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*Action to be taken*

*Voting procedures*

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**PENSION FUND**

**REPORT BY THE EXTERNAL AUDITORS  
ON THE ACCOUNTS OF THE CERN PENSION FUND  
FOR THE FINANCIAL YEAR 2008**

audited by two representatives of the  
**ITALIAN COURT OF AUDIT  
CORTE DEI CONTI**

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## **REPORT BY THE EXTERNAL AUDITORS ON THE ACCOUNTS OF THE CERN PENSION FUNDS FOR THE FINANCIAL YEAR 2008**

### **1. INTRODUCTION**

The legal basis for the audit to be performed by the External Auditors is given in the Financial Protocol annexed to the Convention for the establishment of a European Organization for Nuclear Research of the 1 July 1953, as modified on 17 January 1971; in the Financial Rules as approved by the Council; and in the Internal Regulations of CERN and CERN Pension Fund.

We have planned and performed our activity following generally accepted international auditing standards to the extent that these standards apply to CERN Pension Fund.

In particular, we have focused our audit on the Pension Fund's governance and internal control environment.

Moreover, we have analysed and evaluated the opinion expressed by PriceWaterhouseCoopers (PWC) on the Financial Statements of the Pension Fund for the year 2008, as well as the Management Letter of the above-mentioned special auditor jointly with the Management Replies. Finally, we have gathered and provided information on the implementation status of previous years' External Auditors recommendations as requested by the Council.

Thus, we have obtained a sufficient basis for the opinion given below.

### **2. CERTIFICATE OF THE EXTERNAL AUDITORS**

#### **2.1. General**

As provided for in the Rules and Regulations of the Pension Fund, article I 2.01, Status of the Fund, the Fund is an integral part of CERN and therefore does not have its own legal status.

However, article I 2.02, Assets of the Fund, provides that the assets acquired by the Fund in fulfilling its purpose shall be deposited and held separately from those

of CERN and ESO and they shall be totally and exclusively used for the purposes of the benefits provided for by the Rules.

The opinion under item 2.2 solely relates to accounts managed by the Fund and held as it is laid down in the Rules and Regulations of the Pension Fund. This opinion has to be examined within the external audit mandate at CERN as a whole.

## 2.2. Opinion

We have analysed the Annual Report and the Financial Statements of the CERN Pension Fund for the Year 2008.

We have examined the Consulting Actuary's Report for the year 2008, where it has been stated that the results revealed an "unsatisfactory financial position for the Fund as at 31 December 2008 with a funding ratio of only 72,7%. The Fund has no safety margin that would allow it to weather a further fall in the financial markets. In addition, the Fund's liabilities as at 31 December 2008 are not entirely covered by the available provident assets".

Moreover, the Actuary's Report considered significant the under-funding of 1'345.0 MCHF (27.3% of the provident and technical provision).

We have analyzed the opinion of PWC which draws attention to the fact that the financial statements show a funding gap already disclosed in the above-mentioned Consulting Actuary's Report and that supports the decision of the Pension Fund Governing Board to adopt more realistic economic assumptions in the future.

We have also observed that the cover ratio of the Fund, if calculated according to a discount rate closer to fair value, would have been decreased, showing an underfunding more negative compared with the one considered in the Actuary's Report.

In our opinion, except for the effects of the matters stated above and discussed in the following paragraphs, the Financial Statements for the Year 2008 give a true and a fair view of the financial position of the CERN Pension Fund as a 31 December 2008, of its financial performance and its cash flows for the year in accordance with International Public Sector Accounting Standards (IPSAS).

### **3. PREAMBLE**

The Report by the External Auditors on the Accounts of the CERN Pension Fund for the financial year 2008 includes:

- a table providing information on the implementation status of previous years External Auditors' (2003-2007) recommendations, as requested by the Chairman of the Finance Committee to the Council at its 142<sup>nd</sup> Meeting (CERN 2743). The table is enclosed as an Annexe to this Report;
- the results of our audit which was focused on the Pension Fund's governance and internal control environment;
- our analysis and assessment of the opinion of PWC on the Financial Statements of the CERN Pension Fund for the year 2008;
- our analysis and assessment of the Management Letter of PWC jointly with the Management replies, discussed and approved during the Pension Fund Governing Board (PFGB) meeting held on 13 May 2009 and confirmed to us on 14 May 2009

### **4. LEGAL STATUS OF THE PENSION FUND WITHIN THE ORGANIZATION**

The Council decided, during the restricted Session in December 2006, to set up a Study Group to elaborate detailed proposals “for a new governance structure of the CERN Pension Fund based on the recommendations of the Expert Panel (...) taking into account the special technical and legal aspects of the proper functioning of the Pension Fund in the particular framework of CERN as an international organization”.

The conclusions of the Expert Panel were that “although legal separation is desirable for pension funds in general (...) the establishment of the CERN Pension Fund as a separate legal entity may be lengthy and complex and may not even be legally feasible because of the international organization nature of CERN”.

In relation to such conclusions the Study Group accepted that the Pension Fund remains an integral part of the Organization and has no separate legal personality.

The above-mentioned situation would ensure that the Fund can benefit from the privileges and immunities conferred to an International Organization such as CERN.

Therefore, this is the present legal status of the Fund within the Organization according to the Pension Fund Rules and Regulations dated 1 January 1986, as updated on 1 November 2007 (new composition of the Governing Board)<sup>1</sup>.

This Rules and Regulations shall remain in force as they stand pending their complete revision in the framework of the implementation of the new governance structure that, on one hand, will enhance the operational autonomy of the Fund that had already been granted by the Council in 1986, and on the other hand, the Fund will continue to hold its assets separately from those of CERN.

#### 4.1. Amendments to the Rules and Regulations of the Pension Fund

In the Austrian Court of Audit's 2007 Report (refer to §4.2 doc. CERN/FC/4249 – CERN/2791, it was stated that “during the course of the interim audit the External Auditors reviewed the amendments to Pension Fund Rules and Regulations (version 1 Nov 2007). The review revealed that the Rules and Regulations in its current version cannot be seen as a coherent document. For example according to Article I 2.05 the position of a General Manager should form part of the Governing Board in its new governance, however, Article I 2.07 still refers to the Administrator and his appointment and duties”.

Therefore, the Austrian Court of Audit recommended “(...) that the provisional and transitional nature of the current Rules and Regulations (version 1 November 2007) should be clearly mentioned in the preamble to this document. Furthermore, due to the fact that the complete update of the Rules and Regulations, within the framework of the implementation of the Pension Fund's new governance

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<sup>1</sup> In particular, the article 102.01 provides as follows:” The Fund, which is an integral part of CERN, shall be under the supreme authority of the Council. Its administration and management on its finances shall be separate from those of CERN...”. And the article 1.2.02 specifies: “The assets acquired by the Fund in fulfilling its purpose shall be deposited and held separately from those of CERN....They shall be totally and exclusively used for the purpose of the benefits provided for by these Rules.”

structure, will last a considerable time, adequate transitional provisions should be defined to comply with the principle of legal certainty”.

During 2008 the Management partially implemented this recommendation by inserting in the Pension Fund Rules and Regulation and in the Pension Fund’s website the note “These Pension Fund Rules and Regulations dated 1.1.1986, as updated on 1.11.2007 (new composition of the Governing Board), shall remain in force as they stand pending their complete revision in the framework of implementation of the Pension Fund's new governance structure (...)”.

## **5. THE CONTROL ENVIRONMENT IN CERN PENSION FUND**

### **5.1. Internal Control Environment**

As mentioned in our Preamble (refer to §3), we obtained audit evidence directly and indirectly through the analysis and assessment of documents prepared by other auditors. These documents were PriceWaterhouseCoopers’ opinion and Management Letter and the reports prepared by the local auditors in charge of auditing the CERN Pension Fund Real Estate portfolio.

In PWC’s Management Letter, while recognizing, on the one hand, that the PFGB has actively assumed its leadership function to identify appropriate investment strategies considered by them as adequate for the Fund’s current risk capacity, they, on the other hand, considered that the PFGB has to develop a clear strategy and define measures to remedy the funding gap, in spite of the fact that CERN and ESO guarantee the benefits acquired under the provisions of the Rules.

The management responded that ‘The document ‘Report of the Study Group on Pension Fund Governance’ (CERN/2733/Rev.) affirms that ‘the extent and legal status of CERN and ESO guarantee for pension entitlements and benefits (in proportion to their respective members and beneficiaries)’ as well as ‘the enforcement of the guarantees’ must be specified in the Fund Rules and/or policy statements and decisions. This issue as well as measures to remedy the funding gap fall within the remit of Working Group 2 which will report to the PFGB.

Furthermore, PWC highlighted the fact that “With respect to the internal control system, controls are in place, however some organizational and administrative procedures are not always documented although controls are in performed.”

The Management responded that “The documentation of all organizational and administrative procedures will be addressed as a matter of priority as part of the self-assessment process to be recommended to the PFGB by Working Group 1”. We endorse PWC’s recommendation concerning the necessity to develop a clear strategy and define measures to remedy the funding gap and to enhance the level of documentation of organizational and administrative procedures. However, as indicated by the Management, this falls under the remit of Working Group 1 and 2.

We will follow up the implementation of the above-mentioned issues during next financial year.

#### 5.1.1. Program access management

PriceWaterhouseCoopers draw the management attention on the issue of the passwords in the Pension Fund’s IT system, by noting that the PF accounting system “Winway” shows a lack of traceability and that the safeguards are based on the self-discipline of the PF’s staff. Moreover, the benefits application used by the PF does not enforce a regular password change. This can lead to a risk of unauthorised users obtaining access to one of the applications. They recommend to implement personalised user accounts to restrict system access and secure data. Such a measure will decrease the risk of a non-authorized access and also ensure a traceability of changes. A password change every three months is further recommended.

The management responded that “Consultation with the suppliers of ‘Winway’ has confirmed that it is not technically possible to implement personalised user accounts within this application. Given the access controls which exist currently (...) and the small number of people using the system (...) it is considered that the probability of an undetected, unauthorized intervention is low.” The Management concluded “The existing benefits application, although requiring a personalised password to access the system, cannot enforce a periodic password change. The



feasibility of this recommendation will be considered on installation of the new benefits computing system.” We share the PWC’s view and we agree on their recommendation.

#### 5.1.2. Segregation of Duties in the IT Systems.

As far as segregation of duties in this area is concerned, PriceWaterhouseCoopers wrote: “There is no segregation of duties since an external consultant performs the development and go live of applications. The developer did provide sufficient documentation to allow others to fully understand his work. The CERN Pension Fund IT is fully dependant on an external consultant.”

They recommended to reduce dependence towards IT external consultancies and to implement effective segregation of duties between the development and the implementation phase.

The management replied “The external consultant, being independent of the Fund, cannot personally benefit from any unauthorized modification of an application. Nevertheless the new computing system will reduce dependence on the consultant and will effectively ensure a segregation of duties between development and implementation phases and will in general substantially reduce risk in this area.”.

We endorse the PWC’s recommendation and we will follow up this issue during next financial year.

#### 5.1.3. Monitoring – Independent controller

On this issue PriceWaterhouseCoopers wrote “Financial activities are carried out either by external or internal managers who are supervised by the Pension Fund administration. Given the small number of administrative employees the control activity is not independent from the operational department.”

They recommended to implement a self-assessment process in order to ensure compliance with internal procedures, limits and restrictions decided by the Investment Committee, transactions validity, cash movements validity.

The Management responded that WG 1 will shortly make a recommendation to the PFGB that high priority be given to a self-assessment process covering all aspects of internal procedures including transactions and cash movements validity. Furthermore, they concluded that the question of limits and restrictions is about to be addressed when setting the Investment Principles of the Fund. The issue is ongoing

#### 5.1.4. Risk Management – Strategic decisions

PriceWaterhouseCoopers found that strategic decisions (strategic allocation, tactical margin and investment drivers) are essentially based on qualitative analysis. They recommended implementing quantitative measurement of market risks taken by the PF such as VaR and stress analysis.

The Management responded “Quantitative analysis is performed with regard to strategic asset allocation where the Fund uses the consultants Ortec. (...) The Fund is considering setting up tactical margins based on tracking error constraints. With regard to investment drivers the Fund has access to external research and analysis that include quantitative aspects. The Fund already obtains regular VaR reports from its custodian. Additionally the Fund is working on introducing additional and deeper analysis with the use of the product Algorisk proposed by State Street. Steps have already been taken in this direction. Implementation should be effective in 2009 Q2 (...)”.

We endorse the PWC’s recommendation and we will follow up this issue during next financial year.

#### 5.2. Audit

In the 2007 Report (refer to § 4.3 doc. CERN/FC/5249 CERN/2791), the Austrian Court of Audit referred to their 2005 audit report (CERN/FC/5046) where “they recommended including basic audit principles in any review of the Pension Fund Rules and Regulations. However, the External Auditors noted that these recommendations have not been addressed in the latest version (dated 1 November 2007) of the Pension Fund Rules and Regulations.”

So far no “basic audit principles” have been included in any review of the Pension Fund Rules and Regulations. Thus, the recommendation has been not implemented by the Management, yet.

#### 5.2.1. External Audit

We endorse the analysis and the resulting recommendation of the Austrian Court of Audit, integrally reported in our 2008 Report.

“The basic audit principles for external audit should:

- ensure the external auditors' independence from Management of the Pension Fund and their sole responsibility to Council;
- cover the external audit tasks. These tasks should not only comprise aspects of legality and regularity audit (which are the basic elements of the audit opinion) - but also the performance of the fund's Management.”

Besides, the External Auditors were concerned “(...) about the intention to establish a second external audit function within the Pension Fund. According to CERN document (CERN/2733/Rev.):

*The annual financial accounts of the Pension Fund are audited by the CERN External Auditors appointed by the Council. The PFGB mandates a specialized Pension Fund audit consultancy firm to conduct an additional annual audit of the Pension Fund, which will be submitted to the Council.*

The External Auditors are of the opinion that the appointment of two external auditors with the same reporting line to Council is not in line with the basic principle of an independent external audit mandate. The Council could be put in a very uncomfortable situation to deal for instance with two contradictory audit opinions which might hamper the discharging process.

According to International Standards on Auditing (ISA 600) there can only be one ‘principal auditor’, tasked with responsibility for reporting on the financial statements. However, ISA 600 determines the possibility for an ‘other auditor’. It has to be noted that the work of the “other auditor” comprises the reporting on the financial information of only a component, which is included in the financial statement audited by the ‘principal auditor’.

Working Group 1 has been tasked to revise Chapter I Section 2 of the Rules and Regulations of the Pension Fund at the first meeting of the Pension Fund Governing Board under the new governance.

The External Auditors recommend that Terms of Reference for Working Group 1 should be defined in order to meet the expectations of the Governing Board at its best.

The terms of reference should inter alia refer to the issue of two external auditors and address this issue to be in line with international accepted standards.”

We share the above-mentioned points raised and the resulting views expressed by our predecessors and we consider their recommendations as not yet implemented.

Furthermore, we report below the main events and decisions, chronologically listed, that took place starting from 31 December 2007.

At the meeting of the Pension Fund Governing Board, held on 28 February 2008, a specialized pension fund auditor was selected after a tendering procedure. The audit firm PriceWaterhouseCoopers was chosen, with the objective of performing an audit “on the special purpose financial statements 2008”.

The contract (engagement letter) was signed on 31 October 2008 by the Administrator of the Fund, jointly with an Annex including the General Terms and Conditions of Engagement for Assurance services, dated 1 January 2008 prepared by PriceWaterHouseCoopers.

After the examination of the engagement letter and other relevant documentation, we held several meetings with the Pension Fund Management and one meeting with the PWC executives. Following these meetings, and after having consulted the CERN Legal Service in order to obtain draft proposals according to CERN Internal Procurement Rules, we proposed some amendments related to the obligations due by PWC, amongst these, the requirement of an exact deadline for their definite version to be presented to us containing the results of their audit.

As a matter of fact, in the contract there was not clear indication on “when” interim and final reports should have been delivered to the Pension Fund Management, to the Pension Fund Governing Board and to the Principal External Auditor. Besides, there was no mention of delivery of audit notes and audit management letters.

Moreover, no clear performance indicators were identified in the contract.

The CERN Legal Service agreed with our the remarks and prepared a template to replace PWC’s general conditions as the basic contractual framework.

In particular, being 2008 the first year of an additional audit of the Fund, it was envisaged to:

- ensure smooth communication between the audit bodies (External Auditors and PWC);
- encourage appropriate levels of cooperation;
- facilitate the final reporting process to the Council.

Unfortunately, the intention of amending the contract subsequent our proposals has not been followed-up yet by the Management.

As a result of these circumstances, we obtained the signed PWC’s opinion and Management Letter (jointly with the Management replies) on the 5 May 2009.

It is worth mentioning that the Pension Fund Governing Board put a considerable effort into trying to ensure smooth communication between the audit bodies but, along with the procedure established for this specific issue, the PFGB was put in the position to examine PWC’s opinion only during the meeting held on 13 May 2009. Then we received the PFGB official feedback on 14 May 2009.

We therefore recommend that for 2009 a clear procedure, also in line with the Austrian Court of Audit’s recommendation, be submitted to the Council for decision and approval.

We are of the opinion that, not only should such a procedure follow the recommendations stated by our predecessors, but it should also clarify the scope of a “additional special purpose audit”. Besides, we highlight the fact that we are

available for any clarification regarding the Terms of Reference to be provided in the audit mandate related to the duties of the additional auditor.

We draw the Council's attention to the fact that in case a revision of the Terms of Reference of the mandate for a special purpose audit should lead to an increase in the fees requested for such an audit, then it would be essential to open a new tender procedure.

#### 5.2.2. Internal Audit

We endorse the analysis and recommendation of the Austrian Court of Audit regarding the internal audit issue, as integrally reported below:

“The basic audit principles for internal audit should:

- ensure that the internal audit is part of the overall control system of the Pension Fund and;
- define the reporting requirements.

The External Auditors were informed that an internal audit was conducted on the Pension Fund's internal trading activity. The report was issued in September 2007 and highlighted a number of weaknesses. The External Auditors noted that no validation or comments on issues raised in this report have been received. This situation has been justified due to the restructuring process of the Pension Fund. The External Auditors were informed that the new Governing Board would deal with the issues raised in the internal audit report.

The restructuring of the Pension Fund led to a widely autonomous status of the Pension Fund. In this circumstance the involvement of CERN internal audit regarding the Pension Fund was not properly addressed.

The External Auditors are of the opinion that due to the fact that CERN and its Pension Fund form one legal entity the internal audit should be entitled to perform audits in all areas of CERN including its Pension Fund. This would ensure the overall target to improve CERN's internal control system and to avoid any white spots of unaudited areas.

The External Auditors are aware that the reporting lines of the internal audit are dependent on the area audited (CERN or CERN Pension Fund). While internal audit reports to the Director General on audits performed on CERN core activities, internal audit should report to equivalent executive bodies of the Pension Fund on audits performed on the Pension Fund.

The External Auditors recommend that the terms of reference of Working Group 1 should include the task to clarify the roles and responsibilities as well as the reporting line of the CERN internal audit with respect to the Pension Fund. This includes the definition of the internal audit in the Rules and Regulations of the Pension Fund.”

We share the view of our predecessors and we consider their recommendations as not yet implemented.

## **6. FINANCIAL RESULTS FOR THE YEAR**

The Fund net result as at 31 December 2008 resulted in a decrease equivalent to 1'024.3 MCHF (2007: +140.2 MCHF) due to the negative outcome of the benefits and contributions account totalling to -149.2 (2007:-133.7 MCHF) and the negative result of the profit and loss account equivalent to -875.1 MCHF (2007: +273.9 MCHF). The Fund net assets therefore decreased from 4'614 MCHF, as at 1 January 2008, to 3'590 MCHF as at 1 January 2009 (-22.2 %).

The Council decided at its 135th Session held on 15 and 16 December 2005 to reduce the technical rate from 5.5% to 4.5% as of 1 January 2005. At 31 December 2008 the technical deficit<sup>2</sup> applying a technical rate of 4.5%, was -1'345 MCHF compared to -274 MCHF as at 31 December 2007. Because of the negative performance of the Fund during the year 2008, the funding ratio (percentage of the coverage of the actuarial commitments by the net assets) decreased from 94.4% on 31 December 2007 to 72.7% on 31 December 2008.

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<sup>2</sup> Technical deficit (2008: -1.345MCHF; 2007:-274 MCHF) is given deducting from the value of the Net Provident Assets (2008: 3.590 MCHF above mentioned; 2007:4.614MCHF) the “provident Capital and Technical Provisions” (2008:4.935MCHF; 2007: 4.888 MCHF)

Due to the relevance of this negative performance it is important to draw the attention to what is stated in the Consulting Actuary's Report for the Year 2008 *“the above-mentioned results reveal an unsatisfactory financial position for the Fund as at 31<sup>st</sup> December 2008 with a funding ratio of only 72.7%. The Fund has no safety margin that would allow it to weather a further fall in the financial markets. In addition, the Fund's liabilities as at 31<sup>st</sup> December 2008 are not entirely covered by the available provident assets. If the CERN PF had been wound up on that date, the Member States would have been obliged to pay 1'345.0 MCHF on account of the pensions guarantee provided for in Article I 3.03 of the Rules. As at 31<sup>st</sup> December 2007, this guarantee would have cost 274.1 MCHF. The under-funding of 1'345.0 MCHF or 27.3% of the provident capital and technical provisions is significant (funding ratio below 90%). It is mainly due to the current economic situation and the resulting poor performance of the assets during the 2008 financial year”*.

Furthermore, it is also important to highlight that PWC in their opinion stated that *“without qualifying our opinion, we draw your attention to the fact that the financial statements show a funding gap of CHF 1.345.000.144 and a cover ratio of 72.7% (31.12.2007: 94.4%) based on a discount rate of 4,5% and an expected long-term rate of return of 5%. Average overall performance over the last 20 years was 4.4% which shows that rate of return used is hardly achievable. Therefore we support decision of the Pension Fund Governing Board to adopt more realistic economic assumptions in the future”*

Therefore, although we understand that the Management made use of the assumptions decided by the Council in 2005, we are of the opinion, and we consequently recommend, that the actuarial assumptions to be employed should be based on realistic economic assumptions calculated on market values.

This leads to the conclusion that not only should the expected long-term rate of return be more realistic - as highlighted by PWC - but also other actuarial assumptions, such as the discount rate, should be realistic. For instance, using the fair value principle, as envisaged by IPSAS, the discount rate at 31 December 2008 was 2.59%, based on the 30-years Swiss government bonds' value.



Had these assumptions been used, the cover ratio would have been decreased. This would have entailed that the “underfunding” - already considered “significant” in the Actuary’s Report – would have been assessed even more negatively.

## **7. AUDIT RESULTS**

### **7.1. Current accounts and Deposits**

In accordance with the International Standards on Auditing 505 stating “Audit evidence obtained directly by the auditor is more reliable than audit evidence obtained indirectly or by interference (...) examples of situations where external confirmations may be used include bank balances and other information from bankers”, we asked all the banks declared to have a business relation with the CERN Pension Fund to confirm current accounts and deposits balances as at 31 December 2008.

As for the deposits and the current accounts “out of State Street” we received all the banks’ confirmation letters by April, the reconciliation was performed and all variances were justified and explained. We did not observe any errors and the amounts recorded in the balance sheet are thus verified and confirmed.

As far as State Street is concerned, reports from State Street were used for their examinations of the current accounts held by managers under State Street custody, based on a sample of transactions.

As also specified in the Report on the Accounts of CERN for 2008, we found that the exchange rates for certain foreign currencies at the closing date used by CERN differed from those same currencies utilized by the Pension Fund and, what is more, in some cases they both differed from the Swiss National Bank’s official exchange rates. Since IPSAS have the objective to enhance, among other issues, Comparability of financial statements and considering the fact that the two Financial Statements are interrelated, we thus recommend to employ the same foreign exchange rates for both Entities. We consider that for a public funded International Organization a generally world-wide rate accepted as official, published by public institutions such as, for example, the Swiss National Bank or the European Central Bank could be more appropriate.

## 7.2. Investment properties local auditors selection

The Pension Fund real estate portfolio consists of commercial and residential properties located respectively in Geneva, Berlin, the Netherlands, France and in the U.K. During the year 2008 two buildings in Paris, offices shops and residential, were acquired.

Real estate is managed locally by experts and, on a yearly basis, audited by local auditors.

We observed, as also reported by PriceWaterhouseCoopers, that some local auditors were re-elected without any formal engagement letter and no criteria were defined by the management regarding their selection.

Additionally, PriceWaterhouseCoopers report that some of the documentation provided to them was not in line with the International Standards on Auditing (ISA). The Management response was that the PF will request an annual engagement letter from the local auditors and will ensure the content is consistent with ISA. In conclusion, we endorse PWC recommendations concerning a) the formal request of an annual engagement letter compliant with ISA for auditors' appointment and b) the fact selected auditors should provide their reporting in clearly defined audit terms of reference and we will follow up this issue during next financial year.

With regard to the valuation of the investment property, PWC, by sampling the valuation methods, found that each expert applies the valuation method used in his respective country. Valuation principles consequently differ between countries, and, according to IPSAS 16, current prices on an active market are the best evidence of fair value. In the absence of current market prices and prices on less active markets, discounted cash flow projections should be used. The management responded that "The Fund will write to each valuation expert imposing the valuation methods consistent with the provisions of IPSAS 16." We share the PWC's recommendation and we will follow-up whether the Management implement this issue correctly.

### 7.3. Retirement pension

We have examined a sample cases of pensions, with satisfactory results.

Total departures from the Organizations in 2008 were 358 (2007: 302 persons; 2006: 270 persons). Among these, 112 were retirements (2007: 98), of which 67 opted for early retirement (2007:66 persons).

## **8. FOLLOW UP OF RECOMMENDATIONS 2003 - 2007**

Following the request of the Council to examine and adopt the external auditor's recommendations for the past, we have reviewed the Austrian Court of Audit Reports for the period from 2003 to 2007<sup>3</sup> and the corresponding comments by the Management.

In Annex 1 only two categories of recommendations are listed:

- a) the recommendations which are still pending (considered as uncompleted by the Austrian Court of Audit and by us)
- b) the recommendations considered as "pending" by the Austrian Court of Audit but considered as completed by us.

Those recommendations already considered as closed by the Austrian Court of Audit in their 2007 Report have not been included again in the Annex.

In addition, Annex 1 also comprises the comments received from PF Management at the time of the issuance of the corresponding Report and the latest status on actions taken by Management.

It is worth mentioning that 14 out of 15 of the Austrian's recommendations are still uncompleted or pending or not yet fully implemented, therefore we recommend the Management to take the necessary action in respect of these recommendations so as to improve the effectiveness and efficiency of financial and administrative matters.

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<sup>3</sup> See CERN /FC/5249 - CERN/2791

## ANNEX 1

<b>Report</b>	<b>Recommendation raised By Austrian Court of Audit</b>	<b>Comments received from CERN Management at the time of the issuance of the report (31.12.2007)</b>	<b>Status on actions taken by Management as reported by Austrian Court of Audit</b>	<b>Comments received from CERN Management at the time of the issuance of the report (31.12.2008)</b>	<b>Status on actions taken by Management as evaluated by Italian Court of Audit</b>
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2004	<p><b><u>Organizational matters of the Pension Fund</u></b></p> <p>With reference to a Working Group established in 2004 on the procedures for Council appointments to the Governing Board of the Pension Fund and on the Term of Office of Members and Alternates the External Auditors recommended that efforts should continue to be made to implement an efficient organizational structure for the Pension Fund with clearly defined and separate roles and responsibilities of all members of the Pension Fund's bodies.</p>	No comment.	<p>The procedures for the establishment of a new Pension Fund governance structure, including the roles and responsibilities of the Pension Fund's bodies and their members, is set out in document CERN/2733/Rev. 22 June 2007. The measures outlined in this document are in the process of being implemented.</p>	<p>In 2007 in its new composition under the new governance structure the Pension Fund Governing Board set up four working groups to implement the governance structure.</p> <p>Working Group 1 is responsible for the revision of Chapter I, Section 2 of the Rules of the Fund. The Group completed its tasks on the composition of the Investment Committee and on a Code of Conduct It is continuing its work on the status of the Fund's personnel and the terms of reference of the PFGB and Investment Committee, as well as setting up a new internal control system.</p> <p>Working Group 2 is responsible for defining the Pension Fund's funding policy and principles. It is making steady progress. The actuary has been asked to draw up scenarios with a view to attaining a given funding ratio at the end of a given projection period, taking account of different technical interest rate assumptions and the level of capital needed to cover a future indexation assumption. A preliminary report on the important matter of full capitalization in the context of the funding strategy is due to be submitted at the end of 2009 to the PFGB.</p> <p>Working Group 3 was entrusted with the selection of Investment Committee experts. As a result of this work, the PFGB was able to appoint two new experts to the Committee. The two external experts have extensive experience of institutional investment and are completely independent of any financial group or institution. This working group has therefore completed its mandate.</p> <p>Working Group 4, whose remit included the selection of a new general manager, shortlisted a set of candidates at the end of the year and made a recommendation to the PFGB following a series of interviews. A proposal for the appointment of the selected candidate will be submitted to the Council in June 2009. This working group has therefore completed its mandate.</p>	Ongoing -
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<b>Report</b>	<b>Recommendation raised By Austrian Court of Audit</b>	<b>Comments received from CERN Management at the time of the issuance of the report (31.12.2007)</b>	<b>Status on actions taken by Management as reported by Austrian Court of Audit</b>	<b>Comments received from CERN Management at the time of the issuance of the report (31.12.2008)</b>	<b>Status on actions taken by Management as evaluated by Italian Court of Audit</b>
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<p><b>2005 and 2006</b></p>	<p><b><u>IT – Management of the Fund</u></b> The External Auditors recommended that the Administration of the Fund should continue its efforts with respect to the organizational improvement of the Fund's IT system both on the technical side as well as on the personnel resources. This could also include considerations with respect to the availability of “off-the-shelf “IT-modules for retirement benefit programmes as well as the option for out-sourcing parts of the Fund’s administration to specialized service providers.</p>	<p>In order to address this issue and to improve the logistics backup, an IT project was launched in 2005 with the following objectives:</p> <ul style="list-style-type: none"> <li>✓ Migrate the in-house built computing systems of the Fund towards Organizational standards (Oracle HR);</li> <li>✓ Review and improve available functionality by evaluating standard existing products available on the market.</li> </ul> <p>Amongst other things successful implementation of the project will ensure improved operational efficiency in the recurrent functional areas of the Fund and lead to an improvement in data security and quality.</p>	<p>Following the recommendation of the external consultancy report by Ernst &amp; Young that the Pension Fund's IT requirements would be best served by an off-the-shelf solution, 8 external suppliers were invited to submit offers. From these bids a short-list of 3 or 4 will be selected with a final choice of product being made during the month of August 2008.</p>	<p>A Steering Committee was entrusted with the task of finding a solution to the IT problem of the Pension Fund and presenting it to the Governing Board. The Steering Committee recommended adoption of the Xplan application. (CERN/PFGB/9.8). Xplan is a powerful and flexible standardised system which has been designed for financial planning professionals, based on modern software tools that are analogous to those in use at CERN and compatible with them. The next steps will involve entering into contract negotiations and the drawing up of a contract with aXenta the supplier. The project will be managed in collaboration with GS/AIS.</p>	<p>Pending -</p>
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2005	<p><b><u>Real Estate</u></b></p> <p>The External Auditors highlighted a considerable devaluation relating to office space in the Netherlands.</p>	<p>The Netherlands' market around Amsterdam is characterised with oversupply in office space which has had a negative effect on property values. Nevertheless, the overall performance of the Fund's properties in the Netherlands remains satisfactory.</p>	<p>The valuation carried out for the 2007 exercise recorded an increase in value for the Fund's three buildings in the Netherlands. the average increase was some 14.3</p>	<p>The average decrease in 2008 was some 27.4% including the effect of exchange rate fluctuation.</p>	<p>In 2008 the average decrease was around 27%.</p>
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<b>Report</b>	<b>Recommendation raised By Austrian Court of Audit</b>	<b>Comments received from CERN Management at the time of the issuance of the report (31.12.2007)</b>	<b>Status on actions taken by Management as reported by Austrian Court of Audit</b>	<b>Comments received from CERN Management at the time of the issuance of the report (31.12.2008)</b>	<b>Status on actions taken by Management as evaluated by Italian Court of Audit</b>
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2005	<p><b><u>Decision taken by the Finance Committee - Package of Equilibration Measures</u></b></p> <p>The External Auditors noted that the decision of the Finance Committee, not to support recommendation 5 of the "Package of Equilibration Measures", has an impact on the numerical content of recommendation 6. In the Auditors' view, this decision jeopardises the target of achieving a fully funded situation by end of 2033 (as decided by Council at its 131st Session in December 2004).</p> <p>The External Auditors recommended that the "Package of Equilibration Measures" should be revised to take into account the impact of not supporting the original recommendation 5.</p> <p>Also, the External Auditors advise, that the financial consequences of limiting the non-indexation of pensions to the year 2005 as set out in recommendation 4, should be reconsidered in the light of the decision of Finance Committee.</p>	No comment.	<p>A new indexation policy has been implemented (Appendix C of the Rules and Regulations) as part of the Package of Equilibration Measures.</p> <p>Regarding the External Auditors recommendation, Working Group 2 is charged with the drafting of a Funding Policy and Funding Principles for the Pension Fund for examination by the Pension Fund Governing Board.</p>	<p>As stated above, Working Group 2 has been mandated to re-define the Fund's funding policy. The Group is expected to report at the end of 2009 to the PFGB. In addition a special meeting of the PFGB will be dedicated to this matter at the end of July 2009.</p>	Ongoing -
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2005	<p><b><u>Rules and Regulation of the Pension Fund – Pension Policy</u></b></p> <p>The External Auditors noted the absence of the Pension Policy as foreseen in the Rules. The External Auditors recommended that having a sound pension policy is vital and should be considered together with the overall review of the Rules and Regulations of the Pension Fund.</p>	<p>As stated by the Chairman of the Governing Board in his letter of 12 December 2005, “we feel that the Rules and Regulations regarding the Pension Fund clearly establish the existence of a capitalized fund, with carefully described rights and obligations for both the Sponsors and the participants in the Fund”. Nevertheless, to meet the requirements of the Auditors, a statement on Pension Policy will be included in an appropriate form in the next revision of the Rules and Regulations of the Fund.</p>	<p>This recommendation falls within the remit of Working Group 2 which is charged with the drafting of a Funding Policy and Funding Principles for the Pension Fund for examination by the Pension Fund Governing Board.</p>	<p>Working Group 2 is responsible for defining the Pension Fund’s pensions policy for consideration.</p>	<p>Ongoing -</p>
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<p><b>2005 and 2006</b></p>	<p><b><u>Rules and Regulation of the Pension Fund Investment Policy</u></b>  The External Auditors noted the lack of a comprehensive document on investment policy as such, although guidelines exist in a number of various sources. The External Auditors recommended, that having a sound investment policy is vital and all existing guidelines should be consolidated for better understanding in one document –</p>	<p>It is envisaged that a definitive document that takes into consideration all valid contributions towards an optimal Investment Policy for the Fund will be submitted to the Governing Board via the Investment Committee for implementation within the timescale for the introduction of the new Pension Fund governance. Such a document is of high importance for all bodies involved in supervising the Fund's investment policy.</p>	<p>The new Investment Committee will be tasked with the establishment of a comprehensive investment policy to be submitted to the Pension Fund Governing Board for approval</p>	<p>An investment principles policy document is on the agenda of the PFIC for 2009/2010. The input of the new General Manager of the Fund is required.</p>	<p>Pending</p>
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2005	<p><b><u>External Audit</u></b></p> <p>The External Auditors recommended including the basic audit principles in any review of the Pension Fund rules and regulations based on internationally accepted standards. The audit tasks (e.g. legality and regularity of financial management and accounting as well as the performance, economy, efficiency and effectiveness of the Fund's administration) should be determined accordingly. The revised rules and regulations should ensure, that the External Auditors are appointed by and responsible only to Council and fully independent from the management of the Fund.</p>	<p>In line with the recommendation of the Auditors, the review of the Rules and Regulations of the Fund (see point 10.2.1) will formalise the audit tasks, including audit of the financial status and the management of the Pension Fund, compliance with the Fund's investment and funding policy and other relevant regulations and guidelines. These formalised audit tasks will be based on fundamental audit principles and international auditing standards to be executed by fully independent auditors who are appointed by, and responsible only to, Council.</p>	<p>This recommendation falls within the remit of Working Group 1 which is charged with the revision of Chapter 1, Section 2 of the Rules and related Regulations for examination by the Pension Fund Governing Board.</p>	<p>Working Group 1 has not yet completed its work on the Rules and Regulations of the Fund. This item will be incorporated into the final draft of the revised Rules and Regulations.</p>	Pending
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2005	<p><b><u>Internal Audit</u></b></p> <p>The External Auditors note that internal audit is an essential part of the overall internal control system of the Organization. Therefore the External Auditors recommended formalising the internal audit function in any review of the Pension Fund Rules and Regulations. Based on the principles of independence and objectivity, the responsibilities and competencies of the internal audit function should be determined according to internationally accepted standards.</p>	<p>The Administration recognises the important role played by the Internal Audit service as part of the overall control system of the Pension Fund. The formalisation of this role, based on the principles of independence and objectivity, will be considered in the review of the Rules and Regulations of the Fund within the general audit context.</p>	<p>This recommendation falls within the remit of Working Group 1 which is charged with the revision of Chapter 1, Section 2 of the Rules and related Regulations for examination by the Pension Fund Governing Board.</p>	<p>Working Group 1 has recently completed a thorough review of the Internal Control System (ICS) of the Fund including an evaluation of the risks associated with the Fund's activities. Conclusions are still being formulated but at its last meeting on 13 May 2009 the PFGB endorsed an approach based on periodic self-assessment. Under self-assessment an officer the Fund would ensure that the Fund's internal controls were being implemented and review them for completeness and efficiency. It is envisaged that external auditors would then review the self-assessment process for inclusion in their audit report.</p>	Pending-
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<p><b>2006</b></p>	<p><b>Special regulations and provisions</b></p> <p>The External Auditors noted that occasionally special regulations and provisions are put in force by the governing bodies for implementation by the Administration of the Pension Fund. These special regulations and provision date back to past decades. We noted that currently no comprehensive document exists indicating the special regulations and provisions granted including their validity and duration.</p> <p>We recommend that following an evaluation process all limits, special regulations and provisions put in place for the management of the Fund should be properly documented and periodically reviewed.</p>	<p>There is merit in the production of a document that reiterates and reviews these special regulations and provisions and consistent with the Auditors' recommendations the Administration will prepare once a year an appropriate format for approval by the Investment Committee in order to update systematically decisions which may have been taken.</p>	<p>The External Auditors have been informed that a review process took place. Following the interim audit a comprehensive document has been established which will be circulated to all IC Members for information</p>	<p>This is on the agenda of the PFIC for consideration by the PFGB. The new General Manager of the Fund will be involved in the implementation of this measure.</p>	<p>Pending -</p>
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<p><b>2006</b></p>	<p><b><u>Liabilities of Internal Managers</u></b></p> <p>The External Auditors would like to draw the attention to the fact that in case of fraud and errors occurring in funds handled by external managers the liabilities for compensation for damages lies with the external manager while in cases of fraud and errors arising in funds handled internally the risk lies with CERN and ultimately the member countries.</p> <p>The External Auditors recommended considering strategies to address this potential risk.</p>	<p>The Fund will explore, as recommended by the Auditors, initiatives to further address this issue, which among others, could entail daily compliance monitoring and liability insurance cover.</p>	<p>Daily compliance reports have been introduced, while contracting a liability insurance turned out - according to the Administrator of the Fund – would be feasible but the cost may be prohibitive. The telephone lines of the internal manager for investment deals will be recorded.</p> <p>A list of brokers has been established. In addition, the brokers were informed that two staff members are authorised to perform trading activities. The investment committee is involved in the broker selection process</p>	<p>The Fund is in the process of considering three offers to provide a service to record investment deals. Tests of the proposed systems will be carried out during Summer 2009.</p> <p>A list of brokers was first supplied to the PFIC in October 2007. This list is updated periodically in line with PFIC decisions</p>	<p>Ongoing</p>
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2006	<p><b><u>External Expertise</u></b></p> <p>The External Auditors are of the opinion that under the new governance of the Pension Fund external expertise should form an essential part of the decision making process. The experience of external expertise should concentrate mainly on the following items:</p> <ul style="list-style-type: none"> <li>• strategic asset allocation;</li> <li>• internal control system;</li> <li>• IT-environment.</li> </ul>	No comment.	<p>At present ORTEC, Ernst &amp; Young, Mercer, the Actuary Pittet Associates and State Street (compliance package and performance measurement) are engaged as external experts. Under the new governance structure, external experts make up the composition of the new Pension Fund Governing Board and Investment Committee. In addition the Fund's new IT solution will be provided by an external supplier.</p>	<p>The use of external experts has increased considerably on implementation of the new governance structure. Some 2 out of 10 members of the PFGB and 2 out of 5 members of the PFIC are external experts.</p> <p>With respect to the new IT solution, the PFGB has selected a product supplied by an external supplier who is an expert in the provision of social security computing systems.</p>	Closed
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2006	<p><b><u>Fluctuation Reserve</u></b></p> <p>The external auditor recommended considering the implementation of a fluctuation reserve to be able to react on market fluctuations and to avoid short-term adaptations of the contributions.</p>	<p>The question of fluctuation reserve will be raised with the ALM expert in order to comply with standard practice in other European countries.</p>	<p>This recommendation falls within the remit of Working Group 2 which is charged with the drafting of a Funding Policy and Funding Principles for the Pension Fund for examination by the Pension Fund Governing Board.</p>	<p>The issue of the creation of an investment fluctuation reserve will form part of the deliberations of Working Group 2. The Group is expected to report at the end of 2009.</p>	<p>Pending</p>
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2006	<p><b><u>International Public Sector Accounting Standards (IPSAS)</u></b></p> <p>The adoption of IPSAS can be seen as one of the greatest challenges the Pension Fund has to face in the coming years.</p> <ul style="list-style-type: none"> <li>✓ The External Auditors recommended that: a roadmap for the implementation of IPSAS should be established;</li> <li>✓ cooperation with the responsible department for the implementation of IPSAS at CERN should be initiated to ensure a coordinated approach;</li> <li>✓ the Financial Rules and Regulations should be updated accordingly to reflect the compulsory application of IPSAS.</li> </ul>	<p>The Pension Fund accounting policy is in line with International Accounting Standards (IAS) by having adopted a mark to market policy. Nevertheless, on the Liabilities' side of the balance sheet, regarding IPSAS, IAS 19 will be one of the major issues for actuarial valuation of the liabilities. In addition to traditional actuarial valuation based on long-term hypothesis as determined by the Council, the Pension Fund will provide the financial position based on IAS 19 for information purposes. With respect to the other items, the Pension Fund will address them by consulting other international Pension Funds.</p>	<p>The Pension Fund has adopted IPSAS with a work plan aiming at full implementation for the year-end 2008. Working Group 1 will incorporate this initiative into its re-drafting of the Financial Rules and Regulations.</p>	<p>Working Group 1 has not yet completed its work concerning the Financial Rules and Regulations. Reference to the adoption of IPSAS by the Fund will be incorporated into the final draft.</p> <p>In the absence of a relevant IPSAS the Fund has adopted the provisions of IAS 26. The financial position according to this standard is referred to under heading IV Long-Term Results of the Annual Report and also at Annex 1 in 'The Consulting Actuary's Report'.</p>	<p>Pending.</p> <p>Moreover, quoting from the second column by the Management “regarding IPSAS, IAS 19 will be one of the major issues for actuarial valuation of the liabilities. In addition to traditional actuarial valuation based on long-term hypothesis as determined by the Council, the Pension Fund will provide the financial position based on IAS 19 for information purposes”</p> <p>This issue has not been tackled by the Management yet.</p>
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2007	<p><b><u>External Audit</u></b></p> <p>The External Auditors recommend that Terms of Reference for the newly established Working Group should be defined in order to meet the expectations of the Governing Board at its best. The terms of reference should inter alia refer to the issue of two External Auditors and address this issue to be in line with international accepted standards.</p>	<p>The Terms of Reference of the Working Group will be established with respect to the recommendations concerning External and Internal Audit.</p>	<p>This recommendation falls within the remit of Working Group 1 which is charged with the revision of Chapter 1, Section 2 of the Rules and related Regulations for examination by the Pension Fund Governing Board.</p>	<p>Working Group 1 has not yet completed its deliberations with regard to the issue of two external auditors.</p> <p>A reporting procedure was put in place for the 2008 audit report whereby PriceWaterhouseCoopers, appointed by the PFGB to conduct the additional annual audit decided on by CERN Council, submitted their report in the first instance to the PFGB for subsequent inclusion in the final complete audit report to be presented to CERN Council.</p>	Pending
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2007	<p><b><u>Internal Audit</u></b></p> <p>The External Auditors recommend that the terms of reference of the newly established Working Group should include the task to clarify the roles and responsibilities as well as the reporting line of the CERN internal audit with respect to the Pension Fund. This includes the determination of the internal audit in the Rules and Regulations of the Pension Fund</p>	<p>The Terms of Reference of the Working Group will be established with respect to the recommendations concerning External and Internal Audit.</p>	<p>This recommendation falls within the remit of Working Group 1 which is charged with the revision of Chapter 1, Section 2 of the Rules and related Regulations for examination by the Pension Fund Governing Board.</p>	<p><a href="#">Please see our reply above in respect of the recommendation raised 2005 Internal Audit.</a></p>	<p>Pending</p>
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