### Action to be taken

<table>
<thead>
<tr>
<th>For information</th>
<th>FINANCE COMMITTEE 368th Meeting 18 and 19 June 2019</th>
<th>Voting Procedure</th>
</tr>
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<tr>
<td>For information</td>
<td>OPEN COUNCIL 193rd Session 20 and 21 June 2019</td>
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**Opinion and report from the External Auditors on the Financial Statements of the Pension Fund for the Year Ended 31 December 2018 and Comments from the CERN Pension Fund Management**

National Audit Office of Finland
External auditor’s opinion and report on the financial statements of the Pension Fund of the European Organization for Nuclear Research (CERN) for the year ended 31 December 2018

NATIONAL AUDIT OFFICE OF FINLAND
17 MAY 2019
Helsinki, 17 May 2019

External Auditor´s Opinion
on the Financial Statements of the Pension Fund of the European Organization for Nuclear Research (CERN) for the year ended 31 December 2018

To the Council of CERN

Audit opinion on the financial statements of the CERN Pension Fund

We have audited the financial statements of the Pension Fund of the European Organization for Nuclear Research (CERN) for the year ended 31 December 2018, issued under document reference CERN/FC/6328-CERN/3427 dated 23 May 2019. These financial statements comprise the statement of financial position, the statement of changes in net assets, the statement of the financial performance, the cash flow statement as well as the notes to the financial statements.

In our opinion, the financial statements give a true and fair view of the financial position of the Pension Fund of the European Organization for Nuclear Research as at 31 December 2018, its financial performance and its cash flows for the year ended in accordance with International Public Sector Accounting Standards (IPSAS) and International Accounting Standard 26.

Basis for opinion

We conducted our audit in accordance with International Standards of Supreme Audit Institutions (ISSAlS). Our responsibilities under those standards are further described in the "Auditor’s responsibilities for the audit of the financial statements” section of our report. We are independent of CERN Pension Fund in accordance with the ethical requirements relevant to our audit of the financial statements and we have fulfilled our other ethical responsibilities in accordance with those requirements. We believe that the audit evidence that we have obtained is sufficient and appropriate to provide a basis for our opinion.

Emphasis of matter

The net result of membership activities, which comprise the contributions to the Fund and benefits and payments of the Fund, was 77,9 MCHF negative in 2018 whereas the net result of the investment activities deducted by other expenses was 22,6 MCHF positive. Accordingly, the Pension Fund’s net assets available for benefits decreased from 4,259 MCHF as of 31.12.2017 to 4,203 MCHF as of 31.12.2018.

Our opinion is not modified in respect of the matter emphasized.
Key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements of the current period. The matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon.

Key audit matters in the audit of the CERN Pension Fund financial statements for 2018 were as follows:

1) Valuation of Pension Fund assets

Pension Funds asset available for benefits totals 4,203 MCHF. The valuation of the assets was addressed by the audit by analytical reviews and verification of the information provided in the Custodian’s reports against relevant account balances. Sampled transactions related to asset balances were tested. For investment property, valuations of the assets were verified from independent evaluators’ reports.

2) Accuracy of reporting Pension Fund Investments

The matter was addressed in the audit by verification of the information provided in the Custodian’s reports against relevant account balances. Investment information reported in the Financial Statements was reconciled with the relevant accounting data and external confirmations.

Report on other legal and regulatory requirements

Based on the procedures we performed, nothing has come to our attention, as part of our audit of the financial statements that causes us to believe that the transactions of the CERN Pension Fund have not been made, in all significant respects, in accordance with the relevant regulations of the Pension Fund.

Information other than the financial statements and auditor’s report thereon

Management is responsible for the other information, included in the Pension Fund Annual Report that comprises Pension Fund Governing Board Report and Extract of Actuary's Report on the Fund as at 31 December 2018, apart from the financial statements and our auditor’s report thereon. Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon. However, in connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If based on the work we have performed we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities for the financial statements

The management is responsible for the preparation and fair presentation of the financial statements in accordance with IPSAS and for such internal control as management determines to be 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, management is responsible for assessing the ability of CERN Pension Fund to continue as a going concern, disclosing, as applicable, matters related to the going concern and using the going-concern basis of accounting unless management intends either to liquidate CERN Pension Fund or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the financial reporting process of the organization.
Auditor’s responsibilities for the audit of the financial statements

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

As part of an audit in accordance with the International Standards on Auditing, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement in 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 the risk of not detecting one resulting from error, as fraud may involve collusion, forgery, intentional omission, misrepresentation or the overriding of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for expressing an opinion on the effectiveness of the internal control of CERN Pension Fund.

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

- Draw conclusions as to 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 in relation to events or conditions that may cast significant doubt on the ability of CERN Pension Fund to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor’s report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor’s report. However, future events or conditions may cause CERN Pension Fund to cease to continue as a going concern.

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

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

Helsinki, 17 May 2019

Tytty Yli-Viikari
Auditor General

Petri Nurmi
Principal Financial Auditor
External Auditor’s Report
on the Financial Statements of the Pension Fund of the European Organization for Nuclear Research (CERN) for the year ended 31 December 2018

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1 Introduction

We have completed our audit of the Pension Fund of the European Organization for Nuclear Research (CERN), which we conducted in accordance with the International Standards of Supreme Audit Institutions (ISSAIs). Those standards require that we plan and perform the audit to obtain reasonable assurance that the annual financial statements are free of material errors.

In the course of our audit of the financial statements of CERN Pension Fund for the year ended 31 December 2018, we have identified matters for improvement, which are set out in this report. This report does not affect the opinion given on the financial statements of CERN Pension Fund.

We will follow up these recommendations during next year’s audit. We have also reviewed the status of an open recommendation issued by the previous external auditors (NIK) in the previous year and have determined its status of implementation in Annex 1 to this report.

2 Audit findings and recommendations

Audit findings and recommendations are reported in the following tables.
2.1 Enterprise Risk Management

<table>
<thead>
<tr>
<th>Condition</th>
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<tbody>
<tr>
<td>Pension Fund is an integral part of CERN without a separate legal personality. It is operationally autonomous in accordance with its Rules approved by the CERN Council. Accordingly, Pension Fund manages its own risks.</td>
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<tr>
<td>Pension Fund has had an Internal Control System (ICS) in place since 2011. In the context of ICS, the operational risks and associated controls are identified and assessed. The process is formalised in the Internal Control System Policy.</td>
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<tr>
<td>There is a separate, non-formalised, process for identification of key business risks. The Pension Fund describes this process as Enterprise Risk Management (ERM). The key business risks are identified based on various sources, such as the operational risks in ICS, previous audits, major changes in the Fund’s operations and the input from the Fund’s management.</td>
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<tr>
<td>The key business risks are periodically reported to the Pension Fund Governing Board (PFGB).</td>
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<td>The Pension Fund Rules - Article I 2.04:</td>
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<td>The oversight of the Fund shall be entrusted to the Governing Board, assisted and advised by the Investment Committee and the Actuarial and Technical Committee.</td>
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<tr>
<td>COSO Enterprise Risk Management — Integrated Framework - Executive Summary (ERM definition):</td>
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<td>Enterprise risk management is a process, effected by an entity’s board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives.</td>
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<td>IIA Practice Guide - Auditing Model Risk Management (March 2018):</td>
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<td>Organizations should formally document policies and procedures related to the risk management process. These policies and procedures are typically drafted by senior management and approved by the board (…).</td>
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<td>1) ERM process</td>
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<td>Whereas enterprise risk management should be a process applied across the organisation, currently the Pension Fund’s process to identify the key business risks is separate from the operational risk identification, which is carried out in the context of the ICS.</td>
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<tr>
<td>There is no entity-wide process in place to ensure that the risk management practices are consistently implemented throughout the organisation. Therefore, there is a possibility that not all risks are identified and properly managed at all levels and functions of the organisation. It is also not clear how the key risks are currently linked to the Pension Fund’s strategic objectives.</td>
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<tr>
<td>2) Formalisation and approval of risk management policy</td>
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<tr>
<td>The key risks are currently identified by the Pension Fund management and presented to the PFGB for information but not for the Board’s approval. There is no formal enterprise risk management policy in place.</td>
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Recommendation

1) ERM process

We recommend that the ERM process will be improved by establishing common risk management procedures throughout the organisation. The process should also be formalised.

The main stages of the risk management process to be considered:
- establishing the context: considering the internal and external context and the strategic objectives;
- risk assessment: identifying, analysing and evaluating the risks;
- risk response: deciding responses to risks and preparing action plans as necessary;
- risk monitoring: regular follow-up of risks and incidents through internal controls and supervision;
- risk reporting: disseminating the results of risk assessments and monitoring, including risk response plans and actions to all actors concerned, and the data on follow-up of risks and incidents.

2) Formalisation and approval of risk management policy

We recommend that a risk management policy will be established. It should define the Pension Fund’s risk management policy and establish a framework to ensure consistent risk management practices throughout the organisation. It should be approved by PFGB who oversees the Pension Fund’s risk management.

Management response

1)

As the Pension Fund is an integral part of CERN without separate legal personality, the Fund considers the formal ERM process to be that which is undertaken by CERN, the Organization.

According to Article I 2.05 of the Fund’s Rules one of the functions of the Governing Board is to “approve the internal control system of the Fund”. As per Section 4 of the Financial Regulations of the Fund, there is an Internal Control System in place to “ensure the effectiveness and efficiency of the Fund’s operations, the safeguard of the Fund’s assets, the reliability of the financial reporting and the compliance with the relevant applicable regulations.”

The Pension Fund also considers it best practice to identify key business risks and associated responses at the Fund level to ensure that the Fund’s Internal Control System fully addresses any operational risks. Whilst this is not a formal ERM process, the Fund will continue to work with the CERN ERM team to align the approach to risk management.

2)

There is no provision in the Fund’s Rules for the PFGB to approve an ERM policy. The Fund will consider updating the current internal control system policy, which is approved by the Governing Board, to enhance the documented “Procedures for risk assessment” section. The Fund will also consider further alignment of the risk identification and inherent risk determination approach with that of the overall Organization.
## Annex 1: Status of prior period audit recommendations

<table>
<thead>
<tr>
<th>Audit finding</th>
<th>Audit recommendation</th>
<th>Management comments in prior year</th>
<th>Progress since prior year</th>
<th>Current status</th>
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| **Internal Control System (finding made in 2015 by previous external auditors, NIK)** | We recommend to develop a transition plan to pass over from the current Internal Control System to the 2013 New COSO Internal Control Framework. In our view this will require:  
- creating a centralized project management function,  
- transferring knowledge on the new framework to the personnel,  
- developing a cost-effective approach to converting the underlying documentation,  
- mapping controls through each of the five components and supporting principles and, to the extent they are applicable, particular points of focus,  
- designating roles, responsibilities and authorities for converting documentation,  
- developing a road-map of implementation until the conversion is completed. | Management response:  
The transition to the 2013 COSO internal framework is progressing well and is expected to be completed over the coming year.  
Assessment of NIK in previous year:  
Action was taken by the Fund management during our previous year audit by developing a CERN Pension Fund Internal Control System Policy, which was presented to the PFGB in November 2016 and approved at the PFGB meeting in February 2017. The policy met our recommendations and provided solid grounds for the upgrade of the existing system. We noted that the work on such upgrade was going on last year by, e.g. providing further details to description of particular processes, more informative control descriptions, marking interrelations between processes, creating hyperlinks to relevant documents etc. Last year we suggested several other improvements such as:  
- presenting objectives for particular processes and sub-processes (or functions)  
- marking relation between objectives (operational, reporting, compliance) and risks and controls | Management response:  
Significant work has been undertaken by the PFMU over the last three years to implement the suggestions made by the previous auditors and the PFMU considers the ICS to now be more closely aligned with the 2013 COSO Integrated Framework.  
For example:  
- An internal control policy was drafted in line with the recommendations of the External Auditors at the time and approved by the PFGB;  
- The PFGB perform a monitoring role by receiving regular updates on the ICS from the PFMU;  
- Risk objectives are documented for key functions and processes;  
- The key processes, controls and risks are now mapped to the relevant risk objectives (operational, reporting or compliance);  
- Process descriptions have been reviewed and enhanced to ensure that they meet the risk objectives;  
- Key processes have been reviewed to ensure that there is clear link to the risks and associated controls. | The recommendation is closed. |
1992, is an overall comprehensive and very consistent concept based on 17 principles grouped within five components on internal control framework: control environment, risk assessment, control activities, information and communication, and monitoring activities. Each of the said principles is further illustrated by ‘points of focus’, which assist to understand a principle and to evaluate whether a particular principle is present and functioning. The idea is that particular elements of the system “operate together”, which ensures that identifying missing elements or flaws in the system is easy and rectifying them may be effective. Failure or resignation from applying the new COSO framework would mean losing an opportunity to develop a system in which all its five components, while operating together, may collectively and effectively reduce to an acceptable level the risk of not achieving the organisation’s objectives.

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<tr>
<td>- reviewing process descriptions whether they present sequence of actions leading to the achievement of objectives</td>
<td>The lacking parts were also:</td>
<td>- control environment (in relation to the Fund as a whole)</td>
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<td>- information on how the system and particular control activities are communicated to all concerned, and</td>
<td>- how it is monitored</td>
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<td>During the audit for 2017 we further discussed the issue with the Fund’s management, including on a pattern to provide a clear link between the process and sub-process objectives, risks to their achievement and related controls.</td>
<td>The work on the project was continued and virtually finalized for contributions and benefits processes and to much extent for the Fund’s accounting process. It will be continued for investment processes this and next year. From this point of view, we consider this observation as being still IN PROGRESS.</td>
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