

TITLE:

Using data analytics to deliver strong returns to all New Zealanders

AUTHOR:

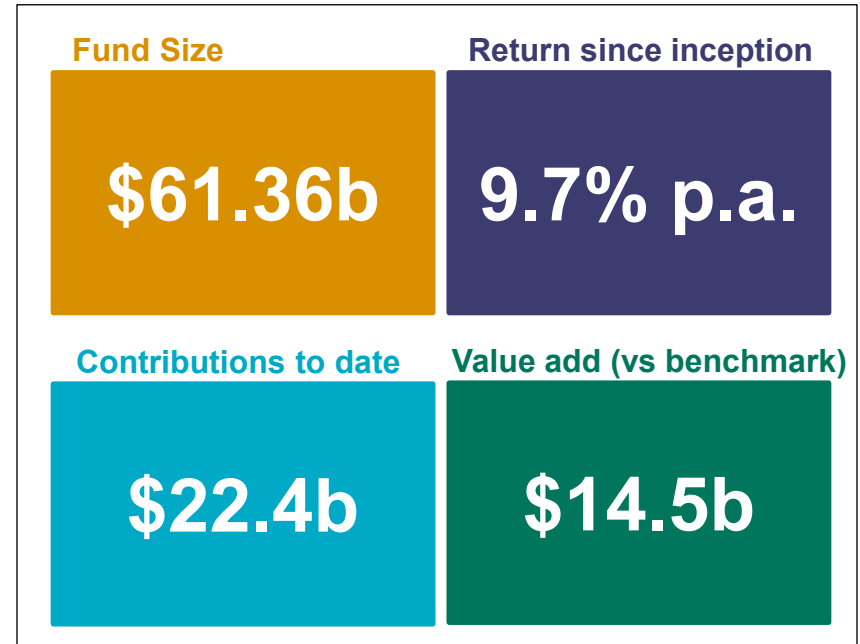
Data Analytics Team

EVENT | PRESENTATION:

R Exchange | May 2023

Overview of the NZ Super Fund

- The NZ Super Fund invests money on behalf of the New Zealand Government to help pay for the increased cost of universal pension entitlements in the future.
- By doing this the Fund adds to Crown wealth, improves the ability of future Governments to pay for universal pensions, and ultimately reduces the tax burden on future New Zealanders.
- A long-term, growth-oriented investor, the Fund has around NZ\$60 billion in assets. The Fund is managed by a Crown entity, the Guardians of New Zealand Superannuation.



Our purpose and vision

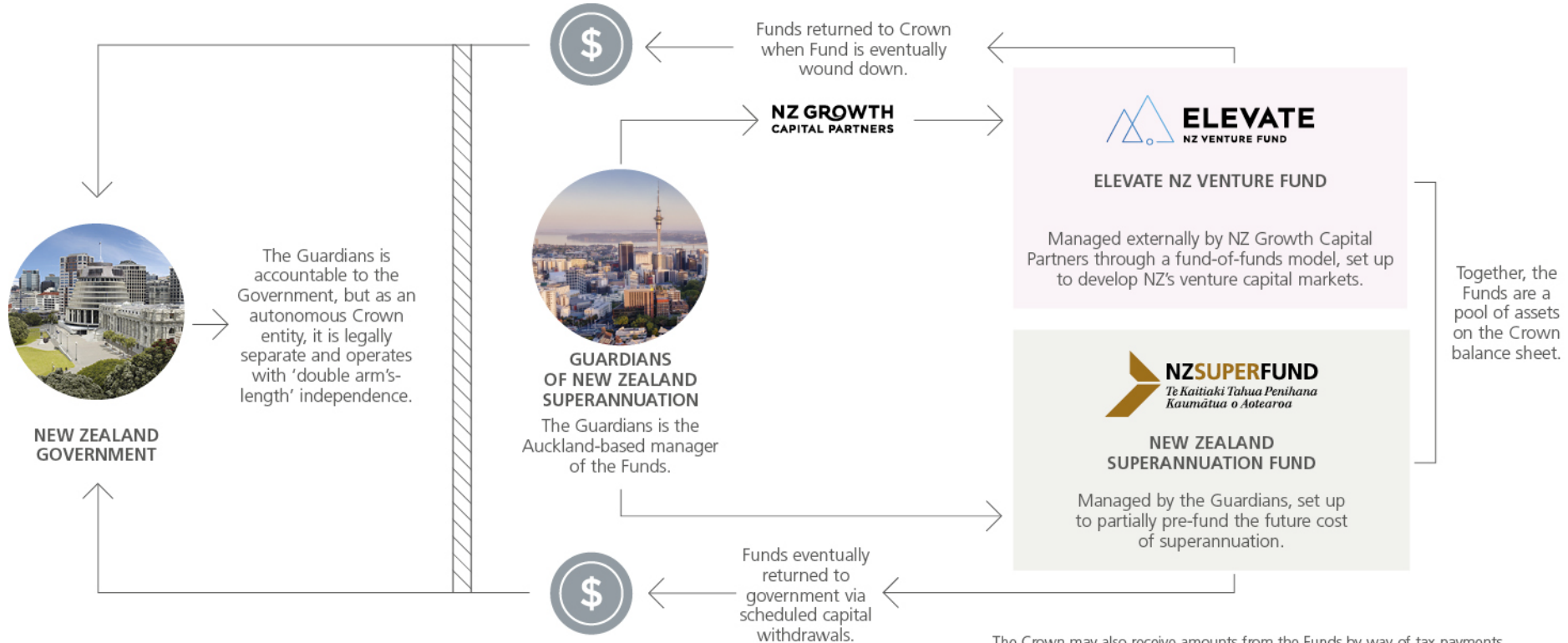
OUR PURPOSE:

Sustainable investment delivering strong
returns for all New Zealanders
Kia toitū te haumi hei hua mā ngā tāngata
katoa o Aotearoa

OUR VISION:

An inclusive team creating a better future
through investment excellence
Mā te kotahi ā-kapa, mā te kounga ā-haumi,
ka tino eke ki tua

Our function



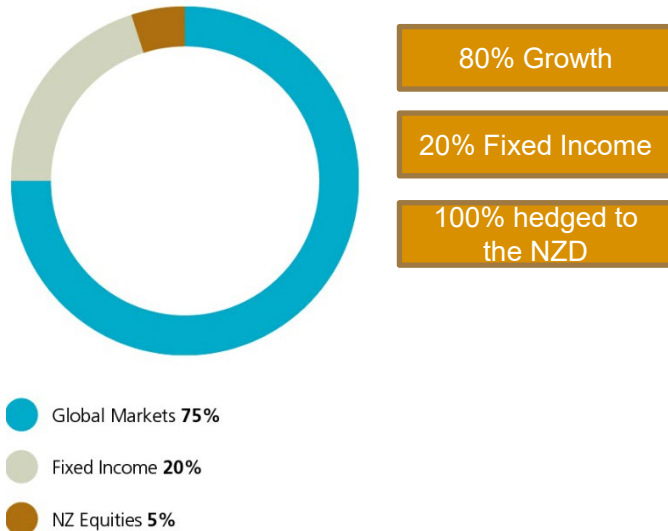
Our endowments

There are four “endowments” that stem from the way the NZ Super Fund has been set up, which shape and guide our investment decisions.



Our Reference Portfolio

The Reference Portfolio benchmarks the performance of our Actual Portfolio and the value we are adding through active investment strategies.



The Reference Portfolio, which is capable of meeting the Fund's objectives over time, is a shadow or notional portfolio of **passive, low-cost, listed investments suited to the NZ Super Fund's long-term investment horizon and risk profile**

The Reference Portfolio is therefore a very clear and 'pure' way for us to:

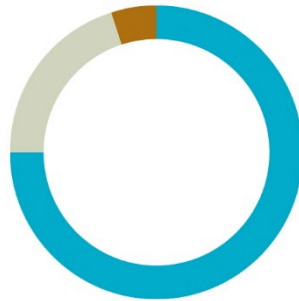
1. Estimate the NZ Super Fund's expected returns;
2. Benchmark active (value add) investment returns net of all costs; and
3. Be clear on the 'hurdles' for active investments

The Reference Portfolio is set by our Board and is reviewed every 5 years (the last review was in 2020)

The Reference Portfolio vs Actual Portfolio

Both portfolios are growth-oriented and highly diversified. The Actual Portfolio includes active investments that are expected to add value with an acceptable level of risk.

Reference Portfolio

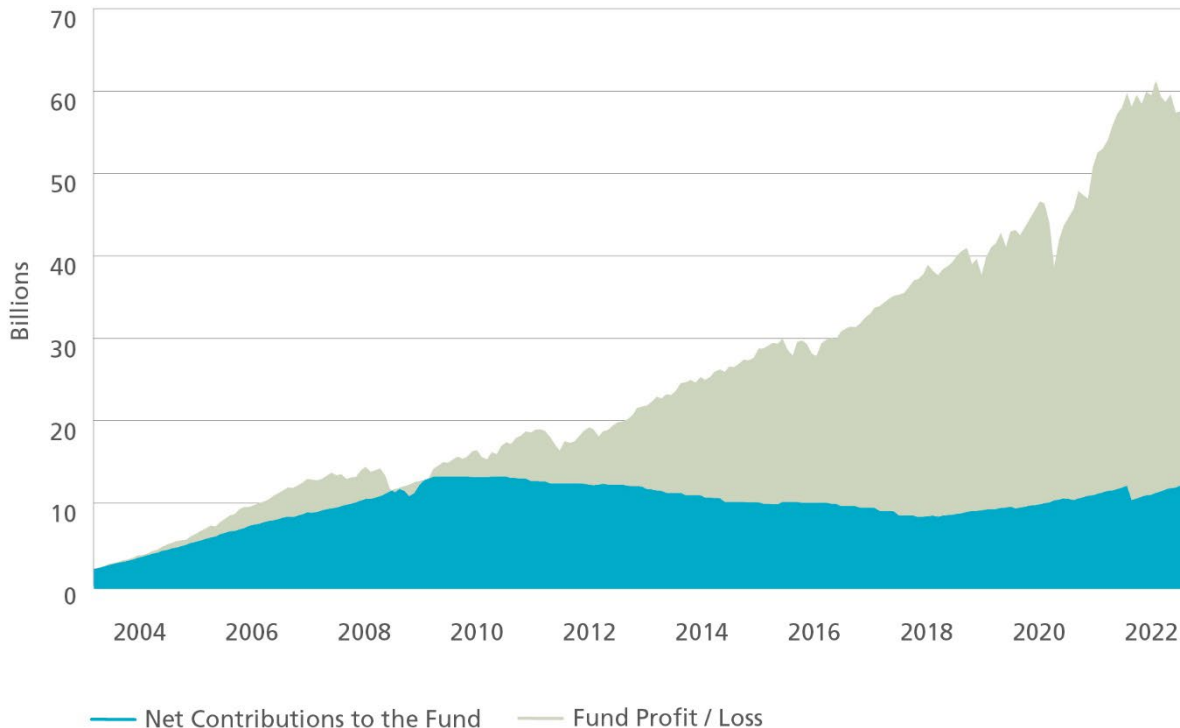


Actual Portfolio

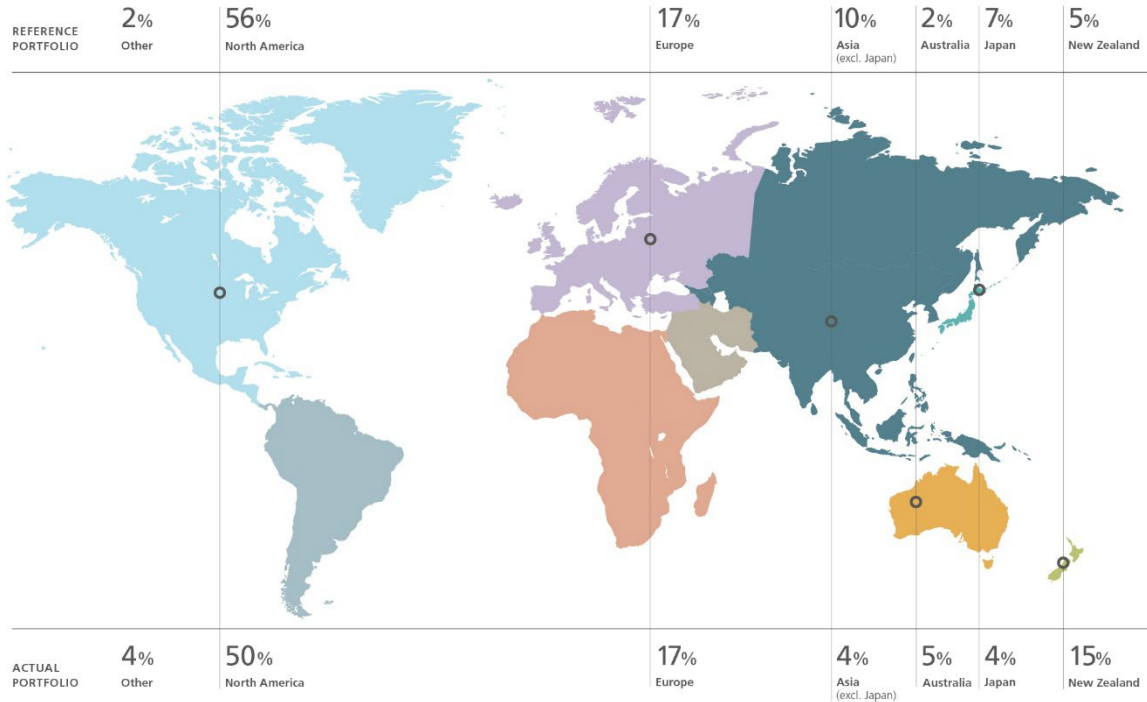


* Excludes the impact of any strategic tilts. Totals do not add to 100% due to rounding.

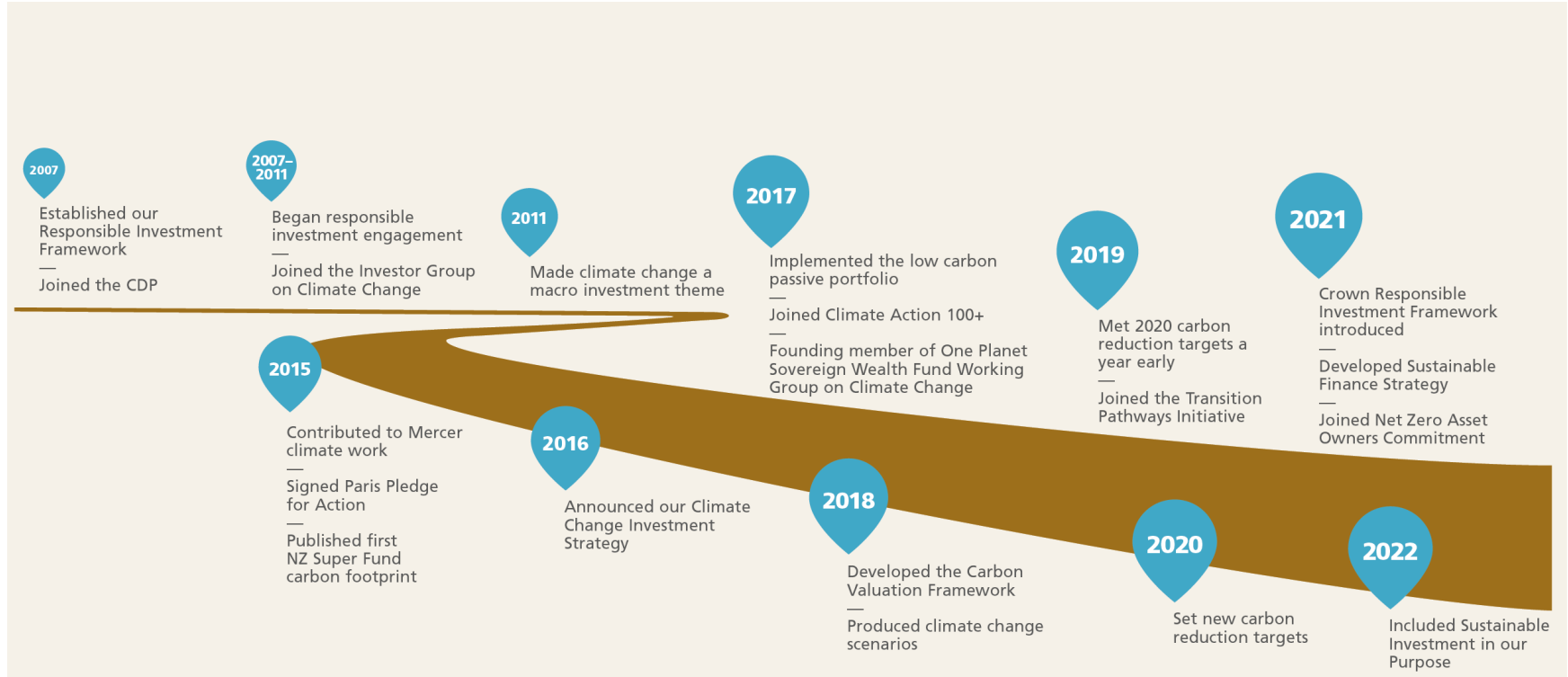
Cumulative contributions and size of NZ Super Fund



Where we invest



Responsible Investment: journey to date



The Data Analytics Team



Kathryn Kerner
Head of Data Analytics



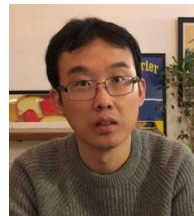
Anastasia Moskvina
Lead Data Scientist



Julian Cheah
Senior Data Scientist



Paul Shucksmith
Senior Data Scientist



Xudong Huang
Data Scientist

Team Purpose

- Data Science as a team sport
 - Foster collaboration and upskill Guardians
- Investment Excellence
 - Create new models and quantitative tools to enhance investment capabilities and returns
- Enhance efficiency
 - Automation of existing models, quantitative tools, and processes
- Mitigate risk
 - Establish best practices and governance in Data Science

Ways of Working

- Bilingual team
 - Python and R
- Problem formulation and business goal alignment
 - Project briefs
- Best practices and governance
 - Coding and version control standards
 - Code, documentation, and methodology reviews
 - Model risk management function
- Upskilling
 - Monthly upskilling sessions; weekly office hours

Questions?