION

- We, the Board of Auditors, have audited the financial statements as disclosed in CA/60/19, comprising the statement of financial position, statement of comprehensive income, statement of changes in equity, statement of cash flows and notes (Article 69(1)(a) FinRegs), together with the bookkeeping system of the European Patent Organisation (EPO) for the accounting period 1 January to 31 December 2018.
- In our opinion, the financial statements as shown in CA/60/19 give a true and fair view of the financial position of the EPO as at 31 December 2018, and its financial performance and its cash flows for the year then ended, in accordance with Article 50(g) EPC and the FinRegs.

2. BASIS FOR OPINION

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the auditors' responsibilities for the audit of the financial statements, section 1. We are independent of the EPO in accordance with Article 49(1) EPC. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

3. RESPONSIBILITIES OF THE PRESIDENT OF THE OFFICE FOR THE FINANCIAL STATEMENTS

The President of the European Patent Office (the Office) is responsible for the preparation and fair presentation of the financial statements in accordance with Article 50(g) EPC and the 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 Office 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.

In preparing the financial statements, the President of the Office is responsible for assessing the organisation's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting.

4. AUDITORS' RESPONSIBILITIES FOR THE AUDIT OF THE FINANCIAL STATEMENTS

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

- c. Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the President of the Office.
- d. 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.
- e. 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.

The Hague, 11 April 2019

Board of Auditors

H. Schuh O. Hollum F. Angermann

C. COMMENTS ON THE ACCOUNTS AND FINANCIAL MANAGEMENT

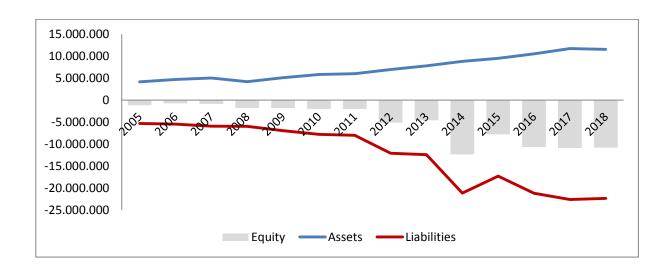
1. THE EPO'S FINANCIAL AND ECONOMIC POSITION

1.1. Introductory remarks

- 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.
- 71) In CA/D 5/11 the Administrative Council did away with the Article 1(3) FinRegs exception, with retroactive effect from 1 January 2011. Since then, the EPO has had to apply the financial reporting standards issued by the IASB in their entirety.
- 72) This change in its financial reporting procedure has had two major effects:
 - (a) the RFPSS assets are shown as assets and the defined benefit obligation as a liability, which leads to significantly higher total assets and liabilities.
 - (b) 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.
- The 2018 estimates and figures are based on CA/60/19 (financial statements) and CA/10/19 (budget implementation statement).
- For the detailed balance-sheet and income-statement figures, see Annexes I/1 and I/2, taken from CA/60/19. Annex III compares the budget estimates as adopted in 2017 and subsequently restated ("IFRS forecast") with actual income and expenditure as per CA/10/19.

1.2. Financial statement figures in brief

(a) Balance sheet



(in EUR '000s)	2014	2015	2016	2017	2018
Non-current assets	8 015 868	8 688 702	9 771 005	11 057 701	11 237 136
Current assets	767 374	789 967	757 203	664 898	295 041
Total assets	8 783 242	9 478 669	10 528 208	11 722 599	11 532 177
Non-current liabilities	-20 535 860	-16 685 700	-20 512 590	-21 862 320	-21 537 039
Current liabilities	-587 538	-587 918	-651 883	-727 102	-799 349
Total liabilities	-21 123 398	-17 273 618	-21 164 473	-22 589 422	-22 336 388
Equity	-12 340 156	-7 794 949	-10 636 265	-10 866 823	-10 804 211

As at 31 December 2018, non-current assets were approx. EUR 11 237m and so roughly the same as for 2017. They included RFPSS net assets of approx. EUR 7 902m, which were down by EUR 292m on their 2017 value. Non-current bonds not held as part of the RFPSS increased in value by EUR 579m to reach EUR 2 460m, while short-term bonds fell by EUR 379 m to EUR 0.

The EUR 2 460m in non-current bonds comes entirely from the EPO Treasury Investment Fund (EPOTIF) newly set up in 2018.

- As at 31 December 2018, non-current liabilities were approx. EUR 21 537m and so roughly the same as for 2017. They included EUR 20 841m for the defined benefit liability (pensions and similar obligations), which is EUR 247m less than for 2017. However, the value of the defined benefit liability can be expected to increase significantly in the 2019 financial statements owing to the use of the 2018 mortality tables instead of those from 2013.
- 77) Current assets were valued at just under 3% and current liabilities at just under 4% of their non-current counterparts.
- 78) At EUR -10 804m, the negative equity has barely changed from the 2017 figure.
- 79) The defined benefit liability accounted for by far the largest share of non-current liabilities.
- 80) The defined benefit liability broke down as follows:

		Staff entitled to		
(in EUR '000s)	Active staff	deferred pension	Pensioners	Total
Pension liability	12 454 893	117 849	5 384 366	17 957 108
LTC insurance	525 508	1 710	346 847	874 065
Health insurance	1 311 818	0	661 837	1 973 655
Death and invalidity	35 947	0	0	35 947
Total	14 328 166	119 559	6 393 050	20 840 775

81) The pension liability (EUR 17 957m) broke down as follows:

(in EUR '000s)	2014	2015	2016	2017	2018
Pensions Tax adjustment/partial	13 344 298	11 070 268	13 912 195	14 466 473	14 434 061
compensation	2 851 942	2 349 661	2 926 869	3 068 196	3 020 858
Invalidity allowance	389 299				
Family allowances	365 211	319 892	383 200	596 027	502 189
Total	16 950 750	13 739 821	17 222 264	18 130 696	17 957 108

82) The figures for the undiscounted defined benefit liability are as follows:

(in EUR '000s)	2014	2015	2016	2017	2018
Pension liability	26 457 954	27 236 334	27 921 531	23 468 599	28 353 293
LTC insurance	1 410 939	1 524 231	1 582 779	1 638 547	1 711 068
Health insurance	1 503 200	3 580 962	3 222 769	3 742 330	3 917 241
Death and invalidity	165 123	41 641	41 740	40 290	41 084
Undiscounted total	29 537 216	32 383 168	32 768 819	28 889 766	34 022 686
Discounted total	19 740 956	15 828 589	19 716 472	21 087 635	20 840 775

The lower defined benefit liability was above all down to an increase in the discount rates.

	2014	2015	2016	2017	2018
Pension liability	1.61%	2.60%	1.82%	1.71%	1.99%
LTC insurance	1.75%	2.78%	2.00%	1.79%	2.09%
Health insurance	1.61%	2.69%	1.82%	1.71%	2.01%
Death and invalidity	1.32%	1.97%	1.28%	1.23%	1.45%

These rates are within the general guideline values.

Calculations in CA/60/19 (note 20.1) show that a 1% increase in the discount rate would reduce the defined benefit liability by EUR 4 219m, whereas a 1% reduction in the rate would increase it by EUR 5 887m. A rise in life expectancy by one month would increase it by EUR 0.8m.

				1-month increase in life
	Current value	1% increase	1% decrease	expectancy
Pension liability	17 957 108	14 372 993	22 867 310	18 591 273
LTC insurance	874 065	654 781	1 191 576	955 871
Health insurance	1 973 655	1 560 940	2 629 938	2 046 557
Death and invalidity	35 947	32 977	39 372	32 259
Total	20 840 775	16 621 691	26 728 196	21 625 960
Difference		-4 219 084	5 887 421	785 185

Note: Life expectancy in the 2018 mortality tables is about two years higher than in the currently used 2013 tables. According to an initial estimate based on this higher figure, the defined benefit liability would increase by EUR 2bn.

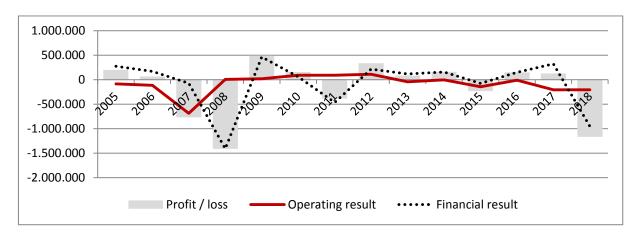
(b) Economic situation, factoring in the present value of future national renewal fees

- The present value of future national renewal fees cannot be shown under the IFRSs because there is no legal obligation to pay them.
- 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/60/19.
- 87) If the present value of such fees put at EUR 4 697m (CA/60/19) is factored in, there is an imputed shortfall of EUR 8 242m between RFPSS assets and the defined benefit liability.

(in EUR '000s)	2014	2015	2016	2017	2018
RFPSS net assets	6 084 859	6 591 858	7 292 203	8 193 835	7 901 770
Present value of future national renewal fees	3 876 977	3 878 744	4 025 807	4 311 079	4 697 000
Net business assets	9 961 836	10 470 602	11 318 010	12 504 914	12 598 770
Defined benefit liability	-19 740 956	-15 828 589	-19 716 472	-21 087 635	-20 840 775
Balance	-9 779 120	-5 357 987	-8 398 462	-8 582 721	-8 242 005

For a long-term view, see the actuarial valuation as at 31 December 2016 (CA/61/17), the Office's comments on it (CA/62/17) and the financial study in CA/79/16 (including Add. 1 and Add. 2), as well as the updated information to be made available in forthcoming documents.

(c) Income statement



(in EUR '000s)	2014	2015	2016	2017	2018
Operating result	-5 180	-145 669	-9 441	-206 975	-205 279
Financial result	156 247	-75 838	148 862	323 402	-952 330
Profit/loss for the year	151 067	-221 507	139 421	116 427	-1 157 609
Other comprehensive					
income	-7 906 367	4 766 714	-2 980 737	-346 985	1 285 661

- There was an operating loss of EUR 205m, which is roughly the same as that reported for 2017.
- 90) At EUR -952m, the financial result was down by EUR 1 276m on 2017 as a result of a EUR 675m fall in finance revenue and a EUR 601m increase in finance costs.
- 91) The profit under other comprehensive income was EUR 1 286m. This EUR 1 633m increase over the 2017 figure is attributable entirely to changes in financial assumptions, in particular an increased discount rate for the defined benefit liability.

The effect of this broke down as follows:

	Revised financial	Revised demographic	
(in EUR '000s)	assumptions	assumptions	Total
Pension liability	1 047 985	0	1 047 985
LTC insurance	77 716	0	77 716
Health insurance	158 538	0	158 538
Death and invalidity	1 422	0	1 422
Total	1 285 661	0	1 285 661

(d) Statement of cash flows

92) The inflow from operating activities was EUR 521m, while the outflow from investment activities was EUR 465m. The outflow from financing activities was EUR 4m.

Cash flows from	2014	2015	2016	2017	2018
Operating activities	446 953	493 288	519 642	521 037	521 583
Investment activities	-410 439	-489 951	-565 848	-532 872	-465 491
Financing activities	-5 964	-6 156	-4 328	-5 499	-3 508
Net increase/decrease in cash					_
and cash equivalents	30 550	-2 819	-50 534	-17 334	52 584

2. SPECIFIC ACCOUNTING REMARKS

2.1. Post-employment benefit and other long-term employee benefit obligations

(a) Discount rate

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.

- The discount rate used as at 31 December 2018 was 1.99% for pension obligations (compared to a discount rate of 1.71% in the prior year). This increase is the main reason for the net actuarial gains of EUR 1 286m that have led to an increase in equity (remeasurements of DBO).
- The method used for determining the rate has been applied consistently. We consider the discount rate used by the Office appropriate.

(b) Service costs

Ourrent service costs are measured using the opening DBO, i.e. the liability as at 31 December 2017. They are determined applying an actuarial calculation. The current service costs for pension obligations remained almost at the same level as in the prior year (EUR 768m in 2018 compared to EUR 763m in 2017). The interest costs on the DBO of EUR 359m, which are shown in the financial result, also remained almost unchanged compared to last year's amount of EUR 366m.

(c) Changes in schemes

(1) New career scheme

- 97) By CA/D 10/14, the Administrative Council decided upon revisions to the Service Regulations with regard to remuneration. The new scheme has been applicable since 1 January 2015 and is relevant for financial reporting in the following respects:
- The actuarial calculation of the DBO includes an estimate by the Office of future salary increases (estimating the salary of the employee upon retirement), which incorporate promotions and step enhancements, as these are considered "regular" at the EPO. Under the new career scheme, regular promotions and step enhancements based on seniority have been replaced by a performance-based scheme.
- 99) Moreover, a bonus scheme has been implemented for rewarding exceptional performance. The bonus element does not give rise to any pension entitlement and therefore does not increase any pension obligation.

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.

(2) Invalidity and sickness scheme

- The Administrative Council approved revisions to the Service and Pension Scheme Regulations regarding the invalidity and sickness scheme in March 2015 (CA/14/15 Rev. 1). For a detailed description of the measures of the reform, please refer to CA/20/16.
 - (3) Tax issues relating to post-employment benefits

(i) Tax adjustment

- According to the EPO's Pension Scheme Regulations, pensioners are entitled to tax compensation of 50% of the national income tax paid by pension recipients to tax authorities. This tax compensation used to be reimbursed by the member states in which taxes were paid. In 2007 the Office decided to cease the application of the tax adjustment according to the Pension Scheme Regulations to employees joining the EPO from 1 January 2009 on, since from this date tax compensation benefits have not been reimbursed by the member states to the Office's budget. Hence tax compensation for qualifying members of the pension scheme is part of the Office's benefit obligation.
- At the end of 2014, the Office proposed the replacement of the partial compensation scheme by the former tax adjustment (CA/95/14 Rev. 1) in place until 31 December 2008. The proposal was accepted by the BFC and Administrative Council in their meetings in November and December 2014 respectively. It has been applicable since 1 January 2015 to all pensioners who began active service before 1 January 2009. There was not any impact on the financial statements as at 31 December 2017 nor before because, for accounting purposes, the Office had treated the partial compensation according to the former tax adjustment rules (in place until 31 December 2008).
- As at 31 December 2018 liabilities of EUR 3 068m were provided for the tax adjustment compared to EUR 3 021m as at 31 December 2017. In the long run the tax compensation liability is expected to decrease as the population of employees who joined the Office before 1 January 2009 is shrinking.

105) We concur with the accounting treatment applied by the Office and we draw attention to the disclosures made in note 28, describing the tax risks of partial compensation.

(ii) Taxation of invalidity allowance

- By way of the reform of the sickness and invalidity scheme, the risk exposure has been limited to staff in non-active service between 1 January 2008 and 31 December 2015 (CA/14/15 Rev. 1).
- The number of non-active staff members classified as pensioners during that period was 209 as at 31 December 2018.
- A provision was recognised in 2015, as former invalids have contacted the Office in this matter claiming support in court proceedings as well as reimbursement of taxes paid. Following the decisions by German and Dutch tax authorities and courts in 2016 that confirmed the exemption from national income tax, the provision was reversed. Nevertheless, the Office assured the Association of European Patent Office Pensioners that the former invalids would be entitled to a compensatory payment covering the difference resulting from tax impacts between the invalidity allowance and the pension and, therefore, a corresponding amount was recognised as an "other employee-related liability" as at 31 December 2018.
- 109) Its appropriateness remains to be monitored as the response rate is one of the main estimates within the calculation.

(iii) Taxation of partial compensation

- Although the Office is not a party to the legal proceedings, it provides legal support to pensioners who have been approached by national tax authorities claiming taxes on partial compensation. The German Federal Fiscal Court ruled by final judgment of July 2015 that the partial compensation is nationally taxable. The appeal before the Dutch Supreme Court confirmed this position in February 2017.
- 111) The Office did not commit towards the pensioners to bear all the financial consequences of the national taxation. In 2015, the Office decided to "phase out" the support measures provided.

- 112) For accounting purposes, the Office maintains its position that no reimbursement of taxes paid on partial compensation will be made to pensioners as there is neither a legal nor a constructive obligation. No provision has been recognised and the potential risk ("contingent liability" in accounting terms) is appropriately disclosed in note 28 ("Contingencies and risks") to the financial statements.
- 113) Moreover, by reintroducing the former tax adjustment scheme, the Office has limited its risk exposure and therefore the materiality of the issue for accounting purposes.

(iv) Salary savings plan

- All staff who have joined the Office since 1 January 2009 are compulsorily members of the salary savings plan, a deferred compensation model. The contributions are paid by the Office (two-thirds) as well as the employees themselves (one-third) and are subject to internal tax under Article 16(1) of the EPO PPI. Consequently, the Office takes the position that no national tax is payable in addition and did not provide for any potential risk of tax reimbursement as at 31 December 2018.
- Given the fact that the corresponding obligation as at 31 December 2018 amounted to EUR 86 393 000 (EUR 79 564 000 in the prior year), any potential impact from tax adjustment is considered immaterial, but may become material over time as more and more employees join the scheme.

(v) Measurement of the tax adjustment

For the purposes of measuring the tax adjustment on pensions (incl. retirement for health reasons), the Office has not undertaken a detailed assessment regarding the country of tax residence of pensioners and their tax status, but applies a "loading factor" of 21% on the defined benefit obligation for current and future pensioners (incl. pensioners for health reasons). The actual payment for tax adjustments (formerly partial compensation) is based on the Pension Scheme Regulations and is derived from theoretical national income tax according to the Inter-Organisations Section of the Co-ordinated Organisations, considering the fiscal situation of the beneficiaries regarding marital status and country of residence.

- The loading factor is derived from historical information by dividing actual payments for tax adjustments by actual payments for pensions. This calculation method has remained unchanged since 2008. At year end 2018, the loading factor was verified. Historical information was used to undertake a sanity check by identifying a trend. Since 2008, a minimum of 20.4% and a maximum of 21.8% have been observed. Based on these observations, the loading factor was set at 21%, which had been applied in the prior year too.
- For accounting purposes, the Office assumes that the country of residence in the case of retirement (incl. retirement for health reasons) mirrors the country of residence as well as tax status of the Office's current retired workforce.
- 119) We concur with the method applied by the Office, but highlight the level of estimation involved.

(vi) Actuarial gains/losses due to demographic assumptions

- Actuarial assumptions can be classified as either financial or demographic assumptions. Demographic assumptions affect the probability that various benefits will be received. Demographic assumptions used for the measurement of the DBO are turnover rates, retirement rates, invalidity rates, proportions married, all of which are EPO-specific tables, as well as a mortality table. The mortality table applied by the Office is the International Civil Servants Life Table (ICSLT) produced by the Joint Pensions Administrative Section, today the International Service for Remunerations and Pensions, since 2008, which is a table specific to international civil servants based in Europe.
- 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, for the period 2013 to 2017. The updated table was issued in February 2019.

- 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. salary increase, inflation, changed turnover, new mortality table. In such cases the EPO receives a recommendation from the AAG (Actuarial Advisory Group), established in 1992 and composed of three external actuaries. After a due review, the AAG recommends to the EPO the application of the new actuarial assumptions, such as the new mortality table. Concerning the ICSLT 2018, issued after the balance sheet date, this due process has not yet finished. This process is similar to that within other international organisations; for instance the EU, despite being the main data provider for the ICSLT, has not yet decided to apply the ICSLT 2018.
- 123) Furthermore, the new ICSLT 2018 mortality table deviates quite significantly from the table from 2013.

		ICSLT 2013 (viewed in 2018)	ICSLT 2018 (viewed in 2018)
Age 16	Female	72.3	74.8
	Male	70.5	72.1
Age 45	Female	43.3	45.9
	Male	41.6	43.3
Age 65	Female	23.6	26.1
	Male	21.9	23.4

- We concur with this procedure but recommend finishing the due process of reviewing the ICSLT 2018 during 2019, as planned.
- Since all demographic assumptions remained unchanged compared to the previous year's assumptions, no accounting effect is recorded as at 31 December 2018. In 2019, we expect effects on the DBO from using the new mortality table.

(vii) Transfer of pension rights

126) The pension obligation as at 31 December 2018 increased (among other amounts) by EUR 8 726 000 (compared to EUR 4 957 000 as at 31 December 2017) due to a transfer of pension rights and by EUR 36 234 000 (compared to EUR 9 127 000 as at 31 December 2017) due to past service costs based on the transfer of pension rights. Under the pension schemes (old and new), employees joining the Office have the option to transfer their retirement pension rights accrued under their previous employment pension schemes to the Office; EUR 8 726 000 is the amount of the funds the Office received due to this transfer. These funds are converted to a 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 is 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. In 2017 the formula used to convert the funds to a current DBO under the New Pension Scheme was revised, leading to a provision of EUR 15 399 000 recorded as an other non-current liability as at 31 December 2017.

(viii) Retirement entry

- 127) The calculation of pensions is based on the most probable retirement entry date.
- 128) Recommendation: We recommend calculating sensitivities based on different retirement entry scenarios for 2019.

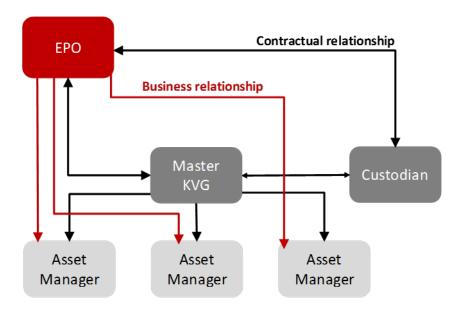
(ix) Summary

To summarise, we concur with the accounting treatment of post-employment and other long-term benefit obligations applied by the Office, but highlight the level of estimation involved. The calculation of the DBO is significantly affected by, amongst other factors, the discount rate, the mortality tables, the loading factor of the tax adjustment and the assumption as to the last salary at career end as well as by the probability of becoming a pensioner for health reasons.

2.2. EPOTIF

(a) Background

- The 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. The new EPO Treasury Investment Fund (EPOTIF) was launched in July 2018.
- 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* (in 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 and regulatory and performance reporting.



The asset managers can make strategic investment decisions. The investments need to be in line with the EPO's investment guidelines. 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 the event of any faults by the asset managers.

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

(b) Governance framework

- The EPO intends to implement for its investments the same level of control and reporting mechanism as for the RFPSS, including, but not limited to, a supervising function, quarterly performance and risk reporting, a compliance function and regular audits.
- For this reason, the EPO has implemented rules for a governance framework including besides others the following items:
- 136) 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%

- 137) The EPOTIF is allowed to use all appropriate financial assets, such as shares (listed and non-listed), bonds, loans, currencies, derivative instruments, structured and custom finance products and other hybrid instruments as well as collective investments.
- The maximum risk exposure, defined as the value at risk (one-year value at risk at a 95% confidence level), is limited to 20% of the total assets' value.
- 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 updated on a daily basis.
- The EPOTIF performance and risk reports for Q3 and Q4 2018 have been finalised and were approved by the President in CA/F 3/19 and CA/F 4/19 respectively. The reports will be submitted to the BFC for validation in May 2019. Reporting will be continued on a quarterly basis.

- 141) 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 KAGB, and is subject to the supervision of BaFin. Any breaches of limits imposed by the investment guidelines and corrective actions taken by asset managers are reported to the BFC in the quarterly EPOTIF performance and risk report.
- The set-up of risk limits has been completed (maximum 20% of the portfolio value, at a 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 EPOTIF's launch. The definition of the rules for the authorisation budget has been completed. The budget for the EPOTIF was presented to and subsequently approved by the Administrative Council in December 2018.
- Risk management is performed and any breach of limits is reported to the EPO by the *Master-KVG* on a daily basis. The *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 the asset managers. The implementation of corrective actions within the set time limit will be enforced by the *Master-KVG* and followed up by the EPO until completion. Any breach occurring in the period and corrective action taken will be reported to the BFC in the quarterly report.
- In addition to the *Master-KVG*, an internal risk and compliance assurance function will be set up to monitor and to control the operational risk management. This function will be executed by Internal Audit.
- This is complemented by the selection of the *Master-KVG* model. According to the contract and legal requirements of the KAGB, the *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.
- This is planned for Q3 2019, one year after the EPOTIF's launch. The EPO has already initiated a preselection of investment consultants who will perform the audit.

- An official guideline, the EPOTIF Governance Framework, was established and submitted to the President on 27 February 2019 for his approval.
- An official internal audit of the EPOTIF has been announced for Q2 2019. Subsequent reviews of governance policies are planned to be performed on an annual basis.

(c) Summary

- The rules for the governance framework were approved by the BFC in December 2017. The set-up of the *Master-KVG* model and of the internal structures and processes relating to the EPOTIF are market practice.
- However, the governance structures were not completely in place either when the EPOTIF was launched on 1 July 2018 or at the end of 2018. The quarterly reporting on the EPOTIF was implemented six months after the EPOTIF's launch.
- The official guideline, the EPOTIF Governance Framework, still needs to be approved by the President.
- Recommendation: A regular review of the EPOTIF Governance Framework and the internal control system relating to the EPOTIF defined therein should be undertaken.

2.3. Revenue recognition under IFRS 15

- 153) IFRS 15 replaces the requirements in IAS 11 Construction Contracts, and IAS 18 Revenue and related interpretations, containing a new set of principles on when and how to recognise and measure revenue as well as new requirements related to presentation and disclosures. IFRS 15 is effective for annual periods beginning on or after 1 January 2018.
- 154) IFRS 15 requires changes in the recognition of revenue at the EPO with regard to the recognition of filing fees, claims fees and grant fees. The EPO ran a data warehouse prepaid fees query resulting in a preliminary impact analysis of initial application on retained earnings.
- The EPO has chosen the cumulative effect method as a transition method. This led to a decrease in retained earnings of EUR 65m as at 1 January 2018. Comparative information has not been restated and is presented in these financial statements under the principles of IAS 18.

- We performed audit procedures on the new data extractions. All relevant disclosures made in the 2018 financial statements were checked for consistency with relevant IAS/IFRS requirements.
- 157) We have no recommendations.

2.4. Leases under IFRS 16

- 158) IFRS 16 replaces the requirements in IAS 17, mainly containing changes in the accounting treatment of lessees. In general, for operating leases an asset and a corresponding lease liability will have to be recognised. IFRS 16 will apply to annual reporting periods beginning on or after 1 January 2019. The EPO will apply IFRS 16 for the first time in its 2019 financial statements, using the modified retrospective approach (also used for IFRS 15).
- The EPO has assessed the impact of the new standard on the accounts. No significant impact is expected for finance leases. For operating leases under IAS 17 it was concluded that additional lease assets and liabilities amounting to approx. EUR 29m will be recognised in the financial accounts. There will be additional annual amortisation expenses of about EUR 2m and an additional finance expense of less than EUR 0.6m. The EPO expects no material equity restatements.
- We performed audit procedures on the disclosures made in the 2018 financial statements regarding their consistency with relevant IAS/IFRS requirements.
- 161) We have no recommendations.

3. GENERAL COMMENTS ON BUDGET IMPLEMENTATION

3.1. Forecast income statement (IFRSs)

- The IFRS plan figures as per CA/D 1/17 and CA/10/19 and the actual ones as per CA/60/19 are juxtaposed in Annex III/1.
- The 2018 operating loss of EUR 205m fell EUR 362m short of the forecast profit of EUR 157m. Income was EUR 119m higher than forecast (+6.3%); expenses too were higher by EUR 481m (+27.6%).

- At EUR -952m, the financial result was EUR 906m lower than forecast. This was because finance revenue was EUR 461m lower and finance costs were EUR 445m higher than forecast.
- 165) Other comprehensive income was EUR 1 286m above the forecast of zero.

3.2. Forecast balance sheet figures (IFRSs)

- The IFRS plan figures as per CA/D 1/17 and CA/10/19 and the actual ones as per CA/60/19 are juxtaposed in Annex III/2.
- Assets were EUR 386m lower than forecast (-3.1%), with non-current assets EUR 426m under plan (-3.7%) and current assets EUR 58m over plan (+24.3%). Overall, RFPSS net assets fell EUR 397m short of the forecast figure (-4.8%).
- Liabilities were EUR 9 851m higher than forecast (+78.9%). This was almost entirely because the defined benefit liability was higher than expected.

3.3. Comparison of budget as adopted and as implemented

- The basic figures (as per CA/10/19) for comparing the budget as adopted and as implemented are given in Annex II.
- 170) In CA/D 1/17, the AC adopted an authorisation budget within the meaning of Article 25(1)(a) FinRegs totalling EUR 2 280m. The actual outturn was EUR 2 384m, which is 4.5% higher than forecast.
- 171) Income from patents (Chapters 50 to 54) was EUR 71m over plan (+3.8%), while other income (Chapters 55 to 58) was EUR 25m under plan (-9.2%).
- There were underspends in all operating expenditure chapters. Totalling EUR 145m, they included one of EUR 70m for staff and one of EUR 22m for general operating expenditure.
- 173) There was a budget surplus (Chapter 49) of EUR 398m, which was EUR 228m higher than the budgeted figure of EUR 170m.

For the pension and social security schemes, the budgeted figure for income was exceeded by EUR 57m (+17%) and that for expenditure by EUR 2m (+0.7%).

3.4. Appropriation transfers

- 175) The appropriation transfers under Article 34 FinRegs are shown in Annex II/4. The figures are taken from CA/10/19.
- 176) Transfers under Article 34(1) FinRegs (within the same chapter) totalled EUR 3.6m.
- 177) 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 -3.6m.
- 178) There were no transfers under Article 34(3) FinRegs (requiring decision by the BFC or the AC).

D. INTERNAL CONTROL SYSTEM

1. GENERAL IT CONTROLS

- 179) General IT control (GITC) testing is necessary to form an audit opinion under full compliance with internationally accepted auditing standards (IASs).
- We performed our IT audit procedures for the following IT systems: SAP FIPS, EPASYS (MADRAS) and the fee capturing system (FCS).
- Detailed information about findings and recommendations has been given to the Office separately.

1.1. Access to programs and data

- 182) General system security settings as well as password parameters were audited.
- Recommendation: Active Directory password settings should be aligned with the requirements of the password policy. In addition, Active Directory and SAP FIPS password settings should either be aligned with the password policy or the password policy should be reasonably updated.
- The use of privileged access to programs and data was reviewed. The critical authorisations identified were revoked by 2 March 2019.
- 185) The process for user creations as well as profile and role assignments was tested.
- 186) Recommendation: A certain remaining functionality for team managers to perform authorisation changes should be revoked.
- 187) Recommendation: A systematic review of all authorisation changes (including newly created users) should be performed on a regular basis.
- 188) Recommendation: A special review of users assigned a certain profile should be performed and the appropriateness of these assignments should be evaluated.

- The process of user and authorisation reviews was tested. Upon recommendation of the BoA new functionality was implemented by November 2018 to log all changes to users and profiles automatically.
- 190) Recommendation: A regular and systematic review by business of users and authorisations covering all SAP FIPS roles and users should be implemented.

1.2. Change management/program development

- 191) Changes to the applications follow the Automation Governance process for demand management. We selected a combined sample of 40 changes for SAP FIPS, EPASYS, MADRAS and the FCS. For all those changes, supporting documentation was provided and no deviations were noted.
- The number of users allowed to create transportable change orders and release change orders in the development system, although it has significantly decreased compared to the 2017 financial year, still seems very high.
- 193) Recommendation: The number of users allowed to create transportable change orders and release change orders should be reviewed (and possibly reduced).
- 194) In general system openings should be used as a means to perform changes only in absolute emergencies. The number of system openings is still very high.
- 195) Recommendation: The reasons for system openings should be reviewed.
- The remaining opportunity for improvement in process design with respect to the "new" FireFighter process has been resolved by version 2.2 of the FireFighter process (as of 1 March 2019).

1.3. operations

- 197) We noted in SAP that batch interfaces had been run in error and were not completely deleted. While a new process in order to evaluate if relevant postings are affected has been designed and developed, we noted that for all identified batch jobs with error status, corresponding corrective actions had been taken. In addition, we noted that for 23 financially relevant tables (according to SAP note 112 388) table logging is not enabled.
- 198) Recommendation: The specific relevance of the financially relevant tables (according to SAP note 112 388) for the EPO should be reviewed.
- 199) Recommendation: It should be analysed whether additional financially relevant custom tables exist that should also be logged.

2. RFPSS GOVERNANCE

2.1. Proper working of the internal control system

200) We have checked a sample of transactions including acquisitions, disposals and corporate actions, and found no exceptions. All transactions were properly executed and documented in line with all regulations given.

In particular: The signature of the respective portfolio manager was on the order, all required signatures from the back office were documented in writing and all data for the transactions was correctly recorded in the system.

2.2. Daily compliance checks and weekly/quarterly reports

- We have reviewed all daily compliance checks carried out in the year 2018 and tested if all exceptions were properly reported in the weekly and monthly reports of the compliance officer. We have checked that on any working day those checks were executed.
- As in the past, only passive breaches occurred, but were corrected in due time. One passive breach occurred shortly before the year end and was corrected on 10 January 2019.

In particular: Compliance checks were carried out for each working day of 2018, the last working day being 18 December, all checks were signed on the front page, all exceptions were noted on the front page as long as they existed, and all exceptions were reported in the reports of the compliance officer.

2.3. Consistency and quality of quarterly reports

- We have reviewed the reports of the Fund Administrator for the third and fourth quarters of 2018 for consistency and accuracy.
- 205) We found the reports to be consistent with past reports. We were also able to reconcile the holdings, the returns and the risk measures of those reports with the system records of funds' administration and found no exceptions.

2.4. Risk management developments within the RFPSS

Market risk, counterparty risk and currency risk were, as in the past, strictly monitored, reported and managed consistently with the past. Specific attention was given to operational risk; no incident was noted in 2018.

2.5. Changes implemented by the Fund Administrator

No significant changes took place in 2018. The asset allocation study did not indicate an opportunity to invest in further asset classes including private equity or debt. The portfolio managers invested in line with past strategies close to the benchmarks and most strategies executed underperformed the respective benchmarks. According to long-term statistics presented by the Fund Administrator, such underperformance on average happens about three times every ten years. Since nobody knows of it in advance there is no way to avoid such underperformance.

2.6. Review of the code of conduct for employees of the RFPSS administration

All employees are required by the code of conduct, issued by the Fund Administrator and presented to the Supervisory Board, to report any investment carried out for themselves and related individuals at any time in due course. Once per year they have to sign a confirmation that they have made a full disclosure. All employees have to report to the Compliance Officer, and the Compliance Officer has to report her transactions to the Compliance Assurance Officer. The Compliance Assurance Officer, in addition, reviews once a year the Fund Administrator's private dealings. The recipients of the reports check the rationale for each transaction and discuss it with the respective employee.

2.7. Mission of the compliance and risk assurance officer

- 209) The compliance and risk assurance officer is still not working based on a written mission statement, defining precisely his role and mission in relation to the RFPSS.
- 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.

3. CO-OPERATION WITH INTERNAL AUDIT AND OVERSIGHT

- 211) Principal Directorate IAO informs us of its general annual audit programme, the one for the RFPSS and its medium-term audit plan, and co-ordinates its annual programmes with our own audit plans in order to avoid any duplication.
- 212) We receive all audit reports and are given information in brief on all fraud audits. We are sent further information on request.

E. OPERATIONS

1. PATENT GRANT PROCESS

1.1. Goal of the audit

- The Office's core activity is the search and examination of patent applications and the grant of European patents. The patent grant process at the Office comprises six major steps, as follows: filing, search, examination, opposition, revocation and appeal. The internal organisational structure of the patent grant process changed from 1 January 2018. A number of different key performance indicators (KPIs) have been developed and are monitored by the Office for the patent grant process. The most important ones relate to the backlog and quality.
- The goal of the audit is to perform a follow-up review on the Office's patent grant process and evaluate the Office's key KPIs for the years 2016 to 2018, in particular the backlog and quality KPIs.

1.2. Audit results

(a) Backlog

- As a result of the audit performed, we have identified that the productivity and efficiency levels of the patent grant process as a whole increased in 2018 compared to the previous years, which is also in line with the strategy of the Office set by the management. In particular, the processing time per file (product) decreased by 3.7% from 2016 to 2018 and the products processed per examiner increased by 7.4% from 2016 to 2018.
- The backlog has also decreased in recent years as a result of the increased productivity and the implementation of the Early Certainty prioritisation system. The overall backlog decreased from 222 115 files as at 31 December 2016 to 155 885 files as at 31 December 2018, which represents a significant reduction of approx. 30%.

- According to management, the root causes of this positive development are the introduction of the new career system in 2015, improvements and developments in the tools used by the Office, the Early Certainty prioritisation system followed by the Office as well as planned overproduction in the process, i.e. the number of finished files exceeds the number of incoming files due to an increase in staff levels and more time spent on core activities.
- One of the possible reasons for the change is the focus put on production and efficiency measures in recent years (i.e. the production plan for 2018 was 445 000 products searches, examinations and oppositions, which constitutes a 10.8% increase compared to the year 2017). From 2019 on the strategy of the Office will be focused more on quality. The production plan for the year 2019 is 417 000 files, in order, among other reasons, to enable the examiners to devote adequate time to the processing of files.
- At the same time, as per the analysis performed in respect of the backlog in January and February 2019 for the priority 1 group, it was identified that there is a slight tendency towards an increase in the number of backlog files as at 28 February 2019, compared to the number of backlog files as at 31 December 2018. There is a risk that, due to the excessive focus on quality, the files might not be processed in a timely manner, which increases the risk that the backlog will grow in the coming years.
- 220) Recommendation: 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.

(b) Prioritisation system

As was identified as a result of the audit, there is a file prioritisation in terms of the priority groups determined by the Early Certainty system, according to which each examiner gets a pre-sorted list of files with the corresponding ranking in accordance with the implemented priority system, indicating what is to be processed. However examiners can choose the files that are to be processed by them independently from the ranking set by the system. In 2017 and 2018 it was recorded by the system that the examiners selected on average the 11th file in the file ranking stock allocated to them.

This implies that there is a degree of freedom in the selection of files for the examiners.

(c) Quality

- The quality KPIs of the patent grant process at the Office are defined and monitored on the Quality Dashboard. In quality KPIs there is a distinction between the KPIs regarding Conformity Assurance for Search and Examination (CASE), where the quality of files is assessed by examiners in a peer review process, and quality audit KPIs, determined based on the results of the audits performed by Directorate Quality Audit.
- As was mentioned above, the backlog and productivity KPIs developed positively between 2016 and 2018. At the same time the quality KPIs, such as quality of search and quality of grants, determined as a result of the audits performed by Directorate Quality Audit, decreased significantly from the second half of 2017 on. As at 30 September 2018 the quality of grants KPI was 76.6%, with the target set at 87%.
- Having analysed both types of quality KPI it was identified that the CASE KPIs in the years 2016 to 2018 have quite high values, i.e. the percentage of CASE-conforming searches was 98% as at 31 December 2018 and 98.2% as at 31 December 2017, with a target of 95%; the percentage of CASE-conforming AGRAs (checks on grants) was 96.4% as at 31 December 2018 and 97% as at 31 December 2017, with a target of 95%.
- As a result of the comparison of the two types of KPI performed it was possible to note that the values of both show a decrease in quality, albeit a very small deterioration in the peer review indicator.
- The rather large decrease in the KPIs as measured by Directorate Quality Audit gives rise to concern, also in the context of this negative change not being clearly present in the CASE indicators.
- From 2019 on the strategy of the Office will be focused more on quality. The production plan for the year 2019 is 417 000 files, in order, among other reasons, to enable the examiners to devote adequate time to the processing of files. This is a reduction from the goal in 2018 of 445 000 files.

Recommendation: 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.

2. PURCHASE-TO-PAY PROCESS

2.1. Goal of the audit

We performed a follow-up review to the prior years' audit results, taking into account the changes in the purchasing process that have taken place. This includes a review of the KPIs, which relate to efficiency measures, based on the process mining analysis and a review of the measures taken by the Office in response to the prior years' findings.

2.2. Audit results

- As we were informed by the management of the Office, the roll-out of the IGR2P project in procurement started during the course of the prior year's audit. IGR2P's objective is to improve the level of automation throughout the purchase-to-pay process and involved three key steps/sub-projects:
 - 1. Introduction of OCR process (optical character recognition) for invoices
 - 2. Establishment of vendor invoice management (VIM) system
 - 3. Goods receipt process definition and automation in SAP
- As per the results of our follow-up audit we have identified that, besides the improved use of the MM module in the SAP system (2018: 60% of documents; 2017: 52%), in particular it was possible to observe one significant change in the process compared to the prior year. The "Manual entering of invoices" KPI significantly improved in 2018 (by 71% from 99% of the whole population of cases in 2017 to 28% of the whole population in 2018) mainly due to the introduction of the new VIM system and implementation of the OCR process.
- 233) Nevertheless, within the OCR process a number of manual corrections and interventions are still needed, which might lead to missed payment deadlines and discounts for the Office as well as a decrease in efficiency in the purchasing process.

- Additionally, we have identified as a result of the audit that a high number of manual corrections of the purchase order occurred in the SAP system after clearing of the open items and after invoice receipt (corrections of the purchase order after clearing of the open items occurred in 24% of the documents in the whole population in 2018 and corrections of the purchase order after invoice receipt occurred in 33% of the documents in the whole population in 2018).
- 235) It should be noted that the use of the MM and FI modules in SAP for posting purchasing transactions is not heavily regulated within the Office. We have observed a high number of direct postings without reference to purchase orders.
- Use of the MM module was promoted during training sessions in 2018. The training sessions include training of all Office buyers on PO handling and separation of expense management from the procurement process as well as clarification of Article 22a exception handling.
- In general, there has been no major improvement in the purchase-to-pay process. To illustrate this, we note that:
- There has been a marginal improvement in late payments, which in 2018 were at 39% compared to 41% in 2017. Late payments have been calculated with seven days' goodwill. In accordance with better practice there should be <6% of such cases.
- 239) The number of different payment options increased to 69 in 2018, versus 59 in 2017.
- Based on the data mining analysis from the process risks perspective, there were 4 470 cases identified in 2018 (2017: 1 521 cases) with changes in purchasing documents after clearing open items, i.e. changes made after the invoice was settled or after the journal entry was closed.
- In conclusion, the recommendations from previous years still apply. We note that the purchase-to-pay process has not been prioritised by the Office, and the effect of steps taken has been minor.

3. IT

3.1. IT overall

(a) IT roadmap

- In June 2018 the former President provided the Administrative Council with CA/56/18, "IT Roadmap Final report", stating that the IT roadmap was now entering its final phase. As a result of the change of President, currently IM does not have a definitive operational plan for 2019-2021 as this will be part of the new President's overall strategy. The new Strategic Plan 2023 for the Office embedding IT is currently being developed and will be presented to the Administrative Council in June 2019.
- An additional budget of EUR 1m is planned for 2019 to finish delivery of the Hosted Filing Submission project. IM is confident of being able to finish the majority of the IT roadmap as stated in CA/20/18. Finalisation of the IT roadmap has been planned for 2019.

(b) IM operational plan

- The Strategic Plan 2023 to be presented to the Administrative Council will include a multi-annual work programme for the EPO from which the activities for IM will be derived. To bridge the intervening period, IM restructured its operational plan in October 2018 to present the current challenges in IT to the President, differentiating strategic IT initiatives from operational ones.
- According to IM, some operational projects were not included in the plan presented in October 2018 on purpose. Operational projects listed as active projects with a higher budget estimate were excluded, whilst projects with smaller budget estimates were included in the operational plan presented.
- The operational plan presented in October 2018 will be the basis for IT work until the new EPO Strategic Plan 2023, which will be defined by June 2019.

- In October 2018, the ongoing projects and planned demands at the time were analysed by IM and grouped into six different areas. These programmes and grouping were not reflected in the operational plan as at October 2018 and were still structured according to the former seven programmes in the current project portfolio from February 2019. This complicates traceability for all parties involved and impairs the transparency of the approach. Moreover, we noted that the operational plan presented in October 2018 was missing some projects that had started already.
- 248) Recommendation: Providing more transparency in the planning and management of projects within IM is recommended. Stringent project management and follow-up should be implemented.
- 249) Recommendation: 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.

(c) IM budget

The planned IM budget for 2019 increased compared to the budget spent last year by 2.44% to EUR 130m. As new (operational) plans are being worked on, it is very likely that the IM budget will be revised in the coming weeks.

3.2. Data centre transition

- 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 to a Tier IV campus. 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 management of all systems and applications will remain the full responsibility of the EPO, managed by IM. In order to manage this transition the project P0737, "New Data Centres", was set up.
- In the 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) were estimated by IM.

(a) Current status

- The project is currently in phase one of three. The lease and PPI agreements with the State of Luxembourg have been signed, and development works in the data centre facilities as well as the WAN procurement were completed on time. The current business case and project initiation document (PID) are still draft pending approval by the Executive Board because the project had to accommodate substantial changes due to recent EPO decisions which impact the scope of the project. Based on the latest information the project is facing a delay of at least eight months.
- The PID is still draft pending approval by the Executive Board. Even when the project started, the PID was still being changed during the ongoing initiation phase. At the time of the audit, the seventh version of the document was currently under development.
- 255) Based on the documents provided the critical success factors are addressed adequately within the project and appropriate actions are taken into account conscientiously during the planning, implementation and the future operation of the data centre.

(b) Data recovery site Munich

- As part of the EPO Strategic Plan currently under development, the decision as to the future location of the data recovery site in "December 2018. Work package 3 Disaster Recovery" is temporarily on hold. In the meantime action plans have been already defined to ensure that the current data recovery sites continue to be operational at all times.
- The outsourcing of the data recovery site is still included in the budget and schedule of the "New Data Centres" project. These plans will be adjusted accordingly as soon as the final decision has been made.
- Time planning, scope and budget need to be adjusted by a project change request compliant with the EPO project management method after the new building strategy has been published.

3.3. General Data Protection Regulation (GDPR)

- The new European General Data Protection Regulation (GDPR) has been in force since 25 May 2018. Even though the EU regulations do not directly apply to the EPO as an international organisation, basic principles have been implemented, as European citizens' data is processed at the EPO.
- In the spirit of transparency, the EPO has implemented a data protection register to record all the processing operations carried out on personal data. This register can be accessed by EPO employees on the EPO intranet but it is not accessible to the data subjects. Nevertheless, upon request the information can be provided to the data subjects (public), thus ensuring the right to information.
- For many data processing activities, not all relevant information is included in the data protection register. We noted that especially older processing activities lack information.
- 262) Recommendation: 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.
- 263) IM is currently only involved in the GDPR analysis on a high-level basis. Necessary implementation, such as deletion concepts, is not prepared by IM.
- Recommendation: 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.

3.4. IT risk management

IM established a new IT risk management framework in 2018 based on international standards such as COSO ERM and COBIT for risk. Implementation of IT risk management is being performed in three phases: (a) introduce and explain, (b) guide and strengthen and (c) embed and refine.

- The first phase, "introduce and explain", started in the course of 2017. The aim of the phase was to generate a common understanding of risk management terms, concepts and processes at CoDir level.
- The goal of the second phase, "guide and strengthen", is to complete a risk register for all areas within IM. IM started this phase in the area of Service Operations. All other areas within IM should be covered by the end of 2019.
- The purpose of the third phase, "embed and refine", is the consistent implementation of the established risk management system. IM's risk management is still at an early stage.
- The risks in the risk register are not clearly defined. For some risks the origin of a potential risk is defined as a risk, not the risk itself.
- 270) Recommendation: 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.
- 271) IM's risk management must continue to be pushed forward at full speed due to the importance of a well-functioning IT landscape for the EPO.
- In order to achieve a well-functioning IT landscape for the EPO, risk management should be supported and pushed forward. The risk management and risk management procedures should be followed as planned.

4. BUILDING PROJECTS

4.1. "New Main building" project in The Hague

273) Based on our review, project management for the "New Main building" development project in The Hague can be regarded as adequate and successful. For individual points we identified areas for improvement for further building projects.

- During the due diligence on the old main building, an asbestos investigation was executed, focused on observable inventory only and not covering a risk assessment for the demolition of the property. Due to the incompleteness of the asbestos investigation, the inventory report explicitly points out its incompleteness and recommends that an additional survey (type B investigation), which covers an indepth investigation, needs to be executed prior to renovation or demolition. More asbestos has been discovered within the façade during the demolition phase, which has led to time delays and increased the risk of overrunning the project budget. Prior to the demolition of the old main building, a detailed examination of asbestos contamination should have been performed in order to optimise the budget and the planning process.
- 275) It appears that no detailed planning phase was conducted by the EPO and its contractors. As a result, a large amount had to be budgeted for contingencies.
- The project budget was mainly based on the costs calculated in the scenario analyses and did not include profitability calculations.
- 277) Recommendation: For the continuing demolition process, we recommend initiating a detailed asbestos investigation soon, in order to prevent further delays.
- 278) For further development projects, we recommend performing a detailed planning phase before approval as well as starting the tender phase. In this detailed planning phase, user requirements should be compiled in detail and reliable cost and schedule estimations made.

4.2. Building costs

For the buildings in Munich, the average annual maintenance cost in the years 2016-2018 was EUR 22.97/m² gross floor area. The values are within the expected benchmarks. The maintenance costs for The Hague are not considered resilient because of the ongoing development project and were excluded from benchmarking.

- The annual environmental reports offer a high level of transparency regarding sustainability/energy consumption for existing buildings. The Shell building in The Hague as well as the PschorrHöfe and the main building in Munich are of a certain age. For this reason, the buildings were not built according to the latest energy specifications (e.g. German *EnEV*). However, the energy consumption of all EPO buildings is continually monitored. Management decisions regarding energy efficiency measures are supported by suitable energy management software.
- It is currently too early to evaluate the New Main in terms of energy consumption. According to interviews with the facility management team, life cycle maintenance and energy costs were only considered marginally in the planning phase. Increased operating costs might therefore occur. As the façade is largely made of glass, higher heating and cooling costs are possible.

Recommendation: 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.

III. STATUS OF PREVIOUS YEARS' FINDINGS

- 282) 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).
- 283) 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/20/18 (STATUS 31.12.2018), AND AUDITORS' RESPONSES

Reference	Title	Status 31.12.2018	BoA's/expert's comments
108	We recommend using SAP information for open leave balance instead of a flat rate.	Closed. Besides staff expenses and the leave balance, the number of staff will be based on SAP information.	Closed.
136	Active Directory and SAP FIPS password setting should be aligned with the password policy or else the password policy should be reasonably updated.	Closed. As from 28 July the SAP FIPS password setting is aligned with the password policy.	No further comments.
		For EPASYS (MADRAS) and the FCS, solely single sign-on (SSO) via Active Directory is used. The SSO login procedure is aligned with the password policy, as confirmed by the KPMG management letter of April 2018.	

Reference	Title	Status 31.12.2018	BoA's/expert's comments
141	The "FireFighter" process should be extended to include a final review of performed actions, via Security Audit Log, once the SAP_ALL profile has been revoked.	Closed. Follow-up to extend the FireFighter process (SFF) has been done by adding the final review as an additional stage in the SFF (workflow) template. The EPO Emergency User account is used instead of the SAP_ALL profile for ad-hoc changes in production. The Security Audit Log tracks the changes made.	Closed.
142	Debugging rights in the production system should only be assigned (if absolutely necessary) with Activity 03, but never with Activity 01 or 02.	Closed. The authorisation has been removed from the 27 dialog/service users as recommended.	Closed.
143	To ensure traceability within SAP FIPS, the critical authorisation to delete change logs should not be assigned to dialog/service users.	Closed. The authorisation has been removed from the 11 dialog/service users as recommended.	Closed.
147	In future, all profiles assignments should follow a predefined process that ensures appropriate segregation of duties by clearly defining roles and responsibilities within the process.	Closed. A strict request process has been introduced by the D141 APEX MADRAS support desk asking for a clear justification from managers if profiles are requested or changed. Further, it has been decided to extract and store all access right changes made on a monthly basis to keep a change log.	No further comments.

Reference	Title	Status 31.12.2018	BoA's/expert's comments
148	A process/check should be implemented for the fee capturing system to ensure that all users are reviewed to determine their appropriateness.	Closed. Work documentation for FCS user and authorisation review procedures was finalised at the end of 2018 and signed off in January 2019. The corresponding process has been put in place. The first review according to this procedure was done in January 2019.	Closed.
152	The number of users authorised to create transportable change orders and release change orders in the development system should be reviewed (and possibly reduced).	Closed. CABS agreed on the scope of users requiring authorisations for change orders (CABS competence centre, members of the managed service, etc.). The authorisations for all users outside the scope have been removed.	Closed.
155	We recommend that all system openings follow the "FireFighter" process and that the parameter CCCORACTIV is always set to "1" to ensure a sufficient audit trail.	Closed. This is covered in the FireFighter process (SFF). The Security Audit Log tracks all changes made by the EPO Emergency User account.	Closed.
157	Direct table changes and changes using the "Repair" function should follow the "FireFighter" process.	Closed. The FireFighter process must be followed for these changes.	Closed.

Reference	Title	Status 31.12.2018	BoA's/expert's comments
170	We recommend adding a chart on risk-return measures to the report, i.e. showing the development of the relative Value at Risk and the relative performance over time for each asset class.	Closed. As a result of recent enhancements in regular RFPSS reporting documents (e.g. extended quarterly risk reporting) in addition to reporting provided by external companies such as PPCmetrics and BNP the recommendation is closed.	Closed.
177	We recommend calculating the VaR percentage on a consistent basis, using the 95th percentile and projected over a one-month horizon (1/12 of 252 business days).	Closed. This recommendation will be implemented in future reporting.	Closed.
180	We recommend formally implementing a process with a joint ad-hoc committee for significant cases.	Closed. D 434 informs and consults D 531 on an ad-hoc basis when a disciplinary case may have an impact on relations with national authorities.	Closed.
196	We recommend that the Office reduce the number of users with access rights they do not strictly need.	Ongoing. The analysis of the role allocations for salary-relevant information types ("write" and "read") has been performed. The technical implementation of the limitations for "write" access has been completed by IM/CA-BS, but is pending for "read" access. Further limitations were applied to personal file access.	Ongoing.

Reference	Title	Status 31.12.2018	BoA's/expert's comments
197	We recommend that the Office install detection controls in instances where segregation of duties conflicts cannot be avoided.	Ongoing. Detection control has been identified and designed. Implementation has been requested with IM.	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. The Integrated Contract Management project, P0738, was merged with the Finance 360 project in November 2018. There is a dependency on the roll- out of S4/HANA.	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 due to take place in 2019.	Ongoing.
238	We recommend that the 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 due to take place in 2019.	Ongoing.

Reference	Title	Status 31.12.2018	BoA's/expert's comments
239	We recommend continuing to review contracts with externals to ensure the compliance check is completed in a timely manner.	Closed. Continuous review in place. Compliance ensured through data processing agreement templates aligned with the new regulation and through written guidance on the use of those templates. New data protection guidelines (DPG) could reflect the need for data protection aspects to be taken up early in the procurement processes.	Closed.

B. OFFICE'S FOLLOW-UP REPORT ON CA/20/17 (STATUS 31.12.2018), AND AUDITORS' RESPONSES

Reference	Title	Status 31.12.2018	BoA's/expert's comments
135	In order to rely on the effectiveness of the controls, it is recommended that consideration be given to implementing a template for a process description and a controls matrix, both in line with the internationally applied COSO framework.	Closed. The Office has performed an analysis of the COSO guidance for internal control systems, and found it to be primarily designed to support companies operating in the US. Implementation at the EPO would not bring the expected benefits. After consultation with the assistants of the BoA, it was decided not to proceed with implementation of the COSO framework at the EPO.	Closed.

Reference	Title	Status 31.12.2018	BoA's/expert's comments
145	For Application Management, a process considering a follow-up of batch jobs with error status, especially files older than 6 months, should be implemented in order to evaluate if relevant postings are affected.	Closed. The process for the follow-up of batch jobs with error status has been defined including the corresponding roles/tasks and reviewed by the main players. CABS finalised the documentation in April 2018.	Closed.
152	A rearrangement of the process (e.g. using an electronic workflow) should be considered to simplify and augment the efficiency of this investment process.	Closed. The RFPSS make widespread use of electronic workflows and thorough documentation. A review of the electronic workflows by the Fund Administrator has shown that, based on current volumes and requirements, further automation would not be costefficient.	Closed.
153	At least every 10 years the value of the IT systems and its providers should be reviewed against fees paid and alternatives available.	Closed. Preparation for launching a market study with the support of an external consultant has started.	Closed.
175	We recommend that the EPO initiate a project to implement major changes in the purchase-to-pay process, and fully utilise the possibilities of electronic procedures.	Closed. IGR2P was closed by the end of 2018. Further improvements in the purchase-to-pay process will be achieved in the dedicated workstream of the Finance 360 project.	Closed.

Reference	Title	Status 31.12.2018	BoA's/expert's comments
218	We recommend that a decommissioning and archiving strategy should be defined to ensure that legal requirements for data retention could be met in future.	Ongoing. After 30 September 2018, IM had further exchanges with DG 5, clarifying that: - Data retention without time limits is not compliant with the DPG (Art. 4(1)e))	Ongoing.
		- New DPG in 2019 will require IT systems to measure archiving duration and support deletion, anonymisation and/or encryption of personal data.	
228a	We recommend that a clear risk evaluation procedure and documented risk rating should be defined to make the risk management more transparent and traceable and to ensure that fund decisions are made.	Closed. The IMRISK management framework (including the risk evaluation procedure and documented risk rating) is ready to go operational within DSO (Directorate Service Operations).	Closed.
		The proposal to start the process in DSO has passed the Comité de direction (CoDir) and a kick-off meeting for implementation took place in September.	

Reference	Title	Status 31.12.2018	BoA's/expert's comments
228c	We recommend that risks should be registered and managed by using one tool to avoid double work	Closed.	Ongoing.
	and to ensure a complete overview.	The IM risk register (SharePoint) serves as the single repository for risks identified within IM.	The risk management procedures have started within DSO. Vulnerabilities have not been
		The register is now populated with risks identified at Comité de direction (CoDir) and DSO level. Further IM teams will follow, contributing to the same risk management process.	merged into a single risk management register yet.
228d	We recommend that a systematic approach should be implemented by the Organisation-wide risk	Pending.	Ongoing.
	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.	Business Information Technology (BIT) is currently rolling out the risk management process within BIT, to be operational at the end of 2019.	
		An initiative for EPO-wide risk management has been started to which BIT will further contribute.	
286	The annual report should provide the SB with more detailed information on activities (nature, targets,	Closed.	Closed.
	objectives, participants) in order to assess their relevance.	The Supervisory Board expressed its high satisfaction with the more detailed reports provided in 2018.	
290	The results of user satisfaction surveys should be presented more explicitly and comprehensively in	Closed.	Closed.
	order to evaluate activities.	Can be closed as indicators on lectures at external events will be included in the 2019 report.	

Reference	Title	Status 31.12.2018	BoA's/expert's comments
292	The performance-measurement system should allow for an improvement in the provision and conditions of training and provide with information regarding the impact of 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.	Pending. Work has started. New strategy is under discussion and will be in line with the Office-wide strategy paper.	Ongoing.

C. OFFICE'S FOLLOW-UP REPORT ON CA/20/16 (STATUS 31.12.2018), AND AUDITORS' RESPONSES

Reference	Title	Status 31.12.2018	BoA's/expert's comments
II.D.5.6 277	We recommend defining and documenting a clear timeline and scope of the Workforce Planning project.	Closed. Workflows were developed. The cornerstone of the project is the recruitment targets within DG 1, our core business, to ensure long-term sustainability. In addition, the workforce planning process will contribute to the recruitment targets presented in the December orientation paper from the President.	Closed.
II.D.8.3 316	We recommend defining a minimum standard of IT security measurements for each classification level for applications.	Closed. This is covered by the secure SDLC and the software security requirements baseline documentation published on the EPO Wiki.	Closed.

D. OFFICE'S FOLLOW-UP REPORT ON CA/20/15 (STATUS 31.12.2018), AND AUDITORS' RESPONSES

Reference	Title	Status 31.12.2018	BoA's/expert's comments
II.D.2.1	We recommend considering a move generally away from paper proof of control to electronic documentation only. The costs of changing to electronic documentation need to be considered.	Closed. Enhanced audit trail facilities are available in the Camra/Antares and NeoLink systems. Based on current volumes and requirements, further automation would not be cost-efficient.	Closed.
II.E.1.3	A central function (single-owner process) for the registration of requests and appeals should be implemented.	Closed. Single-owner process by means of a common e-tool and standardised workflows has been introduced. A working version of the dashboard has been prepared and is available. Because of the independency of external judges, they maintain their own process of registration but use the same tool.	Closed.
II.E.3.2	We recommend that procurers be given instructions on the process and training on the different award procedures.	Closed. A yearly training plan for Central Procurement has been set up and deployed.	Closed.

Reference	Title	Status 31.12.2018	BoA's/expert's 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.	Ongoing. 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.	Ongoing.
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. The supplier monitoring system has been deployed further.	Ongoing. The supplier monitoring system has not been deployed fully.
II.E.3.3	Design and embed a professional "floating" licences-management process in order to be compliant and maximise the value of the number of licences.	Closed. Within SIM (DSO) there is a dedicated team responsible for the licences-management process. Their responsibility is to provide appropriate support for the business, whilst at the same time ensuring the Office is compliant with the different software licence models.	Closed.
II.E.3.3	The Central Procurement strategic roadmap should be enriched with a market and supplier analysis and in-depth procurement category plans.	Ongoing. The introduction of category management has been postponed to Q1/2019.	Ongoing.

IV. SUMMARY AND PRIORITY OF OUR RECOMMENDATIONS

- 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		
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.	2	Agreed. The new career system assumption is one of the key assumptions reviewed every two years in the context of the actuarial valuation. Further, the assumption (50% old career system – 50% new career system) will be reviewed in the context of the 2019 IFRS accounting measurement.
128	We recommend calculating sensitivities based on different retirement entry scenarios for 2019.	2	Agreed. The early retirement assumption is currently reviewed in the context of the actuarial valuation.
152	A regular review of the EPOTIF Governance Framework and the internal control system relating to the EPOTIF defined therein should be undertaken.	2	Agreed.

183	Active Directory and SAP FIPS password settings should either be aligned with the password policy or the password policy should be reasonably updated.	2	Agreed. Follow-up is in progress.
186	A certain remaining functionality for team managers to perform authorisation changes should be revoked.	2	Implemented. The revocation of these rights has been implemented in production in the April release of MADRAS 5.80.
187	A systematic review of all authorisation changes (including newly created users) should be performed on a regular basis.	1	Implemented as at 1 January 2019.
188	A special review of users assigned a certain profile should be performed and the appropriateness of these assignments should be evaluated.	2	Agreed. The review will be finished at the end of May and inappropriate assignments will be corrected.
190	A regular and systematic review by business of users and authorisations covering all SAP FIPS roles and users should be implemented.	2	Agreed. Preparatory work has started to enable and ensure a regular and systematic review by business on at least an annual basis as of 2019.
193	The number of users allowed to create transportable change orders and release change orders should be reviewed (and possibly reduced).	3	Agreed. Follow-up is in progress.

The reasons for system openings should be reviewed.	1	Implemented. 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.
The specific relevance of the financially relevant tables (according to SAP note 112 388) for the EPO should be reviewed.	3	Agreed. The review will be done by the end of May 2019.
It should be analysed whether additional financially relevant custom tables exist that should also be logged.	3	Agreed. The analysis will be bundled with the above review by the end of May 2019.
REPSS		
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.	2	Implemented.
	The specific relevance of the financially relevant tables (according to SAP note 112 388) for the EPO should be reviewed. It should be analysed whether additional financially relevant custom tables exist that should also be logged. RFPSS 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	The specific relevance of the financially relevant tables (according to SAP note 112 388) for the EPO should be reviewed. It should be analysed whether additional financially relevant custom tables exist that should also be logged. RFPSS 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

	Patent grant process		
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.	2	Agreed.
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.	2	Agreed.
	IT		
248	Providing more transparency in the planning and management of projects within IM is recommended. Stringent project management and follow-up should be implemented.	2	Agreed. Follow-up is in progress and in line with the strategic plan requiring transformation of the IT operating model, in terms of structure, governance and processes as from the second half of 2019. Further, automation governance will be simplified to allow more transparency and effectiveness, including an Executive Board with a strong focus on steering the effective delivery of strategic projects.

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.	2	Agreed. Follow-up is in progress. As part of defining the new project process, the project management artefacts and reporting are being reviewed and updated. The recommendation will be taken into account as part of the definition of the new process.
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.	1	Ongoing. The register is under review to fill in fields which are essentially missing in the old entries, back to 1992.
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.	2	Agreed.
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.	1	Agreed. Follow-up is in progress. High-priority risk statements have been revised; lower-priority risks will follow.

	Buildings		
277	For the continuing demolition process, we recommend initiating a detailed asbestos investigation soon, in order to prevent further delays.	1	Agreed.
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.	2	Agreed. It is noted that the New Main includes many energy-saving innovations: solar panels, aquifer thermal energy storage and high-quality glass in the façade to regulate energy intake/output.

The Hague, 11 April 2019

Board of Auditors

H. Schuh O. Hollum F. Angermann

V. OFFICE PRESIDENT'S ADDITIONAL EXPLANATIONS AND REASONS

285)

VI. RECOMMENDATION FOR PUBLICATION

- 286) This report makes particular reference to
 - CA/10/19 Accounts for the 2018 accounting period Budget implementation statement
 - CA/60/19 Accounts for the 2018 accounting period Financial statements.
- 287) Unlike CA/60/19, CA/10/19 is not intended for publication.
- 288) We consider that our report can be published.

VII. ANNEXES

289) 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 I Year-on-year comparison, balance sheet and income and expenditure account (in EUR '000s)

Annex I/1 Income statement

2018	2017	2016	2015
1 935 703	1 859 900	1 812 892	1 725 112
68 736	72 823	75 593	68 586
10 689	6 665	8 101	6 579
3 047	2 280	2 270	2 268
(1 907 840)	(1 879 485)	(1 647 830)	(1 672 037)
(63 060)	(46 353)	(47 247)	(53 917)
(252 554)	(222 805)	(213 220)	(222 260)
(205 279)	(206 975)	(9 441)	(145 669)
21 104	695 845	563 345	245 973
(973 434)	(372 443)	(414 483)	(321 811)
(952 330)	323 402	148 862	(75 838)
(1 157 609)	116 427	139 421	(221 507)
1 285 661	(346 985)	(2 980 737)	4 766 714
128 052	(230 558)	(2 841 316)	4 545 207
	1 935 703 68 736 10 689 3 047 (1 907 840) (63 060) (252 554) (205 279) 21 104 (973 434) (952 330) (1 157 609)	1 935 703	1 935 703

Annex I/2 Balance sheet

	2018	2017	2016	2015
ASSETS				
NON-CURRENT ASSETS				
Property, plant and equipment	661 847	647 241	576 780	546 940
Intangible assets	38 382	50 444	48 798	53 333
RFPSS financial instruments	7 706 874	7 969 841	7 028 156	6 319 492
RFPSS other assets	613	845	888	871
RFPSS restricted cash	200 583	223 246	272 510	271 660
RFPSS financial liabilities	(5 874)	(07)	(9 323)	(83)
RFPSS other liabilities RFPSS net assets	(426) 7 901 770	(97) 8 193 835	7 292 203	(82) 6 591 858
N 1 00 het assets	7 301 770	0 190 000	7 292 203	0 331 030
Bonds	2 460 194	1 880 863	1 571 218	1 302 676
Home loans to staff	88 186	87 230	87 716	92 631
Other financial assets		58 000	77 000	
Other assets	86 757	140 088	117 290	101 264
	11 237 136	11 057 701	9 771 005	8 688 702
CURRENT ASSETS				
Trade and other receivables	154 920	172 122	162 200	160 521
Bonds		379 222	234 942	263 676
Home loans to staff	7 928	7 648	7 392	7 454
Other financial assets	58 000	87 000	318 000	275 200
Prepaid expenses	19 334	16 615	15 073	13 043
Cash and cash equivalents	54 859	2 291	19 596	70 073
	295 041	664 898	757 203	789 967
TOTAL ASSETS	11 532 177	11 722 599	10 528 208	9 478 669
EQUITY AND LIABILITIES EQUITY				
Retained earnings	(2 840 919)	(1 617 870)	(1 734 297)	(1 873 718)
Other components of equity	(7 963 292)	(9 248 953)	(8 901 968)	(5 921 231)
TOTAL EQUITY	(10 804 211)	(10 866 823)	(10 636 265)	(7 794 949)
NON-CURRENT LIABILITIES				
Defined benefit liability	20 840 775	21 087 635	19 716 472	15 828 589
Salary Savings Plan obligation	86 393	79 564	58 245	44 145
Other employee-related liabilities	23 581	38 348	21 732	12 366
Finance lease liabilities	1 854	2 437	2 369	1 505
Provisions				93
Prepaid fees	584 436	654 336	713 772	799 002
	21 537 039	21 862 320	20 512 590	16 685 700
CURRENT LIABILITIES				
Other employee-related liabilities	164 988	155 244	129 067	110 987
Trade and other payables	202 081	219 629	182 395	164 560
Finance lease liabilities	1 085	3 317	4 586	5 491
Provisions	12 776	6 690	7 450	30 821
Prepaid fees	418 419	342 222	328 385	276 059
	799 349	727 102	651 883	587 918
TOTAL LIABILITIES	22 336 388	22 589 422	21 164 473	17 273 618
TOTAL EQUITY AND LIABILITIES	11 532 177	11 722 599	10 528 208	9 478 669

Annex I/3 Statement of cash flows

	2018	2017	2016	2015
CASH FLOWS FROM OPERATING ACTIVITIES				_
Profit/loss for the year	(1 157 160)	116 427	139 421	(221 507)
Adjustments for:				
- depreciation and amortisation	63 060	46 353	47 247	53 917
- disposal of property, plant and equipment	469	3 185	3 292	5 773
- disposal of bonds	(14 974)	(00.045)	(307)	466
other gains and losses revaluation of RFPSS financial instruments	55 241 758 833	(20 945) (542 765)	(14 132) (416 480)	(13 510) (99 371)
- net interest	(58 208)	(64 495)	(69 753)	(76 834)
- dividend income	(92 749)	(83 220)	(73 975)	(65 962)
- changes in net defined benefit liability	1 038 801	1 024 178	907 147	854 344
- changes in Salary Savings Plan obligation	6 828	21 320	14 099	13 979
- changes in provisions	6 086	(760)	(23 464)	24 941
- changes in prepaid fees	(59 142)	(45 599)	(32 903)	6 787
- changes in assets and liabilities carried out as	(00 142)	(40 000)	(02 300)	0 101
working capital	(25 502)	67 358	39 450	10 265
Cash flows from operating activities	521 583	521 037	519 642	493 288
CASH FLOWS FROM INVESTING ACTIVITIES				
Proceeds from disposal/settlement of:				
- property, plant and equipment			354	1
- bonds / cash receipted upon maturity	2 529 528	234 000	286 925	264 919
Purchases of:				
- property, plant and equipment	(50 688)	(100 641)	(63 125)	(40 898)
- intangible assets	(14 684)	(16 963)	(9 238)	(9 169)
- bonds	(2 824 301)	(709 755)	(547 318)	(515 285)
Change in bank deposits > 3 months	87 000	250 000	(119 800)	49 172
Home loans granted to staff	(16 800)	(16 987)	(16 841)	(19 360)
Repayment of staff home loans	15 280	17 037	21 905	27 120
Cash outflow from the purchase of RFPSS assets	(3 264 542)	(3 069 857)	(2 679 627)	(2 976 029)
Cash inflow from the sale of RFPSS assets	2 880 368	2 667 204	2 399 805	2 597 694
Cash inflow (outflow) from decrease (increase) in				
restricted cash	22 663	49 264	(850)	(27 070)
Interest received	82 453	84 096	89 274	94 240
Dividends received	88 232	79 730	72 688	64 714
Cash flows from investing activities	(465 491)	(532 872)	(565 848)	(489 951)
CASH FLOWS FROM FINANCING ACTIVITIES				
Interest paid	(93)	(332)	(527)	(545)
Repayment of lease liabilities	(3 415)	(5 167)	(3 801)	(5 611)
Cash flows from financing activities	(3 508)	(5 499)	(4 328)	(6 156)
NET INCREASE/DECREACE IN CASH AND CASH				
NET INCREASE/DECREASE IN CASH AND CASH EQUIVALENTS	52 584	(17 334)	(50 534)	(2.940)
EQUIVALENTS	J2 J64	(17 334)	(30 334)	(2 819)
Cash and cash equivalents net of bank overdrafts at				
the beginning of the period	2 291	19 596	70 073	73 004
Effect of exchange rate exchanges on cash and				
cash equivalents	(16)	29	57	(112)
Cash and cash equivalents net of bank overdrafts at			,	
the end of the period	54 859	2 291	19 596	70 073

ANNEX II Comparison of budgeted and actual income and expenditure (in EUR '000s)

Annex II/1 Income

		2018	2018	Difference	
Chapte	er Title	budget	actual	absolute	as %
Income					
Operating tra	ansactions				
50	Filing and search	397 105	403 346	6 241	1.6%
51	Examination, grant and opposition	351 925	367 878	15 953	4.5%
52	Appeals and protest	6 700	6 365	(335)	-5.0%
53	Designation, renewal and extension	1 108 445	1 157 053	48 608	4.4%
54	Patent information products	8 010	8 451	441	5.5%
55	General operating income	221 905	221 676	(229)	-0.1%
57	Third-party project funding	140	33	(107)	-76.6%
58	Financial income	49 650	25 032	(24 618)	-49.6%
	Operating income	2 143 880	2 189 833	45 953	2.1%
Capital trans	actions				
60	Net income brought forward	271 000	461 931	190 931	70.5%
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	15 280	(1 520)	-9.0%
69	Authorisation budget deficit	0	0	0	n/a
	Capital income	287 800	477 211	189 411	0
	Total income	2 431 680	2 667 044	235 364	9.7%

Annex II/2 Expenditure

		2018	2018	Difference	
Article	Chapter Title	budget	actual	absolute	as %
Expendit	ure				
	g transactions				
300	Basic salaries and allowances	1 482 210	1 4 28 100	(54 110)	-3.7%
301	Remuneration of other employees	18 255	8 915	(9 340)	-51.2%
302	General staff costs	12 300	7 92 1	(4 379)	-35.6%
303	Training	11 885	6 356	(5 529)	-46.5%
305 _	Schools and day-care centres	23 230	26 159	2 929	12.6%
	30 Staff	1 547 880	1 477 451	(70 429)	-4.6%
310	Land and buildings	55 895	42 514	(13 381)	-23.9%
311_	Furniture and equipment	3 100	2 496	(604)	-19.5%
	31 Property and equipment	58 995	45 010	(13 985)	-23.7%
	32 IT equipment maintenance	122 650	108 804	(13 846)	-11.7%
	33 Co-operation and meetings	23 300	12 678	(10 622)	-45.6%
	34 Patent information and public relations	18 490	14 392	(4 098)	-22.2%
350	Travel	8 070	5 401	(2 669)	-33.1%
351	Supplies	10 980	11 4 27	447	4.1%
352	Services	54 485	36 611	(17 874)	-32.8%
353	Communications	4 330	4 341	11	0.3%
354	Documentation	11 770	10 147	(1 623)	-13.8%
359	Other operating expenditure	1 585	1 591	6	0.4%
_	35 General operating expenditure	91 220	69 517	(21 703)	-23.8%
	37 Project expenditure funded by third parties	140	32	(108)	-77.0%
	38 Financial expenditure	10 205	16	(10 189)	-99.8%
	30 Financial experiordre	10 205	10	(10 169)	-99.076
	Total operating expenditure	1 872 880	1 727 901	(144 979)	-7.8%
Capital tr	ransactions				
p *-	41 Property and equipment (excluding IT)	76 630	43 879	(32 751)	-42.7%
	42 IT hardware and software	24 000	18 547	(5 453)	-22.7%
		24 000		,	
	44 Repayment of loans	•	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	170 370	397 986	227 616	133.9%
	Total capital expenditure	287 800	477 212	189 412	66.0%
	Total expenditure	2 160 680	2 205 113	44 433	2.1%
	-				

Annex II/3 Implementation of the budget of the pension and social security schemes

			2018	2018	Difference	
Article	Chapter	Title	budget	actual	absolute	as %
INCOME						
Operating tra	ansactions					
		Office contributions	117 270	119 872	2 602	2.2%
		Staff contributions	58 635	59 937	1 302	2.2%
		Payments from insurance funds	110	60 999	60 889	55353.7%
		Pension rights transferred	10 000	8 726	(1 274)	-12.7%
		Office contributions (recruitment after 1.1.2009)	19 810	17 867	(1 943)	-9.8%
50		Staff contributions (recruitment after 1.1.2009)	9 905	8 934	(971)	-9.8%
56	600	Pension contributions	215 730	276 335	60 605	28.1%
		Office contributions	11 150	8 761	(2 389)	-21.4%
		Staff contributions	5 575	4 381	(1 194)	-21.4%
56	01	Salary Savings Plan	16 725	13 142	(3 583)	-21.4%
		Office contributions	56 890	57 037	147	0.3%
		Staff contributions	23 015	22 494	(521)	-2.3%
		Pensioner contributions	5 430	5 567	137	2.5%
		Invalids' contributions	0	44	44	
		Spouse contributions	1 300	1 327	27	2.1%
		Healthcare fund	86 635	86 468	(167)	-0.2%
		Office contributions	9 400	9 976	576	6.1%
		Staff contributions	3 780	4 226	446	11.8%
		Pensioner contributions	920	1 039	119	13.0%
		Long-term care insurance	14 100	15 241	1 141	8.1%
		Office contributions	1 590	1 002	(588)	0
		Staff contributions	795	589	(206)	-25.9%
		Death and invalidity insurance	2 385	1 591	(794)	-33.3%
56	605	Social-security contributions	103 120	103 301	181	0.2%
	56	6 Operating Income	335 575	392 779	57 204	17.0%
Canital trans						
Capital transa	actions: inco		40 FCF	45.007	2 422	27 20/
		Healthcare insurance	12 565	15 997	3 432	27.3%
		Pension scheme	28 730	82 119	53 389	185.8%
		Long-term care insurance	8 175	9 662	1 487	18.2%
		Death and invalidity insurance	0	27	27	
		Salary Savings Plan	14 940	11 964	(2 976)	-19.9%
6600/4610		Surplus for transfer from pension and social- security scheme to RFPSS/balance sheet	64 410	119 770	55 360	85.9%
	66	Total (transfer to RFPSS/balance sheet)	64 410	119 743	55 333	85.9%
			222 225	F40 F04	440 FG5	
	Total inc	ome	399 985	512 521	112 536	28.1%

			2018	2018	Difference	
Article	Chapter	Title	budget	actual	absolute	as %
EXPENDITURE						
Operating trans	sactions					
3600)	Pension payments	187 000	194 216	7 216	3.9%
3601	1	Salary Savings Plan	1 785	1 178	(607)	-34.0%
		Healthcare insurance	74 070	70 471	(3 599)	-4.9%
		Long-term care insurance	5 925	5 579	(346)	-5.8%
		Death and invalidity insurance	2 385	1 564	(821)	-34.4%
3605	5	Social-security payments	82 380	77 614	(5 933)	-7.2%
	36	Operating expenditure	271 165	273 008	1 843	0.7%
Capital transac	tions: exp	enditure				
•	·	Healthcare insurance	12 565	15 997	3 432	27.3%
		Pension scheme	28 730	82 119	53 389	185.8%
		Long-term care insurance	8 175	9 662	1 487	18.2%
		Death and invalidity insurance	0	0	0	
		Salary Savings Plan	14 940	11 964	(2 976)	-19.9%
		Surplus for transfer from pension and social-			, , ,	
6600/4610		security scheme to RFPSS/balance sheet	64 410	119 743	55 333	85.9%
	46	Total (transfer to RFPSS/balance sheet)	64 410	119 743	55 333	85.9%
	Total exp	penditure	335 575	392 751	57 176	17.0%

Summary of Annexes II/1 to II/3

TOTAL NET BUDGET

			2018	2018	Difference	
Article	Chapter	Title	budget	actual	absolute	as %
Main budget		Income	2 431 680	2 667 493	235 813	9.7%
		Expenses	2 160 680	2 205 113	44 433	2.1%
Social-security	/					
schemes		Income	399 985	512 521	112 536	28.1%
		Expenses	335 575	392 751	57 176	17.0%
Elimination of i	internal trans	actions				
5600-05	Office's s	ocial-security contributions	216 110	214 497	-1 613	-0.7%
	Net incom	ne brought forward	271 000	462 380	191 380	70.6%
	Cash inje	ction to RFPSS			0	n/a
	Social-se	curity schemes' surpluses	64 410	119 743	55 333	85.9%
	Correction	n for death and invalidity	0	0	0	n/a
NET BUDGET	ADOPTED		2 280 145	2 383 395	103 250	4.5%

Annex II/4 Comparison between original and amended budgets

Main budget

				Transfer under	Art. 34 FinRegs	inRegs		
				para. 1	para. 2	para. 3		
					inter-chapter	Submission	Amended	
Article	Chapte	er Title	Original budget	intra-chapter	(below 20%)	to BFC / AC	budget	
3000		Basic salaries	968 065	-3 440	-12 500		952 125	
3001		Allowances and other benefits	248 500		12 300		247 800	
3002		Social-security contributions	76 135				76 135	
3003		Pension contributions	148 230				148 230	
3004		Partial compensation	41 280				41 980	
300		Basic salaries and allowances	1 482 210		-12 500	0	1 466 270	
301		Remuneration of other employees	18 255				18 255	
302		General staff costs	12 300)			12 300	
303		Training	11 885	5			11 885	
305		Schools and day-care centres	23 230	3 440			26 670	
	30	Staff	1 547 880	0	-12 500	0	1 535 380	
3100		Rent	10 975				10 975	
3101		Cleaning and waste disposal	7 075				7 075	
3101							30 150	
		Repairs and maintenance	30 150					
3103	04	Electricity, gas heating and water	7 695				7 695	
		0 Land and buildings - operating costs	55 895				55 895	
		1 Furniture and equipment - operating costs	3 100				3 100	
	31	Property and equipment maintenance	58 995	0	0	0	58 995	
	32	IT equipment maintenance	122 650	0	1 000	0	123 650	
	33	Co-operation and meetings	23 300	0	300	0	23 600	
	34	Patent information and communication	18 490	0	0	0	18 490	
350		Travel	8 070)			8 070	
351		Supplies	10 980	(150)	3 550	0	14 380	
3520		Surveillance and messenger services	13 700	1			13 700	
3521		External experts and studies	13 475				13 475	
3525		External audit	2 240	1			2 240	
3529		Miscellaneous contract work	25 070		3 400		28 470	
352		Services	54 485		3 400	0	57 885	
353		Communications	4 330		3 .00	· ·	4 480	
354		Documentation	11 770				11 770	
359			1 585		705		2 290	
	35	Other operating expenditure General operating expenditure	91 220		7 655	0	98 875	
	33	General operating expenditure	91 220	, u	/ 055	U	98 8/3	
	37	Project expenditure funded by third parties	140	0	0	0	140	
	38	Financial expenditure	10 205	. 0	(205)	0	10 000	
		Operating transactions	1 872 880	0	(3 750)	0	1 869 130	
		Inward transfers		3 590	8 955	0		
				/ \		_		

(3 590)

(12 705)

Outward transfers

Transfer under Art. 34 FinRegs

				para. 1	para. 2 inter-chapter	para. 3 Submission	Amended
Article	Chapter	Title	Original budget	intra-chapter	(below 20%)		budget
410		Land and buildings	71 000				71 000
411		Furniture and equipment	5 630		(3 550)		2 080
	41	Property and equipment	76 630	0	(3 550)	0	73 080
	42	IT tangible and intangible assets	24 000	0	0	0	24 000
	45	Loans and advances	16 800				16 800
	49	Budget surplus	170 370	0	(3 750)		166 6 2 0
		Capital transactions	287 800	0	(7 300)	0	280 500
		Inward transfers		0	0	0	
		Outward transfers		0	(7 300)	0	
		Total	2 160 680	0	(11 050)	0	2 149 630
		Inward transfers		3 590	8 955	0	
		Outward transfers		(3 590)	(20 005)	0	

Budget of the pension and social security schemes

Expenditure		Transfer under Art. 34 FinRegs					
				para. 1	para. 2	para. 3	
					inter-chapter	Submission	Amended
Article	Chapter	Title	Original budget	intra-chapter	(below 20%)	to BFC / AC	budget
3600		Pension payments	187 000		7 300		194 300
3601		Salary Savings Plan	1 785		7 300		1 785
3605		Social-security payments	82 380				82 380
	36	Pension and social-security schemes expenditure	271 165	0	7 300	0	278 465
		Total operating expenditure	271 165	0	7 300	0	278 465
							0
Capital	transacti	ons					
		Transfer from pension and social-security					
	46	schemes	64 410	0	0	0	64 410
		Total capital expenditure	64 410	0	0	0	64 410
		Total	0	0	7 300	0	7 300
		Inward transfers		0	7 300	0	7 300
		Outward transfers		0	0	0	0

ANNEX III Financial forecast and actual income and expenditure Annex III/1 Statement of comprehensive income

	As per			Difference betw CA/60/19 and 0	
	CA/D 1/17	CA/10/19	CA/60/19	absolute	as %
Revenue					
Revenue from patent and procedural fees	1 815 430	1 935 703	1 935 703	120 273	6.6%
Other revenue	69 915	68 736	68 736	(1 179)	-1.7%
Other operating income	8 365	10 690	10 689	2 324	27.8%
Work performed and capitalised	5 000	3 047	3 047	(1 953)	-39.1%
Employee-benefit expenses	(1 385 560)	(1 907 840)	(1 907 840)	(522 280)	37.7%
Depreciation and amortisation expenses	(47 690)	(63 060)	(63 060)	(15 370)	32.2%
Other operating expenses	(308 830)	(252 554)	(252 554)	56 276	-18.2%
OPERATING RESULT	156 630	(205 278)	(205 279)	(361 909)	
Financial revenue	482 505	21 104	21 104	(461 401)	-95.6%
Finance costs	(528 745)	(973 434)	(973 434)	(444 689)	84.1%
FINANCIAL RESULT	(46 240)	(952 330)	(952 330)	(906 090)	
PROFIT/LOSS FOR THE YEAR	110 390	(1 157 608)	(1 157 609)	(1 267 999)	
Other	_	1 285 661	1 285 661	1 285 661	
TOTAL	110 390	128 053	128 052	17 662	

Annex III/2 Balance sheet

	As per			Difference betw CA/60/19 and 0	
		CA/10/19	CA/60/19	absolute	as %
ASSETS					
NON-CURRENT ASSETS					
Property, plant and equipment	726 510	661 847	661 847	-64 663	-8.9%
Intangible assets	50 275	38 382	38 382	-11 893	-23.7%
RFPSS net assets	8 299 180	7 901 770	7 901 770	-397 410	-4.8%
Marketable securities	2 346 160	2 460 194	2 460 194	114 034	4.9%
Home loans to staff	85 995	88 186	88 186	2 191	2.5%
Other assets	154 950	86 756	86 756	-68 194	-44.0%
CURRENT ASSETS	11 663 070	11 237 135	11 237 135	-425 935	-3.7%
Trade and other receivables	189 510	154 920	154 920	-34 590	-18.3%
Marketable securities	103 310	154 320	134 320	-34 330	-10.570
Home loans to staff	4 785	7 928	7 928	3 143	65.7%
Other financial assets	0	58 000	58 000	58 000	00.1 70
Prepaid expenses	0		19 334	19 334	
Cash and cash equivalents	43 055	54 859	54 859	11 804	27.4%
	237 350	295 041	295 041	57 691	24.3%
TOTAL ASSETS	11 900 420	11 532 176	11 532 176	-368 244	-3.1%
EQUITY Retained earnings	(2 085 966)	(2 840 919)	(2 840 919)	(754 953)	36.2%
Other reserves		(7 963 291)	(7 963 291)	(9 463 872)	-630.7%
TOTAL EQUITY	-585 385	-10 804 210	-10 804 210	-10 218 825	1745.7%
NON-CURRENT LIABILITIES					
Defined benefit liability	11 016 005	20 840 775	20 840 775	9 824 770	89.2%
Salary savings plan obligations	92 340	86 393	86 393	-5 947	-6.4%
Trade and other payables	23 775	23 581	23 581	-194	-0.8%
Finance lease liabilities	3 910	1 854	1 854	-2 056	-52.6%
Prepaid fees	569 920	584 436	584 436	14 516	2.5%
CURRENT LIABILITIES	11 705 950	21 537 039	21 537 039	9 831 089	84.0%
Other employee-related liabilities	0	164 988	164 988		
Trade and other payables	356 235		202 081	-154 154	-43.3%
Finance lease liabilities	7 260	1 085	1 085	-6 175	-45.5 % -85.1%
Provisions	11 035	12 776	12 776	1 741	15.8%
Prepaid fees	405 325	418 419	418 419	13 094	3.2%
	779 855	799 349	799 349	-145 494	-18.7%
TOTAL LIABILITIES	12 485 805	22 336 388	22 336 388	9 850 583	78.9%
			44		
TOTAL EQUITY AND LIABILITIES	11 900 420	11 532 178	11 532 178	-368 242	-3.1%

ANNEX IV Audit expenditure

- 292) EUR 2.36m was set aside for this under Article 3525 of the 2019 budget.
- 293) As at 31 March 2019, a total of EUR 599 701 had been committed, and EUR 31 080 already spent. These figures break down as follows:

	Expenditure booked in	2019 to date	ite		
	2018	Committed	Spending		
Travel expenses and remuneration of auditors and assistants	113 050	150 000	31 080		
KPMG AG Wirtschaftsprüfungsgesellschaft	224 917	359 701			
BDO AG Wirtschaftsprüfungsgesellschaft	57 000	90 000			
TOTAL	394 967	599 701	31 080		

ANNEX V List of abbreviations

AC Administrative Council

BaFin Bundesanstalt für Finanzdienstleistungsaufsicht – German

Federal Financial Supervisory Authority

BFC Budget and Finance Committee

BoA Board of Auditors

COBIT Control Objectives for Information and Related Technologies

CABS Corporate Area Business Support

COSO ERM Enterprise Risk Management framework issued by the

Committee of Sponsoring Organizations of the Treadway

Commission

DBO defined benefit obligation

DG directorate-general

DPG EPO Data Protection Guidelines

EnEV Energieeinsparverordnung – German Energy Saving Regulation

EPO European Patent Organisation or European Patent Office

EPOTIF EPO Treasury Investment Fund

EPASYS European Patent Administration System

EPC European Patent Convention

EU European Union

EUR euro

FCS Fee Capturing System

FinRegs Financial Regulations

FIPS finance and personnel system

GDPR EU General Data Protection Regulation

IAO Internal Audit and Oversight

IAS International Accounting Standards

IASB International Accounting Standards Board

IFRSs International Financial Reporting Standards

IM Information Management (the EPO's IT department)

ITR IT roadmap

KAGB Kapitalanlagegesetzbuch – German Capital Investment Code

LTC long-term care

MADRAS Mother of All Dossier-Related Application Systems

PID project initiation document

PPI Protocol on Privileges and Immunities

RFPSS Reserve Funds for Pensions and Social Security

SAP German software firm

VaR value at risk