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REPORT BY THE EXTERNAL AUDITORS
ON THE FINANCIAL STATEMENTS OF THE CERN PENSION FUND
FOR THE FINANCIAL YEAR 2010

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

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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 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 Fund¹.

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 2010, as well as their Management Letter, jointly with the Management Replies. Finally, we have gathered and provided information on the status of implementation of recommendations that had been issued by External Auditors in the previous years, as requested by the CERN Council.

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

It is worth mentioning that, as the last year, the Actuarial Report is not annexed to the Financial Statements. In the Financial Statement, the Pension Fund Management only reported the Technical Balance Sheet, including the funding ratio, according to the assumptions taken by the Working Group II (WGII). The funding ratio, which results from the IPSAS assumptions, although derivable from the Statement of Financial Position, is not indicated.

¹ Rules of the Pension Fund (CERN/2913/Rev.2), in particular refer to article I 5.01 External Auditors: "The External Auditors, appointed by the Council pursuant to Article 8 of the Financial Protocol, shall certify the accounts and financial statements of the Fund and carry out any audit they consider necessary in that framework or any audit requested by the Council. They shall submit their report to the Council".

2. CERTIFICATE OF THE EXTERNAL AUDITORS

2.1. General

As provided for in the Rules of the Pension Fund², adopted in December 2010, article I 2.01, Legal Status of the Fund, states that the Fund is an integral part of CERN and therefore has no separate legal personality and is under the supreme authority of the Council; the activities of the Fund are part of the official activities of CERN. Under article I 2.02 is stated that the Fund shall enjoy operational autonomy within CERN and shall be managed independently through the bodies referred to in article I 2.04.

However, article I 2.03, Assets of the Fund, provides that the assets of the Fund shall be held separately from those of CERN and they shall be used solely for the purposes of the Fund as defined in article I 1.01 of the Rules.

The opinion we give under item 2.2 solely relates to accounts and financial statements managed by the Fund and held as it is laid down in the Rules 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 Financial Statements of the CERN Pension Fund for the Year 2010.

We have examined the Consulting Actuary's Report for the year 2010, where it is stated that *"the financial stability of the Fund as at 31 December 2010 is not assured. The funding ratio is below 100% at the end 2010 and it amounts to 54,8% according to the technical assessment [according to the assumptions adopted by the PFGB)] and to 69,4% [according to the assumptions stated by WGII]. The Pension Fund was therefore unable to fully guarantee its liabilities at the date of the assessment (...)"* It is also stated, in the same report, that *"[the funding ratio] has dropped from 60,1% as at 31 December 2009 to 54,8% as at 31 December 2010"*.

The Actuary's Report also highlights that the Fund has no security margin that

² Refer to CERN/2913/Rev. 3

would allow it to weather a further fall in the financial markets. In addition, the Fund's liabilities as at 31 December 2010 are not entirely covered by the available provident assets.

Furthermore, the Actuary's Report considered "unsatisfactory" the financial situation for the Fund at 31 December 2010, with a funding ratio of 54,8% and they highlighted the fact that *"if the PF had had to be liquidated at this date, it would have cost Member States 3.185,0 MCHF,⁽⁾ according to the statutory guarantee of benefits according to article 1 3.03" and, what's more, the under-funding of 3.185,0 MCHF (45,2% of the pension capitals and technical provision) is "considerable" and it is the result of three factors like the change in the discount rate, the full capitalisation of the future indexation of pensions and the financial losses due to the 2008 crisis that have not yet been fully compensated for.*

We have analyzed the opinion of PWC which draws "attention to the fact that the financial statements show a funding gap of CHF 3.184.987.976 and a funding ratio of 54.8% (31.12.2009: 60,1%) based on the CERN Accounting Policy (refer to Chapter 2.2. [of the Financial Statement])". Besides, they highlight that "measures to remedy this funding gap were submitted by the Pension Fund Governing Board to CERN Council and approved in December 2010. Approved measures are disclosed under point 17 – Events after the Balance Sheet date [of the Financial Statements]. "

We believe that the CERN Pension Fund underfunding is critical and we will follow-up in the 2011 financial year the effect of the measures approved by CERN Council as its December session³ that have to be implemented as of 1 January 2011.

In our opinion, the Financial Statements for the Year 2010 give a true and a fair view of the financial position of the CERN Pension Fund as at 31 December 2010, of its financial performance and its cash flows for the year 2010, in accordance with International Public Sector Accounting Standards (IPSAS) and subject to the observations in our report.

³ Refer to CERN/2947

3. PREAMBLE

The Report by the External Auditors on the Accounts of the CERN Pension Fund for the financial year 2010 includes:

- a table providing information on the implementation status of previous years External Auditors' (2004-2009) recommendations, as requested by the Chairman of the Finance Committee to the Council at its 142ⁿd Meeting (CERN/2743). The table is enclosed as an Annex 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 2010;
- 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 3 May 2010;
- Our analysis and assessment of the Consulting Actuary's Report at 31 December 2010 prepared by PITTET Associates.

4. LEGAL STATUS OF THE PENSION FUND WITHIN THE ORGANIZATION

The Council decided, during the restricted Session of 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 confirmed that the Pension Fund remains an integral part of the Organization and has no separate legal

personality.

These considerations have been correctly implemented in the rules of the Pension Fund approved by the Council in December 2010⁴.

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

As stated above, in December 2010, Council approved the Chapter I of the Rules of the Pension Fund that entered into force on 1 January 2011. We have been requested by the Standing Advisory Committee on Audits to express our comments on Section 5 "Audit" only.

Chapter I of the new Rules of the Pension Fund provides now a sound legal basis for the Fund's operations, however we recommend that the other Sections, the Application of the rules, Financial Regulations and Procurement Rules be implemented as soon as possible in order to provide the entire legal framework on which the Fund will operate.

5. THE CONTROL ENVIRONMENT IN CERN PENSION FUND

5.1 Internal Control Environment

As mentioned in the 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 presented by the local auditors, selected by the Fund's Management, in charge of auditing the Pension Fund's Real Estate portfolio.

As for 2008, in their Management Letter, PWC reported on *"overall comments on the control environment of CERN Pension Fund"*. In that paragraph it was stated 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"*.

For the year 2009 and 2010, PWC did not perform any follow-up of this

⁴ Refer to CERN/2913/Rev 3. Article I 2.01

comment.

Considering Investments as a part of the strategy “to remedy the funding gap”, PWC, however, issued recommendations, in 2009 and 2010, over the lack of compliance with Strategic Asset Allocation (SAA)⁵ and over the Statement of Investing Principles (SIP) which, under the new Pension Fund’s rules⁶, has to be decided by the PFGB, following the proposals of the Investment Committee⁷.

Furthermore PWC recommended that managers that are dealing with the investments will act in the framework of a SIP “*duly approved by the Pension Fund Governing Board*”, in order to monitor the compliance with the principles, and consequently to approve the SIP “*in year-ending 2011*”.

The Pension Fund Management Unit (PFMU) confirmed that they will submit a SIP for consideration and approval by the PFGB by the year-end 2011⁸

Moreover, PWC observed, at 31 December 2010, “some significant deviations from SAA for Bonds, Diversifying assets and Cash asset classes” and they recommended “*managing the CERN Pension Fund assets as specified by the SAA and to properly document any variance so that the PFGB (through the Investment Committee) can take the appropriate measures*”.

Management replied that the Investment Committee “*has been kept apprised of changes to the asset allocation and deviations from SAA approved in 2008 through regular reports at its meetings. Since January 2011, the Fund’s updated rules provided for a new asset management process to reflect the Fund’s SIP*” and they concluded that “*the PFMU is currently working to develop processes and procedures to implement the provisions of the updated Rules*”. In addition, deviations which occurred in 2010 are explained by the management in the Financial Statements.

We share the point of view of PWC and therefore we recommend, despite the fact that new principles will be implemented at the end of 2011, that the SAA should

⁵ Refer to paragraph 5.1.4 of our 2009 Annual Report and to paragraph 6.1 below.

⁶ Refer to art. I 2.05 1.b.

⁷ Refer to art. I 2.10 1.

⁸ Refer to paragraph 8, Follow-up table, 2005 and 2006 “Rules and Regulation of the Pension Fund Investment Policy”.

have been respected for year 2010 and as a consequence also for year 2011.

As for the development of a clear strategy and as for measures to remedy to the funding gap, they were proposed to the PFGB by the WG2 already at the end of 2009, and on December 2010, the Council approved the document “Proposal by the management concerning a package of measures towards restoring full funding of the CERN Pension Fund”⁹.

The measures proposed were: *i)* an increase in the contribution rate from 30.88% to 34%, *ii)* an additional annual extraordinary contributions by the employers of more than 60 MCHF, *iii)* for current recipients of a pension and those in receipts of a pension as at 31 December 2011, 0% indexation of pensions until a personal loss of purchasing power of 8% is reached.

As also stated in paragraph 6 we welcome the fact that Council has approved remedial measures for the actual underfunding and we will follow-up on whether they will produce the results expected.

5.1.1 Signature of former Administrator of the Fund on bank establishments

PriceWaterhouseCoopers draws the management's attention to the issue that the previous Administrator has still a recognized power of signature by two banks (ABN-AMRO and Credit Suisse) and recommended “*cancelling the [Administrator]’s joint signature on these bank establishments as he is no longer part of the CERN Pension Fund’s management*”.

Management replied that “*all the banks with whom the Fund carried out business were informed in writing of this change to the signatory list and the failure to cancel this signature is an omission on the part of the banks in question*” and that they “*will write again to these banks to ensure full compliance with the current signatory regime at the Fund*”.

We share the point of view of PWC and we thus recommend *not only* to cancel joint signature of the former Administrator *but also* to check whether, in the period

⁹ Refer to CERN/2947

where he was no longer part of the Pension Fund Management Unit, cash movements have been unduly authorized. Accordingly, we will also follow up that such cancellation will be done by the banks.

5.1.2 Verification of data used by real estate experts and figures as audited by local auditors

PWC identified that *"there is no verification of data used by real estate experts and figures as audited by local auditors"* and that *"the source of data used by the real estate experts has to be transferred by the CERN Pension Fund and then checked that the transferred data has been correctly applied"*. PWC recommendation was *"(...) performing a reconciliation between data used by the real estate experts and data transferred by the CERN Pension Fund"*.

The management replied that *"the Fund will establish a reconciliation process to ensure the use of audited data as part of the investment property revaluation exercise"*.

We share PWC findings, and we endorse their recommendation.

5.1.3 Sensitivity analysis to be disclosed from January 2013

PricewaterhouseCoopers wrote that according to IPSAS 30 – effective as of 1 January 2013 - *"CERN Pension Fund will have to disclose a sensitivity analysis for each type of market risk (currency, interest rate and other price risk) to which the CERN Pension Fund is exposed at the end of the reporting period, showing how profit or loss and equity would have been affected by 'reasonably possible' changes in the relevant risk variable, as well as the methods and assumptions used in preparing such an analysis"* They recommend implementing the tools that will enable the CERN Pension Fund to comply with this new requirement as of 1 January 2013. .

Management accepted to study the IPSAS 30's provisions before its entry into effect, in order to ensure that the Fund has the necessary means to ensure full conformity with the Standard.

We are very satisfied that IPSAS 30, although only effective from year 2013, when our mandate will end, will lead Management to start to comply with its

requirements. We have systematically strongly recommended since 2008¹⁰ when we started our mandate, to disclose risks and explain how accounts would be affected by these related risks. This recommendation has so far not been implemented.

Therefore, *not only* do we endorse the PWC's recommendation *but in addition*, we strongly recommend the PFGB to start to take immediate action for selecting an independent expert, through a technically demanding tendering process, who could implement IPSAS 30's requirements or, as a first step, advise on how to implement such requirements.

5.2 Audit

In the Rules of the Pension Fund (CERN/2913/Rev.2), approved in December 2010 by the Council, Section 5 is titled "Audit" and presents 3 articles related to the External Auditors (Article I 5.01), to Internal Audit of the Fund (Article I 5.02) and to CERN Internal Audit (Article I 5.03).

5.2.1 External Audit

Last year we endorsed the analysis and the resulting recommendation of the Austrian Court of Audit, integrally reported in our 2008 Report, which stated that *"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"*.

The Rules approved in December 2010 and mentioned above¹¹ (Article I 5.01 'External Auditors') clarify that only the External Auditors appointed by the Council shall submit their report to the Council and the risk of "two contradictory audit opinions" has been consequently addressed and mitigated.

This position, which re-establishes 'one principal auditor' entrusted with the responsibility for reporting on the financial statements, is aligned with the International Standards on Auditing (ISA 600) However, ISA 600 leaves the

¹⁰ Refer to our 2009 and 2010 Report in paragraph 6. More specific in paragraph 6.1 Risks versus performance (Annual report 2009) and in paragraph 5.14 "Risk management –Strategic decision" (Annual report 2008)

¹¹Refer to Rules of the Pension Fund CERN/2913/Rev.2

possibility for an 'other auditor' to play a role in the framework of a well defined collaboration with the 'principal auditor'. It has to be noted that the work of the "other auditor" comprises the audit of only on a component of the financial data which is included in the financial statement audited by the 'principal auditor'.

The PFGB in 2010 continued to obtain additional assurance through a contract with PricewaterhouseCoopers (PWC) which provides an opinion on the Pension Fund's Financial Statements.

The contacts between ourselves and PWC have been enhanced compared to past the two years in order to avoid overlaps. However, we should point out that since 2009, this contract is renewed without a competitive tender and without taking into consideration our comments and recommendations, in particular the necessity of a competitive tender and the timing in delivery of their opinion to us. This year, as last year, the PWC's opinion jointly with the management Letter, has been delivered to us on the 5th of May 2011, two days after the formal approval of the PFGB (3 May), and therefore we renew our recommendation that more consideration should be dedicated to a timely delivery, in order to have sufficient time to analyze in full and in detail the contents of the PWC's report and management letter as well as any accompanying note of the PFGB .

Furthermore, although we understand that an independent opinion from an external specialized auditor or consultants could help in enhancing the level of assurance that the PFGB would like to have over the Fund, we are in the opinion and therefore we recommend that a higher level of assurance be obtained *not systematically from* the same service provider *but* through an economical and efficient process – for instance a tender procedure – on the basis of the risks that the PFGB itself would like to specifically monitor and on the areas of the financial statements that need a particular audit's attention in a given year.

Additionally, we point out that we are always available to contribute to clarify the requirements –in the technical specifications of a call for tender - on an expert or a service a service provider for providing the highest level of assurance to the PFGB and, ultimately, to the Council.

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 I 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"

As stated in paragraph 5.2, the Rules of the pension Fund dedicates an article¹² to Internal Audit which implements our and the Austrian Court of Audit's recommendations.

However, the Rules leave open the possibility for the PFGB to insource or outsource the internal audit service.

We are aware of the discussion at the level of PFGB about which of the two options would be more appropriate.

Consequently, before any PFGB's decision is taken, we would like to point out and to clarify that the *assurance* that the PFGB is seeking, as indicated in the previous paragraph 5.2.1, requesting to PWC an audit opinion over the Pension Funds accounts is very much different from the *assurance* that PFGB will have through an Internal audit service, whether this service is insourced or outsourced.

For instance, it is worth while mentioning that a service provider specialized and dedicated to internal audit has different "audit objectives" than those of external auditor, especially if it is intended as an assurance provider like PWC.

Therefore, we suggest to the PFGB, as a first step, to assess which level of assurance they would like to have at Pension Fund and, then, deciding if they need *a)* only an internal audit service *b)* both together.

Furthermore –although the PFGB should implement the Rules decided by Council and establish an Internal Audit service - we recommend that in the case where the PFGB takes the reasonable decision of enhancing the level of assurance by having both assurance providers together (point *b*), that two services are not performed by the same service provider or its subsidiaries.

In any case, if the PFGB, after a careful review of the pros and cons of all options, decide to outsource the Internal Audit service, we renew our recommendation to select the internal audit service provider through a competitive tender.

Additionally, in case specific Procurement rules for Pension Fund are not yet in place at the time of the tender procedure, we recommend to follow, the current CERN Procurement rules¹³ as a reference *not only* for a for a matter of transparency *but also* for the sound management of public money.

¹² Refer to Article I 5.02 "Internal Audit of the Fund" of the Rules of the Pension Fund CERN/2913/Rev.2

¹³ Refer to our recommendations in paragraph 7.2 below

6. FINANCIAL RESULTS FOR THE YEAR

It is fundamental to highlight that some of the values recorded in 2010 are based on actuarial assumptions which differ from assumptions used in 2009, both differing from the 2008 assumptions. Therefore, analysing trends during the years or the evolution of certain values from the past year would not be sound and realistic and could lead to erroneous analysis.

Management provided explanation of the impact of the changes to the actuarial parameters between 2010 and 2009 in the Financial Statement under the paragraph "Critical accounting estimates and judgements".

The Fund net result as at 31 December 2010 is a decrease of 45,8 MCHF, which differ from the net increase the Fund in 2009 (+313,8 MCHF; in 2008 : - 1.024,3 MCHF), with Net assets available for benefits equivalent to 3.857,6 MCHF (3.903,5 MCHF in 2009, equivalent to a 1,2% decrease).

The net result of -45,8 MCHF is obtained by deducting from the positive result of the 2010 Investment (Income minus Expenses is equivalent to 114,2 MCHF) the outcome of the contributions minus benefits and payments which is negative is and equivalent to -160,1 MCHF.

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 deficit¹⁴ obtained by applying a technical rate of 4.5%, was -1.345 MCHF compared to -274 MCHF as at 31 December 2007.

In 2009 and 2010 the technical deficit has been determined using as actuarial assumptions the discount rate based on the 30-years Swiss government bonds' value at 31 December of the reference year (2,10% in 2010 and 2,55% in 2009), as recommended by us in our 2008 Report.

¹⁴ 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).

This year the technical *deficit* was equivalent to 3.185,0 MCHF¹⁵ with an increase of 588,1 MCHF (+22,6%) if compared to 2009 (2.596,9)

Because of the severe 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, to 60,1% on 31 December 2009 and to 54,8% on 31 December 2010.

	2007	2008	2009	2010
Funding ratio (%)	94,4%	72,7%	60,1%	54,8%
Technical deficit (MCHF)	-274	-1.345	-2.597	-3.185
Assumption (discount rate)	4,5%	4,5%	2,55%	2,10%

Although the drop from 72,7% in 2008 to 60,1% in 2009 was mainly due to the use of a different discount rate in comparison to the other years, given the relevance of this negative performance, it is also important to draw the attention to the Consulting Actuary's Report for the Year 2010 that is still considering, as in 2009, "unsatisfactory" the financial situation for the Fund at 31 December 2010 with a funding ratio of only 54,8% and assessed as "considerable" the under-funding of 3.185,0 MCHF (45,2% of the provident and technical provision).

Furthermore the Actuary Report highlighted the fact that not only *"in 2010 [the actuary] observed a further deterioration of the financial situation of the Fund (...) mainly due to longevity losses and assumptions changes"*, but also that *"if the PF had had to be liquidated at this date, it would have cost Member States 3.185,0 MCHF according to the statutory guarantee of benefits according to article 13.03"*

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 3.184.987.976 and a funding ratio of 54,8% (31.12.2009: 60,1%) based on the CERN accounting policy [discount rate of 2,10%] Measures to remedy this funding gap were submitted by the Pension Fund Governing Board to CERN Council and approved in December 2010"*.

¹⁵ Assumptions made in 2010 to establish the technical assessment according to IAS 26, set following CERN assumptions, differs from 2009 in addition to discount rate for 2 item a) salary increase linked to career change 1,90% in 2010 instead of 1,80% in 2009 and b) for the exit assumptions (0% in 2009 and 3% in 2010). Which have in any case a minor impact than the discount rate.

We share the view stated in the Actuary's Report and by PWC and we consider the situation of the underfunding to be critical and we therefore welcome the Council's approval of remedial measures for the actual underfunding and we will follow-up on whether they will produce the results expected.

Moreover, in order to increase transparency, we renew our recommendation that the Actuary's Report should be brought to the Council's attention directly in the Financial Statements or indirectly, through a specific document where Management would carry out its detailed analysis on actuarial conclusions.

6.1 Financial Risks versus Performance

In March 2010, Management presented to the Council for consideration a "Report on funding principles and policy and measures to restore full funding of the Fund"¹⁶ that forms the basis for the Council's decision¹⁷ of December related to the approval of a package of measures for restoring full funding at the Fund.

We welcome the approval of these measures and we acknowledge the effort of the PFGB and of the Management in presenting a transparent and comprehensive document where proposals are clearly stated and supported.

Although we are aware that the main objectives for the Council is that the "Fund must be fully funded", as recalled with the approval of the measures for restoring the full funding in December 2010 above mentioned, it is part of our mandate as External Auditor to provide assurance to the Council that the Assets of the Fund are sufficiently safeguarded and not exposed to risks which could in the future undermine these Assets and consequently the funding of the Pension Fund liabilities.

Last year, our recommendations were made with this purpose and, therefore, we asked the Management to show in a table what was the Assets composition, the financial risks and the performance achieved every year in the past 30-years, and we also recommended to compare past performance with the hypothetical results of a "minimal-risk" investment policy during the same reference period (for instance Swiss and/or

¹⁶ Refer to CERN/2897/RA 4 March 2010

¹⁷ Refer to CERN/2947 2 December 2010

German bonds, generally accepted internationally as reference for low risk investments).

In March, the document presented to the Council only addressed a minor part of the above mentioned recommendations, by stating that *“taken over the Fund’s 50-year lifetime, the results of the past decade, which began with three particularly difficult negative years, do not affect the long-term performance, as the 5% rate used in the technical assumptions has been achieved. Such an achievement has only been possible through the investment of a large proportion of the Fund’s assets in equity portfolios over the past fifteen years with the aim of optimising long-term profitability”*, and also by stating that *“by the end of 2008, the situation had significantly deteriorated”*.

We are of the opinion that if, according to our recommendations, more elements would have been analysed, the conclusion could have been different; actually, no information over the composition of the Assets in the past 30 years is given. We could only assume from the analysis above that the Assets composition changed *fifteen years* ago, however our analysis is that this change in the investment policy produced the consistent loss in the Assets which is one of the major component of the present underfunding.

Therefore, we could conclude on this point and state that the past fifteen years investment policy, has increased largely the risks in the Fund’s Assets, and, due to the fact that risk have “materialized” in 2008 the result was a conspicuous loss of Assets, which has influenced negatively the funding ratio.

Furthermore, in the document is stated that *“an increase in the average annual rate of return, for example of 7,5% would have a very substantial positive impact on the funding ratio by restoring the Pension Fund equilibrium in 30 years time. It should be remembered, however, that this rate of return would have to be achieved over the entire 30-year period. Therefore, for prudent reasons, based on analysis of the past result of CERN and Swiss pension Fund, Working Group 2 was not ready to endorse an assumption of an increased return.”*

Finally, in the above mentioned document approved by Council, Management concluded that *“a 5% return on investment is achievable given that (...) the Fund is not a standalone entity and is therefore not obliged to follow a minimum risk policy”*.

Therefore, also in this case, we can conclude that, the Pension Fund

Management “*not obliged to follow a minimum risk policy*”, in order to reach a 5% return on investment, was then allowed to take risks, which can not be easily quantified because every year they vary according to the world-market’s situation.

We simply bring to the attention of the Council the fact that the underfunding¹⁸ would have been far less significant, if a “*minimum risk policy*” would have been implemented. For example, if in the past 15 years, the Fund’s Assets had been invested in long-term governmental Bonds - generally agreed as reference for sound and safe investments, such as, for instance Swiss or German Treasury Bonds - the Fund could have achieved a return on investment without having incurred in a loss in the Financial Assets, and, moreover, also without incurring in the external Portfolios’ managers fees.

In this context, we are aware and we welcome the fact that by the end of 2011¹⁹, the Management and the Investment Committee will present to the PFGB a Statement of Investing Principle (SIP) which is based in respecting the goal of 5% return stated by the Council and also disclosing to the Council the different level of risks according to different investment strategies.

However, we draw the attention of the Council that, having a goal of 5% return on investment, under volatile market situations, makes a “minimum risk policy” not applicable, and therefore, the risks of significant Asset loss, although mitigated, remain. In broad terms, the decision on the level of risk should come first, and then performance is directly impacted by the risk appetite set.

Furthermore, we draw the attention of the Council that the Fund yearly financing of 60 MCHF granted as one of the measures of restoring the full funding, which is de facto reducing the amount provided by Member States for Research, is in the same manner affected by market risks, and therefore, this reduction in research funding could be impaired also by future loss due to market volatility.

¹⁸ For information purpose, part of the underfunding is influenced by the ratio contributions/pension and benefit paid.

¹⁹ Please refer to paragraph 5.1 and to the follow-u table in Annex 1

Disclosure of the risks

In the 2010 Financial Statements the Management dedicated an extensive Paragraph to the Financial Risk factors (Paragraph 2.3 of the Financial Statements). These risks factors are the market risk (including price risk, currency risk, interest rate risk), credit risk and liquidity risk. They are listed individually in subparagraphs and assessed independently. Furthermore, it is stated that " (...) *the Fund measures the degree of risk of its investments by making a quarterly calculation of 'value at risk' to estimate the maximum potential loss under normal market conditions*".

As already stated in paragraph 5.1.3 above, IPSAS 30 – effective from 2013 –will require a sensitivity analysis for each type of market risk for which Pension Fund is exposed²⁰ but it should be pointed out that the IPSAS 30 requires more in-depth analysis than the “quarterly calculation of value at risk” above mentioned,

Therefore, even though we are of the opinion that such a paragraph enhanced the level of transparency of the information provided to the readers, we recall our recommendation stated in paragraph 5.1.3 of starting to provide information required by IPSAS 30, which is really important for understanding risks exposure, as soon as possible.

We are of the opinion that Council should be given all the possible elements in order to understand financial risks and to decide on an appropriate policy for solving the problems related to the underfunding.

Investment policy

Specific investments are administered through portfolio’s managers, within well defined parameters provided by the Management.

According to the commonly agreed principle of diversifying the investment,

²⁰ Refer to IPSAS 30 “Nature and Extent of Risks Arising from Financial Instruments” where at paragraph 38 states “An entity shall disclose information that enables users of its financial statements to evaluate the nature and extent of risks arising from financial instruments to which the entity is exposed at the end of the reporting period”. Moreover in paragraph 40 “Qualitative Disclosures” it is stated that “For each type of risk arising from financial instruments, an entity shall disclose:(a) The exposures to risk and how they arise;(b) Its objectives, policies, and processes for managing the risk and the methods used to measure the risk; and(c) Any changes in (a) or (b) from the previous period. In paragraph 41 “Quantitative Disclosures” is stated “For each type of risk arising from financial instruments, an entity shall disclose: (a) Summary quantitative data about its exposure to that risk at the end of the reporting period. This disclosure shall be based on the information provided internally to key management personnel of the entity (b) The disclosures required by paragraphs 43–49, to the extent not provided in (a), unless the risk is not material (see paragraphs 45–47 of IPSAS 1 for a discussion of materiality).(c) Concentrations of risk if not apparent from (a) and (b).

portfolios managers invest in the world market. This policy is also boosted by the fact that, for achieving the goals stated by the Council of 5% return on investment, emerging markets overseas are particularly profitable.

Although all the investment in equities, index, corporate bonds are perfectly traceable and disclosed in the statements provided by the Global Custodian, the Pension Fund has yet no specific policy for the choice of its investment, as far as principles of ethics are concerned. . Therefore we draw the Council's attention that, provided Council wishes to monitoring this aspect of the Pension Fund investments, such information on investment strategies should be clearly disclosed to Council.

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 2010.

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 material errors and the amounts recorded in the balance sheet are thus verified and confirmed.

7.2. Procurement Rules

In the Rules (CERN/2913/Rev.3) approved by the Council in December 2010, in article I 4.03, second indent, it is stated that "the rules governing financial administration of the Fund, **including procurement**, shall be set out in the Financial Regulations of the Fund". These rules became effective from the 1st of January 2011.

Thus, this Article raises the question of which Rules should be followed by the Management and if Management is then *legibus solutus*,. in particular for Procurement,

until the Financial Regulations , yet to be drafted, are be approved by Council.

Therefore we are of the opinion that, until December 2010, the CERN Procurement Rules should have applied and from January 2011 onwards, until the approval of a new Financial Regulations of the Fund, it is recommended, in *analogia iuris* to follow the general principles which are regulating CERN activities²¹.

We observed, in particular, that for the awarding of a contract for IT services, CERN procurement rules have not been duly applied and the successful bidder is a company that has a direct link with the external auditor PWC, chosen by the PFGB for providing an independent opinion. This will create a risk of lowering the level of independence and assurance that PFGB need to have for discharging the Pension Fund Management.

Moreover, we noted that, at the Pension Fund, relevant contracts are not submitted to Finance Committee for approval.

Therefore we recommend that, until the approval of new Pension Fund's Financial Rules, the CERN Procurement Rules are strictly applied and all procurement done for the Pension Fund be included in the return coefficient for Member States.

7.3. Lack of formal authorization

Our testing revealed that the former Administrator of the Fund, after the end of his mandate, participated in missions overseas without a formal authorization of the PFGB, and that the travel expenses were borne in part by the Fund.

Although Management explained to us that the person, although no longer in post , was a CERN staff (until April 2011), we consider that a procedure which regulates the authorization process for travels, sundry expenses etc, is necessary to ensure transparency and to avoid misuse of public fund.

Therefore we recommend the PFGB to establish a procedure by which certain authorizations are regulated and to ensure, in particular, that Pension Fund's top management is authorized in a formal way by the PFGB or through proper delegation to one of its members.

²¹ Refer to paragraph 5.2.2.

7.4. Investment properties sales and guarantees

Real estate properties generally generate income from the rental mostly of apartments. The tenants, when stipulating the rent agreement, should provide guarantees, usually through a bank dedicated time deposit or warranty. We observed that local auditors do not report to the Pension Fund management Unit that they have checked the validity and existence of such guarantees and that Management does not carry out such checks. We therefore recommend the Management to insert, in the instructions to local auditors, such requirements so as to enhance the internal controls over these guarantees.

7.5. Code of Conduct and declaration

In the Rules (CERN/2913/Rev.3) approved by the Council in December 2010, in article I 2.18, titled “Code of Conduct”, is stated that “the person and bodies referred to in the Fund’s Code of Conduct, as set out in Annex D of the rules, shall comply with the Code of Conduct and shall certify such compliance whenever so requested by the Governing Board”. These rules became effective from the 1st of January 2011.

We have extensively illustrated our view in paragraph 10 of our Annual Report on the CERN accounts (CERN/2965) and therefore the recommendations formulated there apply also to Pension Fund.

RECOMMENDATIONS 2005 — 2009

Following the request of the Council to examine and adopt the external auditor's recommendations for the past, we have reviewed all past recommendations that were still outstanding, either issued by our predecessors or by us in 2008 and 2009.

In Annex 1 we listed two categories of recommendations:

- a) the recommendations that are still pending (not dealt with) or still ongoing (in progress);
- b) the recommendations that we now consider as completed and which are marked as closed.

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

Some of the Austrian External Auditors' recommendations as well as the recommendations that we issued have not been 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.

ANNEX 1

Report	Recommendation raised By Austrian Court of Audit 2004-2007	Comments received from CERN Management at the time of the issuance of the report	Status on actions taken by Management as reported by Austrian Court of Audit	Comments received from CERN Management related to 2010 Report	Status on actions taken by Management as evaluated by Italian Court of Audit
2005 and 2006	<p><u>IT — Management of the Fund</u> 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: -Migrate the in-house built computing systems of the Fund towards Organizational standards (Oracle HR); -Review and improve available functionality by evaluating standard existing products available on the market. 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>	Ongoing	<p>Acquisition of proposed software cancelled by PFGB at its meeting of 5 May 2010. Current system has been enhanced and reinforced to reduce risk. New initiative on benefits management and member communication to be launched.</p> <p>At its meeting of 17 February 2011 the PFGB approved a proposal to procure a new software solution to replace the existing system in order to meet the requirements of measures concerning new members and future beneficiaries. The new system is planned to be operational as of 1 January 2012</p>	Ongoing

Report	Recommendation raised By Austrian Court of Audit 2004-2007	Comments received from CERN Management at the time of the issuance of the report	Status on actions taken by Management as reported by Austrian Court of Audit	Comments received from CERN Management related to 2010 Report	Status on actions taken by Management as evaluated by Italian Court of Audit
2005 and 2006	<p><u>Rules and Regulation of the Pension Fund Investment Policy</u> 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>The amendments to the Rules of the Pension Fund (Chapter 1) as approved by CERN Council at its session of the 16 December 2010 (CERN/2913/Rev.2) provide for, under the Functions of the Governing Board (Article I.2.05), a Statement of Investment Principles (SIP). In accordance with this new provision the Pension Fund Management Unit (PFMU) will submit a SIP for consideration and approval by the PFGB by the year-end 2011.</p>	Pending

Report	Recommendation raised By Austrian Court of Audit 2004-2007	Comments received from CERN Management at the time of the issuance of the report	Status on actions taken by Management as reported by Austrian Court of Audit	Comments received from CERN Management related to 2010 Report	Status on actions taken by Management as evaluated by Italian Court of Audit
<p>2005</p>	<p>External Audit 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 I 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>The amendments to the Rules of the Pension Fund (Chapter 1) as approved by CERN Council at its session of the 16 December 2010 (CERN/2913/Rev.2) provide for under Article I.5.01: External Auditors “The External Auditors, appointed by the Council pursuant to Article 8 of the Financial Protocol, shall certify the accounts and financial statements of the Fund and carry out any audit they consider necessary in that framework or any audit requested by the Council. They shall submit their report to the Council”.</p>	<p>Closed</p>

Report	Recommendation raised By Austrian Court of Audit 2004-2007	Comments received from CERN Management at the time of the issuance of the report	Status on actions taken by Management as reported by Austrian Court of Audit	Comments received from CERN Management related to 2010 Report	Status on actions taken by Management as evaluated by Italian Court of Audit
2005	<p>Internal Audit</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, 2 of the Rules and related Regulations examination by the Pension Fund Governing Board.</p>	<p>The amendments to the Rules of the Pension Fund (Chapter 1) as approved by CERN Council at its session of the 16 December 2010 (CERN/2913/Rev.2) provide for under Article I 5.03 CERN Internal Audit, “In accordance with Article I 4.05, paragraph 2, of the Rules, the CERN Internal Audit shall be competent to perform audits relating to the application of the CERN Staff Rules and Regulations with respect to the staff of the Management Unit”.</p>	<p>Closed</p>

Report	Recommendation raised By Austrian Court of Audit 2004-2007	Comments received from CERN Management at the time of the issuance of the report	Status on actions taken by Management as reported by Austrian Court of Audit	Comments received from CERN Management related to 2010 Report	Status on actions taken by Management as evaluated by Italian Court of Audit
2006	<p>Special regulations and provisions 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. 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>The amendments to the Rules of the Pension Fund (Chapter 1) as approved by CERN Council at its session of the 16 December 2010 (CERN/2913/Rev.2) provide for, under the Functions of the Governing Board (Article I.2.05), a Statement of Investment Principles (SIP). In accordance with this new provision the Pension Fund Management Unit (PFMU) will submit a SIP for consideration and approval by the PFGB by the year-end 2011.</p>	<p>Pending</p>

Report	Recommendation raised By Austrian Court of Audit 2004-2007	Comments received from CERN Management at the time of the issuance of the report	Status on actions taken by Management as reported by Austrian Court of Audit	Comments received from CERN Management related to 2010 Report	Status on actions taken by Management as evaluated by Italian Court of Audit
2006	<p>International Public Sector Accounting Standards (IPSAS) The adoption of IPSAS can be seen as one of the greatest challenges the Pension Fund has to face in the coming years.</p> <p>✓ The External Auditors recommended that: a roadmap for the implementation of IPSAS should be established;</p> <p>✓ cooperation with the responsible department for the implementation of IPSAS at CERN should be initiated to ensure a coordinated approach; the Financial Rules and Regulations should be updated accordingly to reflect the compulsory application of IPSAS.</p>	<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 I will incorporate this initiative into its re-drafting of the Financial Rules and Regulations.</p>	<p>The amendments to the Rules of the Pension Fund (Chapter 1) as approved by CERN Council at its session of the 16 December 2010 (CERN/2913/Rev.2) provide for under Article I.4.02: Accounts and Financial Statements "The Fund's accounts and financial statements shall be prepared and presented by the Chief Executive Officer in accordance with the International Public Sector Accounting Standards, hereinafter referred to as IPSAS."</p>	<p>Closed.</p>

Report	Recommendation raised By Austrian Court of Audit 2004-2007	Comments received from CERN Management at the time of the issuance of the report	Status on actions taken by Management as reported by Austrian Court of Audit	Comments received from CERN Management related to 2010 Report	Status on actions taken by Management as evaluated by Italian Court of Audit
<p>2007 (refer also to 2005)</p>	<p>External Audit 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 I 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>The amendments to the Rules of the Pension Fund (Chapter 1) as approved by CERN Council at its session of the 16 December 2010 (CERN/2913/Rev.2) provide for under Article I.5.01: External Auditors “The External Auditors, appointed by the Council pursuant to Article 8 of the Financial Protocol, shall certify the accounts and financial statements of the Fund and carry out any audit they consider necessary in that framework or any audit requested by the Council. They shall submit their report to the Council”.</p>	<p>Closed</p>

Report	Recommendation raised By Austrian Court of Audit 2004-2007	Comments received from CERN Management at the time of the issuance of the report	Status on actions taken by Management as reported by Austrian Court of Audit	Comments received from CERN Management related to 2010 Report	Status on actions taken by Management as evaluated by Italian Court of Audit
2007	<p>Internal Audit 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>The amendments to the Rules of the Pension Fund (Chapter 1) as approved by CERN Council at its session of the 16 December 2010 (CERN/2913/Rev.2) provide for under Article I 5.03 CERN Internal Audit, “ In accordance with Article I 4.05, paragraph 2, of the Rules, the CERN Internal Audit shall be competent to perform audits relating to the application of the CERN Staff Rules and Regulations with respect to the staff of the Management Unit”.</p>	Closed

Report	Recommendation raised by Italian Court of Audit	Comments received from CERN Management in 2010	Status on actions taken by Management as evaluated by Italian Court of Audit
2008	<p>Internal Control Environment 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. "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".</p>	<p>The new Web-Based Internal Control System (ICS) was presented to the PFGB at its meeting of 8 September 2010. Full implementation of the ICS is planned for October 2011</p>	Ongoing

Report	Recommendation raised by Italian Court of Audit	Comments received from CERN Management in 2010	Status on actions taken by Management as evaluated by Italian Court of Audit
2008 and 2009	<p>Current accounts and Deposits</p> <p>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.</p>	<p>The Fund's Financial Statements now includes a table indicating the Reuters World Markets exchange rates used to convert the major currencies in the Fund's portfolios and also the cross-currency rates calculated using rates from the European Central Bank.</p>	<p>Partially implemented.</p> <p>(an analysis of the effect on the accounts of the two different currency rates is envisaged)</p>

Report	Recommendation raised by Italian Court of Audit	Comments received from CERN Management in 2010	Status on actions taken by Management as evaluated by Italian Court of Audit
2008	<p>Program access management We 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. Besides, a password change every three months is further recommended.</p>	<p>Situation was noted by the PFGB at its meeting on 30 March 2010. This issue will be taken into account when implementing the new accounting and benefits management systems planned for September 2011 and January 2012 respectively.</p>	Ongoing

Report	Recommendation raised by Italian Court of Audit	Comments received from CERN Management in 2010	Status on actions taken by Management as evaluated by Italian Court of Audit
2008	<p><u>Segregation of Duties in the IT Systems. Development — go live</u></p> <p>There is no segregation of duties since an external consultant performs the development and go live of applications....The CERN Pension Fund IT is fully dependant on an external consultant.</p> <p>We recommended to reduce dependence towards IT external consultancies and to implement effective segregation of duties.</p>	<p>This situation was noted by the PFGB at its meeting on 30 March 2010. The issue will be taken into account when implementing the new benefits management system planned for January 2012.</p>	<p>Ongoing</p>

Report	Recommendation raised by Italian Court of Audit	Comments received from CERN Management in 2010	Status on actions taken by Management as evaluated by Italian Court of Audit
2008	<p><u>Assumptions used to calculate the actuarial present value of retirement</u> 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.</p>	<p>Please refer to the document CERN/FC/5342 — CERN/2845 — "Report by the External Auditors on the Accounts of the CERN Pension Fund for the Financial YEAR 2008 - Comments by the Administration of the Fund. The PFGB at its meeting on 18 February 2010 approved the use of two sets of actuarial assumptions for depicting the Pension Fund's liabilities in the 2009 financial statements: a market-based set of assumptions as proposed in the agenda document, and the set of assumptions used in the report by Working Group 2, reflecting a long-term view. At its meeting on 17 February 2011 the PFGB approved actuarial assumptions to calculate the present value of the Fund's liabilities including a discount rate representing the long-term Swiss Confederation Bond market interest rate.</p>	Closed

Report	Recommendation raised by Italian Court of Audit	Comments received from CERN Management in 2010	Status on actions taken by Management as evaluated by Italian Court of Audit
2008	<p>SCI- Monitoring — Independent controller</p> <p>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. We 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.</p>	<p>This recommendation will be covered by the SIP due to be considered for approval by the PFGB by the year-end 2011 and the implementation of the ICS planned for October 2011</p>	<p>Pending</p>

Report	Recommendation raised by Italian Court of Audit	Comments received from CERN Management in 2010	Status on actions taken by Management as evaluated by Italian Court of Audit
<p>2008</p>	<p><u>Investment properties valuation</u> With regard to the valuation of the investment property, by sampling the valuation methods, we 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.</p>	<p>The Fund will write to each valuation expert imposing the valuation methods consistent with the provisions of IPSAS 16. Instructions were issued to all external real estate experts in order to have a consistent valuation approach compatible with the requirements of IPSAS 16.</p>	<p>Ongoing</p> <p>Real Estate in Geneva was calculated not in compliance with IPSAS 16. We acknowledge that the Management reminded the expert to use the correct valuation methodology or, in case of refusal, will obtain the same level of expertise with another service provider.</p> <p>We will follow-up this in 2011</p>

Report	Recommendation raised by Italian Court of Audit	Comments received from CERN Management in 2010	Status on actions taken by Management as evaluated by Italian Court of Audit
2008	<p><u>Risk management — strategic decision</u> Strategic decisions (strategic allocation, tactical margin and investment drivers) are essentially based on qualitative analysis. We recommended implementing quantitative measurement of market risks taken by the PF such as VaR and stress analysis.</p>	<p>The Strategic Asset Allocation (SAA) approved by CERN Council pre-dates the 2008 financial crisis. Since then, the plan’s risk consultant has provided the Pension Fund Investment Committee (PFIC) with updated SAA recommendations taking into account the changed environment. The most recent update, which was approved by the PFIC dates from February 2011.</p> <p>This most recent recommendation from the Fund’s risk consultant also reflects the decision taken by the PFGB at its meeting of June 2009, to adopt an updated, risk-driven, investment philosophy,</p> <p>The PFIC has been kept apprised of changes to the asset allocation and deviations from the SAA approved in 2008 through regular reports at its meetings</p> <p>Since January 2011, the Fund’s updated Rules provide for an new asset management process to reflect the Fund’s SIP. The PFMU is currently working to develop processes and procedures to implement the provisions of the updated Rules.</p>	Ongoing

Report	Recommendation raised by Italian Court of Audit	Comments received from CERN Management in 2010	Status on actions taken by Management as evaluated by Italian Court of Audit
<p>2009</p>	<p>High dependence on the Chief Operating Officer (COO) for accounting matters PriceWaterhouseCoopers noted that the PF is <i>"highly dependent on the COO with regard of the monitoring of accounting and benefits services calculations..."</i>. We share the point of view of PWC and <u>we thus recommended</u> recruiting an additional accountant who can act as deputy in case of absence of the COO.</p>	<p>The management responded that the recruitment of a qualified accountant is planned in accordance with the document "CERN PF 2010-2012 Strategic Plan" approved in February 2010 by the PFGB.</p> <p>On-going re-organization within the CERN PF and the hiring a more staff in year-ended 2010 and planned in year 2011.</p> <p>A qualified accountant was recruited as of 1 May 2011</p>	<p>In progress for 2010</p>

Report	Recommendation raised by Italian Court of Audit	Comments received from CERN Management in 2010	Status on actions taken by Management as evaluated by Italian Court of Audit
2009	<p>Lack of monthly management reporting PricewaterhouseCoopers wrote <i>"Financial statements are fully completed only once a year (as at 31/12). A partial closing is annually performed at the end of June."</i> They recommend establishing an appropriate and timely monthly management reporting. Although an external consultant assisted the PF management to invest and to report on the evolution of the funds of private equities, internal documentation and follow-up should be improved.</p> <p>The recommendation is to define a presentation format with a statement of investments and relevant financial information.</p> <p>In relation to the issue of monitoring complex information by means of excel files, we share the view that <i>"There is a risk of having wrong and/or incomplete data and/or to delete some data by mistake."</i></p>	<p>On all these issues the Management accepted the requirements of the recommendations. Monthly reporting produced by State Street</p>	closed

Report	Recommendation raised by Italian Court of Audit	Comments received from CERN Management in 2010	Status on actions taken by Management as evaluated by Italian Court of Audit
2009	<p><u>Segregation of Duties at the accountant level</u></p> <p>PWC identified "a lack of segregation duties at the accountant level. Yearend adjustments and day-to-day accounting entries recorded by the accountants were not always formally approved by the COO". A risk of unidentified error in the financial statements, or even manipulation, was clearly identified. In addition, it was noted that portfolios' investments valuations provided by the global custodian, to be used to adjust year-end accounting values, are not checked by internal managers. PWC recommendation was "(...) implementing a formal review of adjustments booked at year-end and day-to-day accounting entries." Besides, they recommend that unusual entries, which may have a significant impact on the financial situation, should be reported to PFGB.</p>	<p>The management replied that those adjustments producing differences in figures between the global custodian and the Portfolio managers are resolved through contacts with both parties and recourse to market sources and corrections are made where clear evidence of error is identified. Concerning the global custodian values' point, the management responded that internally administered portfolio will be subject to internal managers' attestation in future Furthermore, in order to improve the accounting interventions and day-today entries, a review system with approval limits will be introduced.</p>	closed

Report	Recommendation raised by Italian Court of Audit	Comments received from CERN Management in 2010	Status on actions taken by Management as evaluated by Italian Court of Audit
2009	<p><u>Consulting Actuary's Report</u> In order to increase transparency, <u>we recommend</u> that the Actuary's Report should be brought to the Council's attention directly in the Financial Statements or indirectly, through a specific document where Management would carry out its detailed analysis.</p>	Please see our comments under 6. Financial Results for the Year	Not implemented

Report	Recommendation raised by Italian Court of Audit	Comments received from CERN Management in 2010	Status on actions taken by Management as evaluated by Italian Court of Audit
2009	<p><u>Private Equity -Reporting</u></p> <p>As for the reporting on private equity, PWC commented that although an external consultant assisted the PF management to invest and to report on the evolution of the funds of private equities, internal documentation and follow-up should be improved. The recommendation is to define a presentation format with a statement of investments and relevant financial information.</p>	<p>Management refer that there is an on-going re-organization within the CERN Pension Fund and the implementation of the ICS is scheduled for October 2011.</p>	<p>Ongoing</p>
2009	<p><u>Use of Excel Files</u></p> <p>In relation to the issue of monitoring complex information by means of excel files, we observed the same problems that PWC identified and we share their view that "there is a risk of having wrong and/or incomplete data and/or to delete some data by mistake."</p>	<p>Management refer that the implementation of Portfolio management System has been postponed due to the fact that there is a current process of reviewing the software and organization within CERN PF.</p> <p>A new system for registering derivative positions , recording accounting movements and payment transfers is in the process of being implemented</p>	<p>- Ongoing</p>

2009	<p><u>Instruction to local auditors</u></p> <p>we recommend to the Pension Fund Governing Board to specify in the terms of reference of the tendering process for the selection of the specialized auditor, and in the subsequent contract, a specific clause that any different instruction should be agreed beforehand with the principal auditor.</p>	<p>As indicated in our comments under 5.2.1 External Audit, we have commenced a process to establish a formal contract with PWC. Such a clause will be proposed for inclusion in this contract.</p>	<p>Not implemented</p> <p>(although we had an informal agreement for year 2010 with PWC concerning audit instructions)</p>
2009	<p><u>Financial Risks versus Performance</u></p> <p>,we recommend improving the level of information already provided, by also mentioning how these risks could interact with one another and what their impact under abnormal market conditions might be.</p>	<p>Our comments under 5.1.3 Sensitivity analysis to be disclosed, refer to this point. The provision of IPSAS 30 will be studied, before its entry into effect, in order to ensure that the Fund has the necessary means to ensure full conformity with the Standard.</p>	<p>Not implemented</p> <p>(refer also to paragraph 5.1.3)</p>
	<p><u>Financial Risks versus Performance</u></p> <p>In order to provide transparent information to the decision-makers, we recommend the Management to show in a table what was the Assets composition, the financial risks and the performance achieved every year in the 30-year period taken as reference.</p>	<p>Please refer to our comments under 6.1 Financial Risks versus performance.</p>	<p>Partially implemented.</p> <p>(refer also to paragraph 6.1.)</p>

	<p><u>Financial Risks versus Performance</u></p> <p>considering that, 10 years ago, highly speculative financial instruments did not exist, <u>we also recommend</u> making a comparison between these values related to annual performances with the performance that the Pension Fund investment would have gained with a "minimal -risk" investment policy for the same past 30 year (for example, Swiss governmental bonds).</p>	<p>Please refer to our comments under 6.1 Financial Risks versus performance.</p>	<p>Not implemented.</p>
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