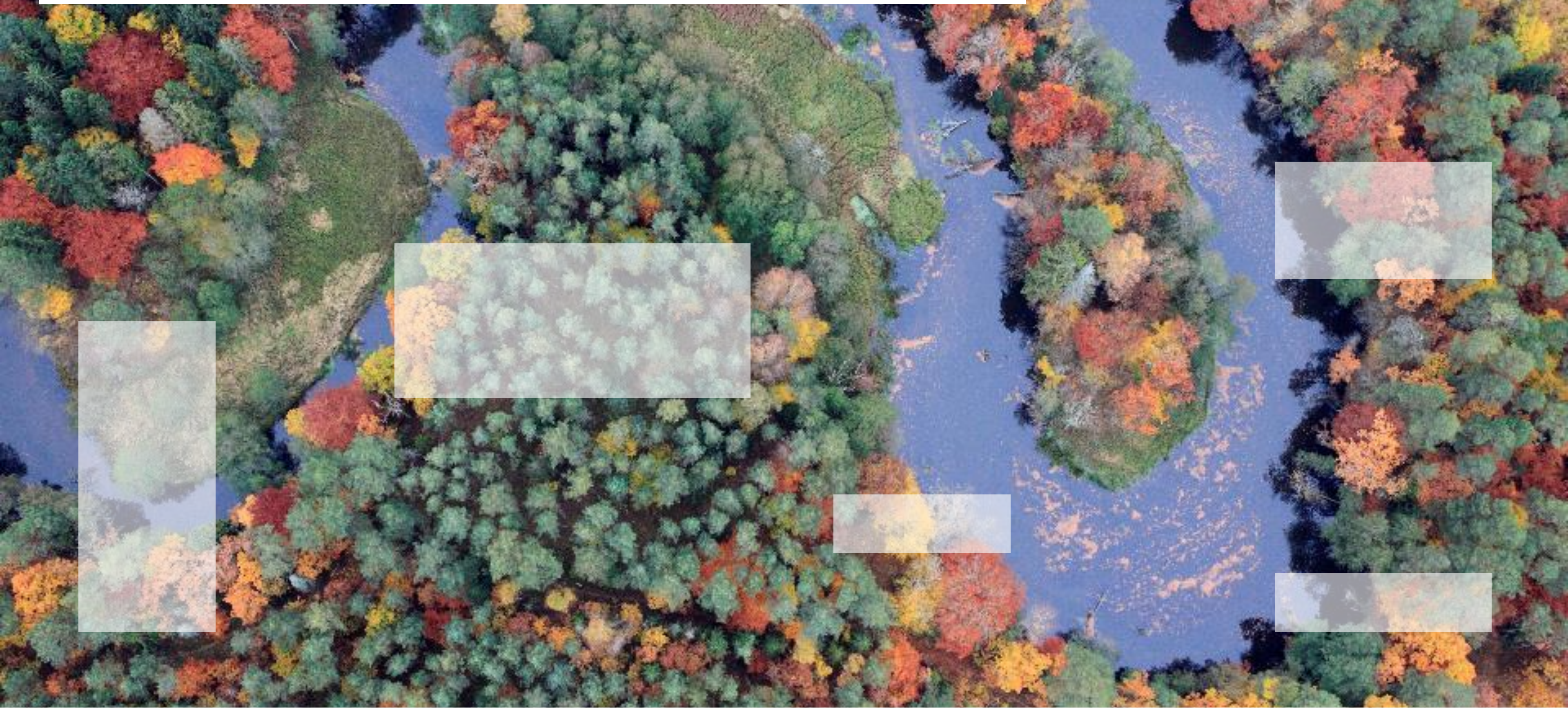
Review of the Guardians of New Zealand Superannuation

Prepared for the New Zealand Treasury

Final report: July 2019



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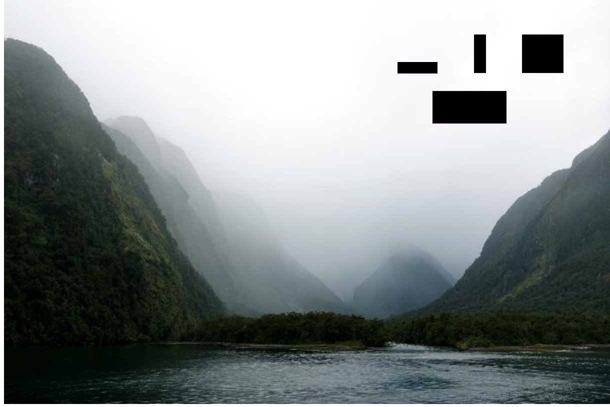

Assessment framework

WTW assessment framework

- Willis Towers Watson (WTW) is delighted to have been selected by the Treasury to conduct this Independent Review of the Guardians of New Zealand Superannuation (the Guardians) and the New Zealand Superannuation Fund (the Fund).
- In carrying out the review, we have sought to address the specific terms of reference outlined by the Treasury and we have also sought to provide views and comments that are useful to the Guardians in its vision to be "a great team building the best portfolio".
- In this review, our approach has not been to describe the Guardians' activities and processes in much detail (many of these are publicly available on the Guardians' website); instead our focus has been on providing comments and suggestions that we hope will be value-adding to the Guardians.
- Our process for this review involved document reviews and on-site and teleconference meetings which allowed us to deepen our understanding of the Guardians and the Fund.
- The Guardians has been completely transparent throughout the process, as demonstrated in all of the interactions we have had with them in the course of this review.
- In addition, we are very appreciative of the level and quality of engagement that we have had with Management and the Board. They have been extremely helpful; their enthusiasm and support for the review process has been very impressive.

WTW assessment framework (cont'd)

- We have assessed the quality of the Guardians and its activities by looking at the three broad components that make up an asset owner – i.e. its governance model, people model and investment model.
- We use an assessment methodology that draws on academic and our own research, as well as our knowledge of other leading asset owners, to assess the Guardians. We assign a rating on a scale that ranges from AAA to C, with AAA and AA representing best-practice characteristics.
- Our overall assessment of the Guardians is as follows:
  - Governance model : **AAA – exceptional rating**
  - People model (culture) : **AA – excellent rating**
  - Investment model : **AA – excellent rating**
- AAA or AA is a very high rating, attained by a small number of asset owners globally and reflects our view that the Guardians achieve best practice in much of what they do.
- Given these ratings, we are satisfied with the efficiency and effectiveness of the Guardians in being able to achieve its mandate and mission.
- However, investing is a highly competitive activity and is subject to characteristics which mean that there is an ongoing need for learning, reflection and improvement in order for the Guardians to maintain its status as a global best-practice asset owner.
- In this report, we provide both suggestions (these can be thought of as "coaching points" for the Guardians to consider adopting) as well as recommendations (where we have greater conviction that the Guardians would benefit from adopting these).
- On the following pages we summarise our recommendations, suggestions and our overall conclusions from the review.

Recommendations

WTW recommendations

- Our recommendations are as follows:

1. The Guardians should review its beliefs, values and strategic principles:
   - The Board should review its high level investment beliefs;
   - Management should identify and document their organisational beliefs, values and strategic principles; and
   - This work should include consideration of stakeholder expectations and particularly the sponsor (Crown's) position.
2. The Guardians should review its compensation structure, to assist with developing a stronger employee value proposition.
3. The Guardians should make greater use of a risk factor framework, as an additional lens through which to view the portfolio and for highlighting diversification opportunities.
4. The Guardians should allocate more resources to focus on responsible investing (RI) issues.
5. The Guardians should make greater use of reverse stress-testing or "pre-mortems" to develop responses that would prevent capitulation of the current portfolio construction and active risk approach, under a small number of extremely adverse (but plausible) scenarios.

WTW recommendations (cont'd)

- The relatively small number of recommendations reflects the strong position that the Guardians is already in; however we expect that many of our suggestions (outlined overleaf) would also be value-enhancing to the Guardians if introduced.

[redacted]

Suggestions

	WTW suggestions	WTW suggestions (cont'd)
	Governance model 1. The Board could benefit from greater use of external advice, particularly on issues that are highly complex or contentious. 2. Management could give greater attention to identifying and reducing bias in decision-making. This should include consideration of the role that new technologies can assist with this process. 3. We support the Guardians' plan to introduce a holistic approach to assessing all Fund risks (investment and enterprise risks) and for bringing the key risks to the Board's attention. We suggest that the same principles could be applied to the dashboard reporting, with the major issues from these highlighted in a manner which helps them to stand out. **People model (culture)** 4. Management and the Board could do more to maintain and evolve the cultural effectiveness of the organisation. 5. The Guardians could act to strengthen diversity, e.g. through observing the experiences of leading peer funds and corporates, in order to learn more about diversity mechanisms which produce both better outcomes and better culture. 6. Greater consideration could be given to scenarios as part of the Long Term Target State review by considering changes in the investment "ecosystem", e.g. the evolution of private markets investing, the application of new technologies and the state of capitalism.	**Investment model** The Board could: 7. Consider whether it remains comfortable with the Management team making a recommendation on the choice of the most appropriate reference portfolio. 8. Confirm that it remains comfortable with the proportion of the active risk budget allocated to the strategic tilting programme. 9. Assign greater time to strategic dialogue on RI issues and the oversight of Management's RI actions. Management could: 10. Review the long-term cash rate assumptions as part of the next reference portfolio review. 11. Review the case for having a 100% hedged portfolio as part of the next reference portfolio review. 12. Consider whether the ex-post returns to date are consistent with the Guardians' beliefs on the reliability of mean reversion in the different asset classes used in the strategic tilting programme. 13. Consider whether the current level of rigour and detail required in the compliance and attestation process is having the undesired effect of stifling creativity. ▪ In addition, in our report we emphasise a number of activities that the Guardians is currently undertaking and which we support as being necessary for continued adherence to best-practice principles.

Conclusions

WTW conclusions

- The Guardians has developed into an organisation that we consider to be best-practice in its activities and more capable of achieving high performance than the vast majority of its peers.
- It has achieved this state principally through the devotion and inspiration of its leaders who, since the organisation's inception in 2002, have ensured that constant attention to improvement have been the defining cultural characteristic of the organisation.
- The Fund's results over the last five years have been excellent, reflecting the organisation's effectiveness in carrying out its mandate, but it has also benefited from a tailwind that has supported all asset classes, particularly growth assets.
- The prospects for the Fund's investment returns going forward are more uncertain, with the returns for all asset classes over the next decade likely to be lower than recent experience. The Fund's large exposure to equity risk in particular means that it is exposed if equity returns disappoint over a prolonged period.

WTW conclusions (cont'd)

- But the Guardians has established strong governance, people and culture, and investment models and that places it in a good position to be able to continue to add value relative to its chosen risk profile and, if assessed over a long enough time period, to continue to meet the mission and goals of the organisation.
- Investing requires learning, reflection and improvement in order for the Guardians to maintain its status as a global best-practice asset owner. We have provided recommendations for the Guardians to work on to secure its best-practice characteristics, including deeper consideration of beliefs and values, culture, compensation design, responsible investing, a factor investing framework and the use of reverse stress testing.

Roger Urwin
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July 2019

1. Introduction

Terms used in this review

Principal terms defined

- The ***Fund*** is the New Zealand Superannuation Fund and the ***Guardians*** is (or are) the asset owner(s) managing the Fund.
- ***Management*** is (or are) the employees of the Guardians.
- The ***Board*** is the Guardians' Board supervising the Fund.
- The ***tools*** of the Guardians are:
  - Allocation to assets, access to mandates;
  - Investment and the exercise of ownership rights.
- The Fund's ***stakeholders*** we see principally, but not exclusively, as current and future New Zealand taxpayers and other citizens. We see other multiple stakeholders as those that are impacted by the Fund that the Guardians has certain obligations to.
- The ***leading asset owners peer group*** we reference in this report is 100 asset owners (approximately) with significant internal teams (over 30 full time equivalent (FTE) staff) and with significant assets under management (over US$30 billion) (see Thinking Ahead Institute's Asset Owner 100, 2018).
- By ***asset owners*** we reference organisations that work directly for a defined group of beneficiaries / savers / investors as the manager of their assets in a fiduciary capacity (upholding loyalty and prudence) under delegated responsibility.
- A list of the acronyms used in this report is included in the Appendix.

Principal strategic priorities

We suggest the following terms are important concepts in the organisation's functioning, with the Guardians' terms (where available) *italicised*.

Core strategic principles

- **Mission** | Why we exist | *Maximise the Fund's return over the long term, without undue risk, so as to reduce future New Zealanders' tax burden.*
- **Vision** | What we want to be | *A great team building the best portfolio*.
- **Values** | What we believe in and how we will behave | *Inclusiveness. Integrity. Innovation.*
- **Endowments** | Our structural advantages | *Long fund horizon. Certainty of liquidity. Operational independence. Sovereign status.*
- **Investment Beliefs** | What do we believe about the investment landscape and our edge (developed advantages) to inform our strategy | *Governance and objectives. Asset class strategy and portfolio structure. Asset allocation. Manager and investment selection.*
- **Organisational Beliefs** | What do we believe about our organisational context (governance, stakeholders, mission, etc.) to inform our strategy.

Other strategic principles

- **Purpose** | What purpose(s) we serve.
- **Value** | What we see as the value that our organisation exists to create.
- **Stakeholders** | The domain and priorities of our reach and influence.

Enablers

- **Culture** | The collective influence from shared values and beliefs on the way the organisation thinks and behaves.
- **Leadership** | Influencing a collection of people to achieve a common goal with strategy, motivation, development.
- **Stakeholder value proposition (SVP)** | Culture and leadership, policies and actions that deliver value to stakeholders in all services.
- **Employee value proposition (EVP)** | Culture and leadership, policies and actions that attract, retain and develop our associates and teams.
- **Strategy** | What is our competitive game plan – thinking ahead, reflecting uncertainty, creating value, intentions and domain.

1.1 Background

	WTW observations	WTW commentary

The Fund and the Guardians
 	
The Independent Review
 	
The approach taken to conduct this review
	▪ The New Zealand Superannuation and Retirement Income Act 2001 (the Act) established the New Zealand Superannuation Fund (the Fund) as a Government pool of assets and the Guardians of New Zealand Superannuation (the Guardians) as a Crown agency that has the role of managing the Fund.
	
	▪ This review is carried out in accordance with Section 71 of the Act which states that the Guardians' performance must be independently reviewed at least every five years. The main purpose of the review is to assess the "efficiency and effectiveness" of the Guardians' governance and operations and to provide assurances that the organisation can meet its mandate and mission.
	
	▪ To conduct the review it is necessary to observe the activities and decisions of the Board, Management and their interaction. Each contribute to the conduct of the whole organisation and need to be studied in detail.
	
	▪ Some of the information required concerning practices can be derived from a review of documents, but much can only come from direct engagement with the key leaders from Management and the Board.
	
	▪ We use a reporting structure with our "<u>observations</u>" that are more fact-based and our "<u>commentary</u>" that is our interpretation and judgement.
	
	▪ The previous Independent Review was carried out in 2014 by Promontory. This was very positive about the Guardians and described "*a very professional operation…with strong Board and impressive quality of professional staff*".
	
	▪ We observe later in this review that since then, through growing the team and evolving the process, the Guardians' position has grown stronger.
		▪ The idea of an independent review represents strong governance in its own right. Such a process supports the accountability of and enables more valuable feedback to emerge to help with the development of the organisation.
		
		▪ By contrast, most funds rely on a combination of performance reviews and audit processes. As we discuss later, the volatility of performance is a characteristic of the funds management sector that limits the reliability of performance feedback.
		
		▪ This review provides an opportunity to deliver significant value to both the Treasury and to the Guardians about future development pathways. The fundamental premise is that feedback can arise from such analysis to help adjust course, particularly in circumstances of fast-moving change.
		
		▪ Willis Towers Watson has been helped by two particular advantages in this work. First, we have maintained a professional relationship with the Guardians since its inception and find the knowledge built up over the years is of value. Second, we have a detailed knowledge of most of the Guardians' peers and this is critical to the assessment of the concept of "best practice", discussed later.
		
		▪ Our review has used a number of sources of information:
		  ▪ Document review;
		  ▪ On-site and teleconference meetings;
		  ▪ Analysis; and
		  ▪ Comparison with the leading asset owners of the world.
		
		▪ We have also studied various external reviews of the Guardians' operations by other parties in a number of areas, covering:
		  ▪ Audit investigations;
		  ▪ Responsible Investment (RI);
		  ▪ Governance standards, reporting and transparency; and
		  ▪ Cost effectiveness.

1.2 Terms of reference for this review

	WTW observations	WTW commentary
Terms of reference *The Act* *The terms of reference for this review*	▪ In accordance with the Act, in this review we must advise on: a. Whether or not the investment policies, standards, and procedures, established by the Guardians are appropriate to the Fund; b. Whether or not the investment policies, standards, and procedures, established by the Guardians have been complied with in all material respects; and c. The investment performance of the Fund. ▪ In addition to meeting the above legislative requirements, this Review is intended to focus on the following aspects of the Guardians' operations: ▪ *Ex-Ante Risk Framework:* to assess the robustness of the Guardians' investment process, including a focus on investments in New Zealand, and resource capabilities required to deliver the objectives of the Fund. ▪ *Ethical Investment Framework:* to evaluate the framework in relation to "avoiding prejudice to New Zealand's reputation as a responsible member of the world community", as well as in the context of international best-practice standards. ▪ *Governance Framework:* to assess whether the Guardians' governance frameworks are in accordance with best practice. ▪ *Ex-Post Performance:* to evaluate the performance of the Fund. This will include an emphasis on the measurement and reporting of performance, including the drivers of return and the contribution of leverage and derivatives to these returns.	We interpret these terms of reference in the following way: ▪ The "appropriateness" aspect is tied principally to the Act's requirements to invest the Fund on a prudent, commercial basis consistent with best-practice portfolio management; maximising return without undue risk to the Fund as a whole; avoiding prejudice to New Zealand's reputation as a responsible member of the world community. ▪ Also associated is meeting the Fund's mission which is "*maximising the Fund's return over the long term, without undue risk, so as to reduce future New Zealanders' tax burden"*. ▪ We define "best practice" as a state where the organisation functions *with a margin of safety* over meeting its mission and benchmarks and compares *very well* by reference to peers (a combination of the best asset owners globally) in strong performance and enablers of good practice. ▪ The concept of best practice is not an objectively assessable one and involves judgment. We have specialised in providing best practice reviews by maintaining detailed knowledge about leading asset owners. ▪ Best practice is not a static view, as the state of practice at leading asset owners evolves through competition and innovation. ▪ Best practice is a stronger state than a "fit-for-purpose" state, where the organisation merely functions *in line with* meeting its mission and benchmarks and compares *adequately* by reference to peers. ▪ We view "performance" as both longer term investment results, allowing for risks, and also as other outcomes implied in the mission, including reputation, which is how the stakeholders' view of the organisation compares with the standards expected of it.

1.3 Framework for this review

	WTW observations	WTW commentary

Organisational effectiveness
 	
The three functioning parts of the organisation
	▪ The central concept we assess in this review is the organisational effectiveness of the Guardians in the context of meeting its specific mandate and mission. This is a function of the quality and coherence of the organisation and its policies, standards and procedures.
	▪ Our assessment will consider the three principal functional parts of the organisation – we refer to these as the governance, people and investment models.
	  ▪ **Governance model** – Resources, structures, processes and practices.
	  ▪ **People model** – Talent, reward, culture and capabilities.
	  ▪ **Investment model** – Beliefs, investment framework, risk model, portfolio construction and implementation.
	▪ The assessment considers each of these in isolation and also how they overlap and combine.
	▪ The characteristics of asset owners and funds management organisations have four exceptional features that need specific attention in conducting this review:
	  ▪ The noise in short-term performance is extremely *volatile*;
	  ▪ Time horizons for decisions and performance are extremely long and outcomes are exceptionally *uncertain;*
	  ▪ The impacts on stakeholders are multiple and highly *complex*; and
	  ▪ The secrets of organisational effectiveness are highly contextual and so *ambiguous* to interpret.
	▪ These four characteristics correspond to the term “VUCA” (volatility, uncertainty, complexity and ambiguity), originally coined to describe the most challenging environments faced in military contexts.
		▪ The assessment of an asset owner resembles the creation of a “mosaic”. That is, an asset owner’s practice is made up of a number of small things that together add up to the “whole”.
		▪ This mosaic building process involves the collection and processing of a large number of small pieces of information – time consuming, but ultimately necessary. In this evaluation, the decision-making processes are critical, in which the component parts are:
		  ▪ A sound process;
		  ▪ Well thought through analysis;
		  ▪ Sound and pragmatic policies; and
		  ▪ Efficient implementation.
		▪ The unique dimensions of this analysis are notable. As discussed in various research (see in particular Clark and Urwin, 2007) asset owners succeed best not by mimicking others’ best practice, but by building a version of their own best practice and by reinforcing and refining good features.
		▪ WTW uses an assessment methodology and model (explained on the following page and in the Appendix) to summarise the quality of various organisational components of the Guardians.
		▪ This report uses the following sections as the basis for meeting the terms of reference of the review:
		  ▪ Governance model
		  ▪ People model (including culture)
		  ▪ Investment model
		    – Appropriateness and compliance with the Statement of Investment Policies, Standards and Procedures (SIPSP);
		    – Ex-ante risk framework; and
		    – The Guardians’ Responsible Investing (RI) framework.
		  ▪ The investment performance of the Fund.

1.4 Assessment models used in this review

WTW observations

Models used and assessment summary

- This report is made up of:
  - *WTW narrative*, using the sub-division explained earlier between observations (more fact-based) and commentary (more judgement-based);
  - *WTW assessment*, using a model-based approach to assess the quality of the Guardians' activities by reference to a group of peer funds.
- With respect to the qualitative assessment, we have followed research-based approaches (see Clark & Urwin, 2007; Urwin, 2015 and Unger & Urwin, 2019) to build a view of the major attributes of the Guardians' governance model, people (focusing on culture) model and investment model.
- The AAA and AA ratings in these assessments correspond *approximately* to global best practice. We stress that it is not possible to benchmark these qualitative concepts objectively and a degree of subjectivity is necessarily present. The end of each section of this report and the Appendix provide further detail on the approaches used in our assessments and how these ratings should be interpreted.

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2. Governance model

2.1 Governance framework

<table>
<tr><th>Terms of reference</th><th>WTW observations</th><th>WTW commentary</th></tr>
<tr><td>The Guardians' governance framework</td><td>

The terms of reference of the review specify the need to assess whether the Guardians' governance frameworks are in accordance with best practice.
Specifically, the terms suggest the following:
Taking into consideration past reviews; the Reviewer is expected to opine on the Guardians' Governance frameworks and whether they are in accordance with best-practice. In addressing this question the following areas should be considered:
(a) Scope of Board and delineation of Board and Management responsibilities.
(b) The appropriateness of Board and Management delegations.
(c) Information flow to the Board: Timeliness / Relevance / Completeness.
(d) The record keeping of Board decisions and management in the context of "best-practice" and with regard to the accountability requirements of the Guardians as a Crown Entity.
(e) Conflicts of Interests: The process of recognising, recording and managing any such conflicts at both the Executive and Board level.
Governance in the Guardians' documentation refers to "the systems and processes that allow an entity to set its direction and manage its operations to achieve its outcomes and fulfil its accountability obligations".
WTW's assessment of the Guardians' governance is AAA. This is an exceptional result – see page 23 for further detail.

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There is no objective or clear-cut specification of "best-practice" governance. Individual fund context differs due to:

The specific mandate involved and the influence of sponsors and stakeholders; and
The path dependent circumstances, outcomes and issues that have needed to be addressed along the way.

As a summary we note that the following high level governance factors, first confirmed in the 2014 Independent Review, are present in 2019 :

The roles and responsibilities of the Board, the Board Committees, Management and its committees are clearly documented in the Board Charter and Delegations Policy.
We see evidence of appropriate separation of responsibilities between the Board and Management, with the CEO and Management charged with the day-to-day leadership and management by way of delegation from the Board supporting effective governance.
In line with the "no surprises policy", the Board is kept well informed of how investment opportunities are developing, particularly in complex areas.
In relation to decision-making, there are clear processes in place with various levels of approval according to circumstance.
The record keeping to decisions is appropriately documented.
Conflicts are appropriately recorded and managed.
The Delegations Policy provides detailed delegations in relation to each policy, investment activity and operational activity.

These all support the effectiveness of the Guardians' current governance arrangements. They are necessary, but not sufficient, to satisfy the concept of best practice. We develop the wider best practice assessment on the following pages.

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2.1 Governance framework (cont'd)

Terms of reference	WTW observations	WTW commentary

The Guardians' governance framework	▪ Governance, as a term, is widely focused on Board activities, but to be comprehensive it needs to consider the Management team's operation in depth as well. Governance broadly defined should consider the resources and operational model employed. We believe viewing governance through this broader lens allows a more holistic picture of organisational effectiveness to be examined.
	▪ We suggest Management's people model is part of this governance concept and our assessment framework.
	  ▪ The people model includes culture and talent management, where culture focuses on behavioural norms and motivations; and talent management is how the organisation plans its human capital needs and attracts, retains and develops its people, particularly its leadership.
	  ▪ In a later section we review the Guardians' people model, focussing mainly on their culture.
	▪ Governance according to the Guardians' documentation also involves:
	  ▪ Clarifying and understanding the respective powers and responsibilities of the responsible Minister, the Board, Management and employees;
	  ▪ Having, and following, effective and well-understood accountability processes;
	  ▪ Modelling acceptable behaviour; and
	  ▪ Probity – strong moral and honesty principles – in its management, and the disclosure and management of conflicts and interests.
		▪ Management quality and Board quality and their interaction are fundamental to governance quality. We consider governance quality as the cornerstone to organisational effectiveness and organisational success. It is not possible to succeed without it (see Clark & Urwin, 2007).
		▪ The reliance on a well-resourced Management team with appropriate forms of delegation has been a steadily increasing factor among large asset owners. It depends for success on extreme clarity of roles, responsibilities and accountabilities and KPIs, accompanying policies and norms, to produce an effective division of labour. The Guardians has clear delegation structures while maintaining critical oversight through the Board.
		▪ A key function of the Board is its ability to assess the Management team, and in particular key leadership individuals. We judge the Board as being skilful in dealing with softer issues relating to people and avoiding an over-reliance on the "hard" measures of performance.
		▪ Over time, the Board has developed appropriate trust in Management. In this context, the Board seems to practise the right behaviours in showing considerable trust while holding the organisation to account at the level of "best practice".
		▪ In addition, a key role for the Board is the appointment of the CEO. The nominating committee of the Board for this appointment led by the Board chair Catherine Savage, ran a detailed and diligent process that concluded with a successful outcome in Matt Whineray's appointment in 2018.

2.2 Board composition

Terms of reference	WTW observations	WTW commentary
Board nomination process and composition *Independent Nominating Committee* *Consideration of "best-practice"*	▪ The Board members are appointed by the Governor-General on the recommendation of the Minister of Finance. The Minister's recommendation follows nominations from an independent Nominating Committee established by the Minister. ▪ The Nominating Committee is made up of a group of four or five individuals that have been selected by the Minister, on recommendation of the Treasury, for their understanding of the Guardians and the Fund and their competencies in judging the needs of the Board. ▪ The Nominating Committee pursues a mandate aimed at finding and recommending well-qualified candidates that will, in combination, result in a Board that has strong capabilities, balance and capacity for high performance. It has made use of a Board Skills Matrix to achieve this. ▪ We judge the Nominating Committee to be an effective body in this mandate with strong alignment with the overall mission of the Guardians. ▪ In addition, the nominating process provides the first "arm" of independence from Government that provides additional assurance that the mission and mandate of the Guardians will not suffer from undue Government influence. ▪ The second arm is provided by the operational independence of the Guardians in managing the Fund. ▪ Board effectiveness requires certain levels of continuity in board tenure. We note that the average tenure of the Guardians' Board members has been at or above four years for the bulk of the last decade (it only dipped below this level between mid 2011 and mid 2014). Data from a peer benchmarking study shown in the Appendix confirms that two thirds of the peers were at or above a four year average. We believe this rough benchmark should represent a target for effective practice.	▪ The Board aligns with best practice in size and composition. In particular the Board size of seven, relatively small by comparison with the boards of other leading asset owners, is a good number for effectiveness, provided there is a diverse balance and adequate sector competencies, which we judge to be present in the current Board (where "sector" refers to the funds management / asset owner sector). ▪ We are impressed by the quality, strong leadership and clear focus of the Nominating Committee. We are similarly impressed by the current Board. We consider that it is well constructed and is performing its role very effectively. ▪ To ensure the continued quality of engagement and challenge, the programme of training and education is very important. In particular the Board already benefits from its visibility of global peers. We see this as critical to address the limits of sector knowledge, noting that the Board's experience from the funds management sector has been quite limited in the past. ▪ Dashboards and data, widely used in the Guardians' Board papers, have been important tools for simplifying complex concepts, but they are still not that easy to understand or work with for those with limited sector knowledge. ▪ <u>We emphasise</u> to the Guardians and the Nominating Committee, the critical nature of having sector knowledge and the importance of Board selection, induction and training in building this knowledge. ▪ <u>We emphasise</u> the continuing need for succession planning to maintain the Board's average tenure and to ensure no abrupt changes in the Board's institutional memory and capability to deal with critical subjects. The 2019/20 Board agenda has a number of particularly sensitive issues, including the reference portfolio review, compensation and the new mandate. We emphasise the need for Board continuity to deal with these, particularly as the present Board has proved effective and as the legislation does not limit the number of terms a Board member may serve.

2.3 Board role and way of working

Terms of reference	WTW observations	WTW commentary

Board modus operandi
 	
Board performance including engagement model
 	
The role of Management in helping the Board do its job well
	▪ Board responsibilities are precisely exercised through well-managed Board meetings that seem to operate by staying at the right strategic level. The Board is focused on a role that includes:
	  ▪ High level decisions;
	  ▪ Disciplined monitoring and oversight; and
	  ▪ Strategic dialogue and engagement on investment content (e.g. considering the most appropriate reference portfolio for the Fund).
	▪ Best-practice boards are governed through a detailed matrix of responsibilities (covering the participants in the organisation's process and their roles and decision types); authorities and accountabilities. This responsibilities matrix for the Guardians is well thought through and pragmatically positioned.
	▪ The exact conduct of the Board's role is captured in Board papers where distinctions are appropriately specified between various degrees of engagement.
	▪ Management's role in this collaboration is critical. We see Management's preparation of Board material as being sound and thorough. We noted considerable attention to detail in preparing accurate and constructive papers.
	▪ Best-practice boards have the following core attributes:
	  ▪ They are collegiate and effective teams that know their roles, capabilities and delegations;
	  ▪ They employ decision rights, meeting length and meeting frequency that support the exercise of focus;
	  ▪ They receive timely, relevant and complete reporting;
	  ▪ They record the proceedings of meetings accurately and constructively and manage conflicts appropriately; and
	  ▪ They receive strong support from their management and board secretariat.
		▪ We consider the Board is operating at best practice in the core attributes set out opposite.
		▪ The engagement between Board and Management is a particularly critical activity; we observe that boards in general often have difficulty with the best-practice model. For the Guardians, we consider best practice involves:
		  ▪ Acting as a sounding board while avoiding second guessing of Management's work;
		  ▪ Challenges where the Management team's paper and presentation is considered incomplete or unconvincing;
		  ▪ Over-ride in limited circumstances where alternative decisions are supported;
		  ▪ Pro-active prompts on areas the Guardians can draw on the Board's diverse experiences; and
		  ▪ Use of a two-stage process – the Board explores new issues in dialogue with Management before the proposition is put to the Board.
		▪ We consider the Guardians is best practice in this regard too. In particular, we characterise the Board-Management dynamic as successful, being built from a strong level of trust and effective collaboration. Board interactions have brought wider considerations and holistic perspectives to key issues through effective chairing that encourages thoughtful dialogue.
		▪ The Board received / is receiving a total of 11 contributions from outside experts in its Board meetings over the three years 2017 - 2019. The complex agenda items may warrant more such inputs in future, particularly in respect of instances of investment portfolio complexity, where an independence of view is likely to be of value.
		▪ <u>We suggest</u> the Board may benefit in more situations from receiving outside advice, particularly when the agenda is highly complex or contentious.

2.4 Management role and way of working

Terms of reference	WTW observations	WTW commentary (1)
Management modus operandi *Management performance including engagement model*	▪ We comment elsewhere on the SIPSP, which is the central governance repository for policies, standards and procedures. ▪ The Guardians has evolved an organisational design that ensures that all facets of the organisation are given appropriate focus and specialisation. ▪ As a result, Management's governing responsibilities are precisely exercised through the well-managed implementation of soundly based policies and norms. ▪ The following policies have evolved to deal with management issues and investing:	▪ Best-practice managements have the following attributes: ▪ They are collegiate and effective teams that know their roles, capabilities and dependencies; ▪ They work within an effective culture that encourages alignment of actions to act themselves and support their colleagues in the cause of the mission of the organisation; ▪ They work within committee structures that have been evolved and tested; there is reflection on how effective each committee is; ▪ They employ their decision rights in accordance with the policies, standards and procedures; ▪ They receive timely, relevant and complete reporting to help the exercise of their responsibilities; and ▪ They attest accurately, honestly and constructively their adherence to policies; they respond to feedback that helps them develop their competencies with time. ▪ In our view, the Guardians' Management aligns with these attributes and is acting in best-practice ways. ▪ The Guardians' degree of documentation of policies, standards and procedures is exceptional. We judge this as a positive but comment elsewhere on whether there are consequences in terms of a possible loss of creativity or reductions in the application of good judgement. ▪ The roles of the CEO, CIO, the Leadership Team and Leadership Committees are specific structures adopted by the Guardians over time, reflecting the Fund's specific context and the individuals involved. Thus far they seem to have worked well by adapting any process and structure to fit with the skills and styles of the people concerned.

Management policies	Investment policies
▪ Risk management ▪ Procurement and outsourcing ▪ Travel ▪ Communications ▪ HR ▪ Diversity & inclusion	▪ Investment risk allocation ▪ Strategic tilting ▪ Portfolio completion ▪ Externally managed investments ▪ Direct investments ▪ Derivatives ▪ Investments valuation
▪ Delegations | SIPSP | Responsible Investment framework	

- Recent work has developed to integrate the risk measurement and risk oversight areas. This has led to a more consistent approach to the management of all facets of risk.
- The Guardians' organisational characteristic is to specify policies in detail and to use these as the starting point for most decisions.
- No policies can be crafted to deal with all eventualities or with unpredictable aspects of change. In such circumstances, actions are guided by an organisation's principles and cultural norms which we discuss later in the report.

2.4 Management role and way of working (cont'd)

Terms of reference	WTW commentary (2)	WTW commentary (3)

Management size and shape of team	▪ Good self-awareness was observed in understanding the effectiveness of the groups concerned, but the insights gained from fresh perspectives should be encouraged further. There are also progression and succession issues that will have to remain under consideration.
	▪ As the Fund size has increased, the marginal costs of additional resources have fallen. When expressed in basis points terms, they are almost insignificant in case by case arguments for expansion.
	▪ Whilst the current single office location may place some bounds on extra staffing, the Guardians should take great care in devising and adhering to operational plans that progress incrementally. It should test these plans rigorously to avoid expansion that introduces too much complexity.
	▪ In the IT and technology areas, we note the successful completion of the Cloud transformation project; the increasing attention given to cyber security; the installation of a number of investment systems and enhancements to technology. At a high level, the organisation has been operating and developing its technologies effectively, particularly when viewed relative to other asset owners.
	▪ The strength of the Guardians' current governance model is embedded in its decision-making process with its obvious human judgement element. For all asset owners this comes with risks around inherent bias.
	  ▪ We note that research is uncovering biases that are present in all investment decision-making settings, that are more numerous and deeply embedded than we readily recognise (see the Thinking Ahead Institute, 2018, on better decision-making).
	  ▪ There are opportunities to address these biases through organisational design, revisions to decision processes and culture. We discuss cognitive diversity in a later section.
		▪ These are areas where the evolution of financial technology including big data, machine learning and artificial intelligence (AI) will be influential over the next few years, under an assumption of innovation that we expect the Guardians will likely undertake.
		  ▪ We note that Guardians has been actively working on bias in decision making, incorporating outside expertise and the use of workshops for staff.
		▪ We suggest that Management could give greater attention to identifying bias in decision-making and considering methods of reducing bias and creating greater decision accuracy across both operational and investment areas. This should consider the role that new technologies can play in this process.
		▪ Turning specifically to risk, we believe the steps taken by the Guardians have been positive and progressive. Best practices on risk among peer funds are not well established in organisational design terms. The role of a Chief Risk Officer (CRO) and a fully independent investment risk function is used by some (and was identified as a possible approach in the 2014 review), but this structure is not always critical to secure the separation of risk decisions and measurements, nor is it critical to the notion of risk ownership (captured in the principle that risk is the responsibility of everyone at the organisation). We believe the Guardians overall has an effective risk framework and philosophy.
		▪ The approach to risk at the Board level has been dependent on risk dashboards, which continue to evolve. Our concern here is the interpretation of multiple complex measures. We emphasise that the organisation should apply principles of continuous improvement here.

2.5 Structure and use of beliefs

Terms of reference	WTW observations	WTW commentary
The importance of beliefs *The integration of Board and Management beliefs*	▪ Beliefs play their part in decision-making through a sequence of steps: 1. The application of beliefs and principles; 2. The deployment of sound thinking and analysis; 3. The exercise of pragmatic judgement; and 4. The use of precise implementation methods. ▪ The Guardians' has eight investment beliefs over four areas: ▪ Governance; asset allocation is key, long horizon; return predictability; skill is rare; some markets are more conducive to skill; constituents of returns; ESG ▪ These are positioned alongside the Fund's endowments: ▪ Long time horizon; ▪ Certain liquidity profile; ▪ Operational independence; and ▪ Sovereign fund status. ▪ These beliefs and endowments are influential in guiding certain decisions at a high level and are referenced by Board and Management in their actions and decisions. ▪ The organisational coherence demonstrated by the Guardians with respect to these points is high. We did not find instances where behaviours or actions seemed contrary to the principles expressed. ▪ The issue is whether these beliefs and endowments are sufficiently deep or extensive, particularly with regard to organisational issues.	▪ Beliefs are valuable for the following reasons: ▪ *Improved thinking*: Good beliefs and values can incorporate deeper insights and fill gaps in thinking by drawing from discussion and team-work, off-setting behavioural biases. ▪ *Improved process*: Beliefs and values act to streamline decision making; discussions start further forward; time is saved. ▪ *Improved governance*: Beliefs and values help integrate thinking and action; amplify the cognitive diversity and institutional memory; provide the courage to stay the course. ▪ Different beliefs may be used by Management and the Board. More detailed beliefs used by Management should be complementary to the higher level Board beliefs. ▪ <u>We recommend</u> the Board reviews its high level investment beliefs to check their continued suitability (we understand this is being undertaken ahead of the reference portfolio review). ▪ <u>We recommend</u> that Management identify and document their organisational beliefs, values and strategic principles. ▪ There are quite sophisticated and/or nuanced organisational beliefs embedded in the Management team's thinking that could be embedded more strongly through this process. This includes taking an integrated view of organisational and investment beliefs. The review of beliefs should overlap with the current review of the Guardians' values. In the Introduction section, we set out the Guardians' core strategic principles which, in our view, have been documented clearly and socialised effectively. ▪ We defined certain terms where there was less clarity and where more thinking is desirable, notably in these strategic principles: ▪ What exact purposes the organisation serves; ▪ What is seen as the "value" the organisation exists to create; ▪ Stakeholder mapping covering the domain and priorities of the Guardians' reach and influence (considered in section 3).

2.6 Stakeholder management

Terms of reference	WTW observations	WTW commentary (1)

The importance of certain stakeholders	▪ The Guardians has been effective in its stakeholder relations by conducting themselves to very high levels of transparency and giving priority to effective communications, while supported by a durable and far-sighted framework. The Guardians' operating independence has been a positive feature of the Crown relationship, but we note in our commentary overleaf two areas of change in this framework.
	▪ The organisation has multiple stakeholders and they exist in several layers. The list below is illustrative, not definitive.
	▪ We cite the highest level of stakeholders as:
	  ▪ The Guardians' sponsor is the Crown; specifically the Responsible Minister is the Minister of Finance; the monitoring agency is the Treasury;
	  ▪ New Zealand taxpayers, current and future; and
	  ▪ Employees and Board members of the Guardians.
	▪ We cite the next level of stakeholders as:
	  ▪ New Zealand citizens;
	  ▪ Service providers to the Guardians;
	  ▪ Members of the community considered in social responsibility thinking and actions.
	▪ There are other stakeholders that are a little further back:
	  ▪ The investee companies of the Guardians and its employees and customers; and
	  ▪ Other people impacted by the companies in which the Fund invests.
	▪ In short, the impacts ripple outwards across stakeholders. While previously the Guardians could keep a narrow focus and think only at the higher layers, going forward in order to act responsibly, all of the above layers need to be considered and an assessment made of the Guardians' responsibilities using a wider lens. We recognise that the Guardians' is mindful of its responsibilities in these areas.
		▪ Overall, we consider the Guardians' communications with its stakeholders as best practice and indeed exceptional in the context of leading international peers.
		▪ The Crown stakeholder relationship appears to have been well managed thus far. Through some formal and more commonly informal channels, the Board Chair has developed a constructive dialogue with the Minister of Finance; and the CEO and Management have developed a a constructive dialogue with the Treasury. We believe expectations have been managed very effectively. We see it as completely critical to future success that these relationships are maintained and developed.
		▪ It is a general governance principle that there needs to be significant attention to the management of stakeholder expectations, which may prove quite diverse in practice.
		▪ We highlighted previously opportunities to clarify "purpose", "value creation" and "stakeholder mapping" – all terms that might be included in a wider definition of mission. We think that the Fund's mission could be clearer as reflected by what "success" actually looks like in practice. This undoubtedly reflects, in part, the difficulty with interpreting the expectations of the sponsor.
		▪ However, we wonder if discussions around wider stakeholders and their expectations of the organisation could go deeper. We believe that the trajectory of change around sustainability and the "social licence to operate" for sovereign wealth funds makes this an important consideration (see Thinking Ahead Institute, Mission critical: understanding value creation, 2018).
		▪ <u>We recommend</u> that work on fuller external stakeholder understanding and management (stakeholder mapping) receives further attention, within the values and beliefs work. This work is helped by the research on stakeholder perception undertaken in 2018 and 2019.

2.6 Stakeholder management (cont'd)

Terms of reference	WTW commentary (2)	WTW commentary (3)

The importance of the Guardians' relationship with the Crown as sponsor and operational independence	▪ The Guardians' relationship with the Crown, while positive, has had to deal with two separate developments where dependencies have been introduced by the Government in the past year.
	▪ The most recent change to the Crown Entities Act means that the Board setting of CEO compensation is subject to the State Services Commission consent (previously this was by consultation only). In addition, the initial CEO term is now fixed, by amendments to the Act, as five years, with the option of reappointment for additional terms.
	▪ These provisions are out of step with best practice governance, where a board's primacy to set CEO compensation and contract terms are accepted norms. This affects the CEO role and has follow-on effects for compensation for other staff, and qualifies the operational independence that has always been a positive attribute of the Guardians' framework.
	▪ Another issue is the forthcoming new investment mandate announced by the Government in the recent budget. This is the establishment of a NZ$300m fund to provide venture capital to New Zealand firms expanding beyond start-up phases, including support for the commercialisation of certain technologies. This is in part funded by diverting contributions previously earmarked for the Fund.
	▪ The Guardians' role in this new fund is to provide governance, investment expertise and administration, working alongside New Zealand Venture Investment Fund (NZVIF). This mandate has a different framework from the Fund's current arrangements. It involves contributing to the Government's development agenda (to strengthen and deepen the New Zealand venture capital market) and working alongside another entity (NZVIF) in the management of these assets. These arrangements cannot be set up as operationally independent as result.
		▪ The addition of this role introduces a number of new considerations for the Guardians to:
		  ▪ Commit to appropriate resourcing for this new initiative;
		  ▪ Establish new governance arrangements to address this new responsibility; the Board will have to develop a framework to contribute strategic thinking and disciplined oversight to the area;
		  ▪ Extend the relationship with the Crown which now involves a new stakeholder in the Economic Development Minister;
		  ▪ Do all of the above without allowing a diversion of attention or focus from the current mandate.
		▪ We observe the experiences of other sovereign wealth fund peers that have to manage multiple mandates and roles and issues of operational independence. It is fair to describe these experiences as mixed. <u>We emphasise</u> that these are challenging areas for stakeholder management which will require the Guardians to commit significant CEO and Board time in order to produce successful outcomes.
		▪ The stakeholder mapping mentioned in our recommendation to review organisational beliefs, values and strategic principles should naturally include the Crown's position.

2.7 Governance assessment

- We have used a model-based approach to assess the quality of the Guardians' governance.
- This approach is based on research (see Clark & Urwin, 2007) to build a view of the major attributes of the Guardians' governance, using the 12 factors that make up an asset owner's governance model.
- We compare the Guardians with a peer group of approximately 100 asset owners globally, with AUM above US$30 billion and a FTE investment professional staff above 30.
- The AAA and AA ratings correspond *approximately* to global best practice. We stress that it is not possible to benchmark these qualitative concepts objectively and a degree of subjectivity is necessarily present. Please refer to the Appendix for further detail on how to interpret these ratings.

Factor		Rating	WTW comments on rating
Mission clarity	Clarity of the mission and the commitment of stakeholders to the mission statement	AA	
Effective time budget	Resourcing each element in the investment process with an appropriate budget considering impact and required capabilities	AAA	
Leadership	Leadership, being evident at the Board and Leadership Team level, with the key roles being the Board Chair and CEO	AAA	
Strong beliefs	Strong beliefs commanding organisation-wide support that align with goals and inform all investment decision-making	A	*Existing investment beliefs are clear but we suggest should be subject to review and connect better with organisational beliefs*
Risk budget	Frame the investment process by reference to a risk budget aligned to goals and incorporating an accurate view of alpha and beta	AAA	
Manager line-up process	The effective use of external managers, governed by clear mandates, aligned to goals, selected on fit-for-purpose criteria	AAA	
Investment executive	The use of highly investment-competent CIO arrangements with clearly specified responsibilities, and accountabilities to the Board	AAA	
Board role and competencies	Board adds value through its numeric skills, capacity for logical thinking, ability to think about risk and probability, engage the Management team	AA	
Effective compensation	Effective compensation and incentive practices used to build team strength and align actions to the mission, different strategies according to context	A	*Limitations from compensation reduce the ability to attract and motivate individuals and so diminishes the overall EVP*
Competitive positioning	Frame the investment philosophy and process by reference to the institution's comparative advantages and disadvantages	AA	
Real-time decisions	Utilise decision-making systems that function in real-time not calendar-time	AAA	
Learning organisation	Work to a learning culture and adaptive model which deliberately encourages change and challenges the commonplace assumptions of the industry	AAA	
Overall governance rating		AAA	*Exceptional rating*

2.8 Summary of suggestions and recommendations

	WTW suggestions	WTW recommendations

Governance model	▪ The Board could benefit from greater use of external advice, particularly on issues that are highly complex or contentious.
	▪ Management could give greater attention to identifying and reducing bias in decision-making. This should include consideration of the role that new technologies can assist with this process.
	▪ We support the Guardians' plan to introduce a holistic approach to assessing all Fund risks (investment and enterprise risks) and for bringing the key risks to the Board's attention. We suggest that the same principles be applied to the dashboard reporting, with the major issues from these highlighted in a manner which helps them to stand out. (This suggestion comes from section 4).
		▪ The Guardians should review its beliefs, values and strategic principles:
		  ▪ The Board should review its high level investment beliefs;
		  ▪ Management should identify and document their organisational beliefs, values, and strategic principles; and
		  ▪ This work should include consideration of stakeholder expectations and particularly the sponsor's (Crown's) position.

3. People model

3.1 Culture

Terms of reference	WTW observations	WTW commentary (1)

Culture and its importance to the Guardians	▪ Definitions of culture and leadership are important given the “soft” aspects of these concepts. The terms below are taken from WTW research (see Urwin, 2015).
	  ▪ *Culture is the collective influence from shared values and beliefs on the way the organisation thinks and behaves.*
	  ▪ *Leadership is influencing a collection of people to achieve a common goal with strategy, motivation, development.*
	▪ The concepts of stakeholder value proposition (SVP) and employee value proposition (EVP) are related:
	  ▪ *SVP is culture and leadership, policies and actions that deliver value to stakeholders; and*
	  ▪ *EVP is culture and leadership, policies and actions that attract, retain and develop the people in the organisation.*
	▪ Culture is a unique and highly influential ingredient in the recipe for organisational effectiveness. It is made up of a number of factors that can be assessed, discussed and managed by the Guardians.
	▪ The Guardians has participated in a study designed by Human Synergistics involving an Organisational Culture Inventory (OCI). This describes culture in terms of the styles of working and collaboration in the organisation. The progress of the Guardians to a stronger collaborative style has been tracked from its original measurement in 2011 through to the latest measures carried out in 2017.
	▪ The Guardians scored particularly well on two attributes – “humanistic-encouraging” and “affiliative” as well as on the constructive styles in which excellence, personal integrity, and support for others are key components. The Guardians’ results stand out as very positive in the OCI database.
	▪ **WTW’s assessment of the Guardians’ culture is AA.** This is an excellent result – see page 32 for further detail.
		▪ Culture is widely referenced in work contexts at the Guardians. Both the Board and the Leadership Team see it as a key strength of the organisation. However, as a critical but tacit part of the Guardians’ activities, it has to date attracted qualitative review without much measurement (although the OCI metrics will be considered in the next year).
		▪ The positive value created from the Guardians’ strong culture is clear. What perhaps is less clear is exactly what is their culture, how it is differentiated, what effects it has on the organisation and how leadership can act to continue its positive impacts.
		▪ The OCI study is one lens through which to see culture. This is a helpful view, but it is simply one view.
		▪ We offer our own view in the attached analysis (see section 3.4). This employs research on asset owner and asset manager organisations (see Urwin, The impact of culture on institutional investors, 2015) and so is a sector-specific view. This assessment confirms a number of key aspects of the Guardians’ culture. We identify three points in particular:
		1. Effective culture combines cultural strength; cultural alignment with strategy; leadership action using culture; and associate ownership of culture. We find evidence to suggest that leadership thinking is in sync with these concepts and with the strategy at the Guardians.
		2. Cultural strength can take different forms but is most observable at the Guardians in the <u>people culture</u> – how the workforce is treated and how it behaves.
		3. There is also a significant <u>purpose-driven</u> element to the Guardians’ culture. The organisation sees a direct connection between their work and being able to act to benefit current and future generations of New Zealanders through being trusted with their money.

3.1 Culture (cont'd)

Terms of reference	WTW commentary (2)	WTW commentary (3)

Culture and its importance to the Guardians	▪ We also find evidence of an investment culture at the Guardians. An investment culture is where the asset owner has a passion for investment as a craft and competitive skill (motivated by the intellectual and performance challenge).
	▪ This investment culture is more accurately a sub-culture of the investment front-line professionals. Sub-cultures exist in all organisations and these need not be weaknesses if the organisation has a sufficient top level shared culture and gets a net benefit from sub-cultures that reflect wider and deeper ownership of those cultures. At the Guardians' present size, we think the sub-cultures are not presenting significant issues, but with a larger team this may change.
	▪ The Guardians in our analysis exhibit some elements of a servant leadership culture. This culture is defined as one where leadership is empowering and non-hierarchical and focuses strongly on sharing power and helping others. Success here is getting team members to develop and perform as highly as possible.
	▪ Asset owners and asset managers are particularly well suited to such a style of culture and leadership. This defines leadership more broadly not as the domain of those at the top of a pyramid, but rather as those working in the network of the organisation, where leadership is exhibited by many individuals every time they step away from their personal tasks and into their opportunities to influence others.
	▪ The cultural state of the Guardians draws strength from a strong sense of working toward a greater good in improving national and citizen wealth, and in the sustainability practices of the Fund which contribute to wider societal value.
		▪ Good culture declines over time without strong actions to maintain it. The larger the asset owner, the proportionately larger the energy needed to maintain or shift the culture.
		▪ It is hard for extrinsic motivations (like compensation) to drive a sustainable culture; management action therefore requires a greater focus on intrinsic motivations and we have found evidence that Management has been able to employ the tools in four relevant areas below:
		  ▪ Leadership and goals: Leaders should align vision, strategy and culture; this suggests that leadership should empower by living the values, putting them into action, and leading with integrity and fairness; leadership KPIs on culture can be used.
		  ▪ Performance reviews: ensuring a significant weighting of culture in performance reviews.
		  ▪ Communications: Leadership talks frequently on the current/destination culture
		  ▪ Hiring: put culture into the employer brand; integrate culture with hiring and leadership development.
		▪ Both Management and the Board have committed considerable time and focus to support the development of a successful culture at the Guardians. We cite the following examples of being pro-active and open-minded:
		  ▪ Board and Management participation in many international peer forums where such issues are discussed;
		  ▪ Consideration of academic inputs on these issues;
		  ▪ A strong hiring record of bringing into the organisation outside talent and perspectives;
		  ▪ The work with Human Synergistics to develop a better understanding of the Guardians' culture and embed stronger collaborative elements in it.

3.1 Culture (cont'd)

Terms of reference	WTW commentary (4)	WTW commentary (5)

Managing cultural sustainability
 	
Culture and diversity and its importance to the Guardians
	▪ Culture has become an issue of heightened attention for the boards of financial services organisations generally. In the Guardians' case, the Board has been consistently engaged on culture. Some discipline in this attention to cultural issues has been maintained through six monthly engagement of the Employee Policy and Remuneration Committee.
	▪ Culture management, consistent with headcount growth, is a challenge. Headcount growth at the organisation has been high for a decade, taking staff numbers from about 60 to about 160 (as indicated in the latest budget). The impacts of this growth on culture seem to have been managed so far, but get more difficult from here.
	▪ We believe an organisation of 160 plus can be fully aligned and effective, but difficulties might arise if the number was much higher. We have highlighted the issue of sub-cultures. Finding the sweet spot between necessary cultural nuances and disruptive differences will require continued attention.
	▪ <u>We suggest</u> that Management and the Board focus more on maintaining and evolving the cultural effectiveness of the Guardians. We believe this should encompass:
	  ▪ Doing further work to pinpoint the Guardians' culture and communicate it;
	  ▪ Developing the cultural differentiation in servant leadership and diversity and inclusion;
	  ▪ Considering the culture involved with balanced decision-making (outlined on the next page); and
	  ▪ Staying open to fresh perspectives and challenge in an area where new ideas are developing fast.
		▪ Incorporating diversity and inclusion in an organisation acts in two dimensions. First, making sure there is diversity and inclusion is supportive to a healthy culture (this is a values case). Second, there is a business case to enhance problem solving and collective knowledge in the Guardians' teams.
		▪ We found evidence to suggest that the Guardians does have a <u>diversity and inclusion cultural signature</u>.
		▪ The main focus of diversity has to date been "surface-level diversity", particularly that relating to gender. This is a valuable proxy for more extensive aspects of diversity.
		▪ The Guardians' Diversity and Inclusiveness Policy has been in place since 2015/16 and has been added to in subsequent years via enhancements to hiring practices, unconscious bias training and flexible work programmes.
		▪ The most desirable underlying traits of diversity to align with the business case are diversity in thinking, processes and experiences. Given the Guardians' current circumstances, diversity in employees' experience (acquired both before and during roles within the organisation) may well have the greatest impact.
		▪ <u>We suggest</u> the Guardians could strengthen its diversity – even with its strong starting position on gender diversity. We suggest there is a benefit from looking at a few of its peers and leading corporates, to learn further about mechanisms which allow diversity to work best in terms of both better outcomes and better culture.

3.2 Risk culture

Terms of reference	WTW observations	WTW commentary

Risk culture	▪ Risk culture is a specific aspect of organisational culture that has critical meaning for an asset owner.
	▪ According to recent Guardians' work on risk culture carried out in conjunction with PwC, this term describes the cultural norms and traditions of behaviour that determine how employees identify, understand, discuss and act on risks in the organisation. This is therefore a subset of organisational culture discussed previously.
	▪ Risk culture has been identified as a key causal factor in undesirable outcomes in financial organisations.
	▪ The PwC analysis highlighted certain Guardians' strengths:
	  ▪ Doing the right thing;
	  ▪ Speaking up – in reporting issues;
	  ▪ Transparency and openness – the Guardians is focused on increasing transparency; and
	  ▪ Continuous improvement – both employees and the organisation are always looking to improve.
	▪ The PwC work did flag some opportunities for improvement:
	  ▪ Understanding the bigger picture – the organisation struggles with the risk big picture;
	  ▪ Ticking the box – the box ticking can be unthinking; there are "form over substance" issues;
	  ▪ Openness to challenge – on occasions challenge is met with defensiveness; and
	  ▪ Right behaviours – the Guardians is seen as being lenient on consequences when poor risk or compliance practices happen.
		▪ The Leadership Team is developing a risk culture work plan following on from this work. We support these actions.
		▪ The issues raised in this work are worthy of considerably more attention. <u>We suggest</u> that as part of a deeper look at culture, more focus should be applied to considering the culture involved with decision-making and how to balance two clusters of attributes:
		  ▪ Inquisitiveness / transparency / candour (so ensuring all factors with respect to a decision should emerge); and
		  ▪ Respect / humility / judgment (ensuring all opinions on a decision matter; judgements are finely balanced and no one perspective should be over-dominant; good collective judgement is paramount).
		▪ We believe the Guardians is following best-practice thinking on risk culture, but it is hard to be definitive that the organisation is well placed on these aspects. There is always more to be done and consistent with the incremental improvement principle, we think more should be done in aligning with these principles:
		  ▪ Beliefs: the whole organisation sharing certain beliefs, values and responsibilities in dealing with risk;
		  ▪ Risk is seen in multiple forms through multiple lenses;
		  ▪ Recognition of "soft" factors: uncertainty, reflexivity, inter-connectedness; recognition of enterprise-wide risks;
		  ▪ Management of risk is emphasised over measurement;
		  ▪ Risk as mission impairment and employing "adaptive capital" – financial and human – to align the Fund with its mission following stressed conditions; and
		  ▪ Soft power preferred to get things done: mutual trust, understanding, effective collaboration (strategic dialogue).

3.3 Human resource and technology capabilities

Terms of reference	WTW observations	WTW commentary (1)
Capabilities assessment – human capital and technology needs	▪ The key organisational changes since the previous Independent Review in 2014 were in Corporate Affairs, Finance, Risk, Operations, Investments, IT, Investment Operations, HR and Risk. These were largely due to the significant growth in headcount over the last 5 years (from 86.4 FTE in 2013 to 127.8 in 2018). ▪ Specifically, the HR team was split into three different functions, HR Operations, HR Talent and HR Governance, which has allowed the team to develop a talent management framework that is aligned to the Guardians' overall strategy. ▪ The current FTE headcount at the Fund is 133, while the budgeted FTE is 163. ▪ Remuneration at the Guardians consists of salary, participation in the discretionary bonus programme, participation in the discretionary benefits scheme and superannuation. ▪ All employees have a confidential salary range associated with their position, which is determined by position descriptions being evaluated by remuneration specialists and authorised by the CEO and the General Manager HR. ▪ There are two components to the discretionary bonus programme: an individual component, (reflecting what the individual has done and how it has been done) which applies to all eligible employees; and a Fund component, which applies to eligible Leadership Team and Front Office employees only. For the eligible Leadership Team and Front Office employees, the Fund component makes up the majority of the total bonus, with the bonus payable over a four year period, based on rolling four year Fund performance. ▪ The overall remuneration strategy is currently being reviewed.	▪ As outlined previously, the people model is a principal functional part of an organisation that encompasses culture, talent (skills) and reward (compensation). We believe this component of the Fund is supported by a strong HR function. ▪ In terms of talent, we are impressed with the quality of the Management team and, in particular, we believe that senior management has very strong investment competencies and is well resourced. ▪ The capabilities of the Management team, given the current size and complexity of the portfolio, is in line with best practice and provides a strong foundation for the Guardians to achieve its mandate. ▪ However, the physical location of the Fund does represent a structural disadvantage relative to other asset owners globally, in terms of hiring specialised skills in certain areas. ▪ The development of a form of joint intellectual property (IP) is important here too. The organisation has an effective engagement model and has significant engagement with a small number of outside firms that it selects to run outsourced portfolios. This secures a form of combined IP, where the results reflect the quality of the internal IP in selecting the external manager and their strategy, and then leveraging the relationship to generate ongoing value-enhancing initiatives.

3.3 Human resource and technology capabilities (cont'd)

Terms of reference	WTW commentary (2)	WTW commentary (3)

Capabilities assessment – human capital and technology needs
 	
Employee value proposition (EVP)
	▪ In order to support the team, technology and data strategies are evolving. However, this is not occurring with the speed or degree of inter-connectedness that has been achieved by some peer funds – this may in part be due to the difficulty of attracting talent in the IT area.
	
	▪ A noticeable issue for many asset owners is a difficulty of mobilising sufficient technology resources and capabilities for the delivery of strategic projects. As a result, progress tends to fall short of expectations. These issues are likely to become more important (see the commentary on technology challenges for asset owners over the next 5 to 10 years in Thinking Ahead Institute, Asset Owner of Tomorrow).
	
	▪ We emphasise the Guardians' IT and technology requirements should be a significant strand in the Long Term Target State review. This suggests some possible adaptions in strategies and policies as a result of new circumstances:
	  ▪ A bigger Fund, given new contributions;
	  ▪ A bigger organisation, by head-count;
	  ▪ A more technologically reliant organisation; and
	  ▪ An organisation potentially affected by growing outside circumstances, such as cyber risks and reputational risk.
	
	▪ We suggest greater consideration of scenarios in the long term area. We think the organisation could extend its scenarios work into areas of change in the investment "ecosystem" – particularly the evolution of private markets investing, the application of new technologies and the state of capitalism. These are all subjects that have had the Guardians' attention but we suggest they should receive greater focus from Management and the Board.
		▪ Compensation is of concern in two areas. First, the organisation is below average in the peer group with respect to monetary aspects of the EVP and must make up for any monetary shortfall through intrinsic measures, notably culture, as well as being inventive and thoughtful about compensation structures and alignment. Second, recent changes to the Crown Entities Act create difficulties for setting CEO remuneration and create follow-on constraining effects on remuneration. These two factors challenge the Guardians' ability to attract and retain talent.
		
		▪ We recommend the Guardians should review its compensation structure and implementation, to assist with developing a stronger EVP. (We understand that a remuneration review is underway).
		
		▪ As part of this, we suggest that compensation design should recognise international peer comparisons that are generally progressing towards designs that have greater variable compensation and have greater flexibility and judgement in awards, including alignment to values and cultural fit.
		
		▪ We also suggest that compensation should be considered in the context of the whole EVP. The EVP is subtly different at different levels of the organisation, and is particularly important to get right at senior levels with appropriate recognition for non-investment professionals. A key part of this EVP consideration is career progression and development.
		
		▪ Brand awareness is a developing topic amongst leading asset owners. The thinking here is to build the "employer brand" to improve the opportunities to attract talent successfully.
		
		▪ The nature of the recruitment process requires a sweet-spot balance between attracting suitable candidates with a good cultural fit whilst avoiding the pit-falls of being under-diversified.

3.4 Culture assessment

- We have used a model-based approach to assess the quality of the Guardians' governance.
- This approach is based on research (see Urwin, 2015) to build a view of the major attributes of the Guardians' culture, using the 6 factors that make up an asset owner's culture model.
- We compare the Guardians with a peer group of approximately 100 asset owners globally, with AUM above US$30 billion and a FTE investment professional staff above 30.
- The AAA and AA ratings correspond *approximately* to international best practice. We stress that it is not possible to benchmark these qualitative concepts objectively and a degree of subjectivity is necessarily present. Please refer to the Appendix for further detail on how to interpret these ratings.

Factor	Rating	WTW comments on attributes
Purpose / drive in mission	AA	Purpose-driven | Attention to the sponsor's and stakeholders expectations | High trust level from the Crown and the Treasury | Strong sense of public responsibility | Understanding of social license to operate
Team and people	AAA	Emphasis on performance development | Employees are prepared to adapt, change and be stretched | Individual autonomy and responsibility is respected | Strong listening and empathy practiced | Trust exists at various levels | Collaboration is strong | Employees have sense of belonging
Positive leadership	AA	Servant leadership is practised | Power is well distributed | Progress reflects delivering outcomes and helping others | Leaders act as stewards of culture | Leadership is engaging and trustworthy and trusting | Leadership is inclusive | Employees have a say and are listened to
High performance	AAA	Excellent thinking and process are emphasised | Recruitment has a high bar | Investment performance revered | Accountability for controllable outcomes | Diversity is used to improve decisions | Creativity and innovation are encouraged | Information and knowledge are shared | Decisions are subject to diverse inputs
Integrity and respect	AAA	High ethical standards are practised | Behaviours aligned to values are highly valued | Work life integration is valued | Colleagues are liked and appreciated
Diversity & Inclusion – integrated score	A	Policies on diversity and inclusion are practised and respected | The organisation recognises the principle of doing the right thing in dilemma situations | Public commitments to diversity are upheld and reported on
Overall culture rating	**AA**	***Excellent rating***

3.5 Summary of suggestions and recommendations

	WTW suggestions	WTW recommendations
People model (culture)	▪ Management and the Board could focus more on maintaining and evolving the cultural effectiveness of the Guardians. We believe this should encompass: ▪ Doing further work to pinpoint the Guardians' culture and communicate it; ▪ Developing the cultural differentiation in servant leadership and diversity and inclusion; ▪ Considering the culture involved with balanced decision-making; and ▪ Staying open to fresh perspectives and challenge in an area where new ideas are developing fast. ▪ The Guardians could act to strengthen their diversity, e.g. through observing the experiences of leading peer funds and corporates in order to learn more about mechanisms which allow diversity to work best, in terms of both better outcomes and better culture. ▪ Greater consideration could be given to scenarios as part of the Long Term Target State review by considering changes in the investment "ecosystem", e.g. the evolution of private markets investing, the application of new technologies and the state of capitalism.	▪ The Guardians should review its compensation structure and implementation, to assist with developing a stronger EVP. (We understand that a remuneration review is underway).

4. Investment model

4.1 Statement of Investment Policies, Standards and Procedures (SIPSP)

4.1 Statement of Investment Policies, Standards and Procedures

Terms of reference	WTW observations	WTW commentary

Terms of reference

Evaluation of the appropriateness of the SIPSP

WTW observations

- The Investment Model is covered in three sections: the SIPSP, Ex-ante risk framework and the Responsible Investing framework.
- **WTW's assessment of the Guardians' investment model is AA. This is an excellent result – see page 56 for further detail.**

The SIPSP

- A key document for the Guardians, as required by Section 60 of the Act, is the Statement of Investment Policies, Standards and Procedures (SIPSP).
- Section 61 of the Act outlines policy topics that have to be covered by the SIPSP, but this list is not limiting. The actual content of the policies is left to the Guardians' discretion.
- The policy framework adopted by the Guardians is outlined below. The policies in bold form part of the SIPSP; each policy has an associated procedure document.

SIPSP

Delegations Policy

Risk Management Policy

Great team	Best portfolio
HR Policy	**Investments Valuation Policy**
Diversity & Inclusiveness	**Derivatives Policy**
Travel & Sensitive Expenditure Policy	**Direct Investments Policy**
Communications Policy	**Externally Managed Investments Policy**
Procurement & Outsourcing Policy	**Portfolio Completion Policy & Internally Managed Securities Policy**
	Strategic Tilting Policy
	Investment Risk Allocation Policy
	Responsible Investment Framework

WTW commentary

- In order to create future wealth, organisations need to develop their understanding of what stakeholder value is and to develop policies and procedures that enable them to meet those expectations, in line with their stated mission.
- To achieve this, best-practice organisations build a strong foundation that integrates mission, beliefs, organisational design, culture and robust decision making; they then ensure that all of these components are in sync.
- We believe that the Guardians has a very well-thought-out policy framework.
- However, in addition to the policies needing to be well defined, they must also be embedded within the organisation. We believe that the Guardians has a number of processes, which we discuss on the following pages, to ensure that all the underlying policies and procedures included in the SIPSP are integrated through the organisation.
- On this basis, we believe that the Guardians' policies and procedures are in line with best practice and that they are helpful in enabling the Guardians to achieve their vision of "a great team building the best portfolio".

4.1 Statement of Investment Policies, Standards and Procedures (cont'd)

Terms of reference	WTW observations	WTW commentary
Coverage of the SIPSP	▪ Since the last Independent Review, the Guardians has introduced a Derivatives Policy, an Investments Valuation Policy and a Diversity & Inclusiveness Policy. ▪ The Derivatives Policy was developed in 2015 as a result of a recommendation from the previous review. ▪ The Investments Valuation Policy was also created in 2015 and mirrors much of the detail on valuations that was originally included in the SIPSP. ▪ The Diversity & Inclusiveness Policy was created in 2016 and is part of the Fund's policy framework, but is not part of the SIPSP.	▪ We believe that the additional policies introduced are fit-for-purpose. ▪ We note that the Derivatives Policy and the Investments Valuations Policy increase the alignment of the Guardians activities with Section 61 of the Act, as this specifies that "the use of options, futures and other derivative financial instruments" and "the method of, and basis for, valuation of investments" must be covered. ▪ In addition, the separating out of these policies from the SIPSP increases the consistency of approach with the other policies, with the SIPSP being the overarching policy document that covers the more detailed policies. ▪ While the Diversity & Inclusiveness Policy is not part of the SIPSP (and it is therefore not strictly part of this Review), our view is that its introduction establishes the Guardians' position on these issues, which should have beneficial flow-on effects for the organisation's culture. ▪ Overall we believe that the SIPSP is compliant with Section 61 of the Act – it provides coverage of all of the required topics, as well as additional topics that are relevant.

4.1 Statement of Investment Policies, Standards and Procedures (cont'd)

Terms of reference	WTW observations	WTW commentary
The Reviewer should note areas of non-compliance; as well as highlighting short comings which may present areas of risk for the Fund	▪ The SIPSP is reviewed at least annually, as is required by the Act. As part of this review process, the owner of each policy provides an annual attestation to the Board that the policy is in accordance with the Fund's mandate and remains "current and appropriate." ▪ The majority of the policies underlying the SIPSP are reviewed every five years, with the only exceptions being the Portfolio Completion and Internally Managed Securities Policy and the Investment Risk Allocation Policy, which are both reviewed biennially. ▪ In addition, every six months, all staff complete an online attestation form, confirming that they have read and understood their responsibilities and obligations under any relevant policies, at which time they are given the opportunity to advise of any instances of non-compliance. ▪ Any areas of non-compliance, that could (or did) result in financial loss/gain, reputational damage and/or theft of Guardians' assets or information, are reported in a Learning and Opportunities Report. ▪ Quarterly Learning and Opportunity Summary reports are prepared for the Leadership Team, the Risk Committee and the Audit Committee.	▪ Best practice in this area is that the oversight body should distinguish between monitoring investment activities for compliance with policies, and examining investment activities so as to gain assurance as to the consistency of those activities. ▪ The oversight body should also make sufficient enquiry into the existence, robustness and consistent application of decision making frameworks, so as to reach such assurance. ▪ We believe that the processes that the Audit Committee have in place are in line with best practice. In particular, the process for identifying areas of non-compliance, through the Learning and Opportunities Report, is a robust one. ▪ The current process is heavily reliant on self-reporting and so it is imperative that the Guardians continues to foster an open and inclusive culture. We believe that the purpose-driven element that underpins the Guardians' culture, alongside their "no surprises policy", does help to create a culture where honest self-reporting is likely to be achieved. ▪ We note though that there are a number of policies which are quite detailed and lengthy. In the most recent culture survey results, a common theme about what people liked least about working at the Guardians is the heavy focus on process and policies. While it is clear that these are important, a rigorous compliance process can act to stifle creativity and make innovation more difficult. ▪ Management is currently developing an action plan based on the results of this survey, with one work stream reviewing the approach to compliance. ▪ As part of this review, <u>we suggest</u> the Guardians considers whether the current level of rigour in the compliance process is having an undesired side effect of stifling creativity.

4.2 Ex-ante risk framework

4.2.1 Portfolio construction approaches

Introductory remarks

WTW observations

- The investment model is the end-to-end process that comprises all of the thinking and processes that result in the final portfolio. It includes an organisation's investment beliefs, a framework for thinking about risk, a portfolio construction process, systems and portfolio implementation.
- In this section of the report we assess the quality of the Guardians' investment model. But as portfolio construction is a key component, we first provide some introductory comments on this aspect.
- The Guardians' approach to portfolio construction can be described as following a Total Portfolio Approach (TPA). TPA has a number of defining characteristics that contrast it with more traditional Strategic Asset Allocation (SAA) based approaches:
  - TPA is more focused on achieving the goals of the fund, rather than outperforming the SAA or policy portfolio;
  - There is greater delegation to the Management team to manage the portfolio, subject to a risk budget set by the Board; and
  - There is a more dynamic capital allocation process, focused on getting the most attractive investment opportunities into the portfolio, all the time.
- We believe that a TPA that is done "well" offers a number of advantages over SAA-based approaches (we estimate an additional return in the region of 50-100 basis points p.a.).

WTW commentary

- Because TPA is a relatively new concept, there isn't a single "best" approach to employing it; instead most portfolio construction approaches end up reflecting the organisation's own governance and people models. As a result there is a spectrum of approaches possible, which include positions on a number of elements as outlined below:

	SAA	TPA
Performance assessed vs.	Benchmarks	Fund goals
Success measured by:	Relative value added	Total fund return
Opportunities for investment defined by:	Asset classes	Contribution to total portfolio outcome
Diversification principally via:	Asset classes	Risk factors
Asset allocation determined by a:	Board-centric process	CIO-centric process
Portfolio implemented by:	Multiple teams competing for capital	One team collaborating together

- The Guardians has been an innovator in the area of portfolio construction and a leader in the adoption of a TPA. Elements of its process which mark it out as a leader include its use of a reference portfolio, the well-thought-out risk budgeting framework, its long time horizon and the incorporation of sustainability into processes.
- Whilst the Guardians was an early adopter of a TPA, and has led innovation in this area more generally, it is our assessment that the rate of innovation in its approach has slowed. We note that this may be intentional, as the last Independent Review in 2014 recommended a period of consolidation, following a period of significant change.
- The combination of adopting a high risk profile (through the use of an 80% equity reference portfolio) and a TPA that has added relative value to the reference portfolio, has resulted in very strong returns for the Fund (we comment further on the Fund's ex-post performance in Section 5).

4.2.2 Reference portfolio

Terms of reference	WTW observations	WTW commentary (1)
Relevance of reference portfolio *WTW to form an opinion on:* *i) its composition & use as a benchmark* *ii) the empirical framework used*	▪ The use of a reference portfolio as the starting point in the Guardians' portfolio construction process is well established. ▪ The manner in which it is used by the Guardians promotes effective governance via a clear delineation of responsibilities between the Board and the Management team. ▪ The Guardians' view that the reference portfolio should be sufficient to meet the terms of their mandate (as set out in Section 58 of the Act) ensures that the Board is deeply engaged in the choice of the most appropriate risk profile. It also means that the Management team is then clearly responsible for build out of the actual portfolio and their value-add can be clearly measured. ▪ The Management team makes a recommendation to the Board as to the most appropriate reference portfolio – we wonder if this creates an "anchoring bias" which then makes it more difficult for the Board to change the Fund's risk profile. We suggest that the Board confirms whether it is comfortable with the Management team making a recommendation on the choice of the most appropriate reference portfolio. ▪ Detailed aspects of the construction of the reference portfolio were described in the review carried out by the Guardians in 2015; and we note that the reference portfolio is due to be reviewed again in 2020.	**Reference portfolio – design principles** ▪ We note that one of the design principles for the reference portfolio is that it should be "*a simple and low cost portfolio that the Guardians could implement passively".* ▪ There is a trade-off between keeping the reference portfolio simple (i.e. limited to a small number of liquid asset classes) and increasing the number of asset classes to reflect the greater number of investment opportunities now available in passive or semi-passive form (i.e. to reflect greater opportunities for diversification). On balance, we agree with the Guardians' preference for a simple reference portfolio. ▪ However, there are a few aspects that we suspect will require careful consideration as part of the upcoming review, particularly in view of the expected increase in the size of the Fund over the next 5 to 10 years: *i.* *Separate allocation to NZ equities* – in the 2015 review, the Guardians concluded that a 5% overweight to NZ equities was appropriate, as this was consistent with the Ministerial directive "to seek and consider New Zealand investments". This approach seems both sound and pragmatic to us; we can see good reasons to continue to have an allocation to NZ equities in the reference portfolio given the Ministerial directive. *ii.* *Fully hedged to NZ dollars* – in the 2015 review, the Guardians concluded that the reference portfolio should remain 100% hedged. There are two reasons why the case for a 100% hedged portfolio may now be weaker – as the Fund increases in size, the potential liquidity impact of a fully hedged portfolio may have more of an impact on the Fund's flexibility in a stressed market environment; and secondly the expected risk premium for hedging overseas assets to NZ dollars may be lower, even under very long-term assumptions. We suggest that the case for a 100% hedged portfolio be reviewed.

4.2.2 Reference portfolio (cont'd)

Terms of reference	WTW commentary (2)	WTW commentary (3)
Relevance of reference portfolio *WTW to form an opinion on:* *i) its composition & use as a benchmark* *ii) the empirical framework used*	**Reference portfolio – design principles (cont'd)** ▪ The decision to exclude stocks with a large carbon footprint from the reference portfolio represents a departure from the "simplicity" principle described previously, but given the Board's view that climate change represents an "undue risk" to the Fund (and is therefore in conflict with their mandate), we think that the approach taken by the Guardians on this issue is appropriate, even though it does result in a more complex reference portfolio. ▪ In summary, we believe that the current use of the reference portfolio by the Guardians is suitable as the basis for determining the risk profile of the Fund and its use complements their strong governance arrangements. We support the simplicity principle used in the construction of the reference portfolio and believe that it forms an appropriate benchmark for the evaluation of the value added by the Management team.	**Reference portfolio – empirical framework** ▪ We note that another design principle of the reference portfolio is that it should "*be an equilibrium construct*", and so long term, equilibrium risk and return assumptions are used in the analysis of different possible reference portfolios. Given the very long-term nature of the Fund and the difficulty of forecasting returns over even medium-term horizons, we believe that this approach is appropriate. ▪ In our view, the approach taken by the Management team to deriving the risk and return assumptions used is sound. We note that even with a long-term horizon in mind, different organisations with skilled investment teams will have different asset class assumptions. ▪ We believe that the Guardians' assumptions are within a range that we would consider to be reasonable. We do note that their long-term cash (risk-free) rate assumptions are generally higher than those currently implied by the bond markets; given the possibility of structurally lower interest rates globally, <u>we suggest</u> that this again receives attention as part of the reference portfolio review in 2020. ▪ The Guardians' estimate of the cost of managing the reference portfolio (25 basis points) seems reasonable to us. We note that approximately half of this cost reflects the estimated impact of implementing the necessary currency hedges; and whilst this is more than offset by the Guardians' estimate of the risk premium from hedging offshore assets back to NZ dollars; we believe that this adds weight to considering whether a fully hedged portfolio is still likely to represent the "optimal" position for the reference portfolio in the future.

4.2.3 Risk budgeting

Terms of reference	WTW observations	WTW commentary
Evaluation of the risk allocation and budgeting process	▪ Once the reference portfolio has been determined, the Management team then has the task of building a "better" portfolio, that aims to deliver a higher return than the reference portfolio, subject to constraints in terms of how much risk can be taken (both active risk, measured relative to the reference portfolio and overall risk measured in absolute terms). ▪ Volatility is the principle measure of risk used, both for individual investment opportunities and for the portfolio in aggregate. ▪ The Guardians utilises five different risk baskets (in each of which broadly similar investment opportunities are grouped); the Management team then uses a risk budgeting process to allocate risk across the different risk baskets and then to individual opportunities within each risk basket. ▪ We note the Board's role in setting the size of the overall active risk budget, as well as the setting the risk limit for strategic tilting, which is by far the largest component of the active risk budget.	▪ We believe that the risk budgeting process is based on sound principles and is very well thought through. An impressive aspect of the process is that it enables a common framework to be used to allocate risk both at a high level (to each of the risk baskets) and then to individual opportunities within each basket. ▪ Whilst the process is quite structured in its design (the Guardians effectively pre-commits to taking on more risk as opportunities become cheaper / more attractive), it effectively incorporates the Management team's judgement on the relative attractiveness of different opportunities, as well as reflecting the Guardians' beliefs and endowments. ▪ We note that the use of volatility as the main risk measure does enable a consistent approach to be used in allocating risk across all investment opportunities. Whilst risk is multi-faceted and cannot be fully captured in a single metric, the Guardians' approach is not overly reliant on volatility as the risk measure – their approach does capture "softer" issues, such as their level of conviction in the opportunity and confidence in their risk and return assumptions. ▪ In addition, the risk budget teams are comprised of staff drawn from a number of investment teams, which helps to ensure that different perspectives are brought in to the risk budgeting process. This also helps to reinforce the Guardians' collaborative culture. ▪ We note that the level of active risk taken over the past 4½ years has been below the Fund's budgeted level of 3.9% and well below the upper limit of 8%. Whilst this may reflect the Guardians' risk budgeting approach, as well as the lack of attractive opportunities, we do wonder whether it will be difficult for the Fund to attain its budgeted level of active risk over the longer term, particularly given the possible decline in the attractiveness of some of the active opportunities previously pursued, as the Fund increases in size.

4.2.4 Actual portfolio construction – risk proxy system and diversification

Terms of reference	WTW observations	WTW commentary (1)
Evaluation of the risk allocation and budgeting process	▪ By design, given the Guardians' choice of a high risk profile, the reference portfolio is dominated by equities – based on the Guardians' own estimate, equities make up over 95% of the risk (variance) of the current reference portfolio. ▪ In building out the actual portfolio, the Guardians uses a risk proxy system to determine the ideal combination of listed equities and bonds in the reference portfolio that are effectively sold to fund the new investment opportunity. ▪ The aim of the proxy system is to keep the Fund's overall risk level broadly the same as that of the reference portfolio and to provide an appropriate performance benchmark for the new investment. ▪ Through the use of the risk proxy system, the actual portfolio adopted is similarly dominated by equity market risk and whilst there is undoubtedly diversification of security specific risk, the actual portfolio that is implemented also has a very heavy reliance on a single risk factor[1] and so cannot be described as being diversified on this basis. ▪ We note that in the past, the Guardians has carried out a decomposition of the actual and reference portfolios into different economic risk factors and that this has included a consideration of the economic environments in which the portfolio is expected to perform differently to their central expectations. 1. *We would ascribe this to an "equities" risk factor, but we note that there is no single approach to identifying risk factors; other organisations may ascribe equity exposure to a "corporate risk" factor or an "economic growth" factor.*	▪ WTW has separately carried out a detailed review of the risk proxy system, in which we concluded that it is fit-for-purpose and that it broadly achieves its intended aim. ▪ As part of that review, we suggested that the Guardians considers the use of an expanded risk factor model (i.e. one that extends beyond just equities and bonds) to better capture the common risks that often exist in private market assets. We acknowledged that, in the context of that review and based on how the risk proxy system is currently used, an expanded factor model is only likely to result in material differences in the choice of risk proxy weights and overall portfolio risk estimates, if the Fund has larger allocations to private markets opportunities than is currently the case. ▪ However, we note that a feature of some other asset owners who have adopted a Total Portfolio Approach, as well as WTW's own approach, is a greater focus on allocating to risk factors as a means of ensuring greater levels of diversification at the total portfolio level. ▪ This is because we believe that risk factors are a primary determinant of overall portfolio risk and so considering a portfolio's exposure to the main risk factors provides additional and useful information on the effective level of portfolio diversification achieved.

4.2.4 Actual portfolio construction – risk proxy system and diversification (cont'd)

Terms of reference	WTW commentary (2)	WTW commentary (3)

Evaluation of the risk allocation and budgeting process	▪ Because the Guardians' existing approach to building the actual portfolio has worked well, there is a natural tension in continuing to adhere to this approach and questioning whether alternative approaches would work better in the future (e.g. a portfolio which is less reliant on equities and which has a greater exposure to other risk factors).
	▪ The difficulty in considering the merits of alternative approaches is exacerbated by the fact that the Guardians' approach is deliberately designed to capture the benefits of their long time horizon; and it is expected that over some periods their approach will not perform well.
	▪ It is clear that the Guardians is well aware of other portfolio construction approaches and that they are comfortable with their current approach. However, it is worth reiterating that the past decade has been a very good one for all asset classes, particularly for equities and equity-like assets[1]. It is our view that the coming decade will not be nearly as positive for equities (or for other asset classes).
	▪ Whilst it is by no means clear that a different portfolio construction approach would result in better returns (especially when measured over a long time period), it is our belief that an approach that uses more a balanced exposure to risk factors is likely to result in a "smoother" ride (i.e. less intra-horizon volatility). In addition, we believe that more diverse portfolios are more "robust" to an uncertain future, as they are less reliant on an ex-ante views of the world unfolding.
	
	1. *On one estimate, the excess returns (over cash) for an 80/20 reference portfolio for the decade ending 31 March 2019 were the highest of all 10 year excess returns for such a portfolio since 1970. Source: Bridgewater Associates.*
		▪ We note that the application of such an approach to the Guardians' portfolio would most likely result in swapping equity risk for other types of risk (e.g. illiquidity risk, term risk, inflation risk, manager skill, etc.)
		▪ The specific factors that could be targeted would depend firstly on the risk factors that the Guardians believes exist and then on the investment opportunities that are considered to be most attractive at a given point in time.
		▪ There are a number of reasons why the Guardians may choose not to adopt a more diverse portfolio (in terms of greater exposure to other risk factors). These include:
		  ▪ The Guardians may have a different belief on the merits of adopting greater portfolio diversity vs. the current approach;
		  ▪ The Guardians' long time horizon (and investment beliefs) may justify a continued large exposure to the equity risk premium as the primary basis for achieving their mandate.
		▪ Nevertheless, we do see merit in making greater use of a risk factor framework as an additional "lens" through which to view the portfolio and for helping to assess what investment opportunities are likely to result in greater levels of diversification. Therefore, <u>we recommend</u> greater use of a risk factor framework to assist with portfolio construction decisions.

4.2.5 Actual portfolio construction – scenario analysis

Terms of reference	WTW observations	WTW commentary
Evaluation of the risk allocation and budgeting process	▪ Scenario analysis forms an important aspect of the reference portfolio review and is also used to assess the expected performance of both the reference and actual portfolios under a number of different economic scenarios. ▪ We note that scenarios likely to have the most negative impact on the Fund are those in which equities are expected to perform poorly (e.g. due to a period of sustained high inflation; or a decade of low / disappointing economic growth in the developed world). ▪ The Guardians is very aware of the dangers of scaling back or unwinding its portfolio approach at the worst possible time (e.g. by reducing their risk profile after a large equity market drawdown) and has taken steps to inform stakeholders of the risks involved in the current portfolio. This has involved carrying out a stress test of the Fund which involves a re-run of the effects of the GFC on the portfolio and also carrying out a detailed analysis of the tail risk outcomes for the Fund under such a scenario. ▪ However, we note that with the benefit of hindsight, it is known that whilst the effects of the GFC were particularly severe, equity markets did rebound fairly quickly and sharply and so the "pain" experienced was relatively short lived.	▪ The continued success of the Fund's existing approach is reliant on maintaining a long-term view in the face of short term pressures. Other than during the GFC, there has not been a long period of time in which the Fund's approach would have come under prolonged scrutiny and questioning. ▪ Given the Fund's large reliance on the performance of equities, coupled with the fact that in a large equity market drawdown, the actual portfolio may initially perform worse than the reference portfolio (due to the strategic tilting program which is likely to increase the weighting to equities as they become cheaper), we believe that there is merit in continuing to explore other scenarios in which the Fund's approach could come under greater scrutiny and questioning. ▪ We recommend greater use of reverse stress testing or "pre-mortems" (see Thinking Ahead Institute, 2018 on better decision making), in which capitulation of the current approach is pre-imagined, along with the identification of a small number of scenarios that are most likely to result in this occurring. This can lead to the identification of actions which can be taken to help manage through such situations and to help prevent such capitulation actually taking place.

4.2.6 Strategic tilting

Terms of reference	WTW observations	WTW commentary (2)
Evaluation of the risk allocation and budgeting process	▪ In our experience, a large risk allocation to strategic tilting is unusual amongst asset owners, as this tends to be a difficult area to consistently add value in. ▪ However, the Guardians' tilting programme has performed very well, achieving returns well above expectations (1.1% p.a. since inception to 31 March 2019 vs. an expected return of 0.4% p.a.). ▪ Views on equity markets appear to have been the significant contributor to the programme's returns (based on the attribution analysis that we have seen, equities have delivered 0.9% p.a. since inception of the programme to 31 March 2019). **WTW commentary (1)** ▪ We think that the construction of the strategic tilting programme is sound – it is designed to reap the benefits of the Guardians' belief in mean reversion in asset class returns and to exploit the Fund's endowments. ▪ The programme has many positive features – it operates in "real time", it has been structured so that it is implemented fairly systematically, it is relatively easy to understand and aligns well with the Fund's long time horizon. ▪ We do note though that, at least based on ex-post returns, the programme seems to rely more heavily on the reliability of mean reversion in equities than in other asset classes. Whilst this may reflect the Management team's greater degree of conviction in their ability to add value in this area, we do think it is worth pursuing greater breadth in the tilting programme, as has been the case with the recent introduction of commodities. ▪ Given the propensity for active returns to mean revert, it would not be a surprise if at some point the tilting programme delivers lower than expected returns.	▪ It is our understanding that the risk limit for strategic tilting (currently 6.9%) was determined, at least in part, by considering the broad ranges that were previously allowed around the reference portfolio. <u>We emphasise</u> the importance of periodically reviewing the Board's level of comfort with such a limit being attained (notwithstanding that it is only likely to occur in extreme circumstances.) ▪ <u>We suggest</u> that the Board confirms that it remains comfortable with the proportion of its total active risk budget allocated to the strategic tilting programme relative to the other value-adding activities carried out by the Guardians, taking into account the level of breadth of the programme and the degree of skill required to add value in this area. ▪ We provide some further suggestions for the Guardians to consider as potential areas for improvement, but note that we have not reviewed their approach to strategic tilting or models in detail: i. Given the use of long-term, equilibrium assumptions in the valuation models, and the common use of a discounted cash flow framework in all of the valuation models, <u>we suggest</u> that consideration be given to whether the terminal cash rates for developed countries are likely to be structurally lower than is currently being assumed. ii. <u>We suggest</u> that the Guardians considers whether the ex-post returns to date are consistent with its ex-ante beliefs on the reliability of mean reversion in the different asset classes used in the programme.

4.2.7 Portfolio completion and liquidity management

Terms of reference	Portfolio Completion – WTW observations	Liquidity management – WTW observations
Evaluation of the risk allocation and budgeting process	▪ The Portfolio Completion team is responsible for carrying out a number of functions related to the efficient implementation of the actual portfolio and the management of liquidity. ▪ The team also manages and implements a number of value-adding strategies, principally related to funding and treasury activities.	▪ The Liquidity Replenishment System (LRS) is used to monitor fund-wide liquidity and, when necessary, trigger the liquidation of value-add activities to replenish liquidity. ▪ The LRS is complemented by the Liquidity Management Framework, which facilitates meeting the fund's shorter-term liquidity requirements by management of the internally managed Collateral Pool.
	Portfolio Completion – WTW commentary	**Liquidity management – WTW commentary**
	▪ A feature of leading asset owners, particularly those who are advanced in applying a Total Portfolio Approach, is the existence of a skilled internal capital markets team that is responsible for implementing the portfolio and adjusting the market exposures cost-effectively and timeously when necessary. This will often involve the use of derivatives. ▪ In our assessment, the Guardians has strong capabilities in these areas and based on our relatively high level assessment, we do not see any obvious weaknesses or areas for improvement. ▪ We note that the team implements a number of value-adding strategies that are quite sophisticated in terms of the opportunities that they are seeking to capture, and which therefore do require the requisite in-house skills to be able to generate positive returns from these activities. ▪ It appears to us that the Guardians has a robust process for monitoring and assessing the attractiveness of these opportunities. We would however question the materiality of the contribution of some of these activities to the overall active return as the Fund continues to grow in size. We understand that these considerations are part of the Long Term Target State review.	▪ As with other aspects of the Guardians' investment process, the Liquidity Management Framework is well-thought-out and is impressive in its scope and level of detail. ▪ We agree with the approach taken to assess both the sources of available liquidity and the demands for liquidity under different levels of market stress (in terms of the severity of market shocks); with the main output being an assessment of the resulting liquidity profile of the Fund. ▪ We also agree that a key use of the liquidity management framework is to assess the Fund's flexibility to be able to respond to opportunities in stressed market environments and the extent to which existing assets need to be sold down to provide necessary liquidity. ▪ The Guardians has used an extensive programme of stress tests, that have examined the impact of stressed market conditions on the liquidity of the Fund, including the Guardians' ability to trade with different market counterparts. We emphasise the on-going importance of carrying out such tests and ensuring that the learning outcomes from these are clearly communicated to the team. ▪ We see no obvious areas for improvement in the management of liquidity.

4.2.8 New Zealand investments

Terms of reference	WTW observations	WTW commentary
Evaluation of the risk allocation and budgeting process	▪ We note that as at December 2018, investments in New Zealand made up approximately 13% of the actual portfolio by economic exposure (which takes derivative exposure into account) vs. 5% of the reference portfolio. ▪ Investments in New Zealand comprise listed equities and direct investments in a number of different types of unlisted asset, including forestry, rural land, privately equity and privately held companies.	▪ The rigour and level of detail applied to considering domestic assets is impressive. Investment opportunities are carefully assessed to ensure that they align with the Guardians' endowments and investing approach. ▪ In addition to pursuing opportunities for their commercial benefits, there does appear to be a strong desire to source new opportunities and to provide capital to those entities that will ultimately produce benefits for the wider New Zealand community. ▪ It is our assessment that the Guardians is effectively allowing for the Ministerial directive to actively seek and consider New Zealand investments; whilst also complying with the terms of their investment mandate. ▪ It was noted by the Guardians that as the Fund continues to grow in size, it will become more challenging to maintain the same percentage allocation to New Zealand. We note that consideration of issues such as this forms part of the Guardians' Long Term Target State review.

4.3 Responsible investing

4.3.1 Mainstream responsible investing practice

Terms of reference	WTW observations	WTW commentary (1)

Assessment of the Guardians' RI Framework
 	
RI thinking and action
 	
RI resourcing
	▪ As a general observation, there is a lack of clarity and consistency around definitions and framing of issues in this area, as terms are not consistently applied in the industry. The Guardians uses the term Responsible Investing (RI) to describe the spectrum of issues concerning ESG and active ownership, extending into sustainability and so we use that term throughout this report.
	▪ It is a combination of the Act and the Guardians' beliefs that make RI a key part of the Guardians' investment model.
	▪ The Guardians' philosophy is that: "*Identifying and managing ESG factors helps us to find new opportunities, steer our capital towards more attractive areas, and manage long-term investment risks. We expect that our returns will be higher, and downside risks lower, over the long term.*"
	▪ The framework adopted aligns to the PRI framework and the Guardians has reported on their RI activities relative to the PRI since their establishment in 2008.
	▪ We observe that the Guardians shows a consistency with the Act and its mission in their RI policies and practices. This accords with the findings of the previous two Independent Reviews in 2014 and 2009.
	▪ <u>We emphasise</u> that to maintain its responsibility under the Act and the Fund's social and political "licence to operate", the Guardians attention to reputation management must be continued and evolved.
	▪ The resourcing of the Guardians' RI activities is ultimately a judgement that concerns hard-to-measure benefits being compared with easier-to-measure costs. This consideration was raised in the Long Term Target State review where the potential need for future additional resources was flagged.
		▪ The Guardians' current approach to ESG integration and stewardship is impressive and, in our view, aligns with best practice in these activities:
		  ▪ Exclusions (where reputation issues are concerned);
		  ▪ Management of climate risk through carbon footprint;
		  ▪ Voting and engagement (where universal owner principles can be applied); and
		  ▪ Use of the BMO engagement overlay (where BMO is employed as an engagement service provider and the Fund's holdings are put alongside other BMO client holdings to benefit from network influences).
		▪ However RI is a developing area with positive momentum and so there is a need for the Guardians to continue to evolve and innovate to maintain their position as a leader in this area.
		▪ <u>We recommend</u> that more resources are needed to focus on RI issues. We particularly have in mind the following areas where additional resources would be value-enhancing for the Guardians:
		  i. The desirability for deeper analysis of sustainability and longer-term portfolio themes;
		  ii. The development of greater understanding concerning portfolio impacts and additionality from voting and engagement;
		  iii. Extensions to the positive investing category with consideration of how any trade-offs may be managed;
		  iv. The mapping of the portfolio impacts to the Sustainable Development Goals (SDGs), incorporating deeper consideration of data in the ESG field (where the quality and quantity of data is developing rapidly);
		  v. More significant commitments to thinking around specific aspects of climate change.
		▪ We note that most of these items have been identified by the Guardians for research coverage in the next two years.

4.3.1 Mainstream responsible investing practice (cont'd)

Terms of reference	WTW commentary (2)	WTW commentary (3)
Assessment of the Guardians' RI Framework *RI impacts*	▪ We amplify the previous recommendation in the points below. ▪ We recommend that the Guardians' thinking on RI and long horizon investing should be deepened. We view RI as a critically important emergent subject in which the combinations of transformational change from technology, energy, environment and social change will lead to assets being strung out in a spectrum from "winner takes all" to "stranded". We believe the Guardians can be better positioned to exploit this thinking. ▪ While voting is important, it can be difficult to have an impact through voting. It follows that going forward the Guardians needs to consider the degree to which it can make a clear difference, as opposed to just doing the right thing. ▪ The Guardians needs to measure its impacts more fully and identify the "additionality" in its actions (whether the Guardians has made a clear and positive difference to a company). Impact will come from whether a company does something "better". Collaboration with other asset owners is more likely to create the conditions for such change. ▪ We recommend that further work should address the alignment of the Guardians' beliefs, values, intentions and actions with the outcomes achieved. For example, the recent Facebook, Google and Twitter engagement process can be cited as a case where the Guardians is seeking to achieve positive outcomes in line with intentions that would have not happened without these actions (i.e. "additionality" exists). ▪ There are two overlapping motivations which need to be carefully factored into the Guardians' investment arrangements – financial and extra-financial motivations. The Guardians has approached the financial motivations objectively and accurately.	▪ The Guardians has more issues with extra-financial objectives and situations where there are financial and extra-financial considerations, and a balance may have to be struck. ▪ We recommend extending the consideration of positive investing in this regard. Alongside the investment case, there are portfolio impacts that positive investing is designed to secure. In this respect there may be trade-offs that need to be managed. ▪ We recommend one further area for additional attention is consideration of how the impacts of the portfolio and the Guardians' ownership actions align to the SDGs. Leading asset owners have started to address this area and the Guardians has identified this as an area for attention to develop their thinking and policies. We understand the SDGs will be considered in the Guardians' strategy for the forthcoming year. ▪ We note again that the concept of best practice is an evolving area. Currently, wider responsibilities and expectations of asset owners globally are developing, and the Guardians will need to evolve alongside its peers in response to this. ▪ As a general pattern, peers are giving increasing time to external stakeholder management issues. This is being driven by increasing public consciousness of the importance of the large sums of capital at stake. Maintaining the Guardians' social and political licence to operate is important to its continued success. ▪ The current resourcing does extend beyond the specialist RI team, by accessing the wider Guardians' teams – both investment and non-investment, external RI and ESG specialists and data providers. However the considerations outlined above are time consuming and resource hungry and so we believe they warrant a step up in resourcing.

4.3.2 Climate change

Terms of reference	WTW observations	WTW commentary (1)
Assessment of the Guardians' RI Framework *Climate risk exposure and management*	▪ The Guardians has suggested that its investment goal is a portfolio more resilient to climate-related risks. ▪ This is linked to the belief that climate risk should be seen as an "undue risk" to the Fund and one that should be managed in accordance with the Guardians' mandate to avoid undue risk. ▪ The key belief is captured in the idea that climate change is a market and policy failure in which carbon risk is under-priced, partly because the time horizon over which the effects will materialise is too long for most market analysis. ▪ In response to climate risk, the Guardians has adopted four work streams to "Reduce, Analyse, Engage (through active ownership) and Search" (to seek new opportunities, for example in renewable energy) as part of the overall climate change investment strategy. These work streams are consistent with a large commitment to responding to climate risk and RI in its broadest sense. ▪ Under the "Reduce" strand of the climate change investment strategy, the response is to position the portfolio to have a lower carbon footprint. The commitment to lower carbon is captured in the reference portfolio which is consistent with the Board's view that carbon is an "undue risk", so the opportunity set in global equities should reflect a lower carbon position than the market-weighted portfolio. ▪ The Guardians worked with their index provider, to create the tilts in the benchmark and underlying portfolio to lower the carbon footprint. The approach was an innovative one that produced tangible reductions in the Fund's carbon footprint. But there are limitations to the data available from public corporations that makes the management of carbon footprint approximate, while the data remains fundamentally uneven and incomplete.	▪ We commented earlier on the issues arising from introducing more complexity into the reference portfolio. On balance, we believe the Guardians' position of excluding securities with a large carbon footprint from the reference portfolio is a pragmatic one. ▪ The subject areas of climate, climate risk, the energy transition and resource degradation are developing. These are areas where assets have the potential to be disrupted or stranded, requiring much deeper and longer term views about risk than were previously required. ▪ We support the current thinking that leads to the Guardians' view that carbon risk is under-priced, but stress the dynamism that characterises sustainability issues. ▪ We recommend that the Guardians should continue to analyse the pricing of climate risk, recognising that the pricing of risk is something that is a continually changing element of the investment landscape, subject to supply and demand influences. ▪ These considerations are particularly important given the review of climate change investment strategy targets that are scheduled to take place in the next year. ▪ The Guardians should also continue to address the issue of data in the area of climate change. The data available to understand the climate impacts and strategies of leading companies and other investments, while improving all the time, is still uneven. We emphasise the need for the Guardians to evolve their research and data platform, including additions to the use of third-party research that is complementary to their internal capabilities.

4.3.2 Climate change (cont'd)

Terms of reference	WTW commentary (2)	WTW RI assessment (2)

Assessment of the Guardians' RI Framework
 	
Climate risk exposure and management
	▪ This attention to RI themes should include interventions, that are aimed at changing the circumstances surrounding critical assets where they are opposed to the Guardians' interests. The underlying philosophy here is that a universal owner sees that the returns it desires will only come from a system that "works"; as a consequence they try to adopt positions that result in change, working alongside other like-minded investors.
	▪ We identify a growing trend among the large and leadership-minded asset owners to exercise universal ownership principles (see Urwin 2010). We emphasise the Guardians should give more attention to possible actions in this regard.
	▪ We recommend increases to the Guardians' resources to address RI areas in general and climate risk in particular.
	▪ We suggest the Board should be assigning greater time to RI strategic dialogue and oversight of Management's actions.
	
	WTW RI assessment (1)
	
	▪ The overall assessment of the Guardians' Investment Model – shown in the following sub-section – includes two items that are related to RI.
	▪ Our assessment of a fund's RI capabilities follows from a review of the best-practice attributes, shown on the right-hand side.
	▪ These lead to the following assessment of the Guardians' capabilities:
	  ▪ On integrated RI: **AA – an excellent rating**
	  ▪ On ownership activities: **AA – an excellent rating**
		▪ Assessment of attributes on overall RI governance:
		  ▪ Mission incorporates longer-term consideration of intergenerational issues;
		  ▪ The organisation recognises some stakeholder responsibility in its mission;
		  ▪ Beliefs are broad in recognising multiple strands and deep in recognising complex endogenous features;
		  ▪ The time horizons for decisions as applied by Board and the CIO reconcile short- and long-term considerations;
		  ▪ There is constant focus across the fund on reconfirming beliefs positions subject to new facts and perspectives; and
		  ▪ Management and Board have deep domain investment knowledge, are probability competent, have sustainability understanding and recognise interconnections.
		▪ Assessment of attributes on integrated RI:
		  ▪ Beliefs on extra-financial factors (ESG) assess their influence on values and risk over extended time periods and are an integrated part of investment analysis;
		  ▪ Risk budget formulation includes ESG beta and alpha elements;
		  ▪ Active manager line-up reviews sustainability characteristics of managers with respect to alignment, beliefs, fees and turnover;
		  ▪ There are clear intentions set out for integrated actions;
		  ▪ Full disclosure of integration actions; and
		  ▪ Full compliance with PRI principle 1.
		▪ Assessment of attributes on ownership RI activities:
		  ▪ Beliefs on the active use of ownership rights are considered and acted upon in the context of the manager's philosophy;
		  ▪ The organisation recognises the links between the actions of its investee companies and the consequences for its beneficiaries through universal ownership;
		  ▪ Network effects are exploited to create first-mover advantages;
		  ▪ There is demonstration of the additionality in impacts;
		  ▪ Full disclosures of ownership activities; and
		  ▪ Full compliance with PRI principle 2.

4.4 Investment model – summary

4.4.1 Assessment of the Guardians' investment model

- We have used a model-based approach to assess the quality of the Guardians' investment approach.
- This approach is based on research (see Unger & Urwin, 2019) to build a view of the major attributes of the Guardians' investment approach, referencing 10 factors that make up an asset owner's investment model.
- We compare the Guardians with a peer group of approximately 100 asset owners globally, with AUM above US$30 billion and a FTE investment professional staff above 30.
- The AAA and AA ratings correspond *approximately* to international best practice. We stress that it is not possible to benchmark these qualitative concepts objectively and a degree of subjectivity is necessarily present. Please refer to the Appendix for further detail on how to interpret these ratings.

Factor	Rating	WTW comments on gaps
An integrated portfolio construction process in which the best investment ideas are captured in the portfolio, referencing the quality of the idea and organisation's comparative advantages	AAA	
Incorporation of a framework for the effective allocation of the total risk budget at any point in time, that enhances value creation over the long term	AAA	
Incorporation of factor exposures into the fund's risk framework, that assists in building a more diversified portfolio (assessed by exposure to different risk factors)	A	*The Fund is very reliant on equities; it could make greater use of a risk factor framework to assist with identifying opportunities that result in greater portfolio diversification.*
Liquidity is understood, measured and managed efficiently, both from a demand and supply point-of-view	AAA	
Integrated approach to measurement and reporting, with attribution and narrative across the key inputs and outcomes	AA	
The presence of long-horizon investing *skillsets* (to capture risk premia) and a long-horizon investing *mind-set* (to implement long-horizon investing under short-term stress)	AA	
Financial and extra-financial factors fully integrated into portfolios, reconciling wider stakeholder and time horizon pressures	AA	
Effective implementation of stewardship, engagement and active ownership, singly or through delegations or collaborations, dependent on comparative advantage	AA	
An effective process for sourcing new ideas and approaches from multiple sources	AA	
The ability to adjust the portfolio's market exposures cost-effectively and time-sensitively, in order to capture market opportunities or to reflect changes in risk appetite	AAA	
Overall investment model rating	AA	***Excellent rating***

4.4.2 Summary of suggestions and recommendations

	WTW suggestions	WTW recommendations
SIPSP	▪ Consider whether the current level of rigour and detail required in the compliance and attestation process is having the undesired effect of stifling creativity.	▪ None.
Ex-Ante Risk Framework	**For the Board:** ▪ Consider whether the Board remains comfortable with the Management team making a recommendation on the choice of the most appropriate reference portfolio. ▪ Confirm that the Board remains comfortable with the proportion of the active risk budget allocated to the strategic tilting programme relative to other the value-adding activities carried out by the Guardians. **For Management:** ▪ Review the long-term cash rate assumptions as part of the next reference portfolio review. ▪ Review the case for having a 100% hedged portfolio as part of the next reference portfolio review. ▪ Consider whether the ex-post returns to date are consistent with the Guardians' beliefs on the reliability of mean reversion in the different asset classes used in the strategic tilting programme.	▪ Make greater use of a risk factor framework, as an additional lens through which to view the portfolio and for highlighting diversification opportunities. ▪ Make greater use of reverse stress-testing or "pre-mortems" in helping to develop responses that would prevent capitulation of the current portfolio construction and active risk approach, under a small number of extremely adverse (but plausible) scenarios.
Responsible Investing	▪ The Board assigns greater time to strategic dialogue on RI issues and the oversight of Management's actions.	▪ Allocate more resources to focus on RI issues. We have outlined a number of areas where we believe additional resources would be value-enhancing for the Guardians.

5. Ex-post performance review

5.1 Evaluation of ex-post performance

Terms of reference	WTW observations	WTW commentary

Terms of reference

Evaluation of ex-post performance including:

- *Drivers of returns*
- *Role of value-adding strategies*
- *Use of leverage & derivatives*

WTW observations

- The Fund's performance to 31 March 2019 is shown below:

As at 31 March 2019	Since inception[1]	Last 5 years
Fund return (p.a.)	10.1%	11.6%
Reference portfolio return[2] (p.a.)	8.6%	9.1%
Value added (p.a.)	1.5%	2.6%
Value added ($bn)	$8.16	$4.49
Long term expectation[3] (p.a.)	6.5%	5.0%
Value added (p.a.)	3.7%	6.7%

Notes:

Returns are after costs, before NZ tax.

1. September 2003
2. The reference portfolio was introduced in July 2010. Comparisons prior to this date are against the Fund's SAA model.
3. Treasury Bill return + a margin (currently 2.7%)

Source: NZ Superannuation Fund

- The strong performance of the Fund is evident in the returns since inception relative to the reference portfolio's realised return and also relative to the long-term expected return for the reference portfolio.
- As noted in the Fund's 2018 Annual Report, it has delivered higher risk-adjusted returns than the reference portfolio, both since inception and also since the introduction of the reference portfolio (in July 2010). Over the period 1 July 2010 to 30 June 2018, the Fund achieved a Sharpe ratio of 1.42 vs. 1.27 for the reference portfolio.

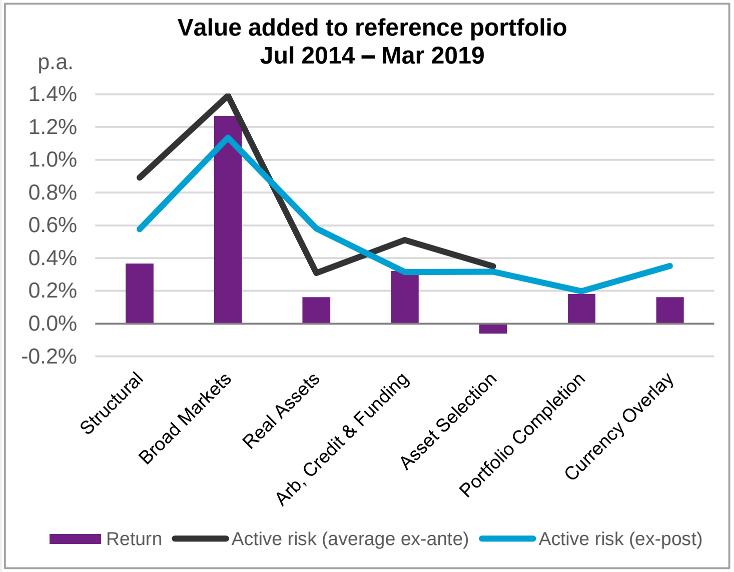
WTW commentary

- The Fund's strong performance since inception has been driven both by the returns delivered by the reference portfolio (8.6% p.a.) as well as the strong contribution from value-adding activities (1.5% p.a.).
- Over the last 5 years, both the returns from the reference portfolio (9.1% p.a.) and the Fund's active returns (2.6% p.a.) have been higher than their returns since inception; as outlined in Section 3, we think that it is reasonable to expect lower returns from both sources over the next 5 to 10 years.
- The Fund participates in an annual survey conducted by CEM Benchmarking; from these we note that comparisons against peer funds included in the survey have consistently shown the Fund to be in the "low cost, high value-add" quadrant; and that the Fund's value added over the 5 years to end December 2017 was the highest of all funds participating in the survey (278 funds)[1].
- Over the last 5 years, the Fund's value added of 2.6% p.a. has been achieved with an ex-post measure of active risk of 1.6% p.a. (the average ex-ante measure of active risk has been around 2.0% p.a.) The ratio of value added to active risk is therefore well in excess of 1 – this represents an impressive return for the amount of active risk taken.
- The same survey indicates that the level of risk being taken by the Fund (based on the reference portfolio) would place it at the top of the survey in terms of policy portfolio risk.
- Overall, the Fund's performance both in absolute and in relative terms (i.e. the value added) is very impressive – the Fund stands out amongst leading asset owners on the basis of its strong performance. However, as noted, this is partly due to the high risk profile that the Guardians has intentionally adopted.

1. *We note that the use of a reference portfolio is not that common amongst asset owners; instead many adopt a strategic asset allocation as their policy portfolio – this may have the effect of biasing upwards the Fund's active returns (value added) in comparison.*

5.1 Evaluation of ex-post performance (cont'd)

Terms of reference	WTW observations	WTW commentary
Evaluation of ex-post performance including: ▪ *Drivers of returns* ▪ *Role of value-adding strategies* ▪ *Use of leverage & derivatives*	▪ The chart below shows the contribution of each of the five risk baskets, as well as effects of portfolio completion[1] and currency hedging[2], to the total value added to the reference portfolio return, from July 2014 (around the time that the last Independent Review was carried out) to March 2019 ▪ We also show the average measure of ex-ante risk taken in each of the five risk baskets, as well as the realised (ex-post) risk for each activity over the period.	▪ The largest contributor to the value added over the 4¾ year period was the Market Pricing – Broad Markets risk basket. Within the Broad Markets risk basket, strategic tilting contributed all of the valued added (of 1.3% p.a.) over this time period and over most individual financial years as well. ▪ To a large extent, the value added from each of the risk baskets over this period reflects the amount of active risk being taken – as can be seen from the chart, Broad Markets (and strategic tilting within this) has had by far the largest active risk allocation; whilst Market Pricing – Real Assets and Asset Selection have had the smallest active risk allocations. ▪ Whilst the ratio of value added to active risk is higher for some activities than others, as noted previously, when aggregated at the total Fund level, the ratio of value added to active risk taken is impressive and demonstrates that the Guardians' risk budgeting process has been very effective in adding value. ▪ Whilst strategic tilting has been the dominant source of value added, we note that the returns to the programme have been well above the Guardians' own expectations over this period; had they been more in line with its expectations (around 0.4% p.a.) then the contributions to the Fund's value added from the different risk baskets would have been more balanced. ▪ We also note the positive and significant contribution to value added from the activities undertaken by the Portfolio Completion Team (Portfolio Completion and Currency Overlay). As highlighted in Section 3, we believe that the activities of the Portfolio Completion Team are a source of a competitive advantage relative to many other asset owners.



Source: NZ Superannuation Fund, WTW calculations

1. *Portfolio Completion returns are due to the implementation activities of the Portfolio Completion Team that have resulted in returns that are different to the benchmarks included in the reference portfolio; as well as other activities (such as securities lending and liquidity management).*
2. *Currency Overlay returns are due to the activities of the Portfolio Completion Team that have resulted in returns from currency hedging that are different from the hedges reflected in the benchmarks used in the reference portfolio.*

5.2 Use of leverage and derivatives

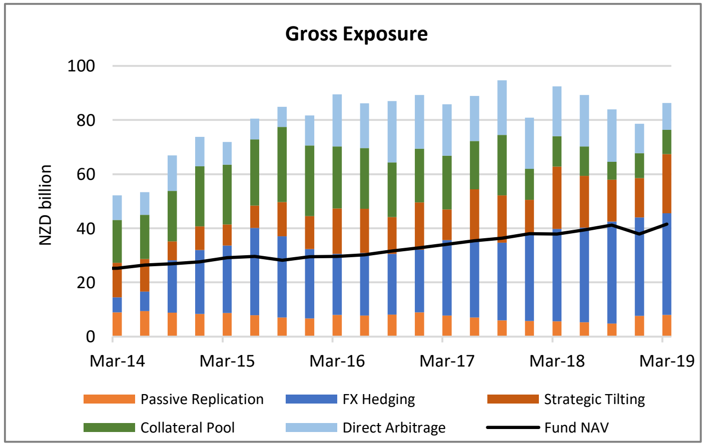
Terms of reference

Evaluation of ex-post performance including:

- *Drivers of returns*
- *Role of value-adding strategies*
- *Use of leverage & derivatives*

WTW observations

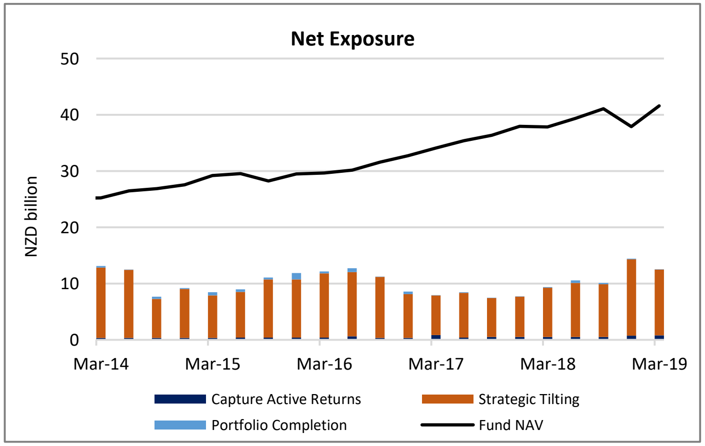
- The Guardians has received consent from the Minister of Finance to enter into derivative transactions, subject to certain conditions, including that they are only used as part of an investment strategy and are consistent with the objectives of that strategy. The Minister's expectation is that the Guardians uses derivatives with the appropriate level of knowledge, skills, transparency and controls in place.
- The Guardians makes extensive use of derivatives, for purposes which include obtaining passive market (beta) exposures to assets from the reference portfolio that are also held in the actual portfolio, implementing currency hedging and as a means of implementing various value-adding activities, including the strategic tilting programme.
- The chart on the left-hand side below shows the Fund's gross derivatives exposures over the last 5 years; whilst the chart on the right-hand side below shows the Fund's net derivatives exposure, which is the residual exposure beyond that required to replicate the reference portfolio exposures and once off-setting risk exposures are also allowed for.



Source: NZ Superannuation Fund

WTW commentary

- It is clear that the use of derivatives plays a significant role in the management of the Fund's assets and has contributed to the overall returns achieved to date.
- Amongst the value-adding activities, strategic tilting is entirely implemented via derivatives, whilst many of the other value-adding activities also make some use of derivatives in their implementation (either by the Guardians themselves or by external managers).
- We believe that the bases on which the Guardians uses derivatives – to manage portfolio risk (including currency risk), for liquidity management purposes and to reduce transactions costs – are sound.
- We note the very comprehensive reporting of the Fund's derivatives exposure via the derivatives dashboard, which includes the charts below. In our view, the level of reporting helps to address the transparency aspect of the Minister's expectation, although we do also note that given the level of detail shown in the dashboard report, it can be difficult to absorb all of the information presented.



Source: NZ Superannuation Fund

5.2 Use of leverage and derivatives (cont'd)

Terms of reference	WTW observations	WTW commentary (2)
Evaluation of ex-post performance including: ▪ *Drivers of returns* ▪ *Role of value-adding strategies* ▪ *Use of leverage & derivatives*	▪ As noted by the Guardians, there is no clear, universally accepted definition of leverage. The Guardians uses the following as its definition: "*leverage occurs when the Fund's total financial exposures are greater than net assets in NZ dollars*". ▪ The Guardians' extensive use of derivatives facilitates the use of leverage in the Fund. ▪ Assigning a specific value to the amount of leverage used by the Guardians is difficult, but as shown in the charts on the previous page, leverage is clearly used in the Fund; whether this is measured on a gross or a net basis. **WTW commentary (1)** ▪ We agree with the Guardians' assessment that any concerns about the use of leverage are ultimately a concern about the impact (of the use of leverage) on the Fund's overall risk and its impact on liquidity. ▪ In our view, the Guardians has a robust framework for the management of portfolio risks; including the management of liquidity and counterparty risk; and it is our high level assessment that the use of derivatives and leverage in the Fund are soundly managed within this overall framework. ▪ It is our belief that the prudent use of leverage can help to deliver better portfolio outcomes (relative to a Fund that does not use leverage), for example by enabling the more efficient use of available capital to facilitate greater risk taking (when it is believed that those risks will be appropriately rewarded) and also through enabling risk reduction strategies to be implemented (e.g. by taking positions in assets that act to reduce overall portfolio risk in some environments).	▪ However, the flip side to these advantages is that the use of leverage increases the size of "left tail" risks for a fund, as it exacerbates non-linear effects in the risk profile of a fund when markets move sharply. ▪ The key to managing leverage successfully is a robust framework for managing fund level liquidity and counterparty risks, a good understanding of the risks introduced by the use of leverage and a skilled capital markets implementation capability. ▪ The Portfolio Completion Team performs these roles for the Guardians. It is our high level assessment that they do have the appropriate level of knowledge and skills to carry out these activities. It is also our assessment that the team is skilled in assessing when it is more appropriate to implement exposures via derivatives rather than in physical form. ▪ The development of appropriate systems for data storage and portfolio risk management systems is an increasingly important area of focus for all large asset owners. In this regard, we note the introduction since the last Independent Review of a number of quantitative tools used by the team – these include the Quantifi Risk System (for assessing counterparty and liquidity risks) and the use of Bloomberg's Multi-Asset Risk System for assessing portfolio risks. ▪ Overall, it is our assessment that the Guardians has developed a sophisticated internal capability that is able to implement the portfolio in a cost effective and efficient manner; that the use of derivatives and leverage are integral to enabling the Portfolio Completion Team to carry out their role effectively; and that there are robust processes and controls in place for managing the associated risks that these introduce.

5.3 Measurement

Terms of reference	WTW observations	WTW commentary
Measurement: ▪ *Classification and calculation methodologies* ▪ *Use of internal valuations*	▪ The Guardians has a comprehensive process for valuing all of the assets held by the Fund and for performance reporting. We do not intend to describe these processes in detail as part of our review, but rather we aim to address the specific aspects outlined in the terms of reference of the Review. ▪ The Fund's custodian (Northern Trust) maintains the book of records of all assets held by the Fund. The Guardians' Finance team reconciles all of the data received from the custodian and is then responsible for performance reporting for the Fund. ▪ We note that the input data into the calculation of the Fund's performance and also the performance calculations are independently audited each year by Ernst and Young (the Auditor-General's appointee as the auditor to the Fund). ▪ The Fund's performance reporting process is also reviewed approximately every three years under the Guardians' internal audit programme. ▪ The Guardians' Investment Valuation policy sets out the approach to valuing different assets; their approach aligns with the IFRS "fair value hierarchy". ▪ The Guardians' Valuation Working Group (VWG) is responsible for reviewing the methodologies, practices and policies relating to the valuation of the Fund's assets. The VWG also carries out a review of the custodian's pricing methodology for quoted assets and for derivatives; and reviews the valuation of unlisted investments produced by independent third-party valuers. ▪ The VWG reports any material issues to the Audit Committee. ▪ We also note that the external auditor issues opinions on the Fund's statutory accounts as well as the Guardians' annual Statement of Performance Expectations.	▪ We note the important role of external, independent valuers in assessing the values of the Fund's unlisted assets. Whilst the VWG is ultimately responsible for recommending a valuation for each unlisted asset to the Audit Committee, we note that it is rare to use a value different from that produced by the independent valuer (and that deviations from these have mainly been to use a lower value). ▪ Whilst the Management team does use internal valuation models for assessing the value of various assets held, only the externally validated asset valuations are used in the Fund's performance reporting (these are the values reported to the custodian for incorporation into the Fund's book of records). ▪ We note that considerable time and effort is applied by the Guardians to assessing the value of the Fund's larger unlisted investments, so that the more material portfolio holdings receive a greater degree of scrutiny. ▪ Overall, based on our relatively high level review; we believe that the Guardians' approach to valuing the assets of the Fund is thorough and is subject to appropriate internal checks and balances; as well as external audit review.

5.4 Reporting

Terms of reference	WTW observations	WTW commentary
Reporting: ▪ *Consistent with the Act* ▪ *Drivers of performance* ▪ *Reporting* ▪ *Best-practice standards*	▪ We note that the Guardians has a comprehensive framework for reporting and disclosure, which includes financial performance but extends to many of the Guardians' activities. ▪ We also note that the Guardians has adopted an approach of being as transparent as possible about their investments and about their organisation in general. This includes making many of its policies and approaches to investing publicly available on their website. ▪ The Guardians has received numerous awards for the quality of annual reports and for transparency.	▪ The extent of the Guardians' performance reporting is comprehensive. In particular, we note the dashboard reports provided to the Investment Committee and to the Board, which provide a detailed breakdown of the Fund's returns and the main drivers of these returns. ▪ In our assessment, the quality of the reporting is high, with the dashboard reports providing a clear attribution of the different sources of active return and the levels of risk being taken within each of the five risk baskets. ▪ The dashboard reports are also very comprehensive; and whilst we agree with the style that has been adopted (including the use of traffic lights); we believe it is still a challenge to be able to quickly identify the key issues that are contained in all of the reports. ▪ We understand that the Guardians is aware of this issue and that there is a longer-term plan to have a more holistic approach to assessing all Fund risks (including enterprise risks) and for bringing the key risks to the Board's attention. ▪ We think that this is a very good initiative; <u>we suggest</u> that the same principles be applied to the dashboard reporting, with the major issues from these highlighted in a manner which helps them to stand out. ▪ Overall, we believe that the Guardians' performance reporting is consistent with the requirements of the Act and that it provides both comprehensive and relevant information to be able to understand what has driven the Fund's performance. ▪ Whilst the Fund's investment performance reporting is not compliant with GIPS - the global standard for presenting performance - we are inclined to agree with the views of the Management team that there is little additional benefit in obtaining this, given the procedures that are already in place to verify the Fund's reported performance and also because daily unit prices are not required for external use.

5.5 Summary of suggestions and recommendations

	WTW suggestions	WTW recommendations
Investment performance	▪ We support the Guardians' plan to introduce a holistic approach to assessing all Fund risks (investment and enterprise risks) and for bringing the key risks to the Board's attention. We suggest that the same principles be applied to the dashboard reporting, with the major issues from these highlighted in a manner which helps them to stand out.	▪ None

References

References

1. Clark & Urwin | Best-Practice Investment Management: Lessons for Asset Owners from the Oxford-Watson Wyatt Project on Governance (2007)
2. The Thinking Ahead Institute's Asset Owner 100 (2018)
3. Urwin | The impact of culture on institutional investors (2015)
4. Unger & Urwin | A Total Portfolio Approach (TPA) to portfolio construction (draft paper) (2019)
5. Thinking Ahead Institute | Better decision-making: a toolkit (2018)
6. Thinking Ahead Institute | Mission critical: understanding value creation (2018)
7. Future Fund and Willis Towers Watson 2017 Asset Owner Study | Smart Leadership. Sound Followership. (2017)
8. Thinking Ahead Institute | The asset owner of tomorrow (2017)
9. Urwin | Pension Funds as Universal Owners: Opportunity Beckons and Leadership Calls (2011)

Appendix

Acronyms used

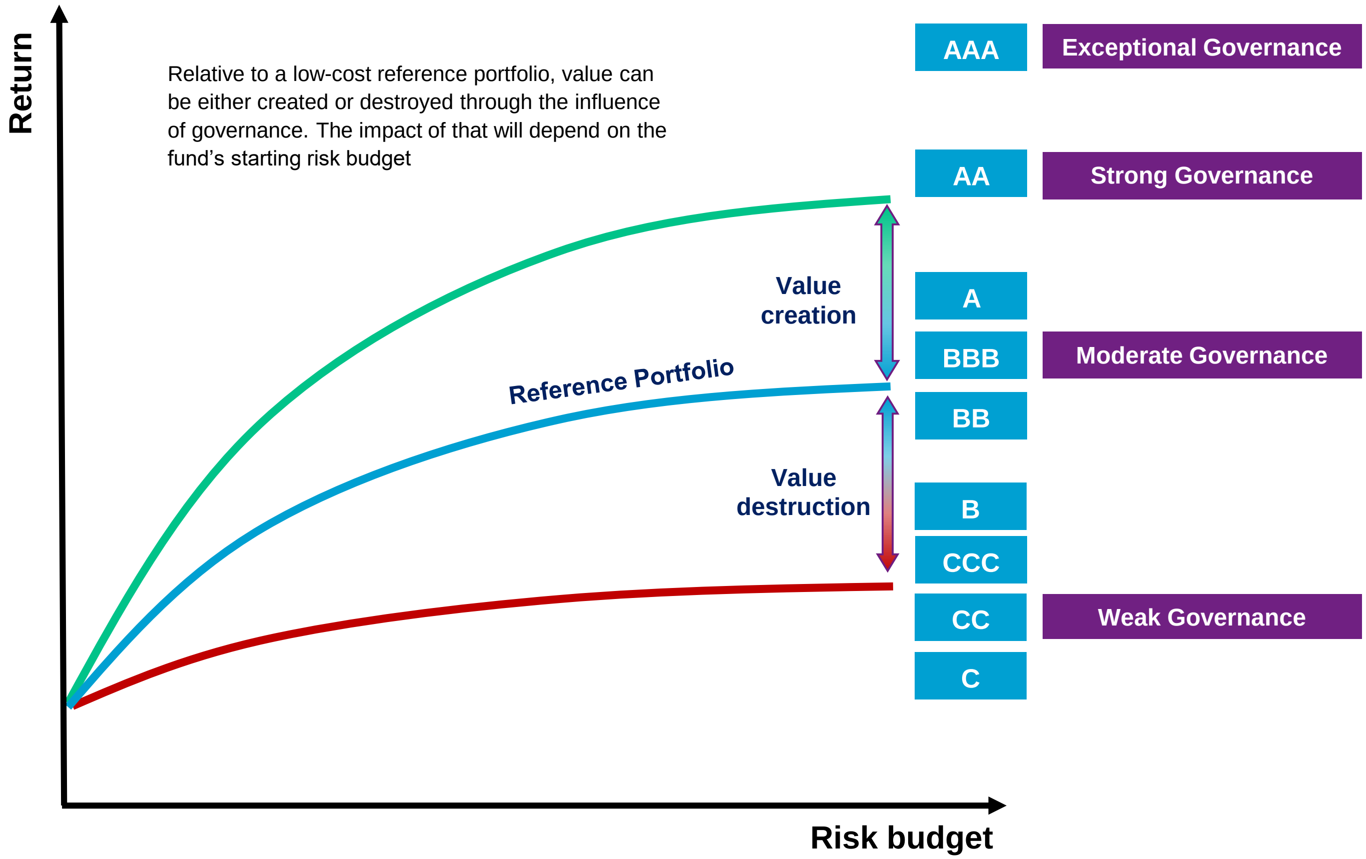
AI	Artificial intelligence
AUM	Assets under management
BMO	Bank of Montreal
CEM	Cost Effective Measurement
CEO	Chief Executive Officer
CIO	Chief Investment Office
CRO	Chief Risk Officer
ESG	Environmental, social and governance
EVP	Employee value proposition
FTE	Full time equivalent
GBP	Global best practice
GFC	Global financial crisis
GIPS	Global Investment Performance Standards
HR	Human resources
IFRS	International Financial Reporting Standard
IP	Intellectual property
IR	Information ratio

IT	Information technology
KPI	Key performance indicator
LRS	Liquidity replenishment system
NZ	New Zealand
OCI	Organisational Culture Inventory
PRI	Principles for Responsible Invetsment
PwC	PricewaterhouseCoopers
RI	Responsible investing / responsible investment
SAA	Strategic asset allocation
SDG	Sustainable Development Goals
SIPSP	Statement of Policies, Standards and Procedures
SVP	Stakeholder value proposition
TPA	Total portfolio approach
VUCA	Volatility, uncertainty, complexity and ambiguity
VWG	Valuation working group
WTW	Willis Towers Watson

The Willis Towers Watson governance rating framework

Governance practice	▪ The Willis Towers Watson research on governance follows the Clark and Urwin research which studied the practices and performances of a large number of global asset owners. ▪ 'Governance' here is considered in the expansive definition that spans the Board and investment executive (organisation) by assessing all aspects or organisational effectiveness in delivering investment results. ▪ The current Willis Towers Watson governance model is derived both from empirical study considering performance, and from deductive methods observing practice that appeared to be particularly effective. This facilitates a structured and rigorous approach, and also allows detailed comparisons with a global best-practice norm to be made.
Clark and Urwin governance model	▪ The Clark and Urwin model is described in detail in published research: ***Best-practice investment management, 2007; source SSRN, also Journal of Asset Management | The Highlight Collection 1996-2016.*** ▪ The model drew its conclusions from a detailed study of a global group of successful funds taken from various institutional backgrounds including pension funds, sovereign wealth funds, and endowments. ▪ A total of **12 factors** were found that were associated with global best practice, these are further detailed earlier in the report. These factors involved coverage of **attributes** or features. By assessing the alignment of an organisation with these factors and attributes through survey responses, a governance assessment can be made. ▪ For each of the 12 factors, there are around 6 to 10 sub-attributes to pin-point alignment to the factor concerned. Our response design uses a six-point Likert scale – adding refinement to the usual range, and also allows 'not known' specification.
Advantages of the Clark and Urwin methodology	▪ The research is public and the source is the most widely referenced research in the field. The model has been used frequently since its inception in 2007 by a number of different institutional funds which allows some informal benchmarking to be undertaken. ▪ The Clark & Urwin process was created in 2008 and has been used in both formal and informal processes with over 50 funds. While this is a small number relative to the number of funds in existence, it has given rise to reasonable assurance in the creation of a rating structure from AAA to C as explained below.
How should the benchmarks be seen?	**Exceptional Governance (AAA):** This is exceptional practice relative to a peer group of international successful institutional investors. Within this band, the fund in question has considered and addressed at a high level all of the twelve factors needed to have a successful governance structure within the fund. This attainment is extremely unusual (<5% of peer funds). **Excellent Governance (AA):** This is strong governance and indicates that the fund has implemented best practice or displayed successful governance across the majority of the 12 factors. This attainment is unusual (~10% of peer funds). **Moderate Governance (A-BB):** This range represents a moderate level of governance where the fund has considered most of the factors but has not implemented best practice across many of them. This attainment is relatively common (~50% of peer funds). **Weak Governance (B-C):** This is a weak level of governance where the fund is lacking in effectiveness or has not covered the primary/important areas which are needed for the management of the fund. This attainment is relatively common (~35%).

The Willis Towers Watson governance rating framework



Within this band, funds have considered and addressed all of the 12 factors needed to have a successful governance structure. This attainment is extremely unusual (~5% of funds).

Funds have implemented best practice or displayed successful governance across the majority of the 12 factors, however there may be areas for improvement in one or two of these. This attainment is unusual (~10% of funds).

Funds have considered most of the factors but haven't implemented best-practice across many of them. This attainment is relatively common (~50% of funds).

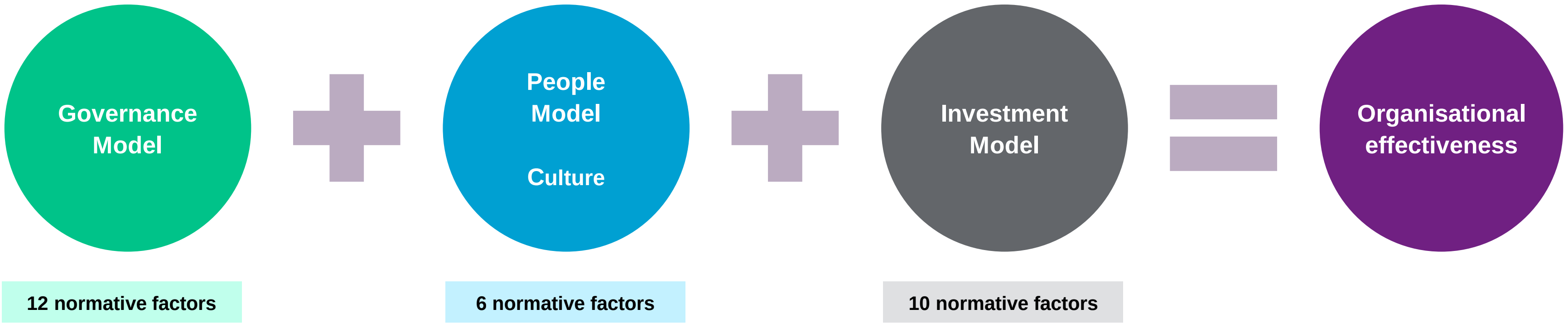
Funds have considered some of the factors when implementing a governance structure, however it is lacking in effectiveness or has not covered the primary/ important areas which are needed for the management of the fund. Within this governance range, funds will likely be significantly affected by poor performance and will find it harder over the long term to reach their objectives. This attainment is relatively common (~35% of funds).

The Willis Towers Watson assessment methodology

- **Organisational effectiveness**. The key to simplifying a complex organisation is to break it down into its three functional parts – we use Governance Model (structure, process, resource, technology) + People Model (talent, culture, EVP, incentives) + Investment Model (beliefs, framework, process, tools), making allowance for combinations of these elements.

- **Organisational effectiveness measurement**. In practice, measurement or assessment involves mixing soft data (including self-assessed, adjacent data, judgemental data) with any hard data (performance) to produce an integrated view of the organisation and its capabilities. Much of the comparative advantage or "edge" (and its obverse) comes from combinations of governance, people and investment model elements.

- **Assessments.**
  The Governance Model assessment has been discussed.
  The Culture Model assessment has been prepared following a review of six attributes and a total of over 70 sub-attributes
  The Investment Model assessment has been prepared following a review of 10 attributes.



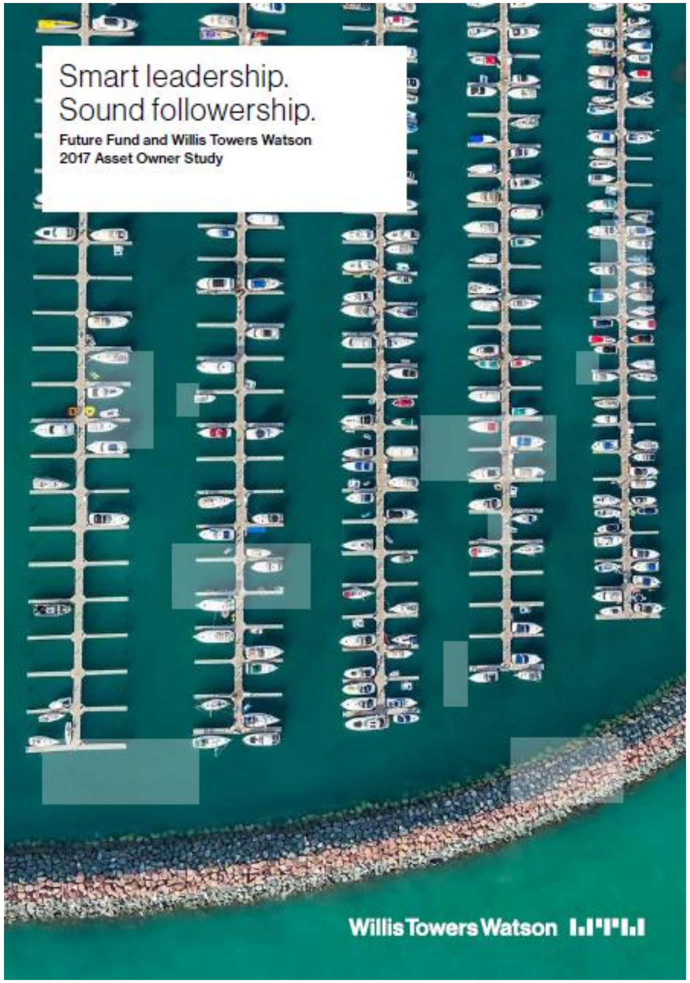
Global peer benchmarking study

In 2017 Future Fund commissioned Willis Towers Watson to conduct a detailed assessment of investment practices in an international benchmarking study. The aim of the study was to make comparisons of the investment and management processes of these leading international funds.

Our peer group comprised 15 leading asset owners, selected for their strong governance, significant size and thoughtful international perspectives. Of the selected peer group, 11 of the funds have pension liabilities to meet and four are sovereign wealth funds. Together the group represented around US$4 trillion of influential capital.

New Zealand Superannuation Fund (NZSF) was one of the 15 participants in the study. This gives us the opportunity to ‘shine a light’ on the Guardians’ practices and processes and compare them to the other 14 international funds. On the following pages, we set out a number of extracts from the report, covering:

- The funds’ investment models
- The focus and arrangements of the respective boards
- Compensation arrangements
- Culture and diversity.



Global peer benchmarking study – investment model

- The bars on the "slider" charts below describe how a small peer group of leading assets owners are set up in terms of their investment models, by comparison with NZSF. The position of the each fund is based on a combination of survey responses, publically available information and our knowledge of each fund's practices. There is no "correct" position on any slider, as each organisation's circumstances and context is different.

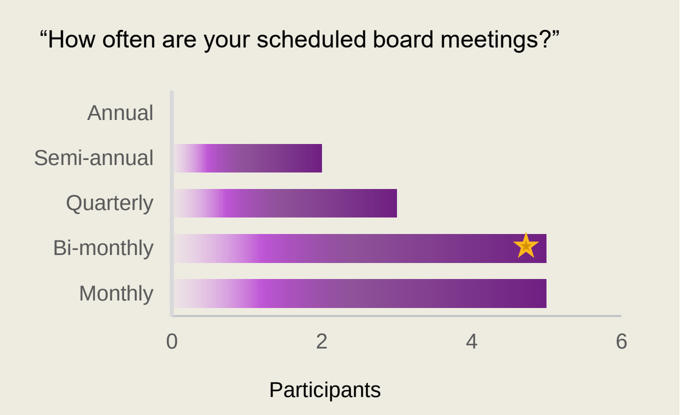
Investment model	← Spectrum of positions →	WTW commentary
SAA vs Total Portfolio Approach	Decisions follow the SAA in a top down discipline — Decisions are integrated from best ideas in a bottom up discipline 	The Guardians has been innovators in the area of portfolio construction and leaders in the adoption of a Total Portfolio Approach.
Policy conviction in private markets	Small deviation from Reference Portfolio in public markets asset allocation — Large deviation from Reference Portfolio in public markets asset allocation 	The Guardians has a below average allocation to private market assets in their actual portfolio
Alpha conviction	Small tracking errors for manager line-ups — Large tracking error for manager line-ups 	The Guardians has a low level of conviction in manager skill in public markets and hence a below average reliance on manager alpha.
Long horizon mindset	Short horizon — Long horizon 	In line with its long-term endowment, the Guardians has adopted many of the features of long horizon investing.
Sustainability	No account — Fully developed and integrated sustainability agenda 	The Guardians' approach to ESG integration and stewardship is impressive and, in our view, aligns with best practice in most aspects.

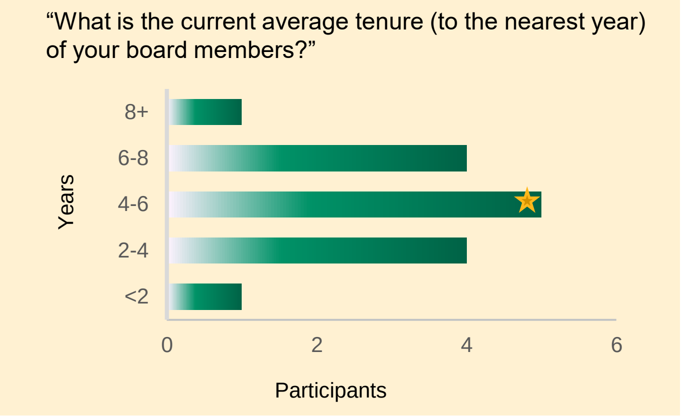
★ NZSF positioning

Source: WTW, Smart Leadership. Sound Followership. (2017)

Global peer benchmarking study – boards

- The results of the survey help to provide some additional context and background to some of our observations and commentary.
- The Guardians' Board meetings have slightly above frequency in the sample.
- The Guardians' Board tenure is average relative to the sample of international peers.



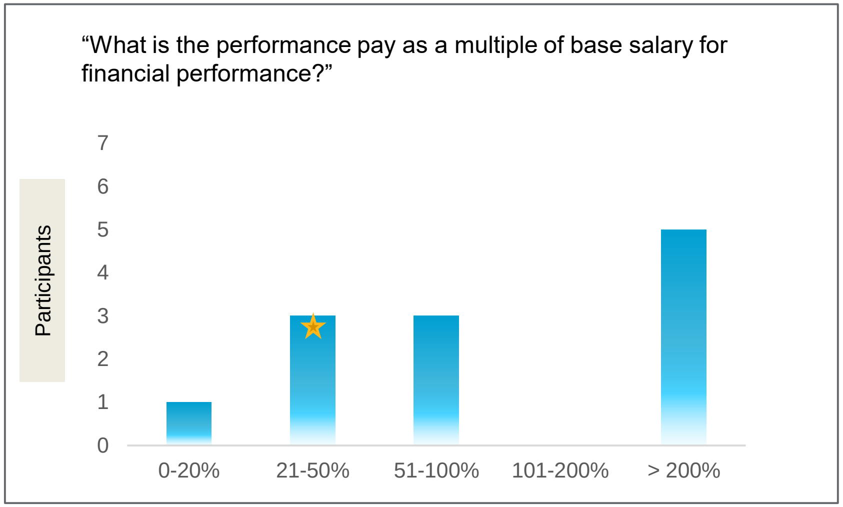


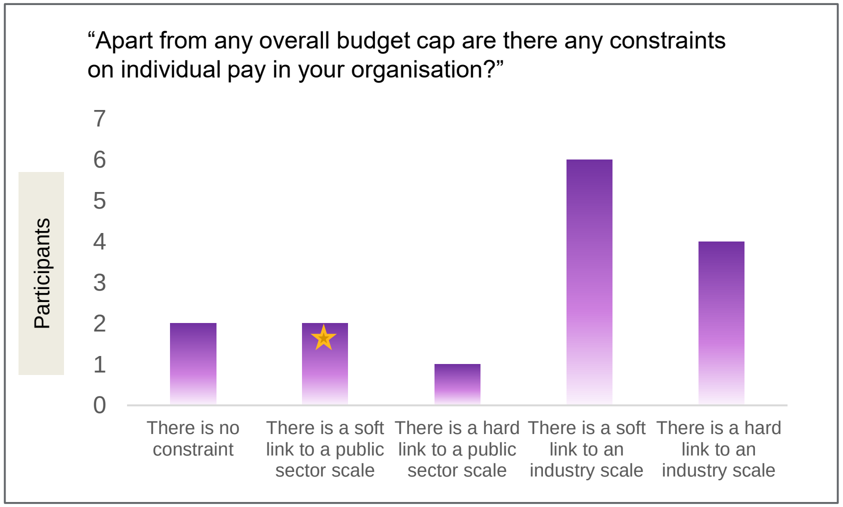
★ NZSF positioning

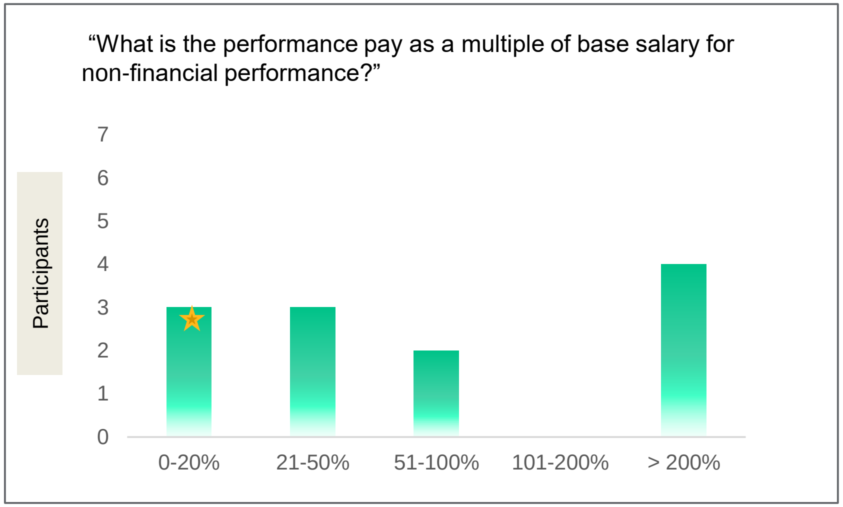
Source: WTW, Smart Leadership. Sound Followership. (2017)

Global peer benchmarking study – compensation

- The results of the survey help to provide some additional context and background to some of our observations and commentary.
- Performance pay related to financial performance is a smaller than average multiple of base pay at the Guardians.
- Performance pay related to non-financial performance is a smaller than average multiple of base pay at the Guardians.
- The nature of constraints on individual pay come from soft links to public sector scales.

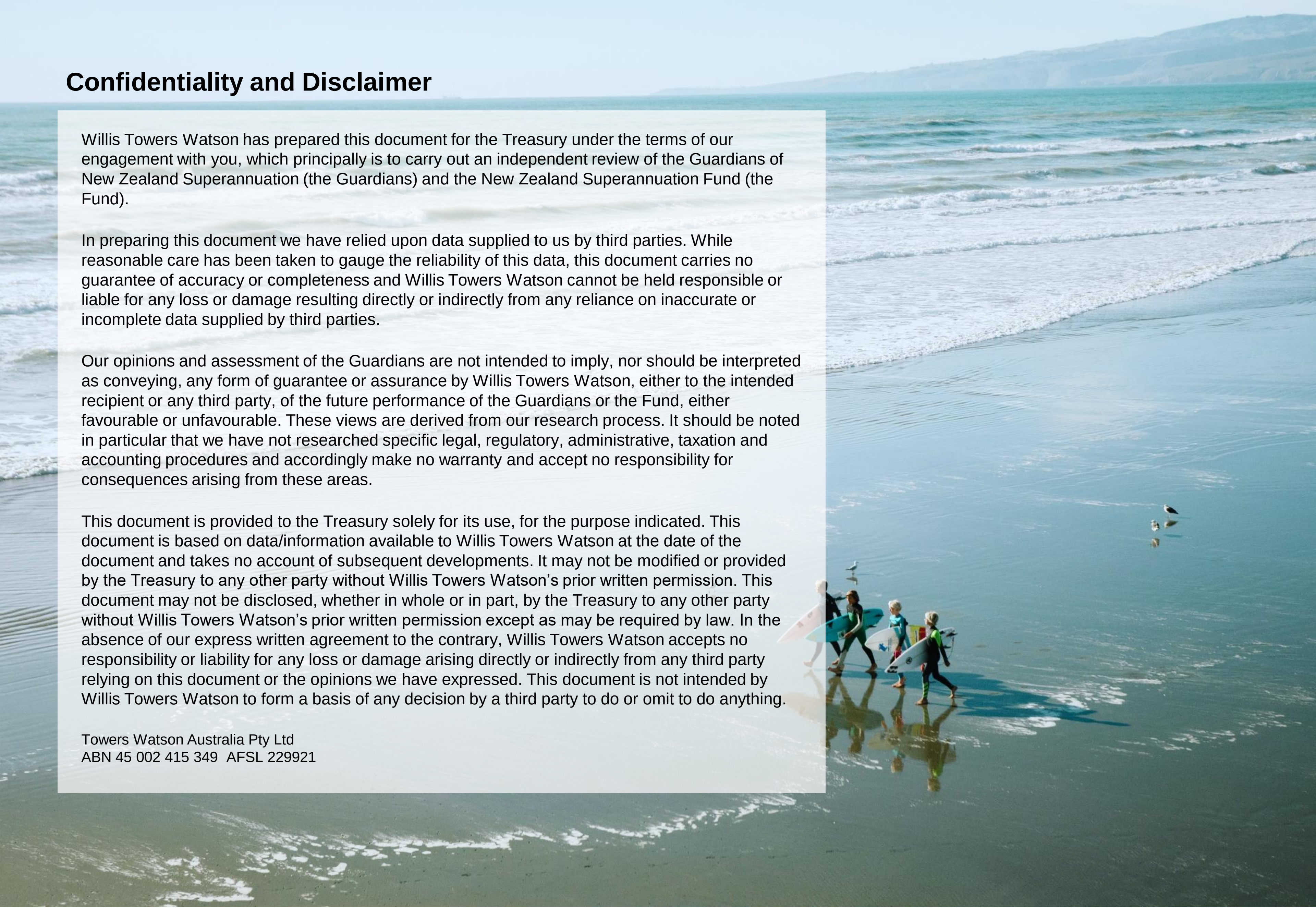






★ NZSF positioning

Source: WTW, Smart Leadership. Sound Followership. (2017)



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