



CERN PENSION FUND ANNUAL INFORMATION MEETING

20 October 2022

A welcome and purpose of the Annual Information Meeting

The AIM is an important part of our communication strategy. It provides members and beneficiaries with important updates and the opportunity to ask questions of the Chair and CEO.

Our presentation today will be in English. A simultaneous interpretation to French is available for this webcast

A recording of today's meeting will be available should you need to watch again later

We are unable to provide financial advice. Please contact pensions.benefits@cern.ch for individual questions or if you have any feedback on today's presentation

Agenda for today

- 1 PFGB Chair's Welcome
- 2 CEO Introduction
- 3 Membership and Benefit Services
- 4 Periodic Actuarial Review (2022)
- 5 2021 Annual Report & Financial Statements
- 6 Investment Report
- 7 Opportunity for Questions
- 8 Closing Remarks

PFGB Chair's Welcome

Annual Information Meeting 2022



Ossi Malmberg

Chair
Pension Fund Governing Board

The purpose of the CERN Pension Fund

Our purpose is to insure our members and beneficiaries, together with their families, against the financial consequences of disability, old age and death.

(Article 1 1.01)

The CERN Pension Fund

- As an international organisation, CERN and ESO operate their own social security system, including a pension scheme, the CERN Pension Fund.

Defined benefits

- Benefits paid are not affected by market value of investments.

A solidarity scheme

- No member has an individual balance and all benefits are paid from a common fund.

PFGB Chair's Welcome

The Governing Board represents all stakeholders of the Pension Fund and works to ensure the purpose is achieved.

Despite many significant challenges the Pension Fund continues to support its beneficiaries and in 2021 paid a total of 320 MCHF in benefits.

A Periodic Actuarial Review was completed in January 2022 and determined that the funding level has increased since 2019, however the effect of the events in 2022 has since had an impact.

The Governing Board continues to hold a dialogue with the Council and the Finance Committee concerning matters relating to Pension Fund risk, investment strategy, funding levels and operational performance.

A similar, constructive dialogue is in place with the Audit Committee and during the year the Governing Board responded to a number of thoughtful questions from AC members in areas such as ESG, controls, internal audit and investment risk limits.

Pension Fund Governing Board (at 30 September 2022)



A Glindemann



I Mardirossian



J Segars



O Malmberg



R Bello



T Groffmann



O Capatina



P Charpentier



A Hilka



D Ryckbosch



	PFGB Chair		ATC Chair
	Vice Chair		IC Chair

	Council (ESO / CERN)		Pensioners Association		Professional
	CERN Ex-officio		Staff Association (E/C)		

Governing Board – rotation in mandates

The Governing Board expresses its appreciation to Mr Marcus Klug and Dr Peter Hristov for their PFGB service and welcomes their appointed successors.



Mandate ended 30 April 2022
After serving two 3-year terms

Representative for ESO Council

Succeeded by Dr Thomas Groffman



Mandate ended 30 April 2022
After serving two 3-year terms

Representative for Staff Association

Succeeded by Ms Ofelia Capatina (for Staff Association) and Ms Isabelle Mardirossian (as Vice-Chair)

The Governing Board notes that Dr Andreas Glindemann (ESO Staff Association) will end his mandate on 31 October 2022 and welcomes the appointed of his successor, Mr Alain Delorme.

CEO Introduction

Annual Information Meeting 2022



Doug Heron

Chief Executive Officer
CERN Pension Fund

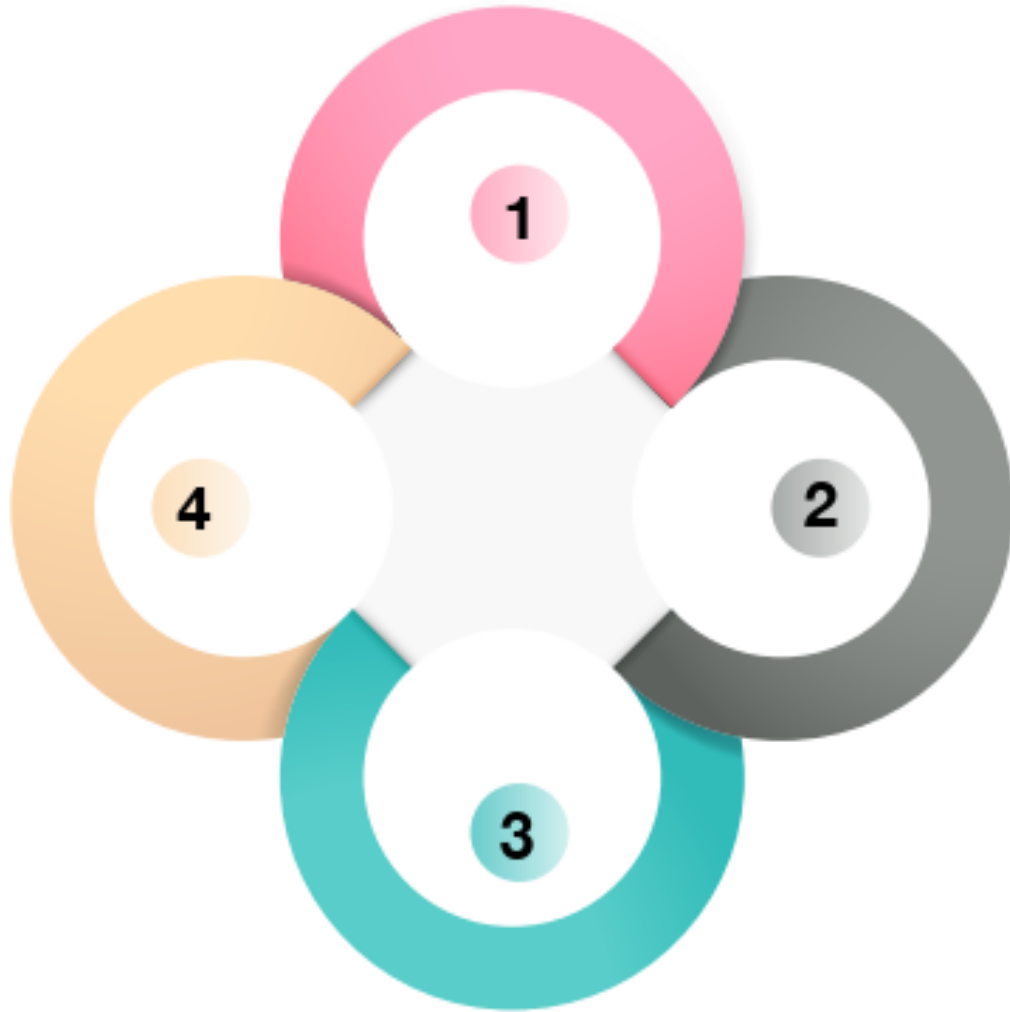
A reminder of how your membership works

Becoming a Member	Membership is automatic with eligible contracts of employment The PFMU creates / administers your file and is the point of contact for queries Benefits accumulate according to service period x reference salary
At the end of your employment	Become a beneficiary (if older than minimum retirement age) Become a deferred beneficiary (and take benefits later) Accept a transfer value (non-optional below 5 years of service)
When you become a Beneficiary	Monthly pension benefits are payable until your death Benefits reviewed each year for indexation Survivor benefits payable according to eligibility
Insurance against death or disability	Benefits payable to you or your survivors for eligible family scenarios
Special transactions	Provisions apply for cases of early retirement; purchase of additional benefits You can acquire rights to survivor benefits for partnerships after employment

Governance Arrangements for the Pension Fund

CERN Council	<p>The Supreme Authority: defines the Pension Fund and its arrangements; acts as ultimate oversight body and approves significant policies or changes.</p> <p>For contributions and benefits, the Council acts on recommendations from the Director-General.</p>
Governance principles	<p>Set out how the Fund is governed</p>
Governing Board	<p>Primary oversight body. Includes professional (independent) members and representatives from all key stakeholder groups. Meets quarterly to review performance of the Pension Fund.</p>
Investment Committee / Actuarial and Technical Committee	<p>Sub-committees to the PFGB. Include experts to provide advice and guidance in technical areas.</p>
Chief Executive Officer	<p>Legal representative of the Fund. Analogous to CERN Department Head. Responsible for the Management Unit and all delegated activities of the Fund.</p>

Governance Principles



1 The Fund is an integral part of CERN, has no separate legal personality and is under the supreme authority of the Council. The activities of the Fund are part of the official activities of CERN and benefit from privileges and immunities.

2 The Fund has operational autonomy within CERN and shall be managed in accordance with its Rules and Regulations. The Director-General shall have no responsibilities with respect to the management of the Fund.

3 The assets of the Fund shall be held separately from those of CERN and shall be used solely for the purpose of the Fund. Neither CERN nor ESO shall reclaim, borrow or impose a lien upon the assets of the Fund.

4 The oversight of the Fund shall be entrusted to the Governing Board, assisted and advised by the Investment Committee and Actuarial and Technical Committee. The management of the Fund shall be entrusted to the Chief Executive Officer.

The activities of managing the Pension Fund

Administering benefits	Maintaining records of eligibility Liaising with members, beneficiaries or their survivors Providing information and assisting with enquiries
Collecting contributions	Accounting for and collecting the contributions from members and CERN / ESO
Managing assets of the Fund	Establishing investment strategy and risk appetite Making investments in asset classes Monitoring performance and making interventions to achieve stable returns
Monitoring funding level	Working with the Actuary to ensure benefit promises (liabilities) are fully valued Reviewing ~100 different factors of liability risk to ensure a balanced view Completing Periodic Actuarial Reviews to establish funding level
Governance / leadership	Following the rules of the Pension Fund Working with all stakeholders to ensure the Pension Fund is well managed Leading the PFMU team to ensure plans are set and goals achieved

Strategic Partners



BUCK

Buck (UK)


Actuarial Services
Valuation of liabilities



NORTHERN TRUST

Northern Trust (UK)


Asset Safe Custody



UBS

UBS (CH)

Main Banker
Payments



APEX

Apex (IRE)

Investment back office services



ORTEC

Ortec (CH)

Risk Consultant
Advise on investment risk



NATIONAL AUDIT OFFICE OF FINLAND

National Audit Office Finland

External Auditor
Review annual accounts



CERN **EY**

CERN / EY (CH)

Internal Auditor
Perform internal audits

Membership and Benefit Services

Annual Information Meeting 2022

Delivering our purpose in 2021

Our purpose is to insure our members and beneficiaries, together with their families, against the financial consequences of disability, old age and death.



A sentiment dashboard

Introduced monitoring of how members and beneficiaries feel about their pension



Payment of monthly benefits

Paid 320 MCHF to 3'334 beneficiaries (100% accuracy)



Performance against SLAs

11 / 13 services rated green. 2 amber (cause: high demand and external delays)



Welcoming new members

498 new members. 3'961 total members.



Leaving the Fund

346 leavers (323 transfer values; 23 to deferred status)



New beneficiaries

Established 59 new beneficiaries



Caring for families

Supported the families of 127 beneficiaries who sadly passed away

Membership Overview

2 Beneficiaries aged over 100

14 Beneficiaries aged under 21

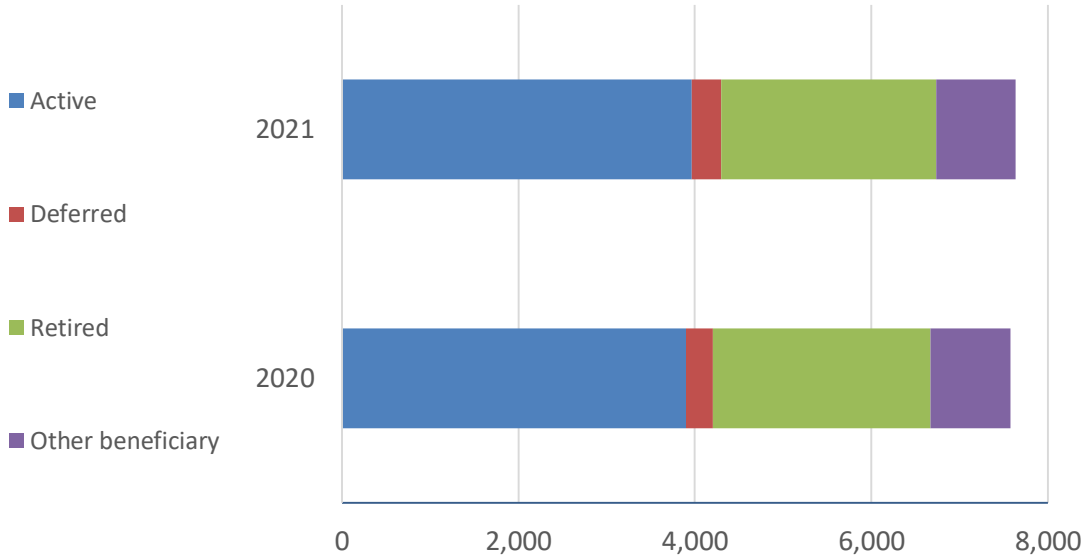


47 Countries with beneficiaries

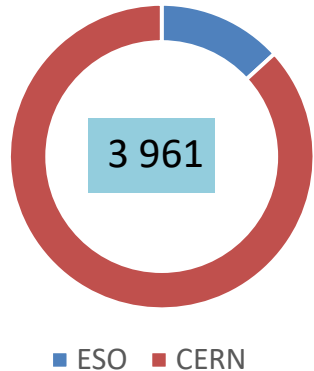
24 Million CHF paid each month

8 Beneficiaries in payment > 50 years

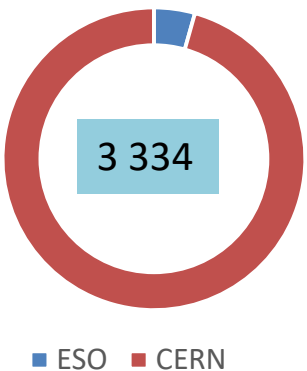
Members and beneficiaries



Members by Organisation



Beneficiaries by Organisation



We focus on what our members need from us

Member and beneficiary feedback directly influences our priorities. We engage with GAC and Staff Association constructively and often. We maintain a Sentiment Dashboard.

The positive themes are: benefits are valued and recognised to be valuable; the service from PFMU is efficient and easy to access.

The less positive themes are: the transfer values paid on leaving < 5 years of service seem too low; the mechanism for annual indexation is a concern; payment arrangements aren't flexible enough.

We launched our Digitalisation Project in 2021 and in 2023 will be implementing a range of improvements to workflow management and document handling. The Pension Fund is committed to ensuring we anticipate member and beneficiary expectations in our service capability.

In 2022 we began a periodic review of the Factors and Parameters within the Pension Fund to ensure they remain suitable. This includes Transfer Values.

Benefits Service



Emilie Clerc



Pilar Herguedas



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<http://pensionfund.cern.ch>

Building 5/5 (CERN)

Periodic Actuarial Review

Annual Information Meeting 2022

Periodic Actuarial Review

What is it?

A full calculation of all of the Pension Fund's assets and liabilities
Uses current information, forecasts and assumptions about the future

How often do we do it?

We prepare a rolling re-forecast every 6 months in a dashboard
The full review is performed once every 3 years (or more often if required)

Who does it?

Must be independent – calculations performed by Buck (our Actuary)
Asset return forecasts are determined by a Long Term Asset Study (from Ortec)

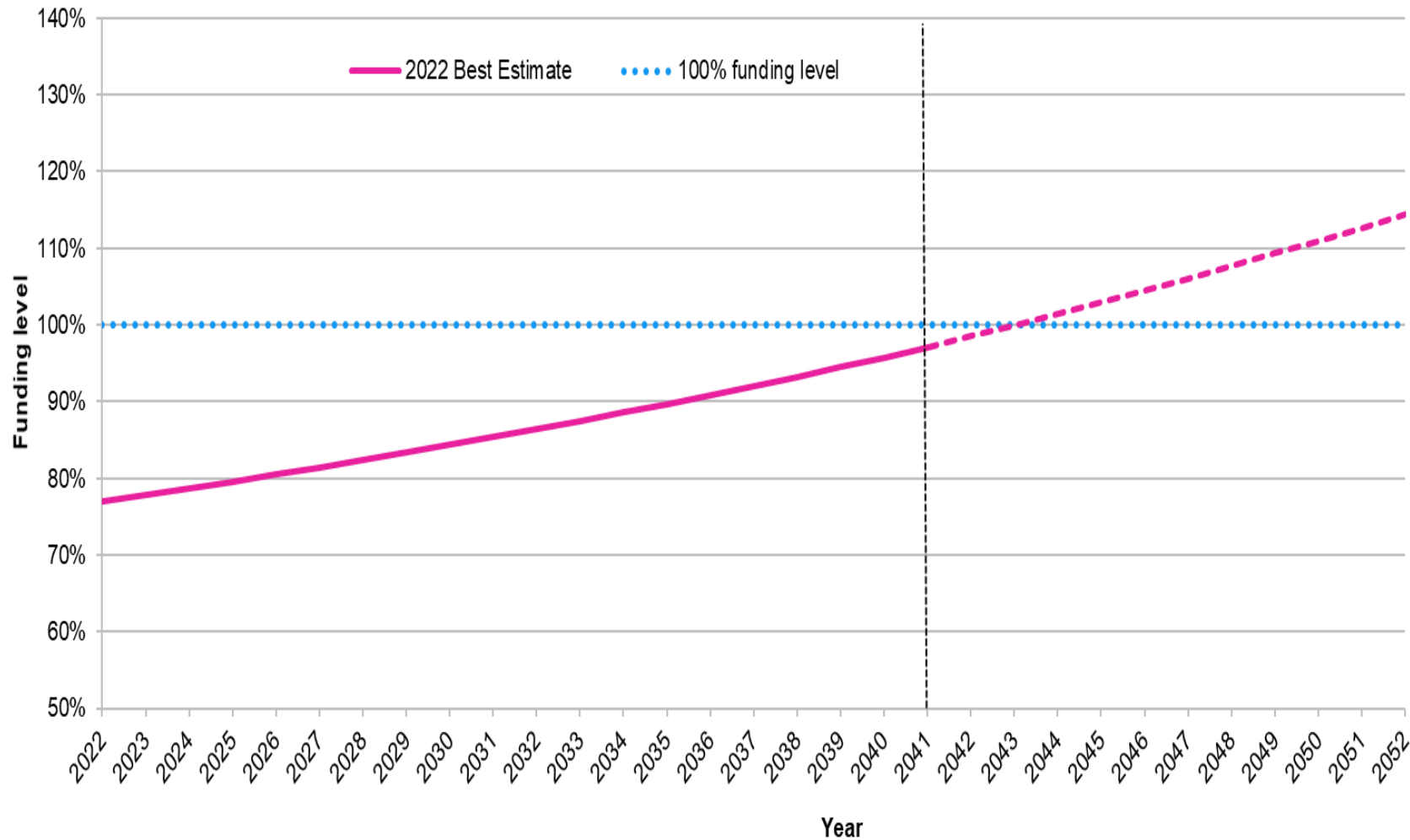
What was the result?

Current funding level improved (2022: 77%; 2019: 68%). Deficit > halved.
The projection is slightly lower and >100% will be achieved ~2.5 years later

Any interesting points?

Our beneficiaries are expected to live longer than other IGOs (0.94 factor)
The Fund expects to be paying 424 MCH in annual benefits by 2052 (+33%)

Actuarial review – projection of funding level



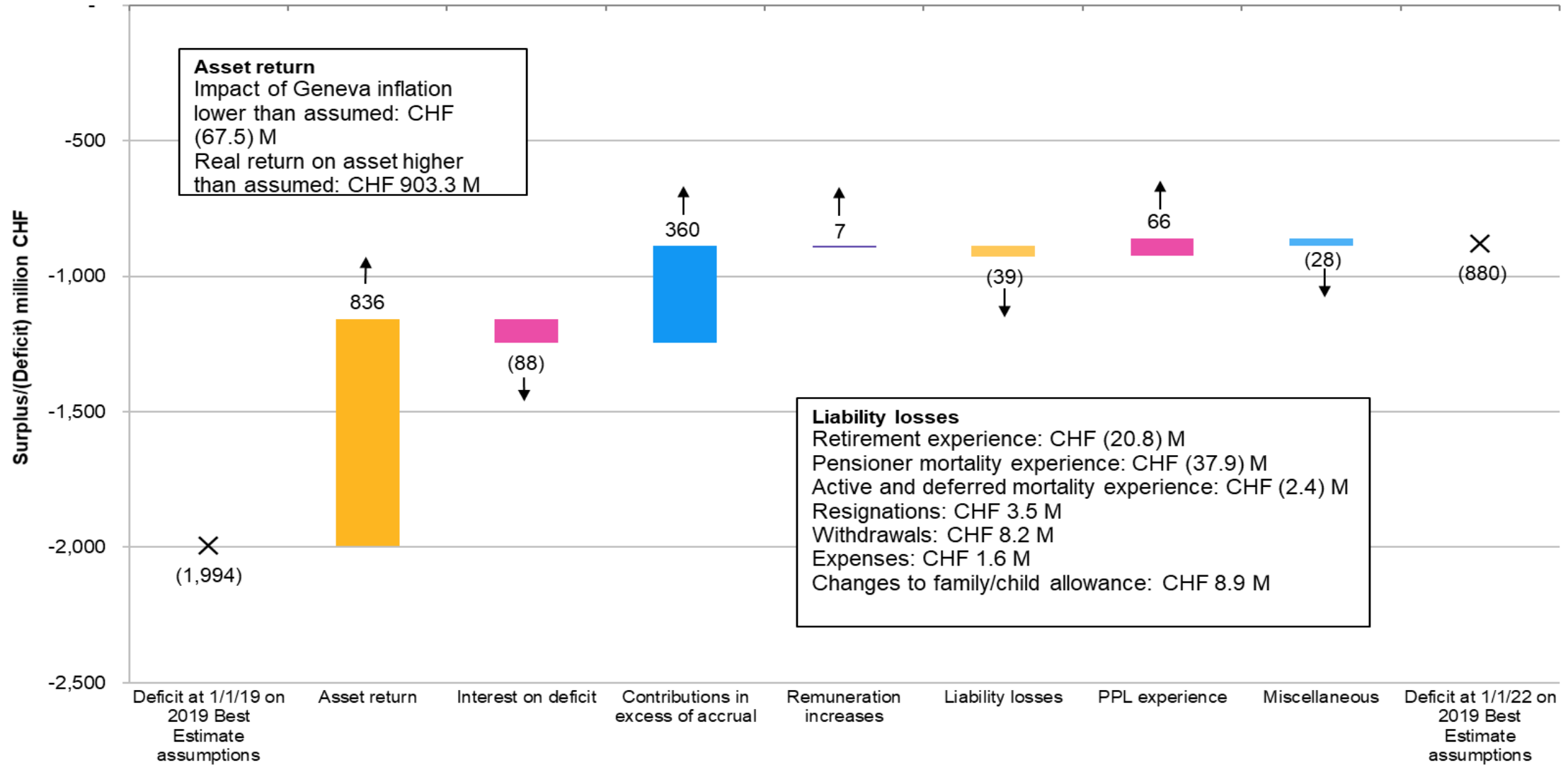
Uses a best estimate: even chance of better or worse outcome

100% forecast to be achieved in 2043

Current funding level 77% (Jan 22)

2022 funding level tracking below plan

Actuarial review – movement in balance since 2019



2021 Annual Report & Financial Statements

Annual Information Meeting 2022

2021 Annual Report & Financial Statements

The format follows International Public Sector Accounting Standards (IPSAS) and pension fund best practice. Includes:

- Chair's Report
- Pension Fund Governing Board's Report
- Disclosure of external advisors and service providers
- Membership disclosures
- Financial statements and explanatory notes
- Actuarial Status of the fund
- Investment Report



Available on request or via pensionfund.cern.ch/en/about-fund/annual-report-and-financial-statements

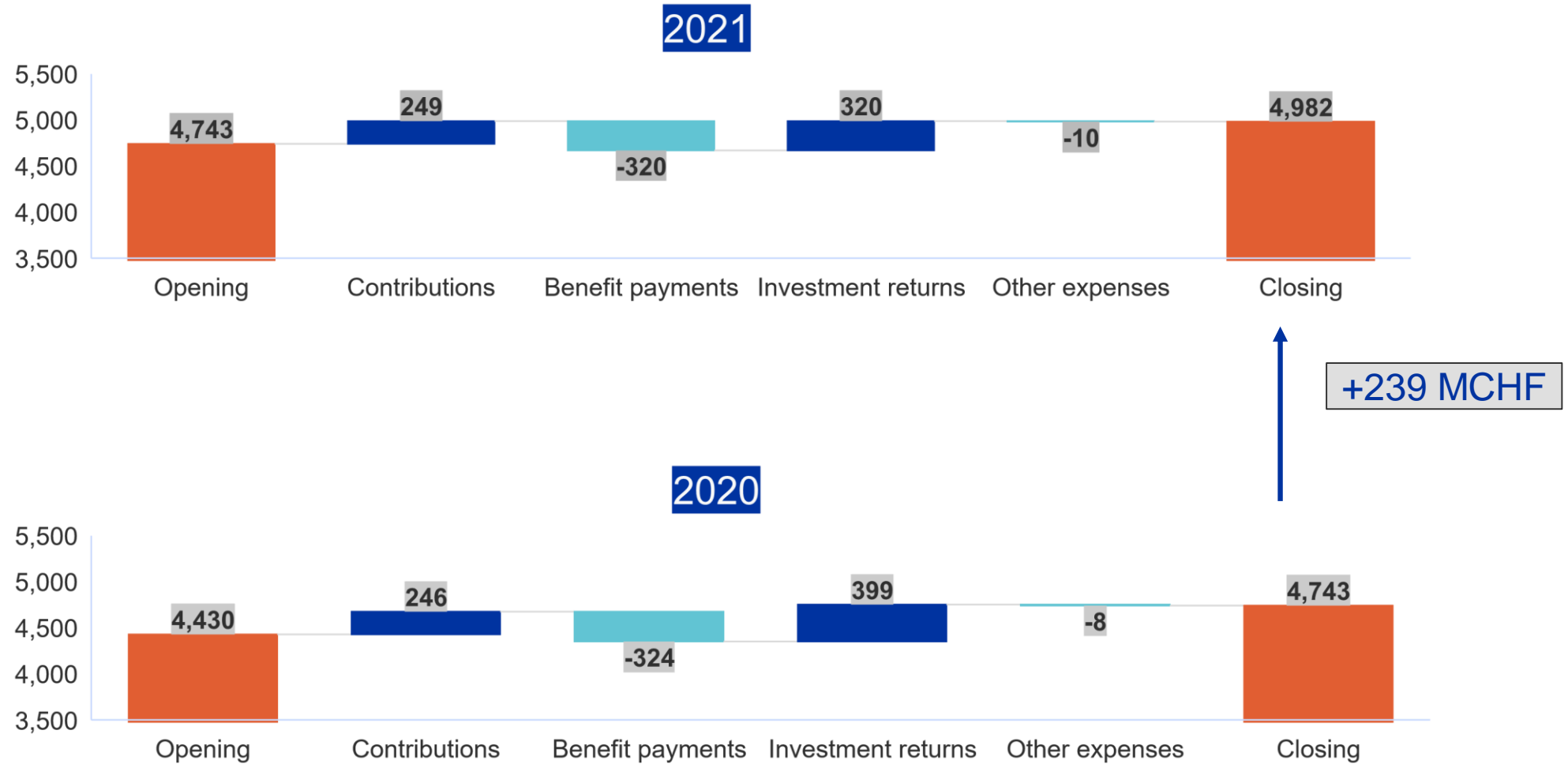
2021 Annual Report & Financial Statements (M CHF)

Funding Ratio:

2021: 40.3%

2020: 36.9%

Accounting measure



2022 Annual Report & Financial Statements

Improved format coming for 2022:

- Additional information on governance
- More transparency on our ESG work
- Increased accessibility to key information

MESSAGE FROM CEO

MANAGEMENT COMMENTARY

Report by the CEO

Another challenging year for members, beneficiaries and their families. The challenges of Covid-19 continued throughout 2021 and required the Fund to continue to adapt its working arrangements to best meet the needs of our members and beneficiaries. Our mission is to pay the benefits owed to our beneficiaries and we did this successfully throughout the year. I offer my thanks to colleagues in the Pension Fund Management Unit for their dedication and commitment to our mission during 2021, and to our members and beneficiaries for their support to us.

Reporting the Funding Ratio

Every three years, or earlier if necessary, the Pension Fund conducts a Periodic Actuarial Review to determine the Funding Ratio, broadly defined as the sufficiency of its assets to meet obligations to pay pension benefits at the current time and over a specified time period, in order to the Funding Ratio that we update each year in the Annual Report & Financial Statements. This review is carried out by our independent Actuary and uses a 'best estimate' view of the expected future returns from the investment of the Fund's assets. The results of the Periodic Actuarial Review will be reported to CERN Council in the June 2022 session and communicated to all of our stakeholders later in the year.

Medium-term operating plan

In the autumn of 2021 the PFOB endorsed the plans of the PFMU for 2022 and beyond. This Medium Term Operating Plan forms part of the integrated operational planning across CERN and sets out the recurring, non-ongoing projects when the work involved requires a significant use of resources. In our plan there are a total of 37 different commitments, 16 recurring, 9 new and 12 continuing. The plan includes the implementation of technology upgrades to increase our efficiency, strengthen our controls and improve the experience of our members and beneficiaries when interacting with us such as with reduced requirement for paper forms.

Our work in Responsible Investment

During the year and following completion of a Working Group led by members of the PFMU, the Pension Fund set out an ambitious work plan to channel its focus and add momentum to our Responsible Investment journey.

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Douglas Moran
CEO, CERN Pension Fund



MEMBERS AND BENEFICIARIES

Over **24 million** chf benefits paid each month
—
Welcomed **498** new members

BENEFITS SERVICE OVERVIEW OF THE YEAR 2021

Supported **127** families of beneficiaries who sadly passed away
—
Converted **23** members to deferred status
—
48 countries with beneficiaries
—
Processed **59** members to retiree status

"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 disability, old age and death. (Article 1.01)"

Last year saw another difficult year for many of the Fund's members, beneficiaries and their families as a result of the COVID-19 pandemic and the resulting restrictions in many countries. CERN implemented a four-level COVID-19 scale, including determining conditions for onsite access. Whilst the overarching objective remained to safeguard the health and safety of everybody on the CERN sites, it did mean that many beneficiaries were not being able to visit the Benefits Service in person. The Benefits Service was still able to provide a seamless service using other communication means and thanks to the patience and flexibility of members and beneficiaries.

Amendments to Fund's Rules and Regulations (effective 1 January 2022)

The beginning of the year saw amendments to the Fund's Rules and Regulations, including the introduction of the possibility of a fractional purchase of a surviving spouse's pension, for beneficiaries who married after retirement and since 2006. The amendments to Article II 5.09 introduced the possibility to purchase a defined tranche 20%, 40% or (the maximum) 55% of the deceased beneficiary's pension. An introductory measure allowed beneficiaries who were already married on 1 January 2021 to submit a request to procure an entitlement to all or part of a surviving spouse's pension where no entitlement to a surviving spouse's pension from the Fund pre-existed or had been procured. During the 180 days when the introductory measure was available twenty five beneficiaries requested calculations and of those seven chose to procure the entitlement. A number of these beneficiaries elected to purchase a reduced spouse's pension i.e. 20% or 40% of the deceased beneficiary's pension.

The amendments to the Fund's Rules and Regulations also included the introduction of a specific article setting out the definition of fraud, as well as new articles to describe the Fund's process for the recovery of undue payments or the refund of overpayments. A number of technical changes were also included to align the Rules with existing practices.

2021 | 15

GOVERNANCE

GOVERNANCE PRINCIPLES FOR CERN PENSION FUND

- 1 The Fund is an integral part of CERN, has no separate legal personality and is under the supreme authority of the Council. The activities of the Fund are part of the official activities of CERN and benefit from privileges and immunities.
- 2 The Fund has operational autonomy within CERN and shall be managed in accordance with its Rules and Regulations. The Director-General shall have no responsibilities with respect to the management of the Fund.
- 3 The assets of the Fund shall be held separately from those of CERN and shall be used solely for the purpose of the Fund. Neither CERN nor IEO shall maintain, borrow or repay a loan upon the assets of the Fund.
- 4 The oversight of the Fund shall be entrusted to the Governing Board, assisted and advised by the Investment Committee and Actual and Technical Committee. The management of the Fund shall be entrusted to the Chief Executive Officer.

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PENSION FUND

Annual Report and Financial Statements
for the year ended 31 December 2021

Investment Report

Annual Information Meeting 2022

Managing the Pension Fund's assets

What are the assets of the Fund?

The Pension Fund pays benefits from its financial resources: funds it has built up through contributions and investment returns.

Why do we invest?

The Pension Fund is only sustainable if we are able to earn returns, over the long-term, in excess of the rate of inflation. This is known as positive real returns.

Do we have a target?

To achieve or exceed a return in excess of the real discount rate (currently 2.6%)
To manage the portfolio within a Risk Limit of $\pm 8\%$ using 5% Conditional Value at Risk

Who manages the assets?

The PFMU and advisers propose a Strategy and Risk Limit, for PFGB to approve.
The implementation of the strategy is delegated to PFMU, under oversight of PFGB.
PFMU takes advice or outsources some strategies, but most assets are internally managed

Are there risks?

Virtually all major events in the world affect financial markets, positively or negatively.
Diversification within the assets is key to managing risk.
A long-term view and approach is essential to managing through volatility.

Strategic Asset Allocation



Precious metals

- Store of value, diversification of risk



Private Equity

- Access to early stage capital growth with a premium for complexity and risk



Hedge Funds

- Risk management; access to positive returns over benchmark through active management



Equities

- Access to capital growth and income from corporate profits



Real Assets

- Apartments, hotels, office buildings: Store of value, stable income and protection from inflation



Fixed Income

- Benefit of liquidity, with premium over cash deposits for limited default risk

Our Real Estate assets held directly

Switzerland



Geneva



Geneva



Geneva

France



Paris



Paris



Paris



Geneva Region



Paris



Paris

Germany



Berlin

United Kingdom



London



London

ESG – Environmental, Social and Governance matters

In 2021 the Fund has approved its first ever ESG policy after extensive consultation of our peers and our stakeholders

The Fund is focused on a small number of meaningful actions and not seeking to become an activist investor or to indulge in greenwashing

An ambitious ESG work plan is being completed with work on schedule in 2022. This includes a climate change scenario model and carbon foot-printing of the portfolio

We look forward to sharing more on these activities in our 2022 Annual Report & Financial Statements

Returns by asset class – 2021 (excluding cash)

SAA %

5

Precious Metals
-4.57

6

Private Equity

35.73

11

Hedge Funds

10.92

17

Equities

11.51

24

Real Assets

10.32

27

Fixed Income

-0.65

■ 2019 ■ 2020 ■ 2021

-10 0 10 20 30 40

% return for each asset class

6.59% total return in 2021

+4.55pp ahead of target

Lower than the 9.21% for 2020 in a Covid affected market

+41.35pp cumulative outperformance since 2011



Investment market themes in 2022

High inflation

- Caused by Covid response stimulus + trade disruption + energy prices

Recession fears

- Negative outlooks across many sectors
- Cost of living crisis affecting confidence
- Energy saving measures will impact productivity

Trade disruption

- Conflict in Ukraine + Covid lockdowns impacting global trade

Overall

- Potential for there to be a high impact to value of assets in short-term
- Patience and caution required to navigate
- PF operates a notional limit of -8% losses in average of worst 5% scenarios

Opportunity for questions

Annual Information Meeting 2022

Closing remarks

Annual Information Meeting 2022

Closing remarks

Thank you for attending our session today - we hope it was informative

The Pension Fund continues to achieve its purpose of paying benefits and welcoming new members

There are challenges ahead but this has always been true and the Pension Fund is well positioned for the conditions of the market

Please contact Benefits Services if you have any feedback or questions



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