A warm welcome to our Annual Information Meeting

Our presentation today will be delivered in English. A simultaneous interpretation to French is available for this webcast and also via Zoom videoconference.

Members and Beneficiaries present or connected via Zoom videoconference will have the possibility to submit questions (for Zoom videoconference via the ‘chat only’).

A recording of today’s meeting will be available for those unable to join us live.

We are unable to provide individual 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. 2022 Annual Report & Financial Statements
5. Investment Report
6. Opportunity for Questions
7. Closing Remarks
PFGB Chair’s Welcome
Annual Information Meeting 2023

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)

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 the market value of investments.

A solidarity scheme

No member has an individual balance, and all benefits are paid from a common fund.
Introduction by the Chair of the Governing Board

The Governing Board represents all stakeholders of the Pension Fund and works to ensure the purpose of the Fund is achieved. During 2022 the Board met on five occasions to consider a range of matters connected to its functions.

2022 was a year where the recovery after Covid was expected but instead we saw the events in Ukraine escalate and have a significant effect on investment markets. The Pension Fund, under the Board’s oversight, navigated these events well with the financial effect contained within the risk limit and no operational issues.

Despite these significant external challenges, the Pension Fund continues to support its beneficiaries and in 2022 paid a total of 324 MCHF in benefits to more than 3,300 beneficiaries. Service performance levels remained excellent throughout the year.

The Funding Level has understandably fallen below the level at the Periodic Actuarial Review (PAR) as at 1 January 2022. The next PAR will take place as at 1 January 2025.

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

**A Glindemann**
- Mandate ended 31 October 2022
- After serving two 3-year terms
- Representative for ESO Staff Association
- Succeeded by Mr Alain Delorme

**O Malmberg**
- Mandate will end 31 December 2023
- Chair since 25 September 2020
- Appointed by CERN Council
- Succeeded by Dr Florin-Dorian Buzatu

**D Ryckbosch**
- Mandate will end 31 December 2023
- Member since 1 January 2021
- Appointed by CERN Council
- Succeeded by Prof Cristina Biino
CEO Introduction

Annual Information Meeting 2023

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 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.
## Governance Arrangements for the Pension Fund

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

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
</table>
| **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 and monitor the 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 |
PFMU strategic goals

1. Achieve our mission of paying promised benefits

2. Foster PFMU culture of professionalism aligned to CERN values

3. Exceed beneficiary expectations in all interactions

4. Achieve the target rate of return over the long-term

5. Optimise the value from the Pension Fund for all stakeholders

6. Operate effective controls that protect Fund assets
Strategic Partners during 2022

- **Buck (UK)**
  - Actuarial Services
  - Valuation of liabilities

- **Northern Trust (UK)**
  - Asset Safe Custody

- **UBS (CH)**
  - Main Banker
  - Payments

- **Apex (IRE)**
  - Investment back-office services

- **Ortec (CH)**
  - Risk Consultant
  - Advise on investment risk

- **National Audit Office Finland**
  - External Auditor
  - Review annual accounts

- **CERN / EY (CH)**
  - Internal Auditor
  - Perform internal audits
Membership and Benefit Services
Annual Information Meeting 2023
Delivering our purpose in 2022

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

Welcoming new members
550 new members. 4,085 total members.

Leaving the Fund
395 leavers (376 transfer values; 19 to deferred status)

New beneficiaries
Established 64 new beneficiaries

Caring for families
Supported the families of 138 beneficiaries who sadly passed away

Launched new benefit factsheets
Each new member and new beneficiary is issued with a 1-page key information sheet

Payment of monthly benefits
Paid 300 MCHF to 3'309 beneficiaries (100% accuracy)

Performance against SLAs
11 / 13 services rated green. 2 amber (cause: high demand and external delays)
Membership Overview

- 4 Beneficiaries aged 100 and over
- 16 Beneficiaries aged under 21
- 47 Countries with beneficiaries
- 25 Million CHF paid each month
- 10 Beneficiaries in payment > 50 years

Members by Organisation:
- ESO: 4,085 (87%)
- CERN: 4,085 (13%)

Beneficiaries by Organisation (excl. deferred):
- ESO: 3,309 (95%)
- CERN: 3,309 (5%)

Members and beneficiaries:
- 2022: Active members - 6,000, Deferreds - 2,000, Retirees - 4,000, Other beneficiaries - 1,000
- 2021: Active members - 6,000, Deferreds - 2,000, Retirees - 4,000, Other beneficiaries - 1,000
Listening to beneficiaries and members

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

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

The less positive themes are: that transfer values paid on leaving < 5 years of service feel too low; the mechanism (PPL) for annual indexation is a growing concern; payment arrangements (CH only) aren’t flexible enough.
Recent progress – new factsheets

Providing easy access to key information.
Issued to each new member or beneficiary and available on our website.
Current priorities – heading into 2024

Digital capability
Ensuring our digital capability meets member and beneficiary needs.
Reduced reliance on paper forms.
Giving beneficiaries and members easy access to their own records.
Further improvements to our website.

Payments outside of Switzerland
Adapting to ensure we are able to pay benefits in a convenient, secure and efficient way. Even where beneficiaries do not reside in Switzerland.

Factors and parameters
Reviewing selected factors and parameters (those values that determine payment of benefits and entitlements) to ensure they remain suitable.
## Indexation and PPL (purchasing power loss)

<table>
<thead>
<tr>
<th>What is PPL?</th>
<th>Benefits are indexed to keep in line with changes to prices and cost of living. PPL is the reduction in what we can buy with a given amount of money. Each beneficiary has an individual accumulated PPL account.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why was it introduced?</td>
<td>Introduced in 2005 and updated in 2012 (as part of package of measures). Indexation not granted or is slowed down until individual PPL reaches 8%. Equitable distribution of measures amongst stakeholders (different ceilings).</td>
</tr>
<tr>
<td>How is it calculated?</td>
<td>Annual adjustment depends on retirement date i.e. before/after 1.1.2012. Inflation reference is Geneva CVI and was 3.1% for the 2023 exercise. Post 1.1.2012, Geneva CVI is adjusted by the accounting funding ratio.</td>
</tr>
<tr>
<td>How to find out more?</td>
<td>Beneficiaries receive a letter each year with details on their personal situation and information on how the adjustment and PPL balance is calculated. The Benefits Service is available to respond to questions.</td>
</tr>
<tr>
<td>Any interesting points?</td>
<td>As at 1.1.2023 around 400 beneficiaries received an annual adjustment of 1.1%. Given current levels of inflation, the number of beneficiaries receiving an annual adjustment in 2024 is expected to increase.</td>
</tr>
</tbody>
</table>
2022 Annual Report & Financial Statements

Annual Information Meeting 2023
The format follows International Public Sector Accounting Standards (IPSAS) and pension fund best practice. Includes:

- Message from the PFGB Chair
- Pension Fund Governing Board’s Report
- Management Commentary
- Membership disclosures
- Financial statements and explanatory notes
- Actuarial Status of the Fund
- Investment and ESG Report

Available on request or via our website
Enhanced format introduced in 2022:

- Additional information on governance
- More transparency on our Environmental, Social & Governance work
- Increased accessibility to key information
ESG remains a key priority, integrated with our investment management approach:

• Update on progress of ESG policy implementation plan
• ESG report follows voluntary guidelines of TCFD (Task Force on Climate-Related Financial Disclosures)
• Governance, Strategy, Risk Management and metrics
• Results of two exploratory studies:
  • Climate impact analysis
  • Carbon footprint and transition pathway study
2022 Annual Report & Financial Statements (M CHF)

**Funding Ratio:**
- 2022: 51.1%
- 2021: 40.3%

**Accounting measure**

<table>
<thead>
<tr>
<th>Year</th>
<th>Opening</th>
<th>Contributions</th>
<th>Benefit payments</th>
<th>Investment returns</th>
<th>Other expenses</th>
<th>Closing</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>4,982</td>
<td>252</td>
<td>-324</td>
<td>-323</td>
<td>-9</td>
<td>4,578</td>
</tr>
<tr>
<td>2021</td>
<td>4,743</td>
<td>246</td>
<td>-324</td>
<td>399</td>
<td>-8</td>
<td>4,982</td>
</tr>
</tbody>
</table>

**Net Change:** -404 MCHF
Annual Report and Financial Statements

- Enhanced format in 2022 to provide transparency and accessibility to key information
- Provides key information to members and beneficiaries and informs all stakeholders
- According to IPSAS (International Public Sector Accounting Standards)

Net Assets

- Net Assets decreased to 4 578 MCHF
- Financial markets were challenging during 2022 and continue to be this year so far

Funding levels

- Funding ratio increased to 51.1% despite a fall in assets
- Accounting funding ratio is different to that of the periodic actuarial review due to different discount rates and different rates of long-term inflation
- Actuarial funding level fell from 77.1% (January 2022 / PAR 22) to 69.0%
Investment markets – important note

The CERN Pension Fund pays defined-benefit pensions. Benefits are calculated according to your service period, reference salary and any applicable factors.

Benefits are not affected by the funding level or investment performance.

This report on investment activity, markets and performance is provided for insight and transparency.

The investment activities are overseen by the Governing Board and its Investment Committee. More information is available in our Annual Report.
## Managing our assets

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What are the assets of the Fund?</strong></td>
<td>The Pension Fund pays benefits from its financial resources: funds it has built up through contributions and investment returns.</td>
</tr>
<tr>
<td><strong>Why do we invest?</strong></td>
<td>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.</td>
</tr>
</tbody>
</table>
| **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 +/- 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 – asset classes

- **Precious metals**
  - Store of value, diversification of risk

- **Private Equity and Venture Capital**
  - 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**
  - Real estate, timber, infrastructure: Store of value, stable income and protection from inflation

- **Fixed Income**
  - Benefit of liquidity, with premium over cash deposits for limited default risk
Economic context

CPI Inflation rates (Year on year, percent)

Euro Area

United States

Annual Information Meeting - 26 October 2023
Economic context

Fed funds rate and market expectations

Fed fund future pricing
Markets pricing Fed funds to bottom at 4%
Economic context

Recession probability forecast (Source: Bloomberg)
Investments in real estate – the portfolio
Investments in real estate – example of value-add
Investments in forestry – the direct portfolio

- More than 3,000 hectares (or half of the area encircled by the LHC)
- Timberland is circa 1% of Fund assets
- Offers a store of capital value and access to diversified, stable, long-term returns
- Sustainability and positive for the environment when managed under responsible ownership
- 8 different species but Oak is more than 80%. Used for wine casks, flooring, furniture
Investments in forestry – the direct portfolio
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 avoids greenwashing or other actions that lack substance.

An ambitious first-phase ESG work plan was completed in 2022. This included a climate change scenario model, carbon footprinting and temperature alignment analysis the portfolio.

The results are reported in a dedicated section of the 2023 Annual Report. The Fund is currently in the process of establishing its second-phase ESG workplan.
Investment performance
-6.41% (nominal) for full year 2022
- Compares to +6.59% for 2021

Risk limit
- PF operated within the approved risk limit (-8% + 2pp error margin) throughout 2022

Market themes (brief)
- i) Covid > monetary stimulus > inflationary pressures > rate rises; ii) Ukraine and other geo-political conflicts impact commodity pricing, trade and market confidence; iii) credit and equity valuations suffer

Market outlook
- Inflation will continue to fall but remain elevated compared to historical averages; rates will be higher for longer
- Real returns in general expected to be lower
- Higher credit pricing provides opportunities

PFMU response
- Asset allocation remains stable and follows the SAA. The PFMU monitor the portfolio closely and make interventions to manage risk or to exploit opportunities.
Returns by asset class – 2022 (excluding cash)

-6.41% nominal investment return net of fees in 2022

11.29 pp below the long-term real rate annualized target*

+23.56 pp cumulative real return outperformance since 2011

*Geneva inflation rate was 2.47% in 2022.
Opportunity for questions

Annual Information Meeting 2023
Closing remarks

Annual Information Meeting 2023
Thank you for attending our session today – we hope that you found it to be informative.

The past two years have been exceptionally difficult in the world of investment markets and uncertainty will be a theme for the years ahead.

The Pension Fund is clear about its purpose and continues to focus on paying benefits, supporting families of beneficiaries and welcoming new members.

Please contact Benefits Services if you have feedback or questions.
Thank you for your attention