



NZSUPERFUND

*Te Kaitiaki Tāhua Penihana
Kaumatua o Aotearoa*

TITLE:

NZ Superannuation Fund Case Study: Efficient Beta Completion

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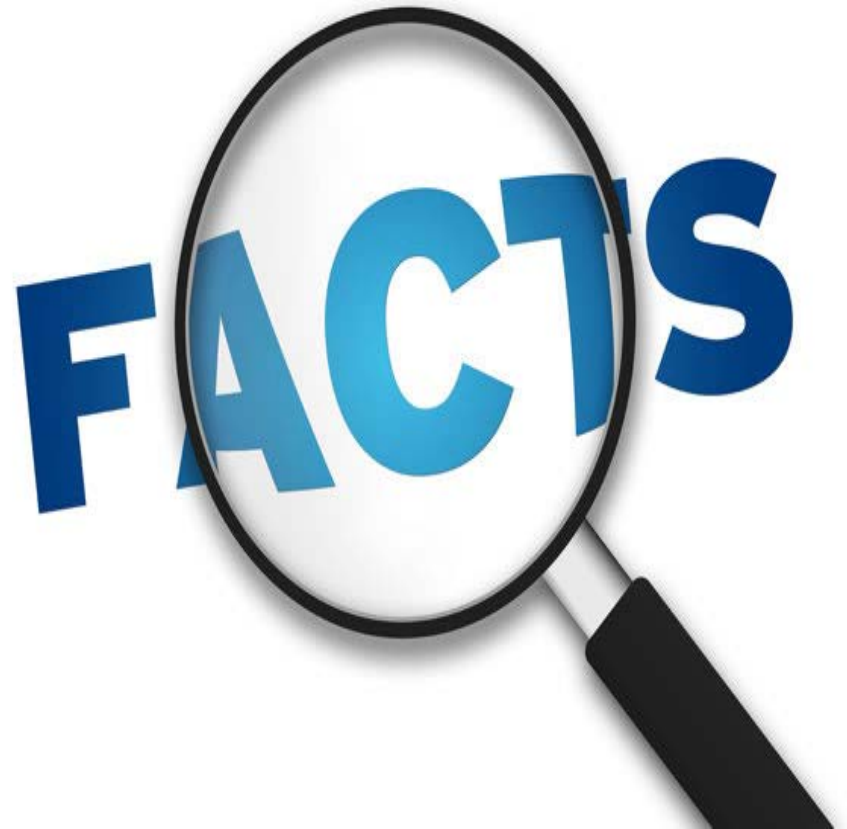
Head of Portfolio Completion

EVENT | PRESENTATION:

11 August 2016

Quick Facts

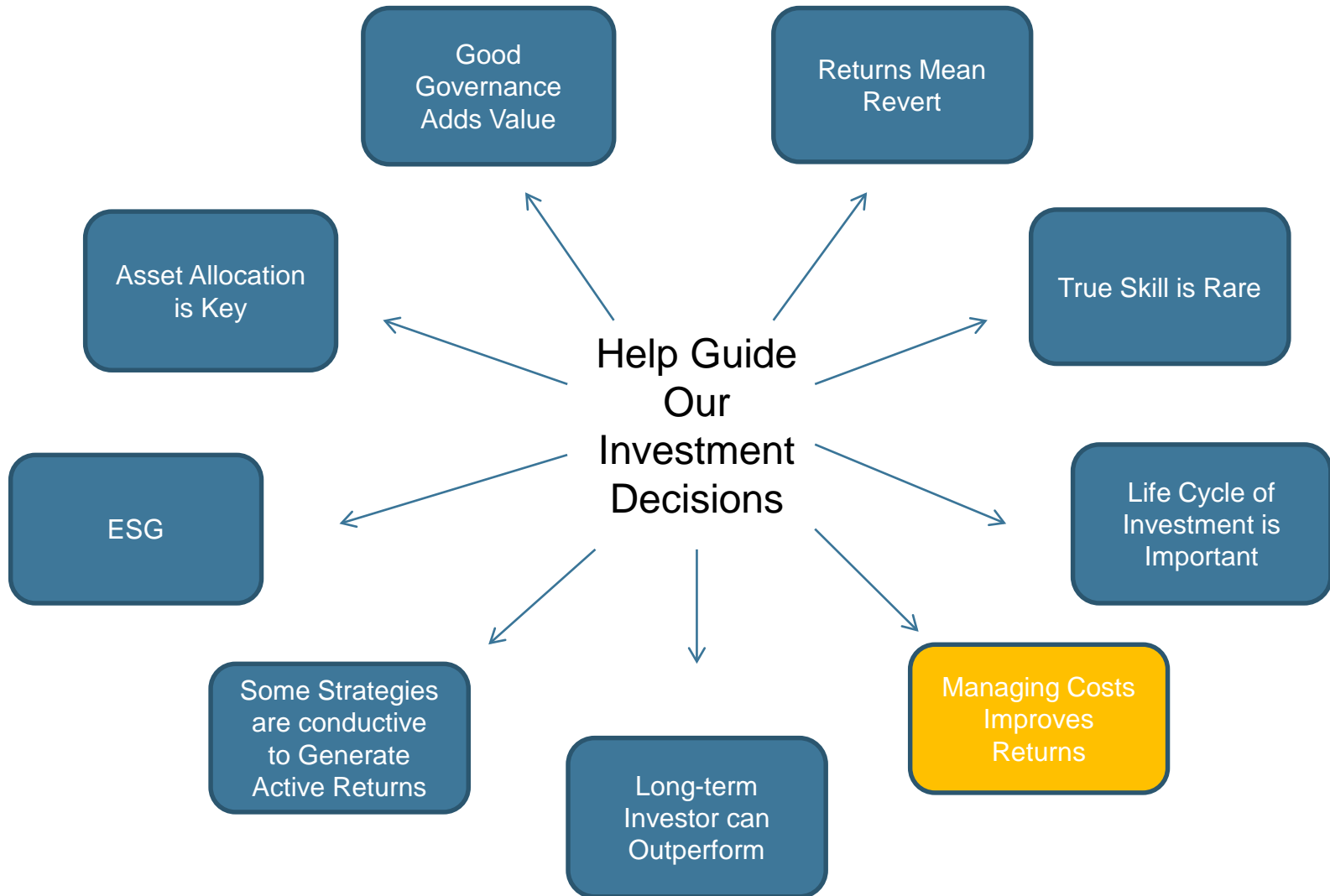
- Size of the Fund
 - \$30 Billion
- Government Contributions to date
 - \$14.8 Billion
- Tax Paid to the NZ Government
 - \$4.9 Billion
- Withdrawals to begin
 - 2029/2030
- Full Time Employees
 - 112 People
- Global Fund
 - 85% of investments are offshore
- Performance
 - 9.6% Annualised Return Since Inception



Who is NZ Superannuation Fund

- Our Purpose
 - We exist to help smooth the burden of future tax payers
- Our Mandate
 - Maximise Return without undue risk
 - Avoid prejudice to New Zealand's reputation Internationally
 - Best Practice Portfolio Management

Our Investment Beliefs



Our Endowments

Long Horizon

Certainty of
Liquidity

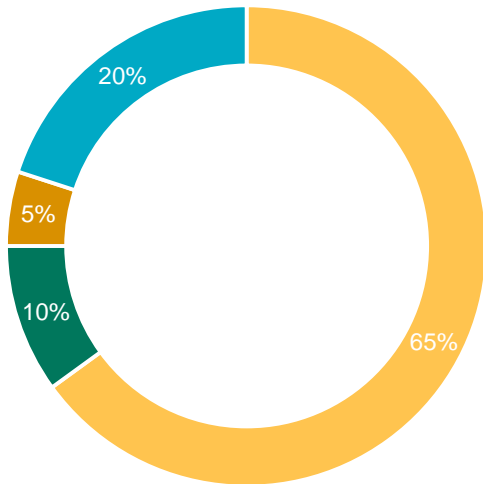
Operational
Independence

Sovereign
Status

How we Invest: Reference Portfolio

Reference Portfolio

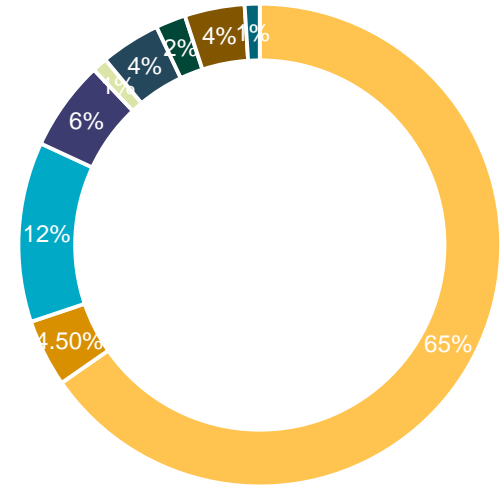
80% Growth
 20% Fixed Income



Value Adding Activities



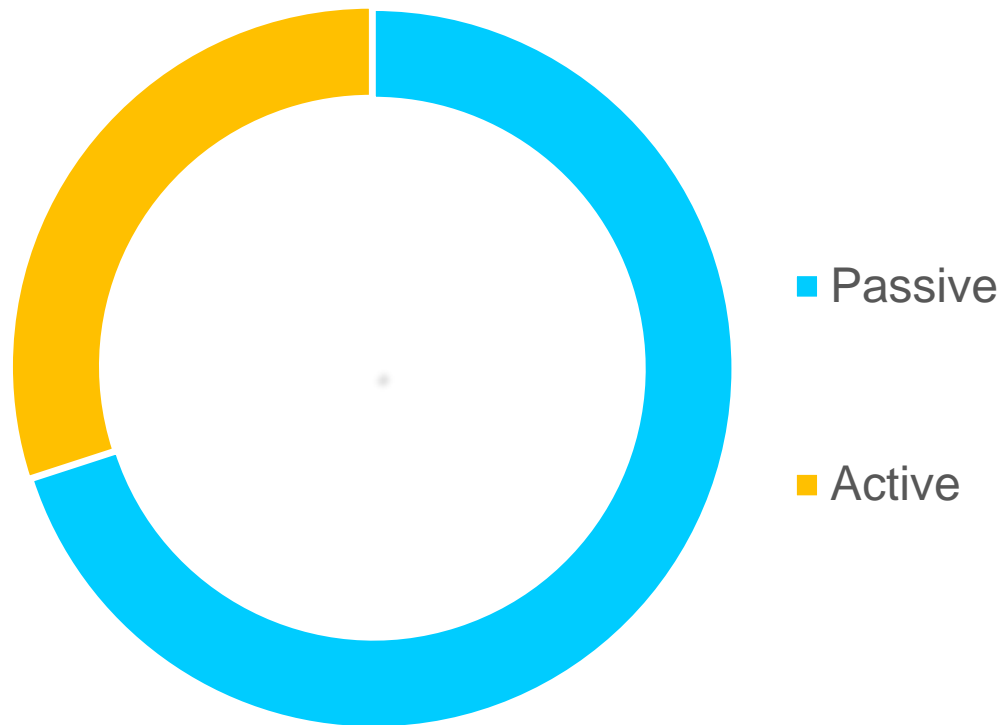
Actual Portfolio



- Developed Market Equities
- Emerging Market Equities
- NZ Equities
- Fixed Income

- Actual Portfolio
- Fixed Income
- Infrastructure
- Other Private Market
- Global Equities
- Timber
- Market Neutral
- NZ Equities
- Rural Land
- Private Equity

Replicate Broad Market Exposures Passively



Efficient Beta Replication

Physical Replication

- External Manager
- Internal Portfolio Manager
- ETFs



Market Exposure

Synthetic Replication

- Swaps
- Futures
- Options



Market Exposure
+ Cash Liquidity

Efficient Beta Replication

Why We Use Derivatives to Replicate Beta

- Efficiency
- Fund Alternative Strategies
- Manage Risk

Risk of Using Derivatives

- Counterparty Risk
- Operational Risk
- Liquidity Management

} Complexity

Beta - Economic Comparison

	Physical	Synthetic
	Manager	Swap
Explicit Cost	Manager Fees	Funding + Spread
Transaction Cost	Comm, Tax, Exchange fees, Spread, Market Impact	None/Minimal
Withholding Tax	Slippage vs Benchmark	None
Tracking Error	Index Optimisation, Cash Drag	None
Sec Lending	Maybe	Yes
Custody Fees	Many lines	One line
Counterparty Risk	No	Yes
Collateral Return	No	Yes

Conclusion

- Investment framework centres around our beliefs and endowments.
- Reference Portfolio which is a passive low cost portfolio which will achieve our long term objectives.
- We have two broad alternatives to get Beta Replication.
 - Physical Replication
 - Synthetic Replication
- Economic Comparison of most cost effective access to Beta.

Physical Replication

Fees

+ Slippage Cost

Total Cost

Synthetic Replication

Financing Spread

+ Counterparty Risk Cost

- Return on Collateral

Total Cost

