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PENSION FUND

Annual Report and Financial Statements for the year ended 31 December 2020

Audited by representatives of the
NATIONAL AUDIT OFFICE OF FINLAND

Action to be taken		Voting Procedure
For recommendation	**FINANCE COMMITTEE** 377th Meeting 16 June 2021	Simple majority of Member States represented and voting and 51% of the contributions of all Member States
For decision	**OPEN COUNCIL** 203th Session 17-18 June 2021	Simple majority of Member States represented and voting

The Finance Committee is invited to recommend to the Council and the Council is invited to approve the Annual Report and Financial Statements of the CERN Pension Fund for the year ended 31 December 2020 and to grant discharge to the Chief Executive Officer.

PENSION FUND

Annual Report

and Financial Statements

for the year ended 31 December 2020

The Financial Statements included in this Report are published in accordance with International Public Sector Accounting Standards (IPSAS) and the Rules and Regulations of the Pension Fund.

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Chair's Letter

As Chair of the Pension Fund Governing Board (PFGB), it is my pleasure to present to you the Fund's Annual Report and Financial Statements for the financial year ending 31 December 2020. I trust that this report will give you a useful update on the financial status of the Fund, as well as a summary of the investment strategy and performance over the last year.

Overall, 2020 was a volatile year for the financial markets, in particular because of the uncertainty caused by the COVID-19 pandemic. It was therefore encouraging to see the Fund return such an excellent investment performance in 2020, which was significantly higher than that of many of its peers. More details of the investment activities and performance are included in the Investment Report in section 5 of this document.

Despite the unprecedented situation associated with the pandemic, the Fund's Benefits Service worked diligently to deliver the usual high level of service to our members and beneficiaries. Our updated website, launched in 2019, continued to provide an important source of information on the Fund and its benefits, and regular communications providing members and beneficiaries with annual statements continued without interruption. Some of the usual communication channels were unavailable as the Fund was unfortunately unable to receive members and beneficiaries in person over much of the year. I would like to thank them for their patience and support in this respect and for making use of other communication channels, such as video calls, to contact the Benefits Service. The annual information meetings at CERN and ESO took place as usual, albeit via videoconference.

During its December session, the CERN Council approved a series of amendments to the Pension Fund Rules and Regulations that entered into force on 1 January 2021. These amendments included the introduction of provisions relating to fraud prevention (Articles I 1.07, I 4.09 and I 4.10), and certain technical changes, mostly on matters related to benefits (Chapter II). Changes were also introduced in respect of the procurement of a surviving spouse's pension for beneficiaries of a retirement or total disability pension who married[1] on or after 1 August 2006, including, in particular, modifications to Article II 5.09 and the introduction of a new Regulation (Chapter V). The updated Rules and Regulations are available on the Pension Fund's website (https://pensionfund.cern.ch).

Because of the PFGB's rotation policy, the composition of the PFGB underwent more changes during the year than usual. At the beginning of 2021, six of the ten PFGB members were new. In September, Charlotte Jamieson stepped down as Chair of the PFGB. On behalf of the PFGB, I would like to extend my warm appreciation to Charlotte for her valuable contributions to the Pension Fund during her time as Chair. At the end of the year, Michel Baboulaz, John Breckenridge and Adrian Cunningham all reached the end of their second three-year terms and Martin Steinacher completed his mandate as CERN's Director for Finance and Human Resources and hence ended his term as ex-officio member. In addition, Véronique Halloin stood down from the PFGB due to other professional commitments. I would like to thank all five members for their significant contributions during their time on the PFGB and, in particular, to thank Adrian for having served as Chair of the ATC for four years.

At its December session, the Council appointed Joanne Segars and Andreas Hilka as new professional members of the PFGB, each for a first period of three years. Both bring with them a wealth of experience and we are very pleased to welcome them to the Board. The Council also elected Dirk Ryckbosch as the new Council-appointed member of the PFGB.

In addition, Raphaël Bello joins the PFGB as an ex-officio member, in his capacity as Director for Finance and Human Resources. These new appointments are effective from 1 January 2021.

In closing, I would like to thank all the members of the PFGB and its subcommittees for their continued commitment and dedication over the last year. On behalf of the PFGB members, I would also like to warmly thank the Pension Fund Management Unit’s staff for their support and assistance.

Ossi Malmberg,
Chair, Pension Fund Governing Board

ANNUAL REPORT

I. Pension Fund Governing Board Report

The PFGB hereby presents its Annual Report and Financial Statements for the year ended 31 December 2020.

A description of the Fund and its governance structure can be found in Note 1 "General Information" of the Financial Statements.

1. Composition of the bodies of the Fund and Advisers (2020)

Governing Board

Members	Appointed by:
Ossi Malmberg, Chair (as of 25.09.2020) Charlotte Jamieson, Chair (until 24.09.2020) Véronique Halloin (until 31.12.2020) Dirk Ryckbosch (as of 01.01.2021)	CERN Council
Marcus Klug	ESO Council
Martin Steinacher (until 31.12.2020) Raphaël Bello (as of 01.01.2021)	Ex-officio (in capacity as member of CERN Management responsible for Administration)
Peter Hristov, Vice-Chair Isabelle Mardirossian	CERN Staff Association
Andreas Glindemann	ESO Staff Association
Michel Baboulaz (until 31.12.2020) Philippe Charpentier (as of 01.04.2021)	CERN and ESO Pensioners Association
John Breckenridge (until 31.12.2020) Adrian Cunningham (until 31.12.2020) Andreas Hilka (as of 01.01.2021) Joanne Segars (as of 01.01.2021)	Professional members appointed by CERN Council

Investment Committee

Members
Martin Steinacher, Chair (until 31.12.2020) Raphaël Bello, Chair (as of 01.01.2021)
Jayne Atkinson
Jacob Bjorheim
Marcus Klug
Isabelle Mardirossian

Actuarial and Technical Committee

Members
Adrian Cunningham, Chair (until 18.02.2021)
Michel Baboulaz (until 18.02.2021)
Marcus Klug

Chief Executive Officer

Matthew Eyton-Jones

Chief Investment Officer

Elena Manola-Bonthond

Chief Operating Officer

Kandy Mitchell

Auditors

	Appointed by:
CERN External Auditors National Audit Office of Finland (NAOF), *Helsinki, Finland*	CERN Council
Internal Audit CERN Internal Audit Service	CERN Council

Advisers

Fund Actuary

Buck Consultants Limited, *London, UK*

Custodian

Northern Trust Global Services SE., *Luxembourg*

Risk Consultant

ORTEC Finance AG, *Pfäffikon, Switzerland*

CERN Consulting Medical Practitioner

Jean-Pierre Lalain, *Geneva, Switzerland*

A detailed list of the Fund's Advisers is included as an annex to this report.

2. Overview of the year 2020

Pension Fund Governing Board

The PFGB met six times during the year (2019: five times). There was a 100% attendance record by the members of the PFGB. Due to the COVID-19 situation, all meetings of the PFGB and its committees, from mid-March until the end of the year, were conducted remotely, via videoconference. In addition, some of the meeting agendas were shortened and an additional meeting was added in order to facilitate adaptation to the new meeting format.

The PFGB's agendas included recurrent items such as the approval of the submission of the Fund's Annual Report and Financial Statements to the CERN Council and the approval of the Fund's risk limit and strategic asset allocation. In addition, the Fund's Actuary presented the Fund's actuarial "dashboard" to the PFGB, and the PFMU presented the Fund's annual budget for administrative expenses and its medium-term plan for approval, as well as an update on the Fund's Internal Control System. The PFGB also reviewed the 2020-2023 programme of work for the internal audit of the Fund, as well as receiving four internal audit reports on audits performed during 2019 and 2020. As part of the follow-up on these audits, the Internal Audit service presented updates on the implementation of the audit recommendations.

At its meeting on 8 April, the PFGB received an update from the Fund's CEO on the business continuity planning resulting from the COVID-19 situation. The update included details of the measures taken, and the risk assessments performed, to ensure that the Fund continued to meet its high-level objectives. The PFGB was also provided with information on the regular communication with the Fund's members and beneficiaries with respect to the changes made in order to ensure a seamless Benefits Service.

During the year, the PFGB reviewed a report from the Standing *Concertation* Committee Working Group on the purchase of surviving spouse's benefits, provisions related to fraud prevention, and technical changes in relation to Chapter II of the Fund's Rules. At the request of the Director General, the PFGB was asked to determine whether the changes proposed by CERN would have an actuarial impact on the Fund. The PFGB provided a response to the Director General, voicing its satisfaction with the provisions related to fraud prevention and the technical changes to Chapter II and noting that, following work by the Fund's Actuary, the changes to the purchase of surviving spouse's benefits were not expected to have a material actuarial impact on the Fund.

Investment Committee

The Investment Committee (IC) held five meetings during the year (2019: four meetings). The IC received regular reports from the PFMU on the performance of individual asset classes, examining and reviewing the actions by the PFMU aimed at optimising the Fund's performance in line with the risk limit and strategic allocation set by the PFGB.

During the year, the IC examined updates to a number of the Fund's Investment Guidelines, such as those related to fixed income, equity, liquidity management and active overlay, as well as reviewing new guidelines for the infrastructure and the timber and farmland portfolios.

The Fund's Risk Consultant presented the results of an updated medium-term asset study to the IC. The purpose of the study is to provide the basis for defining a target asset allocation in the medium-term that is compatible with the Fund's risk limit and with the longer-term return objectives of the long-term asset study.

The IC also received updates from the PFMU on the retendering of some of the external service providers' contracts, such as those responsible for risk consultancy services and for due diligence services for private equity.

In November, the IC approved the Fund's Strategic Asset Allocation for 2021 and endorsed the proposal, subsequently approved by the PFGB, to retain the Fund's risk measure of 1 Year 5% CVaR at -8% for the coming year.

Actuarial and Technical Committee

The Actuarial and Technical Committee (ATC) met three times during the year (2019: four times).

During the year, the ATC agenda included regular items such as the review of the Actuary's year-end report and semi-annual dashboard. In addition, the ATC received the annual report from the Fund's Medical Practitioner and a report from the PFMU on the annual life certificate exercise. The PFMU also updated the ATC on its strategic roadmap for the Benefits Service.

The ATC reviewed the work performed by the Fund's Actuary to determine whether the changes proposed by CERN in the "Report by the CCP Working Group on the purchase of surviving spouse's benefits, provisions related to fraud, and technical changes in relation to Chapter II of the Fund's Rules" would have an actuarial impact on the Fund. Furthermore, the ATC provided the PFGB with additional comments on the proposed changes, in particular an assessment of the operational risks and costs associated with implementing such proposals.

The planning of the next Periodic Actuarial Review (effective date 1 January 2022) was initiated by the ATC towards the end of the year and will form a key part of the Committee's work plan over the coming year.

3. Members and beneficiaries

The number of members and beneficiaries as at 31 December was as follows:

			2020			2019
	CERN	ESO	Total	CERN	ESO	Total
Members (pre 01.01.2012)	1,648	302	1,950	1,711	310	2,021
Members (post 01.01.2012)	1,743	209	1,952	1,719	193	1,912
Total Members	3,391	511	3,902	3,430	503	3,933
Deferred retirement pensions	243	58	301	218	58	276
Retirement pensions	2,349	113	2,462	2,401	107	2,508
Surviving spouse pensions	828	16	844	796	14	810
Orphan pensions	40	1	41	38	2	40
Disability and ex-gratia	19	6	25	24	6	30
Total Beneficiaries	3,479	194	3,673	3,477	187	3,664

The number of members as at 31 December 2020 was 3,902 (3,933 as at 31 December 2019), representing a decrease of 0.8% compared to 31 December 2019.

The number of beneficiaries as at 31 December 2020, excluding participants in the Progressive Retirement Programme, was 3,673 (3,664 as at 31 December 2019), representing an increase of 0.2% compared to 31 December 2019.

There were 461 members who left the two Organisations (CERN and ESO) during the year 2020 (457 in 2019), 69 of which were retirements (48 in 2019):

				2020				2019
	Men	Women	Total	%	Men	Women	Total	%
Retirement	57	12	69	15%	42	6	48	10%
Deferred Pension	19	1	20	4%	13	4	17	4%
Disability	-	-	-	0%	2	-	2	1%
Transfer Value	275	96	371	81%	298	92	390	85%
Deaths	1	-	1	0%	-	-	-	0%
Total Departures	352	109	461	100%	355	102	457	100%

4. Actuarial Status of the Fund

A key measure when assessing the financial situation of a defined-benefit pension fund such as the CERN Pension Fund (the "Fund") is the funding ratio. The funding ratio indicates the degree to which the Fund's assets cover the value of liabilities to be paid now and in the future and is calculated by dividing the net assets at the balance sheet date with the present value of the liabilities.

A funding ratio of 100% means that a pension fund is in a position to service all of its obligations whereas funding ratios in excess of 100% and below 100% indicate overfunding and underfunding scenarios respectively. Funding levels can fluctuate hence many pension funds target a funding ratio above 100%.

Liability Measurement

It is important to note that a pension fund's liabilities can be defined and measured in a variety of ways and therefore different funding ratios may be calculated for the same fund.

The accumulated benefit obligation (ABO) measure takes into account those liabilities accumulated or accrued at a given valuation date. Only those benefit payments that are due to be made to members and existing beneficiaries at the valuation date are included in this measure and therefore no future accumulation of benefits is assumed.

Another approach to liability measurement which does take into account anticipated increases in benefits is the projected benefit obligation (PBO) method. This measure accounts for expected remuneration increase linked to career change and indexation, and also pension indexation. The funding ratio based on the PBO is generally considered the single most appropriate measure for assessing the financial position of the Fund at a given date.

When considering how a pension fund's liabilities will evolve over time the PBO liability is projected forward using a consistent set of actuarial assumptions. The PBO can be projected forward on either a 'closed fund' or 'open fund' basis. For a closed fund projection, no allowance is made for any new entrants to the Fund over time such that the analysis focuses only on the current membership. Conversely, an open fund projection will anticipate new entrants to the Fund, making allowance for the accrual of benefits for these members as time progresses.

Table 1 below summarises the elements of the different liability measures described above:

Liability Measure	Accrued service	Remuneration Indexation	Pension Indexation	New Entrants
ABO	X			
PBO (Closed Fund)	X	X	X	
PBO (Open Fund)	X	X	X	X

Table 1

Actuarial Assumptions

In addition, these different methods of determining a funding ratio may use different actuarial assumptions including salary and pension indexation, longevity and the discount rate. These assumptions are typically derived from studies of previous experience of trends in these variables over different periods of time. The Fund's actual experience over the study period is compared to the current actuarial assumptions used in the Fund's actuarial models and where variations are detected adjustments may be made to better reflect, in the actuarial model, the recent and accumulated history of these assumptions. Note that where an experience study is not feasible, actuarial assumptions may instead be set with reference to a fund's investment strategy, current market conditions, publicly available statistics, legislation, accounting standards, or a best estimate of future trends. The Fund's Actuary is appointed by the PFGB to carry out the actuarial studies on an independent basis.

In 2020 the CERN Pension Fund has disclosed information on the financial situation of the Fund based on the following different liability measures:

1. The Accounting Measure under International Accounting Standard 26 (IAS 26) – Accounting and Reporting by Retirement Benefit Plans (PBO – Closed Fund)
2. The Updated Funding Measure – Best Estimate assumptions (PBO – Closed Fund)
3. The Periodic Actuarial Review as at 1 January 2019 – Best Estimate assumptions (PBO – Open Fund)

The key actuarial assumptions applied in the different liability measures are indicated in Table 2 below. For further details regarding the actuarial assumptions applied under IAS 26 please refer to section VI. "Extract of Actuary's Report on the Fund as at 31 December 2020". The actuarial assumptions used for the Updated Funding Measure as at 31 December 2020 were the "Best Estimate" assumptions. These assumptions are those that were used in the Periodic Actuarial Review as at 1 January 2019.

Actuarial Assumptions	Accounting Measure under IAS 26 PBO (Closed Fund) 31 December 2020	Updated Funding Measure Best Estimate PBO (Closed Fund) 31 December 2020	Periodic Actuarial Review Best Estimate PBO (Open Fund) 1st January 2019
Discount Rate	AON Swiss AA Corporate Bond Yield Curve *(0.02% single equiv. rate)*	1.5%: until 2021 2.5%: 2022-2026 4.5%: 2027-2031 5.7%: 2032 onwards	1.5%: until 2021 2.5%: 2022-2026 4.5%: 2027-2031 5.7%: 2032 onwards
Remuneration increase linked to inflation	0.7%: until 2021 0.9%: 2022-2026 1.0%: 2027-2031 1.4%: 2032 onwards *(1.23% equiv. 30yr spot rate)*	0.7%: until 2021 0.9%: 2022-2026 1.0%: 2027-2031 1.4%: 2032 onwards	0.7%: until 2021 0.9%: 2022-2026 1.0%: 2027-2031 1.4%: 2032 onwards
Indexation of pensions linked to inflation	0.7%: until 2021 0.9%: 2022-2026 1.0%: 2027-2031 1.4%: 2032 onwards *(1.23% equiv. 30yr spot rate)*	0.7%: until 2021 0.9%: 2022-2026 1.0%: 2027-2031 1.4%: 2032 onwards	0.7%: until 2021 0.9%: 2022-2026 1.0%: 2027-2031 1.4%: 2032 onwards
Remuneration increase linked to career change	Fellows: 0.0% Non fellows: 2.0% to 1.2%. Linear reduction between age 18 to 64 *(1.40% liability weighted av.)*	Fellows: 0.0% Non fellows: 2.0% to 1.2%. Linear reduction between age 18 to 64	Fellows: 0.0% Non fellows: 2.0% to 1.2%. Linear reduction between age 18 to 66
Mortality and disability tables	77% ICSLT2013*	77% ICSLT2013*	77% ICSLT2013*

Table 2

** Following analysis of the Fund's mortality experience, an adjustment of 77% to the probabilities contained within the ICSL2013 tables was proposed as the best estimate assumption.*

Discount Rate

A key actuarial assumption is the discount rate which is used to calculate the present value of a pension fund's future liabilities and can be determined in different ways. Given the long term nature of pension fund liabilities, discount rates can be based on long term market interest rates or on actuarial assumptions that are more stable. Even small differences in the discount rate used can have a significant effect on the value of the liabilities and therefore the funding ratio. Different discount rates may be used under different approaches to liability measurement disclosed by the Fund.

Explanation of different liability measures and actuarial assumptions

The Accounting Measure under International Accounting Standard 26 (IAS 26) – Accounting and Reporting by Retirement Benefit Plans

The Fund prepares its financial statements in accordance with International Public Sector Accounting Standards (IPSAS) and International Accounting Standard 26 (IAS 26). As there is no IPSAS with respect to the reporting of the pension plan the Fund conforms to the provisions of IAS 26 in presenting the net assets available for benefits, the actuarial present value of promised retirement benefits and the resulting excess or deficit.

The Fund uses the PBO closed fund approach to value liabilities under IAS 26 and this permits an assessment of the financial position of the Fund by comparing the net assets of the Fund with its liabilities as at 31 December 2020. As the PBO method takes account of future salary and pension increases, it presents a higher value for liabilities than that which would be calculated under the ABO method.

Under IAS 26 the Fund uses a discount rate that refers to high-quality Swiss corporate bonds. This is a variable rate and as such is likely to produce volatile funding ratios from one year to the next. Using this variable discount rate to calculate the present value of promised retirement benefits illustrates the extent to which the Fund's net assets as at 31 December 2020, if invested with minimal investment risk would meet the liabilities at this date. It is important to note that the "risk free" approach to determining the discount rate, although required by accounting standards, produces a very conservative funding ratio that is inappropriate for assessing the financial health of the Fund.

Updated Funding Measure

This measure of the Fund's liabilities also uses the PBO closed fund approach but with a different set of actuarial parameters that represent a best estimate of the long term funding view. Best Estimate actuarial assumptions are those which are most likely to be borne out in practice. For each assumption there is a 50% chance of actual experience being more favourable than assumed and a 50% chance of experience being less favourable than the best estimate assumption. The aggregate effect is that actuarial gains and losses should be equally likely in future years.

An important difference from the actuarial assumptions under the Accounting Measure is the discount rate which under this method represents the Fund's long term investment return target. The use of a consistent discount rate reduces the funding ratio volatility which is inherent in the Accounting Measure approach.

The Periodic Actuarial Review as at 1 January 2019

As provided for under Article I 4.04 of the Fund's Rules, a Periodic Actuarial Review is performed at least every three years. The purpose of this review is to inform CERN Council of the financial situation of the Fund. The last Periodic Actuarial Review was carried out as at 1 January 2019.

With respect to this liability measurement the actuary projects the assets and liabilities to 1 January 2041 to determine the expected funding level in the future. The PBO method is again used but in addition future contributions, the expected return on assets and future accrual of service for current and new members of staff is included in the projection. Given this inclusion of expected future service for the current and future population and the use of a consistent discount rate, this measure of a future funding ratio is the most appropriate approach for funding purposes.

As in the case of the previous Periodic Actuarial Review, a Best Estimate approach was used to set the actuarial assumptions for the Periodic Actuarial Review as at 1 January 2019.

Best Estimate actuarial assumptions are those which are most likely to be borne out in practice. For each assumption there is a 50% chance of actual experience being more favourable than assumed and a 50% chance of experience being less favourable than the best estimate assumption. The aggregate effect is that actuarial gains and losses should be equally likely in future years.

Funding Situation under different Liability Measures

Table 3 below shows the funding situation under each of the liability measurement approaches using the actuarial assumptions mentioned in Table 2 above. The prior year funding ratios under the first two measurements are presented in section VI "Extract of Actuary's Report on the Fund as at 31 December 2020". There is no funding ratio at 1 January 2041 as these two measures are projected on a closed fund basis.

Liability Measure	Funding Position Accounting Measure under IAS 26 As at 31 December 2020 kCHF	Funding Position Updated Funding Measure As at 31 December 2020 kCHF	Funding Position Periodic Actuarial Review As at 1 January 2019 kCHF
Net assets of the Fund	4,742,928	4,742,928	4,203,000
Actuarial Liabilities	12,865,859	5,945,658	6,197,000
Surplus/(Deficit) in the Fund	(8,122,931)	(1,202,730)	(1,994,000)
Funding Ratio at date of measure	36.9%	79.8%	67.8%
Funding Ratio at 1 January 2041	N/A	N/A	103.4%

Table 3

Summary

Different approaches to the measurement of liabilities may be applied to determine the financial situation of a pension fund under different scenarios and to meet the requirements of accounting standards.

The most appropriate method of liability measurement for assessing the funding situation is the PBO in an open fund scenario as determined in the Fund's three-yearly Periodic Actuarial Review.

5. Investment Report

Macroeconomic Highlights

In 2020, global economic activity declined at a historic pace as a result of COVID-19-induced lockdowns across the world. According to the IMF, global GDP fell by 2.9% in 2020, the highest annual drop in recent decades. The impact was broad-based as both advanced and emerging market economies experienced a contraction in activity (-4.9% and -2.4%, respectively).

The COVID-19 pandemic led to large-scale shutdowns of most economies. With the global propagation of the virus and successive waves of contagion, activities were drastically reduced.

The impact was the sharpest in the first half of the year. The Chinese economy was affected mainly in the first quarter (-36.4% quarter-on-quarter annualised), while the US and European economies experienced their strongest downturns in the second quarter (-31.4% and 39.2% quarter-on-quarter annualised, respectively).

The uncertainty surrounding the length of the shutdowns and the impact of the pandemic, as well as the sudden collapse in activity, led to a sharp decline in financial asset prices. This in turn led to a very rapid deterioration of financial conditions, with funding markets shutting down and equity markets suffering some of the steepest falls on record.

However, policymakers responded with unprecedented speed. Monetary policy was swiftly adjusted to offset some of the concerns about financial stability. The Federal Reserve cut interest rates by 150 bps to 0.25% and put in place a number of liquidity programmes that had been previously used in the 2008 financial crisis. It also signalled that it would purchase a large amount of assets, including, for the first time, debt from less creditworthy borrowers. Other central banks also acted aggressively, putting similar programmes in place and expanding their balance sheets significantly. Fiscal policy was also eased around the world, with unprecedented amounts of spending in advanced economies in order to prop up the sectors and help the consumers that were the worst affected by the crisis.

The powerful response of monetary and fiscal policy combined with the gradual improvement in growth prospects had a significant impact on asset prices. The declines in the cost of lending, together with the rapid improvement of certain technology companies' prospects, allowed equity markets to post a very sharp rebound, especially in the United States.

In the second half of the year, the positive news on COVID-19 vaccines, the reduction in geopolitical uncertainty and additional monetary and fiscal stimulus announcements provided the financial markets with some clarity on the future trajectory of policy and macroeconomic developments. Therefore, as the longer-term outlook seemed to have improved significantly, risky-asset prices continued to rise, despite the near-term economic slowdown resulting from a resurgence of COVID-19 cases.

Risk Management and Asset Allocation

The Fund's risk management and asset allocation policy is set out in the Statement of Investment Principles, which has been approved by the PFGB. It is based on setting an annual Risk Limit and an annual Strategic Asset Allocation (SAA), and on managing the Current Asset Allocation (CAA) exposure in a manner compatible with both the risk limit and the investment return objective.

The Fund's return objective is to meet or exceed the actuarial best-estimate discount rate, adjusted for Geneva inflation, over the long term. For the period 2019 – 2021 the objective stands at 0.80% per annum plus Geneva inflation. The PFGB set the same risk limit for 2020 as for 2019, namely a 5% Conditional Value-at-Risk (CVaR) limit of -8%.

The SAA for 2020, which was defined by the PFMU in collaboration with the Risk Consultant (Ortec Finance) and was subsequently endorsed by the Investment Committee and approved by the PFGB, is shown in Table 1 below.

Asset class	CAA as at 31-12-2020	SAA 2020	SAA 2019
Fixed Income	26.31%	30.50%	31.50%
Equities	21.23%	16.00%	15.00%
Real Estate	16.99%	19.00%	20.00%
Infrastructure	2.53%	2.50%	3.00%
Timber/Farmland	1.58%	2.50%	3.50%
Private Equity	6.72%	6.00%	6.00%
Hedge Funds	8.75%	8.50%	7.00%
Commodities/Gold	3.72%	5.00%	4.00%
Cash	6.94%	10.00%	10.00%

Table 1: CAA as at 31-12-2020, SAA 2020 and SAA 2019.

Note: The CAA does not add up to 100% as the impact of futures and options is included in the equity allocation.

In 2020, the COVID-19 crisis, combined with the unprecedented monetary and fiscal policies implemented, led to a level of uncertainty that warranted the recommendation by the risk consultant to adopt the use of a CVaR error margin, in accordance with the Risk Framework of the CERN Pension Fund approved by the PFGB in November 2017. The increased error margin, equal to 2 percentage points around the calculated CVaR value, was implemented on 12 March 2020 and remained in place throughout 2020. After the March drawdown, the risk of the SAA gradually drifted higher as the market rebound progressed.

Throughout the year, the Fund's risk, as estimated by the risk consultant using the disequilibrium scenarios, remained within the one-year 5% CVaR limit of -8% +/- the 2 percentage point error margin. It is recalled that the use of disequilibrium scenarios, which are short-term scenarios, is necessary because the Fund's risk limit is expressed in terms of a one-year time horizon. The disequilibrium scenarios are those that take account of the current policies of central banks, which tend to keep the level of risk from rising to that of the long-term expectation.

Portfolio Performance in 2020

In 2020 the Fund returned a performance of 9.21% net of external management and custody fees, as reported by the external performance-monitoring reporting service (APEX) as at 31 December 2020. This performance, which is calculated using a time-weighted rate of return to eliminate the impact of external cash flows and the associated timings on return calculations, does not include the governance and internal management/operations costs[1], which are evaluated at approximately 0.19 percentage points.

[1] Includes PFGB, ATC and IC expenses, Actuary, CERN services, Risk Consultant, PFMU staff, temporary labour and external service providers related to the investment process, such as due diligence providers, data providers, real-estate appraisal service, and performance reporting services.

Figure 1 shows the Fund's cumulative returns compared to the return objective since December 2011, as reported by the independent performance calculation service provider appointed by the PFGB. The return objective corresponds to the actuarial best-estimate discount rate prorated on a monthly basis and adjusted for actual Geneva inflation. The Fund's cumulated returns since this date exceeded the objective by 34.07 percentage points as at 31 December 2020.

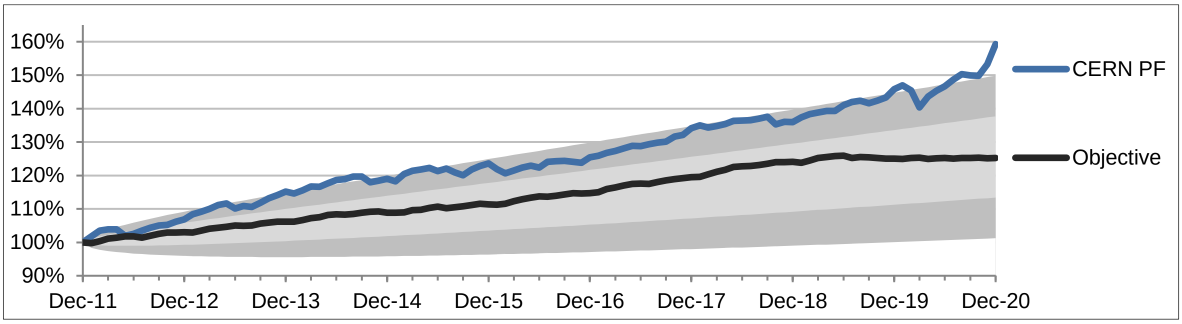

Figure 1: Cumulative Returns vs. Objective

Currency Hedging Policy

Throughout the year the Fund maintained a prudent currency hedging policy, hedging 99% of its overall currency exposure on average.

Fixed Income

This was a very strong year for fixed income assets. The unprecedented level of monetary policy stimulus from central banks to support the economy compressed government interest rates (e.g. average yield of -0.50% for 10-year Swiss government bonds) and allowed risk assets to perform strongly. Additionally, governments around the globe put aggressive fiscal spending measures in place to tackle the impact of the COVID-19 crisis.

Emboldened by the exceptional level of stimulus, governments and corporations issued bonds at a record pace. As a result, total private and public sector debt increased by 24 TUSD, or 35 percentage points, to 355% of global GDP in 2020, according to the Institute of International Finance. This was partially financed by central banks' balance sheets, which expanded by more than 5 TUSD.

The allocation to the fixed income asset class was kept stable during the year, at around 29% of the Fund's total assets, i.e. below the 30.5% weighting of the SAA. The low absolute level of spreads and interest rates led the portfolio management team to underweight the bond exposure.

The volatility of the market created a number of opportunities that compensated for the Fund's lower exposure to riskier asset classes (credit and emerging markets). The active duration management allowed the portfolio to outperform during the March volatility and reduced the impact of rising rates in the second half of the year. The 10-year US Treasury opened the year at 1.90%, then collapsed to 0.50% in March, ending the year at 0.90%.

It should also be noted that the cost of hedging currency exposure was a strong headwind for investments in USD-denominated fixed income assets (approximately 1.57% for the USD/CHF currency pair rolled monthly, compared to approximately 0.86% average yield for the 10-year US Treasury).

The private debt portfolio comprises six direct lending funds, a CLO vehicle, a venture debt fund and, since 2020, a distressed / special situations fund.

Equities

Although Q1 brought a sharp drop in stock prices caused by the COVID crisis, overall, 2020 was a strong year for the US equity markets. The rally started in April and continued throughout the rest of the year, strongly supported by the actions of the main central banks and an unprecedented level of fiscal stimulus.

In 2020, the equity markets were particularly volatile. The S&P 500 index initially dropped by 30.75% before rebounding by 67.88% and eventually delivering a cumulative return of 16.26% at the end of the year. The European benchmark presented similar dynamics but, as the rebound was less strong, it eventually decreased by 3.32%. The Japanese Topix index recorded an intermediate result, with a yearly return of 4.84%.

Most of the actively managed portfolios in Europe and the US outperformed their benchmarks, which significantly added to the performance of the Fund. The active portfolios benefitted, in particular, from tactical overweights in the Information Technology and Consumer Discretionary sectors. Overall, the equity book returned a strong performance of 22.3% after currency hedging costs.

The equity hedges in the US and Europe remained costly with respect to the Fund's overall performance but were necessary to keep the risk within the limit and, especially in Q1, protected the portfolio. Following the rebound, the allocation to equities was gradually increased, as much as possible within the constraints of the risk limit, to allow the Fund to benefit from the improved environment for equities.

Real Assets: Real Estate - Timber - Farmland - Infrastructure

The real-asset portfolio comprises the following three buckets: real estate (directly owned properties and real-estate funds), timber/farmland and infrastructure.

Real Estate

Directly owned properties

The real-estate portfolio was composed of thirteen properties, which were geographically distributed across Western Europe: seven in France, three in Switzerland, two in the United Kingdom and one in Germany. The portfolio was mainly invested in core properties, with only two value-added investments, located in Paris.

In 2020, the portfolio generated a strong performance of 14.7% (including currency hedging), which largely reflected the annual valuation of the investments. The biggest contributors were the increase in the values of a large property in Geneva and the seven French properties, whose value was driven up by strong demand for core, high-quality defensive assets. The property in Geneva and the seven French properties combined each contributed to about half of the annual performance, respectively. On the other hand, the UK-based properties experienced price declines that reflected the impact of the pandemic, Brexit-related issues and the large supply of available properties to let.

Yields fell as a mechanical result of the capital appreciation of most of the assets in the portfolio. For example, the gross yield in EUR of the property located in Berlin declined from 2.9% in 2019 to 2.3% in 2020.

An important element to highlight is the strong resilience of the entire portfolio to the financial impact of the pandemic. At the end 2020, unpaid rents represented less than 1% of the full due amount. This remarkable result underlines the quality of the portfolio in terms of management, location and quality of tenants.

No investments or divestments were made during the year. However, the Fund continued to actively explore investment opportunities with an attractive risk/return profile in the main European markets.

Real-estate funds

At the end of 2020, the real estate portfolio comprised three funds: an opportunistic Spanish/Portuguese residential segment fund, a Pan-European value-added office segment fund, and a fund active in the Central/Eastern European office/residential market.

As of September 2020 (latest available data), the Pan-European value-added fund had called approximately 60 % of the 17 MEUR total commitment. Since inception the fund has purchased eleven properties in the United Kingdom, Ireland, Germany and the Netherlands.

The opportunistic fund has so far called approximately 55% of the total commitment of 7 MEUR in order to acquire four residential developments in Spain and one in Portugal.

The Central/Eastern European office/residential fund is largely invested across several residential and office projects. Since inception it has distributed approximately 2.9 MEUR out of the 7 MEUR committed in 2007.

Timber

At the end of 2020, the timber portfolio comprised four parcels of directly owned forests in France, and two funds (2016 and 2020 vintages) under a manager who is active in the south of the United States.

The Northern American forestry fund, which is focused on timberland located in the south of the United States, has now fully invested the 8 MUSD commitment and distributed 0.25 MUSD in 2020. At the beginning of the year, the Fund committed 8 MUSD to the following fund, a forestry fund that invests according to the same strategy as its predecessor.

The four parcels of forest in France (total area of approximately 2,000 hectares) are mainly dedicated to the growth of oak trees. As of December 2020, the value was 29.4 MEUR, representing a growth of+5.1% compared to December 2019.

Farmland

At the end of 2020, the farmland portfolio consisted of a New Zealand dairy fund.

The fund (vintage 2017) was fully invested over five dairy farms, to which the Pension Fund committed 50 MNZD, or approximately 30 MCHF. In 2020, the fund delivered its first distribution of 0.4 KCHF net.

Infrastructure

The infrastructure portfolio represents 2.5% of the Pension Fund's assets and mainly comprises listed equities (around 60% of the portfolio) and private partnerships (around 30%). 2020 was a challenging year for the portfolio, which delivered a performance -4.3% in FX-hedged terms.

The publicly listed investments were the main detractors to the performance as they were the most strongly affected by the economic impact of the pandemic. This part of the portfolio is mostly exposed to companies in the industrial and utilities sectors.

The portion of the portfolio that is invested in privately managed assets performed better. The main asset is a vehicle focused on European public-private partnerships. The underlying investments are largely availability based (concession agreements in which the public agency makes payments such as for hospitals), with fully contracted revenues received from government-backed authorities. The fund performed well in 2020 and is forecast to meet its net income yield target for the year in March 2021.

Private Equity

As of December 2020, the portfolio consisted of 84 funds (and 58 managers). The portfolio is quite concentrated, as approximately 17 funds (20% of the portfolio) make up half of the total exposure (NAV plus unfunded commitments), while about 50% of the portfolio accounts for less than 10% of the exposure. The geographic exposure of the total commitment is evenly shared between Europe and North America.

In 2020, the portfolio's cash flow consisted of approximately 31 MCHF in outflows and 48 MCHF in inflows. This translates into a positive net cash flow of about 17 MCHF.

The performance in 2020 was mainly driven by venture capital funds and those that were exposed to the technology sector. In part, they benefitted from the strong demand for digital products and services, which surged as a result of the COVID-19 economic lockdowns.

The Fund committed a total of almost 12 MCHF to private equity, largely allocated to a primary private equity fund and, to a smaller extent, to two co-investments (add-ons). The primary fund was focused on a structured growth capital fund, while the two add-ons were allocated to a biotech and an aeronautical company.

Hedge Funds

At the end of 2020, the hedge fund allocation included 16 funds. During the year, the portfolio was adjusted in terms of position sizing and strategy. This was undertaken following the severe market volatility in March, which created new opportunities, in order to make the portfolio even more resilient to potential further market dislocations. A number of new investments were made, with the inclusion of five new funds (a multi-strategy fund, a macro fund, a distressed credit fund and two commodity funds) with a total value of 125 MUSD. There were also a number of redemptions from funds that were less adapted to the present market environment, including systematic and fixed income arbitrage funds with a total value of 77 MUSD.

The hedge fund portfolio was increased due to strong returns and to align it more closely to the strategic asset allocation (SAA). In 2020, the performance of 8.23% in CHF was the strongest since inception. It was mainly driven by multi-strategy managers, who returned double-digit returns in US dollars, some more than 20 percent. These managers benefited from the market dispersion that followed the record equity price declines in March and from the volatility in a number of asset classes such as equities, fixed income and commodities.

Commodities/Gold

In 2020, the commodities and precious metals portfolio delivered a strong performance, supported by the highly expansionary fiscal and monetary policy. As a whole, the portfolio returned 10.99%, driven by the good performance of gold as well as by tactical positions in crude oil.

Update on the Operational Infrastructure

The implementation of the Portfolio Management System (PMS) was undertaken in 2020 and is expected to be completed in 2021. The implementation of a PMS represents a major improvement in the infrastructure of the Fund, which will strengthen all trade flow processes and provide an overall more robust and reliable set-up in terms of operations and business continuity.

Update on Environmental, Social and Governance Policy

As in 2019, and at a sustained pace, the Pension Fund actively participated in various environmental, social and governance (ESG) initiatives in 2020, integrating ESG factors into its risk management process. This was done in collaboration with Ethos Engagement Pool International (EEPI), a platform established by the Fund’s provider of proxy voting services, through which shareholder engagements take the form of participation in initiatives mainly centred on environmental, social and governance topics. These initiatives are either recurrent or one-off, depending on whether they are long-term in nature or confined to specific issues affecting one or more companies.

In 2020, the Pension Fund signed up for 17 recurrent initiatives managed by the EEPI platform but not for any of the four one-off initiatives that were proposed. The recurrent initiatives accepted by the Fund essentially related to environmental engagements, labour law and fiscal responsibility.

Thanks to international movements like the “Say on Climate” initiative, which brings together various actors engaged in climate issues (in which Ethos Engagement Pool International is also engaged) and the Paris agreement on global warming, the year 2021 will fly the flag against climate change, one of the major challenges of our time.

Conclusions – Macro Outlook

For 2021, the outlook is relatively positive but remains challenging. On the one hand, the marked loosening of monetary and fiscal policy in 2020, the improved outlook in terms of vaccinations and the incipient signs of stabilised growth suggest that the expansion should last. The expectation of continued growth in corporate profits and broader activity, as well as the perception that some of the political risk might abate, is also supportive of risk assets.

However, there is high uncertainty linked to the potential long-term impact of the COVID-19 outbreak, the high level of government indebtedness and future geopolitical risks. As the economic cycle matures, the impact of geopolitical and financial shocks on asset returns is becoming more relevant. The investment outlook should therefore be viewed with great caution as the risk of further market volatility remains high.

II. Annex

1. Advisers, Service Providers, and Investment Funds

Bankers

Banque Cantonale de Fribourg, *Fribourg, Switzerland*
Barclays Bank plc, *Cambridge, UK*
Caisse de Credit Mutuel, *Saint Genis Pouilly, France*
Credit Agricole Centre-Est, *Oyonnax, France*
Credit Suisse AG, *Zurich, Switzerland*
Deutsche Bank AG, *Berlin, Germany*
Mirabaud & Cie Banquiers Privés SA, *Geneva, Switzerland*
Post Finance SA, *Lausanne, Switzerland*
Société Générale SA, *Annemasse, France*
UBS SA, *Nyon, Switzerland*

Brokers and Derivatives Counterparties

Bank of America Merrill Lynch, *New York, USA*
Barclays Bank plc, *London, UK*
Bloomberg L.P., *New York, USA*
BNP Paribas SA, *Paris, France*
Carax SA, *Paris, France*
Citigroup Inc., *New York, USA*
Deutsche Bank AG, *Frankfurt, Germany*
Exane SA, *Paris, France*
Goldman Sachs Group, Inc., *New York, USA*
Intesa Sanpaolo SpA, *Torino, Italy*
Jefferies, *London, UK*
J.P. Morgan Chase & Co., *London, UK*
Louis Capital Market, *London, UK*
Mirabaud Securities LLP, *London, UK*
Mizuho Intenational plc, *London, UK*

Brokers and Derivatives Counterparties (continued)

Morgan Stanley & Co. International plc, *London, UK*
Santander Investment, *Santander, Spain*
Société Générale SA, *Paris, France*
State Street Corporation, *Boston, USA*
Tachibana Securities Co.Ltd, *Tokyo, Japan*
UBS Limited, *London, UK*
UniCredit SPA, *Munich, Germany*
Wells Fargo & Co, *London, UK*

Data Services

Apex Fund Services Ltd, *Dublin, Ireland*
Bloomberg Finance L.P., *New York, USA*
Calypso Technology Inc., *San Francisco, USA*
Capital Economics Ltd, *London, UK*
Efront Financial Solutions Inc., *New York, USA*
Ethos Services SA, *Geneva, Switzerland*
FTSE International Ltd, *London, UK*
Haver Analytics, *New York, USA*
Interactive Data Europe Ltd, *London, UK*
Links Analytics B.V., *Delft, The Netherlands*
Mcube Investment Technologies LLC, *Plano, USA*
Morningstar Switzerland GmbH, *Zurich, Switzerland*
Ned Davis Research Inc., *Venice, USA*
Nerco Ingenierie SAS, *Lyon, France*
NYSE Market Inc., *Pittsburgh, USA*
Peracs GmbH, *Frankfurt, Germany*
Preqin Ltd, *London, UK*
S&P Dow Jones Indices LLC, *Chicago, USA*
State Street Global Exchange GmbH, *Frankfurt, Germany*

External Investment Manager - Currency Overlay

State Street Bank Europe Limited, *Boston, USA*

External Investment Managers – External Equity Mandate

Granahan Investment Management Inc., *Waltham, USA*
MFS International (U.K.) Limited, *London, UK*

External Investment Managers – Funds

3i Investments plc, *London, UK*
AE Industrial Partners LLC, *Florida, USA*
Aeolus Capital Management Ltd., *Hamilton, Bermuda*
AIF Capital Limited, *Hong Kong*
Alcuin Capital Partners LLP, *London, UK*
American Capital Limited, *Maryland, USA*
American Century Investments, *Luxembourg*
aMoon Fund, *Tel-Aviv, Israel*
aMoon Ventures Y.SH. Ltd., *Tel-Aviv, Israel*
Andera Partners, *Luxembourg*
Apax Partner SAS, *Paris, France*
Arbor Private Investment Company IV, LLC, *Chicago, USA*
Audax Group, *New York, USA*
AXA Funds Management SA, *Luxembourg*
Barings Global Credit Funds, *Luxembourg*
Blackstone Patria Investimentos, *Sao Paolo, Brazil*
BC Partners, *London, UK*
Capricorn Investment Group LLC, *Palo Alto, USA*
Citadel Advisors LLC, *Chicago, USA*
Craigmore Sustainables, *Christchurch, New Zealand*
Cressey & Company L.P., *Chicago, USA*
Crestview Partners, *New York, USA*
CS Real Estate SICAV, *Luxembourg*

External Investment Managers – Funds (continued)

DN Capital (UK) LLP, *London, UK*
Eiffel Investment Group SAS, *Paris, France*
Endeavour Vision SA, *Geneva, Switzerland*
Essling Capital, *Paris, France*
Fortissimo Capital, L.P, *Rosh Haayin, Israel*
Freeport Financial Partners LLC, *Chicago, USA*
FTV Capital, *San Francisco, USA*
GHO Capital Management Limited, *London, UK*
Graham Partners, *Newton Square, USA*
Groupe Siparex, *Lyon, France*
HarbourVest Partners LLC, *Boston, USA*
Huntsman Gay Capital Partners Fund, L.P., *Palo Alto, USA*
Hydra Platform SPC, *Cayman Islands*
Index Ventures LLP, *London, UK*
Invest Industrial Advisors Limited, *London, UK*
Invision Capital Partners Hospitality Limited, *St Helier, Jersey*
J.P. Morgan Asset Management, *New York, USA*
Keensight Capital, *Paris, France*
King Street Capital Management L.P., *New York, USA*
Kronos Investment Group, *Luxembourg*
L Catterton Partners, *Greenwich, USA*
LBO France FPCI, *Paris, France*
Littlejohn & Co., *Greenwich, USA*
Lyxor Asset Management Inc., *New York, USA*
Macquarie Funds Group, *Sydney, Australia*
Main Post Partners LP, *San Francisco, USA*
Man Group, *London, UK*
Massar Capital Management, *New York, USA*
Metalmark Capital, *New York, USA*

External Investment Managers – Funds (continued)

Millennium International, *New York, USA*
MML Capital, *London, UK*
MML Capital Partners, *London, UK*
Montefiore Investment, *Paris, France*
Nemo Investor Aggregator Limited, *Greenwich, USA*
NXT Capital, *Chicago, USA*
Oak Hill Advisors, L.P., *New York, USA*
Oak Hill Capital Partners, *New York, USA*
Pacific Community Ventures Inc., *San Francisco, USA*
PAI Partners SAS., *Paris, France*
Partner for Growth, *San Francisco, USA*
Point72 L.P., *Stamford , USA*
Portag3 Ventures, *Toronto, Canada*
Premiere Global Services Inc., *New York, USA*
Primavera Capital Group, *Hong Kong, China*
Quadriga Asset Manager, *Madrid, Spain*
Quilvest Switzerland Limited, *Zurich, Switzerland*
Silverpoint Capital, *Greenwich, USA*
Silverstone Capital Partners, *Atlanta, USA*
Siris Capital Group LLC, *New York, USA*
Sofinnova Partners SAS, *Paris, France*
Spectrum Equity Investors, *Boston, USA*
Spindletop Capital, *Austin, USA*
StepStone Group, New York, USA
Talde Gestion SGEIC SA., *Bilbao, Spain*
TDR Capital LLP, *London, UK*
Technology Crossover Ventures, *Palo Alto, USA*
The CapStreet Group LLC., *Houston, USA*
TIAA Global Asset Management, *New York, USA*

External Investment Managers – Funds (continued)

Timberland Investment Resources LLC, *Boston, USA*
Top Tier Capital Partners LLC, *San Francisco, USA*
TowerBrook Capital Partners L.P., *New York, USA*
TPG Capital, *Fort Worth, USA*
Two Sigma Investments, *New York, USA*
Valedo Partners, *Stockholm, Sweden*
Värde Partners, *London, UK*
Webster Capital Partners LLC, *Waltham, USA*

External Legal Advisers

Dentons UK and Middle East LLP, *London, UK*
LPA-CGR avocats, *Paris, France*
Freshfields Bruckhaus Deringer, *Frankfurt, Germany*
Gowling WLG LLP, *London, UK*
Oberson Abels SA, *Geneva*, *Switzerland*
Raue LLP, *Berlin, Germany*
Willkie Farr & Gallagher LLP, *London, UK*

Operational Due Diligence Service Provider

Aksia Europe Limited, *London, UK*

Real Estate Managers

Comité des forêts, *Paris, France*
Kinney Green, *London, UK*
Hayter International, *Paris, France*
Moser Vernet & Cie, *Geneva, Switzerland*
PRÄZISA, *Berlin*, *Germany*

Real Estate Valuation Experts

BNP Paribas Real Estate, *Paris, France*
EURL P Cochery, *Rambouillet, France*

Real Estate Auditors

BDO AG, *Berlin, Germany*
Cabinet Louis Planche, *Lyon, France*
REVIDOR Société Fiduciaire SA, *Geneva, Switzerland*
Rouse Partner LLP, *London, UK*

2. Real Estate Portfolio

	Property	Location	Size (m^2)	Main usage
Switzerland	Taverney	Geneva	42,117	Residential
	Prulay	Geneva	2,992	Residential
	Carl-Vogt	Geneva	1,311	Residential
France	Opéra	Paris	5,494	Commercial
	Notre-Dame-des- Victoires	Paris	5,013	Commercial
	Malesherbes	Paris	2,536	Commercial
	Lauriston	Paris	2,181	Commercial
	Villiers	Paris	2,382	Commercial
	Ferney	Ferney-Voltaire	8,244	Hotel
	Forêt de Vauchassis	Troyes	769 ha	Timberland
	Forêt de Gergy	Chalon-sur-Saône	727 ha	Timberland
	Forêt d'Avril	East of France	338 ha	Timberland
	Forêt du Miaule	East of France	250 ha	Timberland
Germany	Mauerstrasse	Berlin	3,981	Commercial
UK	Dean Farrar Street	London	2,830	Commercial
	Queen Anne's Gate	London	2,311	Commercial

FINANCIAL STATEMENTS

III. Audit Opinion

Helsinki, 29 April 2021

External Auditors' Opinion

on the Financial Statements of the Pension Fund of the European Organization for Nuclear Research (CERN) for the year ended 31 December 2020

To the Council of CERN

Audit opinion on the financial statements of the CERN Pension Fund

We have audited the financial statements of the Pension Fund of the European Organization for Nuclear Research (CERN) for the year ended 31 December 2020, issued under document reference *CERN/FC/6496-CERN/3571* dated 31 March 2021. These financial statements comprise statement of financial position, statement of the financial performance, cash flow statement, statement of changes in net assets available for benefits as well as the notes to the financial statements.

In our opinion, the financial statements give a true and fair view of the financial position of the Pension Fund of the European Organization for Nuclear Research as at 31 December 2020, of its financial performance and of its cash flows for the year ended, in accordance with International Public Sector Accounting Standards (IPSAS) and International Accounting Standard 26.

Basis for opinion

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

Emphasis of matter

The Pension Fund´s net assets available for benefits grew to 4 743 MCHF in 2020 from 4 429 MCHF in 2019. The increase of assets was due to positive net result of the investment activities, 391,4 MCHF, albeit the net result of membership activities was 77,9 MCHF negative. Consequently, the increase of net assets has improved the Fund's funding ratio to 36,9 % in 2020 from 35,9 % in 2019

Despite the increase of the Fund's net assets, we draw the Council's attention to the liabilities, presented in the Statement of Financial Position under vested capital, which increased to 12 866 MCHF in 2020 as compared to 12 340 MCHF in 2019. This increase is explained by a change in the variable discount rate which moved to 0,02 % in 2020 from 0,17 % in 2019.

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

Key audit matters

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

Key audit matters in the audit of the CERN Pension Fund financial statements for 2020 were as follows:

1) Valuation of Pension Fund assets

The valuation of the Fund's assets was addressed by our audit work including analytical reviews and verification of the information provided in the Custodian's reports against relevant account balances. Transactions related to asset balances were tested on a sample basis. For investment property, the valuations of the assets were verified from reports received from independent evaluators.

2) Accuracy of reporting Pension Fund Investments

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

Report on other legal and regulatory requirements

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

Information other than the financial statements and auditors' report thereon

The CERN Pension Fund Management is responsible for the other information, included in the Pension Fund Annual Report that comprises the Pension Fund Governing Board Report and an Extract of the Actuary's Report on the Fund as at 31 December 2020, as well as the financial statements and our auditor's report thereon. Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon. However, in connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If based on the work we have performed we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities for the financial statements

The CERN Pension Fund Management is responsible for the preparation and fair presentation of the financial statements in accordance with IPSAS and for such internal control as it determines to be necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Management is responsible for assessing the ability of CERN Pension Fund to continue as a going concern, disclosing, as applicable, matters related to the going concern and using the going-concern basis of accounting unless the Management intends either to liquidate CERN Pension Fund or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the financial reporting process of the Organization.

Auditors’ responsibilities in the audit of the financial statements

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

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

- Identify and assess the risks of material misstatement in the financial statements, whether due to fraud or error, design and perform audit procedures that are responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than the risk of not detecting one resulting from error, as fraud may involve collusion, forgery, intentional omission, misrepresentation or the overriding of internal control.

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

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

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

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

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

Matti Okko
Acting Auditor General

Christa Laurila
Principal Financial Auditor

Helsinki, 29 April 2021

IV. Financial Statements

1. Statement of Financial Position

(in kCHF)	Note	As at 31 December 2020	2019
Assets			
Cash and Cash Equivalents	5	424,181	646,602
Short-Term Deposits	6	60,000	60,000
Settlements Receivable		66,689	120
Sundry Debtors	7	5,427	5,741
Other Receivables	8	5,178	4,054
Derivatives	9	87,470	65,398
Bonds	10	977,784	960,250
Equities	11	1,054,074	725,575
Investment Funds	12	1,332,949	1,291,121
Total Financial assets		4,013,752	3,758,861
Investment Property	13	800,503	712,513
Total Non-Financial assets		800,503	712,513
Total assets		4,814,255	4,471,374
Liabilities			
Settlements Payable		861	2,751
Sundry Creditors	14	12,265	13,561
Other Payables	15	4,559	5,320
Derivatives	9	53,642	20,294
Total liabilities		71,327	41,926
Net assets available for benefits		4,742,928	4,429,448

(in kCHF)	Note	As at 31 December 2020	2019
Vested pension capital **			
Transfer values of active members or current value of deferred pensions (without future adjustment)		7,102,752	6,580,510
Mathematical reserves of the beneficiaries		5,763,107	5,759,704
Vested pension capital		12,865,859	12,340,214
Technical deficit		(8,122,931)	(7,910,766)
Funding Ratio		36.9%	35.9%

**Extract of Actuary's Report – see section VI*

2. Statement of Financial Performance

(in kCHF)	Note	Year ended 31 December 2020	2019
Investment Income			
Financial Assets			
Dividend Income		42,598	32,813
Interest Income	16	13,447	17,849
Unrealised Gains/(Losses) on Financial Assets at Fair Value Through Profit & Loss	17	239,188	136,878
Realised Gains/(Losses) on Financial Assets at Fair Value Through Profit & Loss	18	(97,134)	41,834
Non-Financial Assets			
Investment Property Income and Gains/(Losses)	19	111,938	106,951
Foreign Exchange Gains/(Losses)	20	139,680	12,229
Total Investment Income/(Loss)		449,717	348,554
Investment Expenses			
Financial Assets			
Investment Management Fees	21	37,496	21,225
Custody Fees and Administration of Securities		413	469
Transaction Costs		1,893	1,297
Taxation		215	288
Non-Financial Assets			
Investment Property Expenditure	22	7,405	9,011
Investment Related Expenditure		2,408	2,837
Total Investment Expenses		49,830	35,127
Net Investment Income/(Loss)		399,887	313,427
Other Expenses			
Bank Charges		38	59
Other Financial Expenses	23	2,854	3,695
Administration Costs	24,28	5,567	5,627
Total Other Expenses		8,459	9,381
Change in Net Assets before Membership Activities		391,428	304,046
Membership Activities	25		
Contributions			
Member Contributions		64,881	64,689
Employer Contributions		116,693	116,890
Employer Special Contributions		61,400	61,400
Purchase of additional years of membership		3,262	2,293
Indemnities received from third parties		-	19
Compensations	26	192	1,370
Procurement of entitlement to pension for surviving spouse		80	46
Total Contributions		246,508	246,707
Benefits and Payments			
Retirement pensions		248,023	249,634
Disability pensions		1,818	1,894
Surviving spouse pensions		44,739	43,865
Orphans pensions		1,282	1,315
Family allowances		13,401	13,735
Ex gratia payments granted		66	66
Transfer values paid to members		14,346	13,676
Transfer values paid to other schemes		616	311
Contributions paid to other schemes		165	143
Total Benefits and Payments		324,456	324,639
Net Membership Activities Cost		(77,948)	(77,932)
Net Increase/(Decrease) in Net Assets During Year		313,480	226,114
Net Assets Available for Benefits at Beginning of Year		4,429,448	4,203,334
Net Assets Available for Benefits at End of Year		4,742,928	4,429,448

3. Cash Flow Statement

(in kCHF)	Note	Year ended 31 December 2020	2019
Cash flows from membership activities			
Contributions and other receipts		246,331	246,565
Benefits and other payments		(323,975)	(324,605)
Net cash flows from membership activities		(77,644)	(78,040)
Cash flows from investing activities			
Financial Assets			
Purchases of Short-Term Deposits		-	(60,000)
Purchases of Bonds		(675,316)	(1,194,089)
Purchases of Equities		(767,382)	(791,677)
Purchases of Investment Funds		(356,867)	(183,287)
Proceeds of Short-Term Deposits		-	105,515
Proceeds from sale of Bonds		683,588	1,272,334
Proceeds from sale of Equities		629,672	682,828
Proceeds from sale of Investment Funds		272,375	179,004
Net receipts from Derivatives		36,198	(62,248)
Dividends received		40,861	31,663
Net Interest received		14,450	18,025
Non-Financial Assets			
Investment Property payments		(14,800)	(15,455)
Purchases of Investment Property		(9)	(87,589)
Proceeds from sale of Investment Property		-	186,954
Investment Property receipts		28,285	33,165
Tax reimbursements		1,885	185
Management and Custody Fees paid		(21,204)	(2,608)
Administrative and other Operating expenses paid		(10,106)	(10,734)
Net cash flows from investing activities		(138,370)	101,986
Net (decrease) increase in cash and cash equivalents		(216,014)	23,946
Cash at beginning of the year		646,602	629,384
Exchange gains /(losses) on cash and cash equivalents		(6,408)	(6,728)
Cash at end of the year		424,181	646,602

4. Statement of Changes in Net Assets Available for Benefits

(in kCHF)	Note	2020	2019
Balance as at 1 January		4,429,448	4,203,334
Employer Contributions		116,693	116,890
Member Contributions		64,881	64,689
Employer Special Contributions		61,400	61,400
Purchase of additional years		3,262	2,293
Indemnities and Compensations		192	1,389
Procurement of Entitlement to pension for surviving spouse		80	46
Benefits paid		(309,329)	(310,509)
Transfer values and contributions paid		(15,127)	(14,130)
Investment Income/(Loss)		449,717	348,554
Investment Expenses		(49,830)	(35,127)
Other Expenses		(8,459)	(9,381)
Balance as at 31 December		4,742,928	4,429,448

V. Notes to the Financial Statements

1. General Information

1.1. Fund description

Under Chapter IV of the CERN Staff Rules and Regulations, the European Organization for Nuclear Research (CERN), which has its seat in Geneva, is responsible for the social insurance coverage of its staff. Thus it set up in 1955 a pension fund which constitutes the CERN personnel's social protection for disability, old age and death.

The governance structure of the Fund and its relations with the Council and the Director General of CERN are defined in the Rules of the Pension Fund ("the Rules," available at: https://pensionfund.cern.ch). The Rules and Regulations of the Fund are approved by CERN Council.

The Rules state that *"The purpose of the Fund is to insure its members and beneficiaries as well as the members of their families against the economic consequences of the disability and old age of its members and of the death of its members and beneficiaries"* (Art. I 1.01).

With respect to the status of the Fund within the Organisation, according to the Rules, *"The Fund is an integral part of CERN, and, as such, has no separate legal personality and is under the supreme authority of Council"* (Art. I 2.01). In addition, *"The Fund shall enjoy operational autonomy within CERN and shall be managed in accordance with the framework set out in the Rules and Regulations"*. (Art. I 2.02).

Regarding the oversight and management of the Fund, Article I 2.04, states that

"1. The oversight of the Fund shall be entrusted to the Governing Board, assisted and advised by the Investment Committee and the Actuarial and Technical Committee.

2. The management of the Fund shall be entrusted to the Chief Executive Officer of the Fund, hereinafter referred to as "the Chief Executive Officer."

Article I 2.03 of the Rules further provides that the assets of the Fund shall be held separately from those of CERN and shall be used solely for the purpose of the Fund.

The Fund operates as a defined-benefit scheme. The members of the personnel of CERN and the members of the personnel of the European Southern Observatory (ESO), which has its seat in Munich, are members of the CERN Pension Fund. Conditions relating to the admission of ESO staff to the Fund are set out in the CERN/ESO Agreement.

Pensions are calculated in the following manner:

For members who joined the Fund on or before 31 December 2011, 2% of the Basis for the Calculation of Benefits, as set out in Article II 1.08 of the Rules, for each year of membership, up to a maximum of 35 years;

For members who joined the Fund on or after 1 January 2012, 1.85% of the Basis for the Calculation of Benefits, as set out in Article II 1.08, of the Rules, for each year of membership, up to a maximum of 37 years and 10 months.

The retirement age is as follows:

i. For members who joined the Fund on or before 31 December 2011: 65 years;

ii. For members who joined the Fund on or after 1 January 2012: 67 years.

The entitlement to a pension begins after a minimum of five years' contributions.

1.2. Funding arrangements

According to the Rules, the resources of the Fund derive from (a) contributions from CERN and ESO, (b) contributions from its members, (c) the income from the investment of its assets, and (d) gifts and legacies. The contributions are expressed as a percentage of each member's reference salary, which is equal to the basic remuneration for 40 hours' work per week multiplied by a coefficient set out in Annex A to the Rules. Contributions are apportioned between the member and the participating Organizations as follows:

i. For members who joined the Fund on or before 31 December 2011: member: 11.33%; Organization: 22.67%; total: 34%;

ii. For members who joined the Fund on or after 1 January 2012: member: 12.64%; Organization: 18.96%; total: 31.6%.

1.3. Termination terms

When membership of the Fund terminates before the applicable age of retirement for a reason other than death or total disability, a transfer value is calculated on the basis of the reference salary at the date of termination:

i. Less than five years of service: where the member has less than five years of service, the transfer value is paid into another pension scheme or to the member himself;

ii. Between five and ten years of service: the member has the choice between a deferred retirement pension, or payment into another pension scheme, or, if the latter option is not possible, to himself;

iii. Ten or more years of service: the member has the choice between a deferred retirement pension, and payment into another pension scheme, or, if the latter option is not possible, into a private insurance scheme offering comparable guarantees.

Payment of a transfer value extinguishes any right to a pension, except that for partial disability that is already being paid.

1.4. Significant Activities for the period

There were no significant activities during the year.

1.4.1 Beneficiaries

As at 31 December 2020 the number of beneficiaries was 3,673 (3,664 as at 31 December 2019), representing an increase of 0.2%.

1.4.2 Members

As at 31 December 2020 the number of members of the Fund was 3,902 (CERN: 3,391 and ESO: 511) compared to 3,933 (CERN: 3,430 and ESO: 503) as at 31 December 2019. This represents a decrease of 0.8%.

1.5. Investment policy

The Fund's principles governing the investment policy are set out in the Statement of Investment Principles CERN/PFGB/80.5d/Rev.2/A which is approved by the PFGB.

The Fund strives to maximise returns while remaining below a maximum level of risk. The maximum level of allowable risk is referred to as the "risk limit".

The Fund's portfolio is constructed and managed with the objective of remaining at all times within the risk limits approved by the PFGB, while striving to attain the Fund's investment return objective.

When selecting and managing investments, the Fund considers adapting the time horizon to the market conditions or to the circumstances of the Fund. In addition, the requirement for active management and the sensitivity of the risk and return to market cycles are also considered.

The Fund may invest in a wide range of asset classes including listed equity, government and non-government debt, currencies, money market instruments, property, commodities, private equity/debt. The Fund may also invest in strategies with absolute return focus. Investments may be undertaken directly (internally), or indirectly (e.g. via funds or investment agreements), in physical assets or derivatives.

2. Summary of Significant Accounting Policies

2.1 Basis of preparation

The CERN Pension Fund Financial Statements for the financial year ended 31 December 2020 have been prepared on a going-concern basis and pursuant to Article I 4.02 of the Rules of the Pension Fund, in accordance with International Public Sector Accounting Standards (IPSAS) and International Accounting Standard 26, Accounting and Reporting by Retirement Benefit Plans, as there is no such equivalent IPSAS. The preparation of financial statements in conformity with IPSAS requires the use of certain critical accounting estimates. It also requires the Fund to exercise its judgement in the process of applying the Pension Fund's accounting policies. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the financial statements are disclosed under note 3. If such estimates and assumptions deviate from the actual circumstances, the original estimates and assumptions will be modified as appropriate in the year in which the circumstances change.

At its meeting on 15 April 2021 the PFGB approved the submission of the CERN Pension Fund Annual Report and Financial Statements for 2020 to CERN Council, via the Finance Committee, for approval and discharge.

The accounting policies set out below have been applied consistently by the Fund and throughout all periods presented in these financial statements.

The following new standards, that are issued but not yet effective, up to the date of issuance of the Fund's financial statements, are disclosed below. The Fund intends to adopt these standards, if applicable, when they become effective:

i. IPSAS 41, Financial Instruments (will replace IPSAS 29) – effective January 1, 2023.

ii. IPSAS 42, Social Benefits – effective January 1, 2023.

Once effective, the above standards are not expected to have any effect on the amounts in the Statement of Financial Position, Statement of Financial Performance, Cash Flow Statement nor the Statement of Changes in Net Assets Available for Benefits.

2.2 Measurement base

The measurement base adopted is that of historical cost as modified by the revaluation of financial assets and financial liabilities (including derivative financial instruments) and investment property at fair value through profit or loss.

2.3 Foreign currency translation

2.3.1 Functional and presentation currency

Pursuant to Article I 4.02 of the Rules of the Pension Fund, the unit of account of the Pension Fund is the Swiss franc which is the functional and presentation currency.

2.3.2 Transaction and balances

At each balance sheet date monetary assets and liabilities that are denominated in foreign currencies are translated into Swiss francs at the exchange rates ruling on that date. Foreign currency transactions are accounted for at the exchange rates prevailing at the date of the transaction. Gains and losses arising on translation are shown separately in the Statement of Financial Performance for the period.

2.4 Classification of assets and liabilities

The CERN Pension Fund is an entity that, inter alia, manages assets used to pay pensions. As such, the assets and liabilities are disclosed in the Statement of Financial Position in an order that broadly reflects their relative liquidity.

2.5 Cash and cash equivalents

Cash and cash equivalents include cash in hand, deposits held at call with banks and other short-term highly liquid investments with original maturities of three months or less, as well as margin accounts with brokers that cover margin calls on derivative positions.

2.6 Financial assets

Financial assets are recognised on the Fund's Statement of Financial Position when the Fund becomes a party to the contractual provisions of the instrument.

The Fund classifies its financial assets in the following categories: at fair value through profit or loss and loans and receivables. The classification depends on the purpose for which the financial assets were acquired. Management determines the classification of its financial assets at initial recognition.

2.6.1 Financial assets at fair value through profit or loss

The Fund's business is investing in assets with a view to profiting from their total return in the form of interest, dividends, distributions and increases in fair value.

A. Classification

The Fund classifies its investments in cash and cash equivalents, debt, equity securities, investment funds and derivatives as financial assets at fair value through profit or loss. Cash and cash equivalents, bonds, equities and investment funds are designated by the Fund at fair value through profit or loss. Derivatives are classified as assets held for trading.

The portfolio of investment funds is categorized as financial assets designated at fair value through profit or loss at inception and is shown under Investment Funds on the Statement of Financial Position.

B. Recognition and derecognition

Purchases and sales of unquoted and quoted investments are recognised and derecognised on trade date where a purchase or sale is made under a contract whose terms require delivery within the timeframe established by the market concerned.

Financial assets are derecognised when the rights to receive cash flows from the investments have expired or have been transferred and the Fund has transferred substantially all risks and rewards of ownership.

C. Measurement

Financial assets at fair value through profit or loss are initially recognised at acquisition cost. Transaction costs are expensed in the Statement of Financial Performance. Subsequent to initial recognition, all financial assets at fair value through profit or loss are measured at fair value which is based on the last reported bid price (sales price) at the balance sheet date. Unrealised gains and losses arising from changes in the fair value of the "financial assets at fair value through profit or loss" category are presented in the Statement of Financial Performance in the period in which they arise.

Interest, dividends and investment management fees arising from financial assets are shown separately in the Statement of Financial Performance and are not included in Unrealised or Realised Gains/(Losses) on Financial Assets at Fair Value Through Profit and Loss.

2.6.2 Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. Sundry debtors include recoverable withholding tax levied at source on dividends and reimbursable value added tax paid on investment property transactions, investment property debtors and other due amounts.

Settlements receivable represent amounts due to the Fund for securities sold that have been contracted for but not yet settled or delivered at the balance sheet date.

Other receivables include accrued interest on cash and short-term deposits, dividends receivable and outstanding receipts.

These amounts which do not carry any interest are expected to be received within twelve months and are accordingly stated at their nominal value. Loans and receivables are subsequently carried at amortised cost using the effective interest method less any impairment losses.

2.7 Impairment of financial assets

Financial Assets carried at amortised costs are Loans and Receivables.

The Fund assesses at the end of each reporting period whether there is objective evidence that this group of financial assets is impaired. A financial asset or a group of financial assets is impaired and impairment losses are incurred only if there is objective evidence of impairment as a result of one or more events that occurred after the initial recognition of the asset (a “loss event”) and that loss event (or events) has an impact on the estimated future cash flows of the financial asset or group of financial assets that can be reliably estimated.

Evidence of impairment may include indications that the debtors or a group of debtors is experiencing significant financial difficulty, default or delinquency in interest or principal payments, the probability that they will enter bankruptcy or other financial reorganisation, and where observable data indicates that there is a measureable decrease in the estimated future cash flows, such as changes in arrears or economic conditions that correlate with defaults.

For loans and receivables, the amount of loss is measured as the difference between the asset’s carrying amount and the present value of the estimated future cash flows (excluding future credit losses that have been not been incurred) discounted at the financial asset’s original effective interest rate. The carrying amount of the asset is reduced and the amount of the loss is recognised in the Statement of Financial Performance.

2.8 Offsetting financial instruments

Financial assets and liabilities are offset and the net amount reported in the Statement of Financial Position when there is a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis or realise the asset and settle the liability simultaneously.

2.9 Non-financial assets

Those assets where there is no contractual right to receive cash or another financial asset are listed under this heading.

2.9.1 Investment property

Investment property is defined as land, buildings and forests held to earn rental income and capital appreciation and is not occupied by the Fund.

Investment property is measured initially at its cost, including related transaction costs. After initial recognition investment property is carried at fair value, representing open market value determined annually by external valuators with professional qualifications and experience. Fair value is based on active market prices, adjusted, if necessary, for any difference in the nature, location or condition of the specific asset. If the information is not available, the Fund uses alternative valuation methods such as recent prices on less active markets or discounted cash flow projections. Changes in fair values are recorded in the Statement of Financial Performance, as part of Investment Property Income.

The costs of the day-to-day running of the properties, e.g. repairs and maintenance, are recognised in the Statement of Financial Performance as incurred. Expenditure incurred in the replacement or renovation of part of an existing investment property that is 5% or more of the value of that property is recognised in the carrying amount, only when it is probable that future economic benefits associated with the item will flow to the Fund and the cost of the item can be reliably measured.

2.10 Other financial liabilities

Other financial liabilities include Settlements Payable, Sundry Creditors and Other Payables.

Settlements payable represent amounts due by the Fund for securities purchased that have been contracted for but not yet settled or delivered at the balance sheet date.

These amounts are not interest-bearing and are due within twelve months. They are initially recognised at their fair value and subsequently measured at amortised cost using the effective interest method.

2.11 Derivative financial instruments and hedging activities

The Fund's activities expose it to the financial risks such as foreign currency risk, interest rate risk and credit risk. Therefore the Fund may use derivative instruments such as foreign exchange forward contracts, interest rate swap contracts and credit default swaps to hedge these exposures. The Fund may also use derivative instruments for investment purposes, principally to gain exposure to specific markets.

Derivatives are initially recognised at fair value on the date on which a derivative contract is entered into and are subsequently re-measured at fair value. Any gains and losses arising from changes in the fair value are recognised in the Statement of Financial Performance. The Fund does not apply hedge accounting.

Derivatives are carried as financial assets when the fair value is positive and as financial liabilities when the fair value is negative.

The Fund may, at a given time, hold the following derivative instruments:

A. Forward contracts

Forward contracts are contractual obligations to buy or sell financial instruments on a future date at a specified price. A forward contract is a non-standardised contract written by the Fund and the counterparty to the agreement. The contracts are collateralised by cash and changes in the forward contracts' value are settled on reset, rollover or closure of the contract. The forward contracts are settled on a gross basis.

B. Options

An option is a contractual arrangement under which the seller (writer) grants the purchaser (holder) the right, but not the obligation, either to buy (a call option) or sell (a put option) at or by a set date or during a set period, a specific amount of securities or a financial instrument at a predetermined price. The seller receives a premium from the purchaser in consideration for the assumption of the future securities price. Options are settled on a gross basis.

C. Swaps

Swaps are contracts to exchange cash (flows) on or before a specified future date based on the underlying value of currencies/exchange rates, bonds/interest rates, commodities, stocks or other assets.

D. Futures

Future contracts are contractual obligations to buy or sell financial instruments on a future date at a specified price established in an organised market. The futures contracts are collateralised by cash and changes in the futures contracts' value are settled daily with the exchange. Futures are settled on a net basis.

E. Credit default swaps

Credit default swaps are contractual obligations under which the seller receives a premium or interest-related payments in return for agreeing to compensate the buyer in the event of a credit event on an underlying reference obligation. Credit events usually include bankruptcy and payment default.

2.12 Provisions

Provisions are recognised when the Fund has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits or service potential will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

2.13 Actuarial liabilities

The PFGB approves the significant actuarial assumptions for the calculation of the actuarial present value of promised retirement benefits at the end of the period, taking advice from an independent actuary concerning the appropriateness of the assumptions. The actuarial present value of promised retirement benefits at the end of the period is included in the Statement of Financial Position under the heading "Vested pension capital".

The actuarial present value of the promised retirement benefits, based on projected remuneration and capitalised pension indexation, is disclosed to indicate the magnitude of the potential obligation on a going concern basis.

In accordance with IAS 26, the actuarial method used to calculate the actuarial commitments is the projected unit credit method (PUC method). The projected unit credit method considers that each service period allows for an additional unit of benefits rights and evaluates each of these units separately to obtain the final value of the liability.

2.14 Revenue recognition

2.14.1 Revenue from exchange transactions

Interest income is recognised on time proportionate basis using the effective interest method;

Rental income is recognised over the term of the lease on a straight line basis;

Dividend income is recognised when the right to receive payment is established.

2.14.2 Revenue from non-exchange transactions

The Fund does not recognise revenue from non-exchange transactions. Non-exchange transactions include administrative support and office accommodation provided free of charge by CERN.

3. Critical Accounting Estimates and Judgements

The Fund makes estimates and assumptions that affect the reported amounts of assets and liabilities. Estimates and judgements are continually evaluated by the Fund, with input from independent experts, and are based on historical experience and other factors, including assumptions about future events that are believed to be reasonable under the circumstances. The resulting accounting estimates will, by definition, seldom equal the related actual results.

The most significant estimates made during the period are outlined below. The Fund has assessed the impact of the COVID-19 pandemic on these estimates and assumptions and has not been required to make any significant judgements for the financial years 2020 and 2019.

3.1 Actuarial assumptions

The liabilities of the Fund, in respect of promised benefits to be paid, have been determined using methods relying on actuarial estimates and assumptions. These assumptions reflect the long-term nature of future benefits. Changes in these estimates and assumptions could materially affect liabilities in respect of benefits.

The basis for the Fund's actuarial assumptions is set out under note 2. "Summary of Significant Accounting Policies".

The table hereafter shows the significant actuarial assumptions proposed by the Fund's Actuary and approved by the PFGB at its meeting of 18 February 2021 (CERN/PFGB/89.8a) and also those used in the corresponding period. The reference discount rate as at 31 December 2020 is the AON Swiss AA Corporate Bond Yield Curve. As a result the discount rate applied for 2020 is 0.02% when expressed as a single equivalent rate. In 2019, the rate was 0.17%, when expressed as a single equivalent spot rate. All other assumptions used as at 31 December 2020 are identical to those used as at 31 December 2019 (and also adopted for the 1 January 2019 Periodic Actuarial Review), presented as single equivalent spot rates or a liability-weighted average for simplicity.

Actuarial Assumptions	2020	2019
Discount Rate	0.02%*	0.17%*
Remuneration increase linked to inflation	1.23%**	1.20%**
Indexation of pensions linked to inflation	1.23%**	1.20%**
Remuneration increase linked to career change	1.40%***	1.40%***
Mortality and disability tables	77% ICSLT2013 GEN	77% ICSLT2013 GEN

**The underlying best estimate assumption is the AON Swiss AA Corporate Bond Yield Curve. The single equivalent spot rate approximates this underlying curve.*

***The underlying best estimate assumption has the following term structure: 0.70% p.a. until 2021, 0.90% p.a. until 2026, 1% p.a. until 2031 and 1.40% from 2032. The single equivalent spot rate describes this underlying term structure.*

**** Remuneration increase linked to career change is 1.4% p.a. when expressed as a liability-weighted average, however the underlying assumption is 0% for Fellows and for non-Fellows a 2.0% to 1.2% linear reduction between ages 18 to 64 i.e. the best estimate assumption that was used for the Periodic Actuarial Review as at 1 January 2019.*

Buck Consultants Limited London is the Fund's Actuary. An extract of the Actuary's Report on the Fund as at 31 December 2020 is included in section VI for information purposes.

In 2020, the Fund's Actuary did not propose any change to the reference used for the discount rate assumption, however the yield curve data was different compared to 2019. There were no changes to the other actuarial assumptions when compared to 2019. These were accepted by the PFGB. The sensitivity of results as at 31 December 2020 to changes in the discount rate, indexation of pensions, indexation of remuneration and remuneration increase linked to career change, are set out in section 2 of the extract of the Actuary's report.

In 2020 the discount rate used to determine the present value of future promised benefits was 0.02% (0.17% in 2019). The effect of this change was an increase in liabilities of 566 MCHF.

Total liabilities, as at 31 December 2020, were 12,866 MCHF (12,340 MCHF as at 31 December 2019).

3.2 Fair value of Investment Property

The fair value of the Fund's investment property is considered to be its market value. As at 31 December 2020 the fair value of Investment Property was 800,503 kCHF (712,513 kCHF as at 31 December 2019).

The fair values of the Investment Property were determined based on valuations performed by independent valuers, as at 31 December 2020 and 2019. The fair values of the properties (excluding the forests) have been determined using a sales comparison approach, where possible, and supported by a discounted cash flow method, in order to arrive at the most reliable estimate of the fair value within a range of reasonable fair value estimates. The independent valuers use assumptions that are mainly based on market conditions existing at each balance sheet date. The fair values of the forests have been determined by an expert in the forest industry, using market practice for valuing forest land i.e. taking into account current market prices for forest land and inventory.

The principal considerations underlying the estimation of fair value are those related to:

- Current or recent prices of similar properties;
- Appropriate discount rates ranging from 2.92% to 5.75% (2.99% to 4.75% in 2019);
- The receipt of contractual rentals;
- Expected future market rentals;
- Void periods;
- Maintenance requirements;
- Current market prices for forest inventory.

These valuations are regularly compared to actual market yield data, and actual transactions and those reported by the market. The expected future market rentals are determined on the basis of current market rentals for similar properties in the same location and condition.

3.3 Fair value of financial assets not quoted in an active market

In arriving at the fair value of financial assets not quoted in an active market, the Fund considers factors such as industry performance, company performance, quality of management, the price of the most recent financing round, exit opportunities which are available, liquidity preference, comparable market transactions, discounted cash-flows, earnings multiples and net present value analysis. The maximum use of market inputs is made with as little reliance as possible on entity-specific inputs.

3.3.1 Investment Funds

As at 31 December 2020 the Fund had holdings in investment funds totalling 938,016 kCHF (932,592 kCHF in 2019) that are not quoted in an active market. Many of these investment funds have the same reporting period as the Fund. Consequently, in some cases, audited financial statements attesting, inter alia, to the value of the Fund's investments in these funds were not available at the reporting date. Where audited statements were not in evidence, the Fund used unaudited statements as at 31 December 2020 provided by the independent administrators or fund. In the case of ninety two funds (ninety three in 2019), unaudited statements as at 30 September 2020 were used, as adjusted for capital movements between the last received statements and 31 December 2020.

Valuations totalling 486,931 kCHF (454,451 kCHF in 2019) were based on unaudited statements. These holdings are included in note 12 "Investment Funds".

The Fund has the following outstanding commitments to Private Equity, Real Estate and Private Debt funds as at 31 December:

	2020		2019	
(in kCHF)	Total Net Asset Value	Outstanding Commitment	Total Net Asset Value	Outstanding Commitment
European Private Equity	148,405	44,477	139,185	57,310
US Private Equity	143,182	33,660	119,659	44,945
Real Estate funds	67,372	16,326	65,471	16,089
Private Debt	40,731	21,120	48,153	11,642
Total	399,690	115,583	372,468	129,986

3.3.2 Over- the-counter derivatives instruments

The fair value of over-the-counter derivatives instruments is determined using quoted prices at the balance sheet date. When an instrument or its equivalent does not have a market price, its valuation is determined using a valuation model that is based on observable market inputs.

4. Financial Risks

4.1 Financial risk factors

The Pension Fund's activities expose it to a variety of financial risks: market risk (including price risk, foreign exchange risk, interest rate risk), credit risk and liquidity risk. The Fund's overall risk management programme seeks to maximise the returns derived for the level of risk to which the Fund is exposed and seeks to minimise potential adverse effects on the Fund's financial performance. The Fund uses derivative financial instruments to both hedge and to create certain risk exposures.

All securities investments present a risk of loss of capital. The maximum loss of capital on bonds, equities, investment funds and purchased options is limited to the fair value of those positions. The maximum loss of capital on written put options, long futures and forward currency contracts is limited to the notional contract values of those positions. On written call options and short future positions the maximum loss of capital can be unlimited.

The management of these risks is carried out by the Fund in line with investment guidelines approved by the PFGB. The Fund uses different methods to measure and manage the various types of risk to which it is exposed; these methods are explained below.

4.1.1 Market risk

The risk management policy of the Fund is defined in the Statement of Investment Principles. It is based on setting a risk measure, an annual risk limit and managing the asset allocation exposure compatible with the risk limit and with the return objective.

The Fund uses CVaR (Conditional Value at Risk) to measure and monitor its market risk. The CVaR of a certain confidence level measures the expected return of the corresponding tail of the return distribution. 1 Year 5% CVaR is defined as the annual expected return in the worst 5% of the return distribution of a portfolio. CVaR is also called expected shortfall.

The risk measure of 1 Year 5% CVaR is approved by the PFGB, based on the recommendation of the IC. The annual 1 Year 5% CVaR risk limit of -8% for 2020 was set by the PFGB taking into account the actuarial return considerations. The risk exposure of the Strategic Asset Allocation (SAA) and the Fund is estimated and reported to the IC by the independent risk consultant on a quarterly basis and compared to the risk limit set by the PFGB. In addition the Fund's Risk Manager monitors the expected risk relative to the risk limit on a daily basis.

During 2020 all quarterly evaluations of the estimated 1 Year 5% CVaR showed that the Fund was within the risk limit of -8%, taking into account the 2 percentage point margin referred to in the Risk Framework of the Fund that was approved by the PFGB in November 2017. This margin was utilised from March 2020, because of the market conditions observed at that time, and remained in place until the end of the year. As at 31 December 2020 the estimated 1 Year 5% CVaR of the Fund was -9.5% (-7.1% as at 31 December 2019), according to data provided by the Fund's independent risk consultant (and not the data included in these Financial Statements).

A. Price risk

The Fund is exposed to securities and derivative price risk. This arises from investments held by the Fund for which prices in the future are uncertain. Where assets of the Fund are denominated in currencies other than the Swiss franc, the price initially expressed in foreign currency and then converted into Swiss franc will also fluctuate because of changes in foreign exchange rates. Paragraph B: "Foreign exchange risk" sets out how this component of price risk is managed and measured.

Some of the Funds' financial assets and liabilities are exposed to market price risk. The fair value of these assets as at 31 December is as follows:

(in kCHF)	2020	2019
Assets		
Bonds	977,784	960,250
Equities	1,054,074	725,575
Investment Funds	1,332,949	1,291,121
Derivatives	87,470	65,398
Total Financial assets	3,452,277	3,042,344
Liabilities		
Derivatives	53,642	20,294
Total Financial liabilities	53,642	20,294

B. Foreign exchange risk

The Fund is exposed to foreign exchange risks arising essentially upon investments in assets denominated in foreign currencies as outlined in the table below. As a general policy, the Fund hedges its exchange rate risk to the level of 100% of its exposure, but may alter the hedge ratios depending on tactical considerations. The Fund uses three month rolling forward foreign exchange contracts and currency options to cover the currency exposure of existing and anticipated investments in foreign currency. The value of currency forward contracts as at 31 December 2020 is disclosed in note 9. "Derivatives".

As at 31 December 2020, given a shift of 10% in foreign currency rates against the Swiss Franc with all other variables held constant, the Statement of Financial Performance would have shown a higher/lower result of 12,361 kCHF (17,818 kCHF as at 31 December 2019).

The table below summarises the Fund's net assets that are denominated in a currency other than the Swiss franc. The table excludes the forward foreign exchange contracts that are used to hedge foreign exchange rate exposure:

(in kCHF)	2020	2019
US dollar	2,025,874	1,639,051
Euro	1,718,975	1,870,270
Pound sterling	217,953	230,792
Japanese yen	100,413	98,729
New Zealand dollar	31,125	31,546
Swedish krona	19,472	19,542
Other currencies	45,906	32,551
Total	4,159,718	3,922,481

The Fund uses year-end exchange rates supplied by its custodian. The source of these rates is Reuters World Markets.

The table below shows the rates used by the Fund at 31 December to covert the major currencies in the Fund's portfolio to the Swiss franc:

Currency	2020	2019
Euro	1.0816	1.0870
Pound sterling	1.2083	1.2828
US dollar	0.8840	0.9683

C. Cash flow and fair value interest rate risk

Fair value interest rate risk arises from the effects of fluctuations in the prevailing levels of market interest rates on the fair value of financial assets and future cash flows. The Fund holds some fixed income investments and cash on short-term deposits. The duration of the fixed income investments is regulated by investment guidelines. The Fund may use derivatives to hedge interest rate exposure.

The analysis below summarises the maturity range of the Fund's principal fixed income portfolio at 31 December and is a measure of the sensitivity of the fair value of the Fund's fixed interest securities to changes in market interest rates:

	2020	2019
Global Fixed Income	978 MCHF	960 MCHF
0 - 1 year	0%	2%
1 - 3 years	1%	1%
3 - 5 years	10%	9%
5 - 7 years	22%	27%
7 - 10 years	35%	33%
> 10 years	32%	28%
Total	100%	100%

The duration of the above securities, which is the weighted-average term to maturity of the cash flows, was 9.32 years at 31 December 2020 (2019: 8.44 years).

The following table indicates the Fund's exposure to fair value interest rate risk in respect of cash and short-term deposits:

(in kCHF)	2020	2019
Swiss franc	89,539	89,689
Total	89,539	89,689

The Fund also holds cash, a limited number of floating rate debt and derivatives that expose the Fund to cash flow interest rate risk.

As at 31 December 2020, if interest rates on these investments had been 1% higher with all other variables held constant, the net assets available for benefits at the end of the year would have been higher by 5,206 kCHF (6,875 kCHF higher as at 31 December 2019).

4.1.2 Credit risk

The Fund is exposed to credit risk, which is the risk that the counterparty will be unable to pay amounts in full when they fall due.

Credit risk arises from cash and cash equivalents short-term deposits, derivative financial instruments and bonds, as well as credit exposures including outstanding receivables and committed transactions.

All transactions in listed securities are contracted using approved brokers and settled/paid for upon delivery. The risk of default is considered minimal, as delivery of the securities sold is only made once the custodian has received payment. Payment is made on a purchase once the securities have been received by the custodian. The trade will fail if either party fails to meet its obligation.

The Fund invests in fixed income securities issued by various bodies such as governments, agencies or corporations. These holdings are managed in line with the investment guidelines to ensure issuer quality and diversification. In addition, the Fund limits the amount of credit exposure to any financial institution through diversification of its counterparties and strict monitoring of open receivables on derivatives instruments. If a derivative position is showing a profit, the Fund may ask for collateral or force the reset of the position.

The analysis below summarises the issuer quality of the Fund's principal fixed income portfolio at 31 December:

	2020	2019
Global Fixed Income	978 MCHF	960 MCHF
AAA	18%	13%
AA	22%	33%
A	20%	14%
BBB	31%	32%
BB-B	8%	8%
CCC	0%	0%
NR/NA	1%	0%
Total	100%	100%

Source of issuer data: provided by Custodian (minimum of Standards & Poor's and Moody's)

The maximum exposure to credit risk at 31 December is set out below:

(in kCHF)	2020	2019
Bonds	977,784	960,250
Cash and Cash Equivalents	424,181	646,602
Fixed Income funds	194,992	191,214
Private Debt	40,731	48,153
Short Term Deposits	60,000	60,000
Derivatives	87,470	65,398
Settlements Receivable	66,689	120
Other assets	10,605	9,795
Total	1,862,452	1,981,532

No material financial assets were past due as at 31 December 2020.

4.1.3 Liquidity risk

Liquidity risk is the risk that the Fund may not be able to generate sufficient cash resources to settle its obligations in full as they fall due, or can only do so on terms that are materially disadvantageous. In addition to its commitments to pay monthly benefits, the Fund is exposed to the periodic settlement of margin calls and gains and losses on derivative positions. The hedging of exchange rate risk can generate substantial cash flows that are difficult to predict. Therefore the Fund aims to maintain sufficient levels of cash and cash equivalents to meet its short-term liabilities. The Fund does not take leveraged positions on the market.

The table below analyses the Fund's financial liabilities (excluding the derivative financial instruments in a loss position) into relevant maturity groupings, based on the remaining period at the balance sheet date to the contractual maturity date:

(in kCHF)	< 7 days	1-3 months	3-12 months
As at 31 December 2020			
Settlements payable	861		
Members and Beneficiaries	6,840		
Investment property deposits			1,745
Taxes payable		155	
Investment property creditors		3,065	
Reimbursements of contributions	1,783		
Payments Outstanding		2,776	
Total	9,484	5,996	1,745
As at 31 December 2019			
Settlements payable	2,751		
Members and Beneficiaries	6,168		
Investment property deposits			2,077
Taxes payable		310	
Investment property creditors		4,564	
Reimbursements of contributions	2,234		
Payments Outstanding		3,086	
Total	11,153	7,960	2,077

The following table analyses the Fund's derivative financial instruments in a loss position that will be settled on a gross basis into relevant maturity groupings based on the remaining period at the balance sheet to the contractual maturity date:

(in kCHF)	< 1 month	1- 6 months	> 6 months	
At 31 December 2020				
Forwards	-	21,263	-	
Credit default swaps	-	2,805	2,271	
Swaps	12,752	1,256	11,886	
Futures	-	1,409	-	
Options	-	-	-	
Total	12,752	26,733	14,157	
At 31 December 2019				
Forwards	-	8,234	-	
Credit default swaps	-	-	53	*
Swaps	-	10,283	1,010	*
Futures	-	476	-	
Options	-	238	-	
Total	-	19,231	1,063	

Amounts of 53 kCHF and 1,010 kCHF as at 31 December 2019, previously classified as "Credit default swaps 1-6 months" and "Swaps 1-6 months" have been reclassified as "Credit default swaps > 6 months" and "Credit default swaps > 6 months", respectively. These reclassifications do not affect the derivative financial instruments in a loss position at 31 December 2019.

4.2 Fair value estimation

The fair value of financial assets traded in active markets (such as trading securities) is based on quoted market prices at the close of trading on the reporting date.

An active market is a market in which transactions for the asset take place with a sufficient frequency and volume to provide pricing information on an on-going basis.

The fair value of assets not traded in an active market is determined using valuation techniques. The Fund uses a variety of methods and makes assumptions that are based on market conditions existing at each year end date. Valuation techniques include the use of recent arm's length transactions, reference to other instruments that are substantially the same, discounted cash flow analysis, and option pricing models, making maximum use of market inputs and relying as little as possible on entity-specific inputs.

The carrying amounts of the financial assets and liabilities not measured at fair value in the Statement of Financial Position approximate their fair value.

** Re-stated*

Specific valuation techniques used to value financial instruments include:

i. Quoted market prices or dealer quotes for similar instruments;

ii. Prices sourced from broker quotes, inter-dealer prices or other reliable pricing services;

iii. The present value of the estimated future cash flows using observable yield curves, prices and other available market information;

iv. The latest available valuation received from fund administrators;

v. Other techniques, such as discounted cash flow analysis.

The fair value hierarchy has the following levels:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets that the Fund can access at the measurement date;
- Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly, or indirectly;
- Level 3 inputs are based on unobservable market inputs for the asset or liability.

The level in the fair value hierarchy within which the fair value measurement is categorised in its entirety is determined on the basis of the lowest level input that is significant to the fair value measurement in its entirety. For this purpose the significance of an input is assessed against the fair value measurement in its entirety. If a fair value measurement uses observable inputs that require significant adjustment based on unobservable inputs, that measurement is a Level 3 measurement. Assessing the significance of a particular input to the fair value measurement in its entirety requires judgement, considering factors specific to the asset.

The determination of what constitutes “observable” requires significant judgement by the Fund. The Fund considers observable data to be that market data that is readily available, regularly distributed or updated, reliable and verifiable, not proprietary, and provided by independent sources that are actively involved in the relevant market.

The following table analyses within the fair value hierarchy the Fund’s assets measured at fair value at 31 December 2020:

(in kCHF)	Level 1	Level 2	Level 3	Total
Assets				
Financial assets designated at fair value through profit or loss:				
Equities	1,054,012	-	62	1,054,074
Bonds	-	977,784	-	977,784
Investment Funds	394,933		938,016	1,332,949
Sub total	1,448,945	977,784	938,078	3,364,807
Financial assets held for trading:				
Derivatives	15,986	71,484	-	87,470
Sub total	15,986	71,484	-	87,470
Total assets at fair value through profit or loss	1,464,931	1,049,268	938,078	3,452,277
Liabilities				
Financial liabilities held for trading:				
Derivatives	(1,409)	(43,727)	(8,506)	(53,642)
Total liablities at fair value through profit or loss	(1,409)	(43,727)	(8,506)	(53,642)

The following table analyses within the fair value hierarchy the Fund's assets measured at fair value at 31 December 2019:

(in kCHF)	Level 1	Level 2	Level 3	Total
Assets				
Financial assets designated at fair value through profit or loss:				
Cash and Cash Equivalents (Money Market funds)	120,096	-	-	120,096
Equities	725,513	-	62	725,575
Bonds	-	960,250	-	960,250
Investment Funds	358,529		932,592	1,291,121
Sub total	1,204,138	960,250	932,654	3,097,042
Financial assets held for trading:				
Derivatives	5,686	58,157	1,555	65,398
Sub total	5,686	58,157	1,555	65,398
Total assets at fair value through profit or loss	1,209,824	1,018,407	934,209	3,162,440
Liabilities				
Financial liabilities held for trading:				
Derivatives	(714)	(16,339)	(3,241)	(20,294)
Total liablities at fair value through profit or loss	(714)	(16,339)	(3,241)	(20,294)

Investments whose values are based on quoted market prices in active markets, and are therefore classified within Level 1, include money market funds, listed equities, exchange-traded derivatives and exchange-traded funds.

Financial instruments that trade in markets that are not considered to be active but are valued based on quoted market prices, dealer quotations or alternative pricing sources supported by observable inputs are classified within Level 2. These include government bonds, corporate bonds, and over the counter derivatives. As Level 2 investments include positions that are not traded in active markets and/or subject to transfer restrictions, valuations may be adjusted to reflect illiquidity and/or non-transferability, which are generally based on available market information.

Investments classified within Level 3 have significant unobservable inputs, as they trade infrequently. Level 3 instruments include unlisted investment funds, over the counter derivatives and unlisted equities. As observable prices are not available for these securities, the Fund has used valuation techniques to derive the fair value.

There were no transfers between levels for the year ended 31 December 2020 nor 31 December 2019.

The following table presents the movement in level 3 instruments for the year ended 31 December 2020 by class of financial instrument:

(in kCHF)	Equities	Derivatives	Investment Funds	Total
Opening balance	62	(1,686)	932,592	930,968
Purchases	-		173,053	173,053
Sales	-		(157,243)	(157,243)
Transfers into level 3	-	-	-	-
Unrealised Gains/(Losses) on Financial Assets at Fair Value Through Profit & Loss	-	-	(31,138)	(31,138)
Realised Gains/(Losses) on Financial Assets at Fair Value Through Profit & Loss	-	(6,820)	20,752	13,932
Closing balance	62	(8,506)	938,016	929,572

The following table presents the movement in level 3 instruments for the year ended 31 December 2019 by class of financial instrument:

(in kCHF)	Equities	Derivatives	Investment Funds	Total
Opening balance	62	1,023	806,591	807,676
Purchases	-	-	271,084	271,084
Sales	-	-	(137,076)	(137,076)
Transfers into level 3	-	-	-	-
Unrealised Gains/(Losses) on Financial Assets at Fair Value Through Profit & Loss	-	-	(14,304)	(14,304)
Realised Gains/(Losses) on Financial Assets at Fair Value Through Profit & Loss	-	(2,709)	6,297	3,588
Closing balance	62	(1,686)	932,592	930,968

4.3 Investments exceeding five percent of net assets available for benefits

There were no investments representing five percent or more of net assets available for benefits as at 31 December 2020 nor as at 31 December 2019.

The Fund was invested in a total of 244,783 kCHF, including one exchange-traded fund and two unlisted funds, as at 31 December 2020, each investment representing five percent or more of Investment Funds. (As at 31 December 2019: 291,605 kCHF in one exchange-traded fund and three unlisted funds).

The Fund had currency forward asset positions hedging US dollars against Swiss francs and a credit default swap position, totalling 64,049 kCHF as at 31 December 2020 each representing five percent or more of the Derivatives assets balance. (As at 31 December 2019: 47,317 kCHF representing currency forward positions hedging US dollars and Euro against Swiss francs and a swap asset position).

As at 31 December 2020 the Fund had currency forward liability positions hedging US dollars, Euro and Pound Sterling against Swiss francs, two swap liability positions and three credit default swap positions totalling 40,837 kCHF, each representing five percent or more of the Derivatives liabilities balance. (As at 31 December 2019: 18,309 kCHF representing currency forward positions hedging Euro, Pound Sterling and New Zealand dollars against Swiss francs and three swap liability positions).

5. Cash and Cash Equivalents

For the purposes of the cash flow statement, cash and cash equivalents comprise the following balances with original maturity of 90 days or less:

(in kCHF)	2020	2019
Current accounts	364,209	484,445
Money Market funds	-	120,096
Deposit accounts	29,538	29,689
Margin accounts with brokers	30,434	12,372
Total	424,181	646,602

The amounts under the heading "Margin accounts with brokers" concern cash collateral pledged with derivative counterparties of the Fund. The cash is held in segregated accounts with the brokers and is callable by the Fund to the extent that collateral balances are in excess of the net fair value liability amount of the open derivative positions held with each broker.

6. Short-Term Deposits

Short-term deposits are made for varying periods, depending on the immediate cash requirements of the Fund and earn interest at the respective short-term rate. The deposits are made for more than 3 months and hence are classified as short-term deposits.

7. Sundry Debtors

(in kCHF)	2020	2019
Recoverable taxes	3,656	4,063
Investment property debtors	1,612	1,588
Other due amounts	159	90
Total	5,427	5,741

8. Other Receivables

(in kCHF)	2020	2019
Accrued interest	124	105
Dividends receivable	847	982
Outstanding receipts	96	288
Payments in advance	4,111	2,679
Total	5,178	4,054

9. Derivatives

The following table shows the types of derivative contracts held by the Fund as at 31 December:

(in kCHF)	2020 Assets	2020 Liabilities	2019 Assets	2019 Liabilities
Forwards:				
Currency Overlay programme	48,787	(14,646)	42,639	(4,913)
Other	3,356	(6,617)	3,091	(3,321)
Credit default swap	14,841	(17,828)	27	(53)
Swaps	3,398	(13,142)	9,980	(11,293)
Futures	63	(1,409)	140	(476)
Options	17,025	-	9,521	(238)
Total	87,470	(53,642)	65,398	(20,294)

10. Bonds

The fair value of investments in bonds, 977,784 kCHF as at 31 December 2020 (960,250 kCHF as at 31 December 2019) is as follows:

(in kCHF)	2020	2019
Europe, Middle East and Africa	535,253	592,899
North America	273,674	228,189
Asia	89,162	95,736
Emerging Markets	79,695	43,426
Total	977,784	960,250

Source of geographical data: country of risk data provided by Custodian

The exposure of bonds to market and credit risk is described under note 4.1. “Financial Risk Factors”.

11. Equities

The fair value of investments in equities, 1,054,074 kCHF as at 31 December 2020 (725,575 kCHF as at 31 December 2019) is as follows:

(in kCHF)	2020	2019
Europe, Middle East and Africa	539,742	404,585
North America	495,687	305,195
Asia	13,534	11,472
Emerging Markets	5,111	4,323
Total	1,054,074	725,575

Source of geographical data: country of risk data provided by Custodian

The increase in equities during the year includes 186,459 kCHF in relation to increases in market valuations (139,654 kCHF in 2019) and 142,040 kCHF in respect of new positions due to increased allocation to equities (111,751 kCHF in 2019).

The exposure of equities to market risk is described under note 4.1. “Financial Risk Factors”.

12. Investment Funds

The fair value of Investment Funds, 1,332,949 kCHF as at 31 December 2020 (1,291,121 kCHF as at 31 December 2019) is as follows:

(in kCHF)	2020	2019
Equity funds	399,647	391,080
Alternative funds	338,620	336,358
Private Equity	291,587	258,845
Fixed Income funds	194,992	191,214
Real Estate funds	67,372	65,471
Private Debt	40,731	48,153
Total	1,332,949	1,291,121

13. Investment Property

The fair value of Investment Property, 800,503 kCHF as at 31 December 2020 (712,513 kCHF as at 31 December 2019) is as follows:

(in kCHF)	2020	2019
As at 1 January	712,513	731,843
Purchases	13	89,394
Sales	-	(161,841)
Net gain/(loss) for fair value adjustments (price)	94,052	64,554
Net gain/(loss) for fair value adjustments (foreign exchange)	(6,075)	(11,437)
As at 31 December	800,503	712,513

During the year, there was one purchase of Investment Property in France representing a small parcel of forest land (two purchases in France in 2019). There were no sales of Investment Property (one in Germany and one in the United Kingdom in 2019).

14. Sundry Creditors

Sundry creditors include rent guarantee deposits, rents received in advance, amounts due to members leaving the Fund and value added tax payable.

(in kCHF)	2020	2019
Members and Beneficiaries	6,840	6,168
Investment property deposits	1,745	2,077
Taxes payable	155	310
Investment property creditors	3,065	4,564
Deferred Income	460	442
Total	12,265	13,561

15. Other Payables

Other Payables include contributions to be reimbursed to members leaving the Fund and amounts due mainly in respect of management and custody fees.

(in kCHF)	2020	2019
Reimbursements of Contributions	1,783	2,234
Payments Outstanding	2,776	3,086
Total	4,559	5,320

16. Interest Income

(in kCHF)	2020	2019
Cash and Cash Equivalents	402	1,259
Short term deposits	-	58
Bonds	13,045	16,532
Total	13,447	17,849

17. Unrealised Gains/(Losses) on Financial Assets at Fair Value through Profit & Loss

The following table shows the amount of unrealised gains/(losses) on financial assets at fair value through profit and loss and discloses the gains and losses arising as a result of changes in price and changes in foreign exchange currency movements for the money market funds included within Cash and Cash Equivalents, Bonds, Equities, Investment Funds and Derivatives. The Fund hedges the foreign exchange exposure it has to assets denominated in non-Swiss franc currencies.

The unrealised gains/(losses) arising as a result of changes in price and changes in foreign exchange currency movements on derivative products are on a best estimate basis.

			2020			2019
(in kCHF)	Price	Currency	Total	Price	Currency	Total
Cash and Cash Equivalents	-	-	-	(295)	(4,519)	(4,814)
Bonds	51,990	(28,942)	23,048	34,433	(22,292)	12,141
Equities	206,006	(23,689)	182,317	121,303	(9,431)	111,872
Investment Funds	124,917	(80,509)	44,408	50,316	(24,887)	25,429
Derivatives	(10,293)	(292)	(10,585)	(7,516)	(234)	(7,750)
Total	372,620	(133,432)	239,188	198,241	(61,363)	136,878

18. Realised Gains/(Losses) on Financial Assets at Fair Value through Profit & Loss

The following table shows the amount of realised gains/(losses) on financial assets at fair value through profit and loss and discloses the gains and losses arising as a result of changes in price and changes in foreign exchange currency movements for Bonds, Equities, Investment Funds and Derivatives. The Fund hedges the foreign exchange exposure it has to assets denominated in non-Swiss franc currencies.

(in kCHF)	Price	Currency	2020 Total	Price	Currency	2019 Total
Cash and Cash Equivalents	(319)	(775)	(1,094)	(117)	(2,450)	(2,567)
Bonds	16,838	(9,174)	7,664	37,809	(6,185)	31,624
Equities	17,582	(13,440)	4,142	28,775	(993)	27,782
Investment Funds	7,847	(6,648)	1,199	73,301	357	73,658
Derivatives	(107,836)	(1,209)	(109,045)	(89,505)	842	(88,663)
Total	(65,888)	(31,246)	(97,134)	50,263	(8,429)	41,834

The realised gains/(losses) arising as a result of changes in price and changes in foreign exchange currency movements on derivative products are on a best estimate basis.

19. Investment Property Income

The following table shows Investment Property Income arising from both rental income and non-rental income:

(in kCHF)	2020	2019
Rental Income:		
Residential Property	12,405	12,353
Commercial Property	11,171	15,679
Non-Rental Income:		
Agricultural property	-	16
Forests	384	441
Changes in fair value	87,978	53,117
Gains/(Losses) on Sales	-	25,345
Total	111,938	106,951

Gains of 94,052 kCHF for fair value price adjustments and losses of 6,075 kCHF for fair value adjustments as a result of foreign exchange movements, are included in “Changes in fair value” above. The corresponding amounts in 2019 were gains of 64,554 kCHF and losses of 11,437 kCHF respectively.

With regard to its Investment Property the Fund is a lessor of operating leases and as such is required to make the following disclosures in respect of future minimum lease payments.

(in kCHF)	2020	2019
Not later than 1 year	20,835	22,812
Between 1 and 5 years	66,666	73,837
Later than 5 years	14,777	15,734
Total	102,278	112,383

The Fund has leases that are contracted for remaining periods of between one and ten years. Some of the operating leases include break clauses.

20. Foreign Exchange Gains/(Losses)

Foreign Exchange Gains/(Losses) includes gains of 149,434 kCHF (gains of 23,302 kCHF in 2019) relating to trades executed as part of the Currency Overlay programme that is used by the Fund to hedge its foreign exchange rate risk.

(in kCHF)	2020	2019
Currency Overlay programme	149,434	23,302
Other exchange rate movements	(9,754)	(11,074)
Total	139,680	12,228

21. Investment Management Fees

21.1 Recorded Investment Management Fees

The following table shows Investment Management Fees recognised in the Statement of Financial Performance.

(in kCHF)	2020	2019
Reported Investment Management Fees	36,270	20,218
Calculated Investment Management Fees	1,226	1,007
Total	37,496	21,225

The above Recorded Investment Management fees also include performance fees and the Reported Investment Management Fees of 36,270 kCHF in 2020 (20,218 kCHF in 2019) was largely due to an increase in the performance of many Investment Funds in 2020.

21.2 Non-recorded Investment Management Fees

For less than 3% of Total Financial assets (less than 4% in 2019) there was insufficient information available regarding Investment Management Fees. As a result no Investment Management Fees have been disclosed for these assets that are all Private Equity/Debt funds. The total carrying value of these assets as at 31 December 2020 was 135,928 kCHF (170,180 kCHF as at 31 December 2019).

Carried interest payable in the future to the general partners of Private Equity funds has not been disclosed as there was insufficient information available.

22. Investment Property Expenditure

(in kCHF)	2020	2019
Residential Property	5,920	4,634
Commercial Property	1,322	4,188
Forests	163	189
Total	7,405	9,011

23. Other Financial Expenses

Other Financial Expenses were 2,854 kCHF for the period ending 31 December 2020 (3,695 kCHF in 2019). During the year the Fund was exposed to negative interest rates in some currencies, notably Swiss Franc and Euro rates.

24. Administration Costs

Administration costs of 5,567 kCHF in the period ending 31 December 2020 (5,627 kCHF for the period ending 31 December 2019) were as follows:

	2020	2019	
Personnel Costs	4,297	3,979	*
Operating Expenses	1,104	1,444	*
Supplies	32	29	
Audit/Valuation costs relating to Investment Property	134	175	
Total	5,567	5,627	

An amount of 251 kCHF as at 31 December 2019, previously classified as “Personnel Costs” has been re-classified as “Operating Expenses”. This reclassification does not affect the Administration Costs as at 31 December 2019.

** Re-stated*

25. Membership Activities

This heading shows the contributions of the members of the Fund and the participating Organisations and other amounts received, as well as the various benefits and other amounts paid during the period.

26. Compensations

The Fund is compensated by CERN for the additional cost associated with Administrative Circular No. 22 A (Rev.1) "Award of additional periods of membership in the Pension Fund for kCHF in 2019) long-term shift work". There were no such compensations received for the period ending 31 December 2020 (1,158 kCHF in 2019) included in the total amount of 192 kCHF (1,370 kCHF in 2019).

27. Litigations and Claims

As at 31 December 2020, there was one claim against CERN pending before the ILOAT (International Labour Organization Administrative Tribunal), which stemmed from a claim against the Fund. The complaint relates to the procurement of an entitlement to a surviving spouse pension. Nothing is recognised in the Financial Statements as, in the opinion of the Organization and the Fund, the legal position is well substantiated and documented. The judgment is expected in 2021.

28. Related-Party Transactions

Parties are considered to be related if one party has the ability to control the other party or exercise significant influence over the other party in making financial or operational decisions.

Related parties of the Fund during the period were:

I. Professional members appointed by the CERN Council to act as experts in the PFGB and professional members appointed by the PFGB to the IC and ATC. These professional members provide advice on governance, investment and actuarial issues respectively. Fees in 2020 totalled 108 kCHF (87 kCHF in 2019);

II. Key personnel are the Chair of the PFGB, Chair of the IC, Chair of the ATC and the Chief Executive Officer of the Fund. The aggregate remuneration paid to the remaining key personnel includes salaries, allowances and other entitlements paid in accordance with the Staff Rules and Regulations;

III. CERN, the Organization, contributes a significant portion of the Fund's financing. While the Fund is an autonomous operating entity without separate legal identity, for the purposes of IPSAS 20 disclosure requirements, CERN is considered a related party. Although the Fund meets the cost of its operating expenses, CERN provides free of charge some central support services and office accommodation.

During the year the Fund paid the following amounts to CERN:

- Finance and Administrative Processes department: 192 kCHF for IT support and maintenance (129 kCHF for Benefits management system development and 121 kCHF for IT support and maintenance in 2019).
- Industry, Procurement and Knowledge Transfer department: 43 kCHF for procurement services (40 kCHF in 2019).
- Internal Audit Service: 111 kCHF for internal audit services (71 kCHF in 2019).
- Legal Service: 116 kCHF (115 kCHF in 2019).
- Translation Service: 0 kCHF (8 kCHF in 2019).

In 2020 the Fund did not grant any loan or pay any other remuneration (except for the above mentioned amounts) to the key management personnel or to their close family members.

29. Events after the Balance Sheet Date

There were no material events after the Balance Sheet Date

VI. Extract of Actuary's Report on the Fund as at 31 December 2020

The Actuary to the Fund has provided technical assessments of the Fund in line with the requirements of IAS26 using two separate sets of assumptions as set out below. The first set of assumptions are those assumptions used to measure the liabilities for inclusion in the Statement of Financial Position (IAS26). The second set reflects assumptions as set out in the report 'Actuary's Report on the Fund as at 31 December 2020' dated March 2021 (Best Estimate).

The technical assessments were based on member and asset data provided by the Fund.

1. Actuarial assumptions

Actuarial assumptions	**IAS26 31 December 2020**	**IAS26 31 December 2019**	**Best Estimate 31 December 2020**	**Best Estimate 31 December 2019**
Financial assumptions	**% p.a.**	**% p.a.**	**% p.a.**	**% p.a.**
Discount rate	0.02	0.17	1.50 (until 2021) 2.50 (2022 – 2026) 4.50 (2027 – 2031) 5.70 (2032 onwards)	1.50 (until 2021) 2.50 (2022 – 2026) 4.50 (2027 – 2031) 5.70 (2032 onwards)
Indexation of pensions linked to inflation	1.23	1.20	0.70 (until 2021) 0.90 (2022 – 2026) 1.00 (2027 – 2031) 1.40 (2032 onwards)	0.70 (until 2021) 0.90 (2022 – 2026) 1.00 (2027 – 2031) 1.40 (2032 onwards)
Inflation and remuneration increase linked to inflation	1.23	1.20		
Remuneration increase linked to career change	1.40 (age related scale)			
Demographic assumptions	**IAS26 31 December 2020**	**IAS26 31 December 2019**	**Best Estimate 31 December 2020**	**Best Estimate 31 December 2019**
Mortality and disability tables	77% ICSLT2013			
Spouses' age gap	Males are assumed to be 3 years older than their female spouses and vice versa			
Exit assumptions*	Under age 40: 2.3% p.a.; Ages 40 and over: 0.8% p.a.			
Method of evaluating benefits on exit	18% Transfer Value / 82% present value of accrued deferred pension (on average)			

* *The proportion of members who fully extinguish their liability by payment of a transfer value compared to those who take a deferred pension when they depart the Fund with at least five years' service.*

Some narrative has been provided below on the key actuarial assumptions to the IAS 26 assumptions.

Discount rate

IAS26 measures pension fund liabilities by reference to a discount rate which reflects the time value of money of an appropriate duration and currency. An entity should make a judgment whether the discount rate that reflects the time value of money is best approximated by reference to market yields at the reporting date on government bonds, high quality corporate bonds, or by another financial instrument. In some jurisdictions, market yields at the reporting date on government bonds will provide the best approximation of the time value of money. However, there may be jurisdictions in which this is not the case, for example, jurisdictions where there is no deep market in government bonds, or in which market yields at the reporting date on government bonds do not reflect the time value of money. The currency and term of the financial instrument selected to reflect the time value of money should be consistent with the currency and estimated term of the post-employment benefit obligations.

For the 31 December 2020 disclosures, the discount rate is the AON Hewitt Swiss AA corporate bond yield curve. This results in a discount rate assumption of 0.02% p.a. when expressed as a single equivalent rate. The full discount rate curve has been used for the purposes of the calculation.

This approach is consistent with that adopted for the 31 December 2019 disclosures.

Inflation-related assumptions

IAS26 does not state any method for determining the rate of inflation or of pension indexation to be assumed. Consequently the rate of inflation, on which indexation of benefits provided by the Fund and also remuneration increases are dependant, has been set by the principles of best estimate and also of mutual compatibility with other assumptions. The assumption adopted is a long-term assumption appropriate over the entire remaining lifetime of existing members and beneficiaries of the Fund in relation to their accrued benefits as at 31 December 2020.

For the 31 December 2020 disclosure CERN have set their assumption to be consistent with the current best estimate of future inflation suggested by the Fund's risk consultant, Ortec Finance, for the 1 January 2019 Periodic Actuarial Review. This results in an inflation assumption of 1.23% p.a. as at 31 December 2020 when expressed as a 30-year spot rate (1.20% p.a. as at 31 December 2019). The underlying best estimate assumption has the following term structure: 0.7% p.a. until 2021, 0.90% p.a. from 2022 to 2026, 1.0% p.a. from 2027 to 2031 and 1.4% p.a. from 2032. This assumption is consistent with that used at 31 December 2019. The full term-dependent assumption has been used for the purposes of the calculation.

Remuneration increase linked to career change

This assumption is in respect of increases to remuneration that are in excess of inflation and are due to career progression, promotional increase or some other mechanism.

The 31 December 2020 assumption has been set on average as 1.40% p.a. The assumption is consistent with the accounting assumption used for 31 December 2019 disclosures as well as the best estimate proposed for the 1 January 2019 Periodic Actuarial Review. The average assumption has been calculated as a liability weighted average. The full age dependent assumption is used for the purposes of the calculation and is a rate of 0% p.a. for Fellows and a linear scale from 2.0% p.a. to 1.2% p.a. between ages 18 to 66 for non-Fellows.

Mortality assumption

The 31 December 2020 mortality assumption is the same as the assumption used for the 31 December 2019 disclosures and is in line with the best estimate assumption adopted for the 1 January 2019 Periodic Actuarial Review. The ICSLT2013 table is based on mortality data from European-based International Civil Servants which allows for future improvements.

Based on the Fund's past experience and using individual pension amount as a weighting factor to derive the best-fit scaling factor, an adjustment of 77% is applied to the probabilities contained within the ICSLT2013 tables.

Other demographic assumptions

The method of evaluating benefits for active members who leave service has been kept the same as that used as at 31 December 2019 and in line with the best estimate assumptions adopted for the 1 January 2019 Periodic Actuarial Review. It reflects a best estimate analysis of the proportion of members who fully extinguish their liability by payment of a transfer value compared to those who take a deferred pension when they depart the Fund with at least five years' service. The age-related scale adopted results in an average assumption that allows for 18% of the corresponding transfer value and 82% of the present value of the accrued deferred pension. In accordance with the Fund rules we have allowed for 100% of the transfer value for a member who is assumed to leave the Fund with less than five years' service.

The assumptions for proportion married, spouse's age gap, withdrawal rates, retirement age and contract transitions are consistent with the corresponding assumptions in the 31 December 2019 disclosures and are in line with the best estimate assumptions adopted for the 1 January 2019 Periodic Actuarial Review.

2. Technical balance sheet under IAS26

Balance sheet	31 December 2020 IAS26 000's CHF	31 December 2020 with 2019 IAS26 assumptions 000's CHF	31 December 2019 IAS26 000's CHF
Total assets of the Fund	4,742,928	4,742,928	4,429,448
Liabilities in respect of members	(7,102,752)	(6,665,059)	*(6,580,510)*
Liabilities in respect of beneficiaries	(5,763,107)	(5,634,376)	*(5,759,704)*
Total Liabilities	(12,865,859)	(12,299,436)	(12,340,214)
Surplus/(Deficit) in the Fund	**(8,122,931)**	**(7,556,508)**	**(7,910,766)**
Funding Level under IAS26 (%)	**36.9**	**38.6**	**35.9**

The funding level has increased from 35.9% as at 31 December 2019 to 36.9% as at 31 December 2020. This improvement is mainly due to an experience gain and the return on assets over the year being higher than assumed, which was offset in part by the lower discount rate assumption.

The table below summarises the impact on the accounting liability at 31 December 2020 of changing the discount rate assumption from the assumption used at 31 December 2019. All other assumptions have remained the same.

Assumption	31 December 2020	31 December 2019	(Increase)/decrease to the liability at 31 December 2020 000's CHF
Discount rate	0.02% p.a.	0.17% p.a.	(566,423)

The table below shows the impact on the IAS26 liability results at 31 December 2020 (with a starting position of 12,865,859 k CHF) to changes in the discount rate, inflation and remuneration increase assumptions. Please note that for the purpose of these sensitivities, all assumptions are changed in isolation while keeping the other assumptions constant.

Assumption changed*	Gain/(loss) on liabilities resulting from a 0.5% increase in the assumption 000's CHF	Gain/(loss) on liabilities resulting from a 0.5% decrease in the assumption 000's CHF
Discount rate	1,345,023	(1,590,071)
Inflation (including impact on indexation of pensions and remuneration)	(1,438,786)	1,162,091
Remuneration linked to career change	(419,094)	386,935

** Please note that the changes in the liabilities resulting from the increase/decrease to the individual assumptions shown in the table above are slightly asymmetric around the base value of the liabilities of 12,865,859 k CHF. The asymmetry occurs as a result of compounding the inflation related assumptions and the discount rate assumption as part of the present value liability calculation. In this instance, the asymmetry is more significant than might be expected owing to a fairly low discount rate (in nominal terms).*

3. Technical Balance Sheet using Best Estimate assumptions

Balance sheet	31 December 2020 000's CHF	31 December 2019 000's CHF
Total assets of the Fund	4,742,928	4,429,448
Liabilities in respect of members	(2,163,066)	(2,173,792)
Liabilities in respect of beneficiaries	(3,782,592)	(3,926,318)
Total Liabilities	(5,945,658)	(6,100,110)
Surplus/(Deficit) in the Fund	**(1,202,730)**	**(1,670,662)**
Funding Level using Best Estimate assumptions (%)	**79.8**	**72.6**

The funding level has increased from 72.6% as at 31 December 2019 to 79.8% as at 31 December 2020. This improvement is mainly due to the return on assets over the year being higher than assumed, and also due to the contributions paid. The Best Estimate assumptions at 31 December 2020 are consistent with those used at 31 December 2019.

4. Sensitivity of the results to changes in the Best Estimate assumptions

The table below shows the impact on the Best Estimate liability results at 31 December 2020 (with a starting position of 5,945,658 k CHF) to changes in the discount rate, inflation and remuneration increase assumptions.

Assumption changed*	Gain/(loss) on liabilities resulting from a 0.5% increase in the assumption 000's CHF	Gain/(loss) on liabilities resulting from a 0.5% decrease in the assumption 000's CHF
Discount rate	371,555	(416,024)
Inflation (including impact on indexation of pensions and remuneration and the discount rate)	41,740	(82,472)
Remuneration linked to career change	(98,971)	92,656

* *Please note that the changes in the liabilities resulting from the increase/decrease to the individual assumptions shown in the table above are slightly asymmetric around the base value of the liabilities of 5,945,658 k CHF. The asymmetry occurs as a result of compounding the inflation related assumptions and the discount rate assumption as part of the present value liability calculation.*

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