Institute of Actuaries of India
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20th Global Conference of Actuaries
4th - 6th March, 2019 | Mumbai, India

# A Goals-Based Investment Approach for DC Funds

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# The Crisis in Retirement Planning




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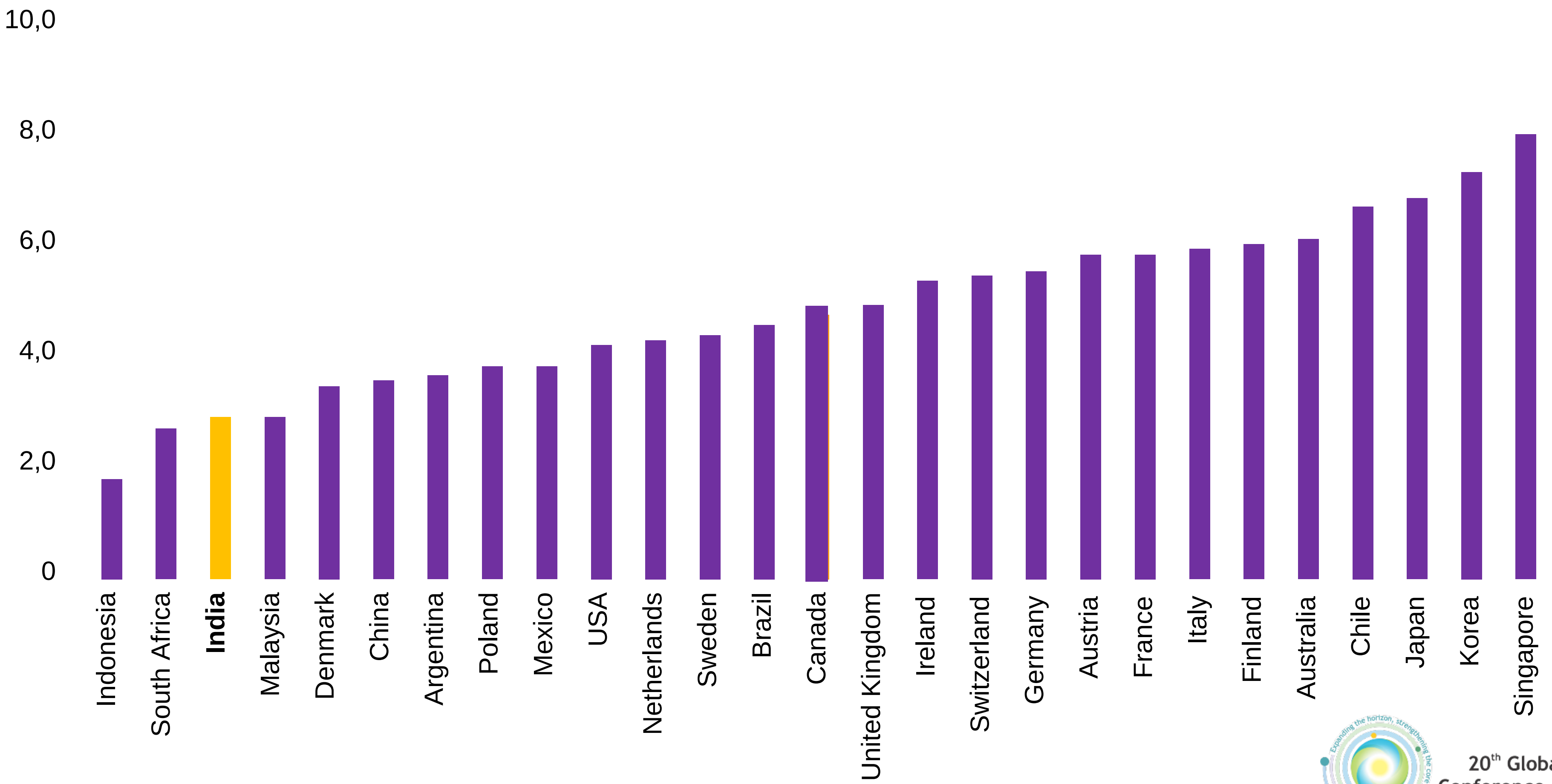
# The Crisis in Retirement Planning

- Worldwide shift from DB to DC retirement plans
- Almost 50% of global assets now in DC plans

# The Crisis in Retirement Planning

The world is ageing –
improvements in life expectancy at age 65 over last 40 years

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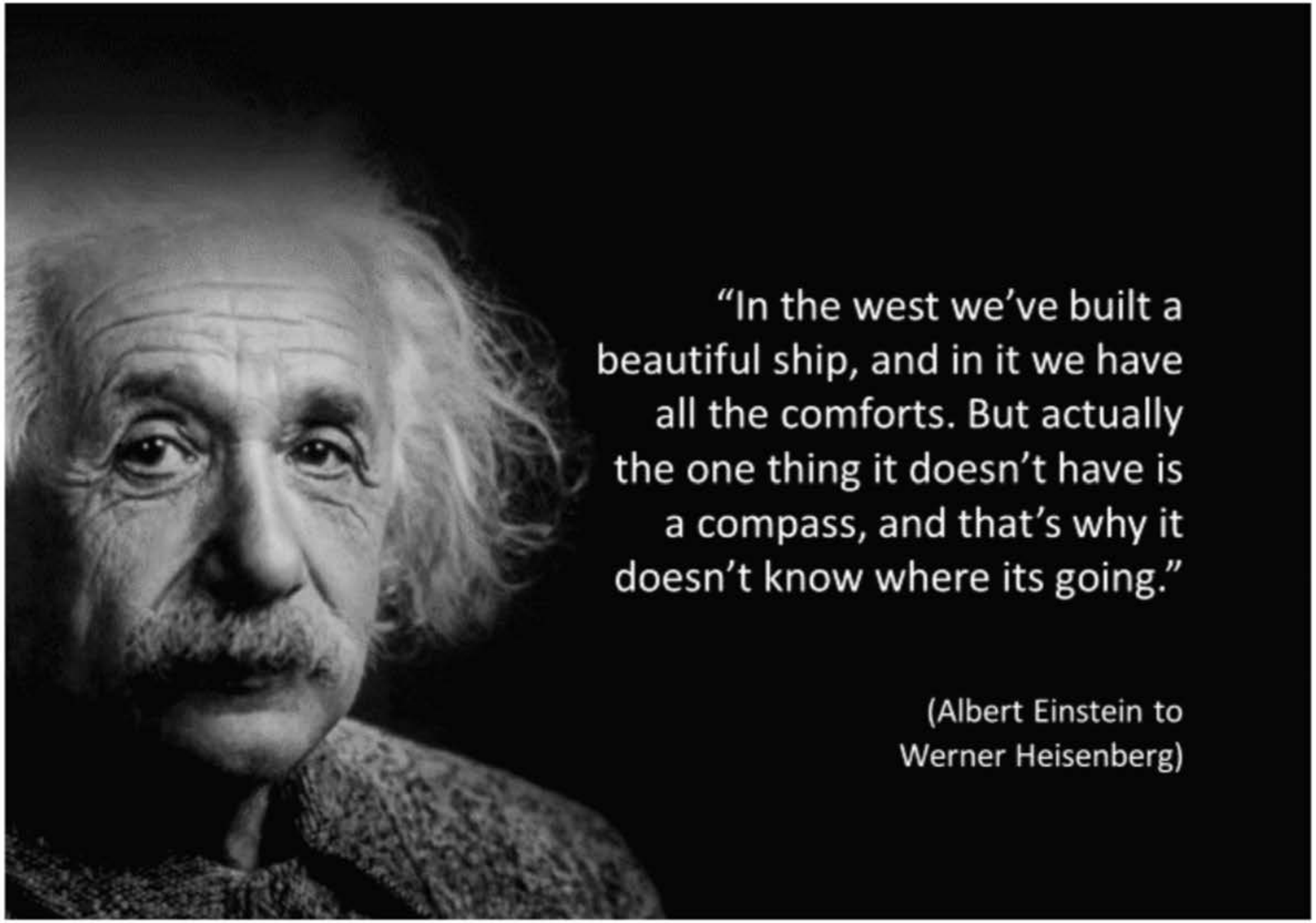
# The Crisis in Retirement Planning

- People are saving less
- Expected return on investments have decreased
- Interest rates have fallen

**Individual member carries all the risk!**

# The Crisis in Retirement Planning



# The Crisis in Retirement Planning

- Developing a default investment framework from scratch...
- What is a good retirement?

# What is a good retirement?

# What are retirement funds there for?

- What are retirement funds there for?
- Maintain standard of living
- Income each month
- NOT a pot of cash

# Investment Strategy Objectives - Income is the goal

- Traditional DB fund have a specific promise (guaranteed income at retirement)

- Almost every retirement system (except DC) express benefit promise in terms of income

- Appropriate objective for a retirement plan is to provide members with a stream of income in retirement.

# Important vs Meaningful Information

- Actuaries focus on fund credit balances
- Trustees and members of a DC fund focus on fund credit balances
- Entrenched practice
- Members taught from a very early stage to treat their DC savings like a bank account

# Important vs Meaningful Information

- Important to distinguish between "important" and "meaningful" information

- Accumulated account balance is important but it is not meaningful

- We provide members with
    - Account balance
    - Investment return
    - Past performance

- What do we expect them to do with it?

# Default Investment Strategies

- Default investment strategy for members (chosen by Trustees)
- Participation paradox
- Default strategy is crucial
- Target Date Funds or Life Cycle Funds are popular internationally
- Popularity of this type of strategy in the US peaked when the Pension Protection Act (2006) designated these strategies as a qualified default investment alternative.
- Everyone of the same age has the same investment strategy

# Default Investment Strategies

The implication of reducing account balance volatility and avoiding negative nominal returns close to retirement is that cash becomes the risk-free asset

# Considering the Balance Sheet sides

| Assets | Liabilities |
|---|---|
| Account Balance | |
| DB Assets and/or Social Security | |

# Current member paradigm

| | Conventional Approach |
|---|---|
| Investment goal | Wealth accumulation<br>*No specific wealth goal* |
| Risk measure | Volatility of portfolio returns |
| Success measure | Account balance size |
| Asset Allocation strategy | Generic proportions<br>*Fixed or age-only based* |
| Risk-free Asset | Cash |

# Current member paradigm

- You cannot defined risk without reference to liabilities

- Risk is not
  - volatility of returns
  - possibility of a negative return
  - Or even the underperformance of a market benchmark?

**"What good is beating the benchmark if you don't achieve your goals?"**

# Current member paradigm

- An actuary's role in a DB fund includes placing a value on the income expected to be paid to pensioners
- Language of DC funds is very different
- We refer to the "liability" of the fund as being equal to the account balance in respect of each member

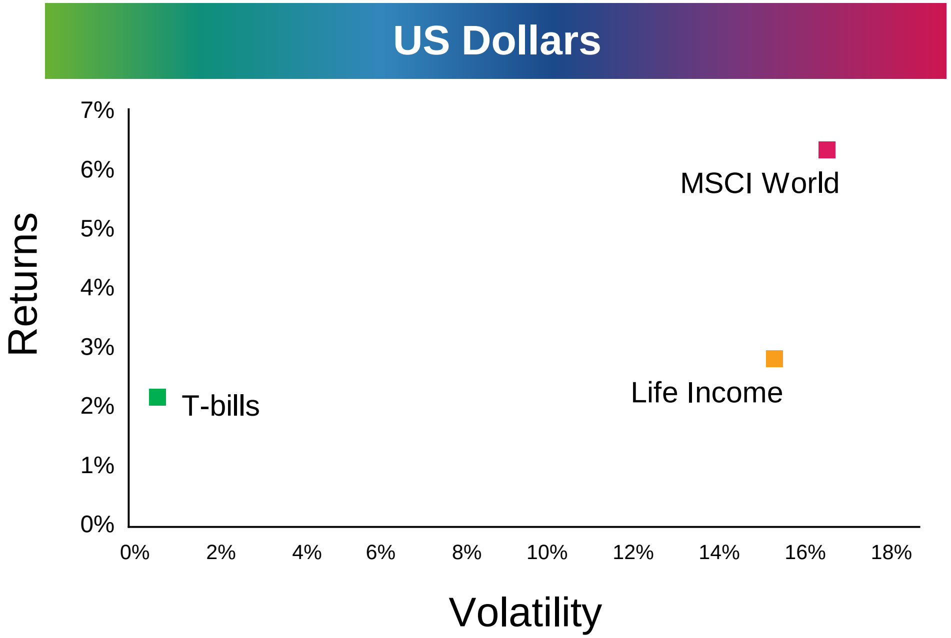
# Investment Strategy Objectives - Income is the goal

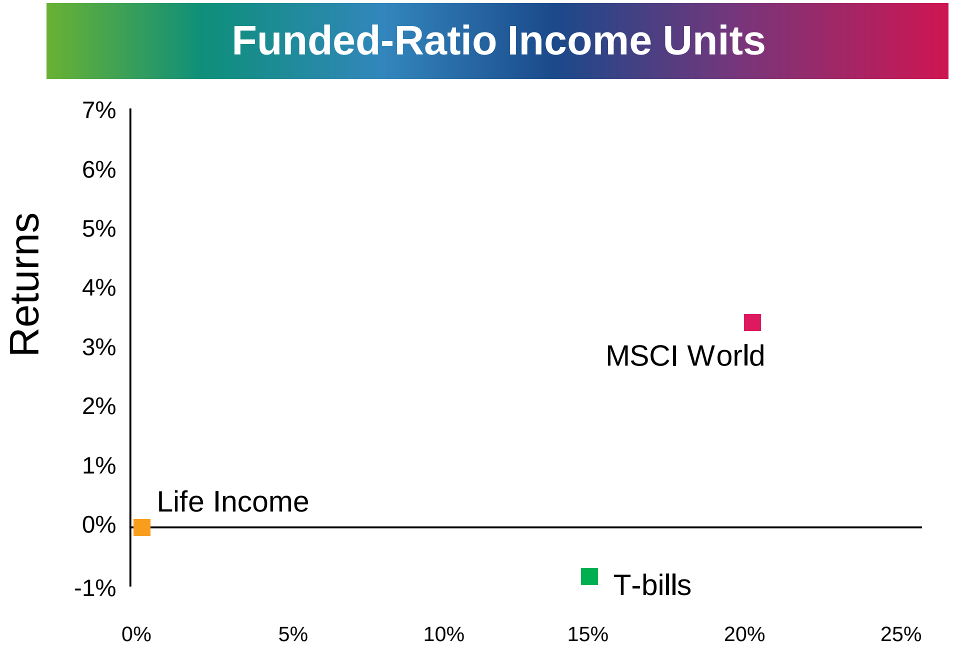
- Members do have a liability
- It is the cost of providing an income that allows the member to have a reasonable standard of living in retirement
- Should increase annually with inflation
- Payable for as long as the member is alive
- The definition of the true liability has implications for the risk-free asset
- Risk-free asset is a deferred annuity or a an appropriately structured portfolio of inflation-linked securities

# Investment Strategy Objectives – Income is the goal

Risk & Return: Wealth vs Income Goal

Measuring the risk/return trade-off correctly

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# Need to take into account Human Capital

- The assets of a plan member does not include only the accumulated savings

- Human capital is the largest single asset most members will have for a significant part of their early working life

# Considering the Balance Sheet sides

## Assets

Account Balance

Future Contributions

DB Assets and/or Social Security

## Liabilities

Cost of providing for income requirements

# Funding Level of each individual

- It is possible to calculate the funding level of each member

- Funding Level = $\frac{Accumulated\ funds + Human\ Capital}{Cost\ of\ providing\ this\ income}$

- This is familiar territory for Actuaries

- Using valuable member information
  - Age
  - Salary
  - Contribution Rate
  - Accumulated Savings
  - Cost of annuity

# A member's assets are invested in two core portfolio types

- Personalised Investment Strategy
- Technology developed by Robert C Merton

Bespoke De-risking portfolio

Growth Portfolio

# Default investment strategy (unengaged member)

- Allocation to portfolios will change through time to optimize the likelihood of achieving the income goal
- Change in asset allocation not based on age
- Risk is a tool used to achieve the goal
- The complexity of investing is handled on behalf of the member

# Current paradigm

| | Conventional Approach | New Approach |
|---|---|---|
| Investment goal | Wealth accumulation<br>*No specific wealth goal* | Retirement Income<br>*Specified desired income goal* |
| Risk measure | Volatility of portfolio returns | Volatility of funded ratio<br>*Income shortfall* |
| Success measure | Account balance size | Funded Ratio<br>*Relative to desired income goal* |
| Asset Allocation strategy | Generic proportions<br>*Fixed or age-only based* | Dynamic-individiualised<br>*Based on age, income, funded ratio.*<br>*Focused on improving funded ratio while managing income volatility* |
| Risk-free Asset | Cash | Index-linked instruments |

# Why is this an evolution of the existing DC framework?

| | | |
|---|---|---|
| Income as the goal | Manage relevant risks | Human capital |
| Strategy changes | Understandable information to all members | International best Practice |

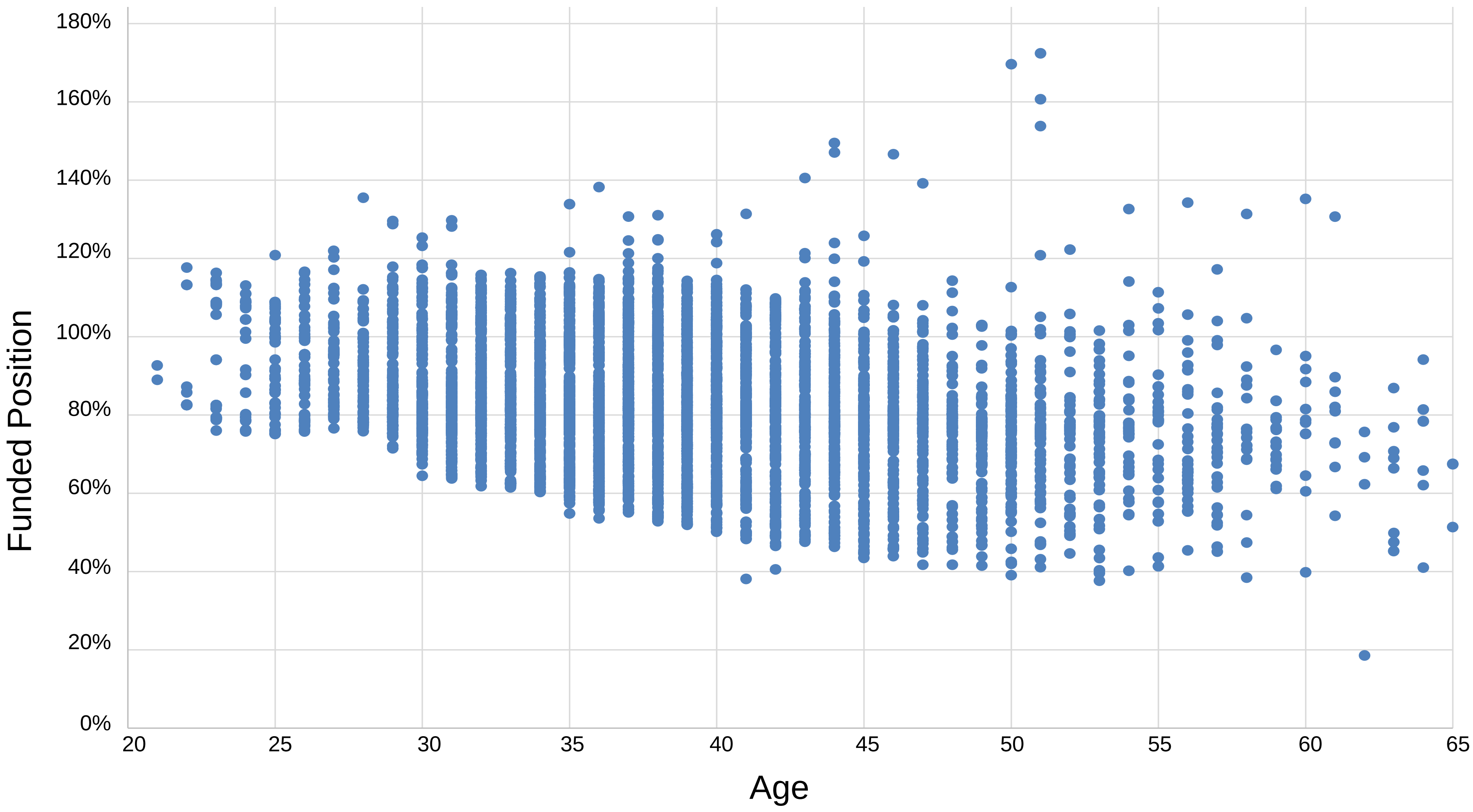
# Case Study: Pension Fund

**Investment Policy Statement should establish that income is the goal for retirement**

- Set a Replacement Ratio goal (e,g, 70% Replacement Ratio)
- Scale by expected saving time in the plan

# Case Study: Pension Fund

## Funding Ratio Based on a 70% Replacement Ratio Target



| Member | X | Y | Z |
| --- | --- | --- | --- |
| Ratio of Savings to Salary | 10.95 | 4.48 | 1.12 |
| Contribution Rate | 20.97% | 20.97% | 15.97% |
| Funding Ratio | 202% | 85% | 53% |
| Equity Exposure | 17% | 37% | 57% |

# Engagement

- The magic of turning 50... now I’m listening
- Earlier, quality engagement
- Pre-retirees don’t know how much they need but they can appreciate helping out their future self

# The Crisis in Retirement Planning

## Key Features

**A better DC Solution**

**Flexibility**
Payout options in Retirement

**Goal**
Sustainable Retirement Income

**Risk Metric**
Volatility of Future Income

**Meaningful Information**
Actionable Choices

**Integration**
More Complete Picture

**Flexibility**
No Member is Average

**Flexibility**
Income Risk Management

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