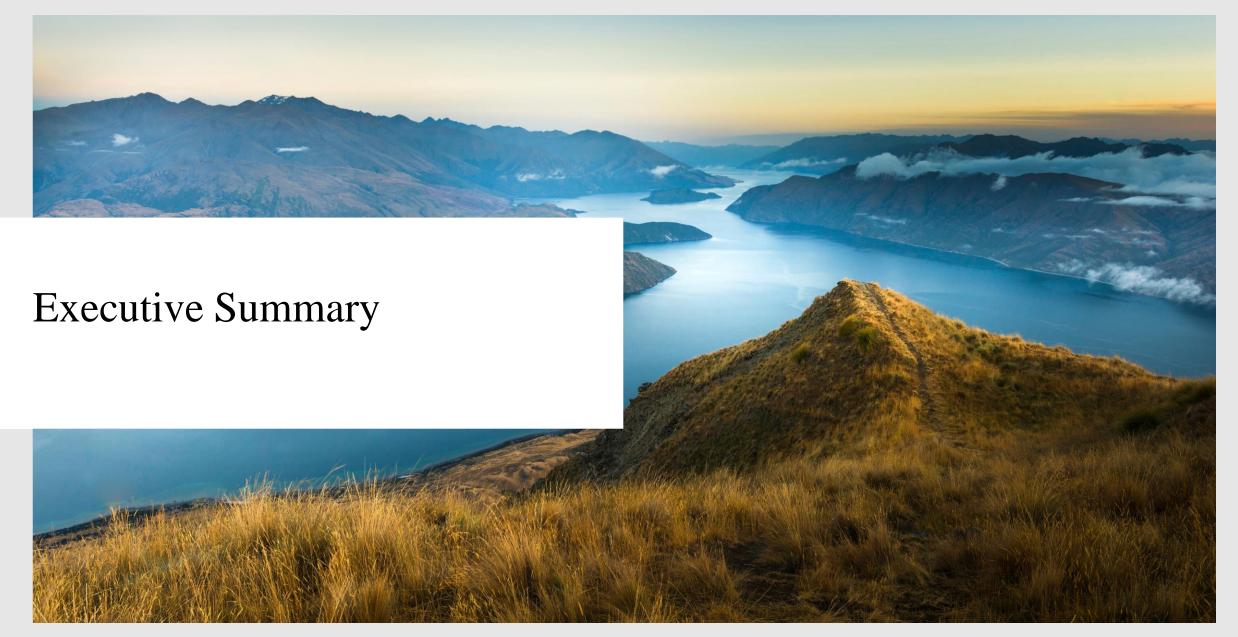


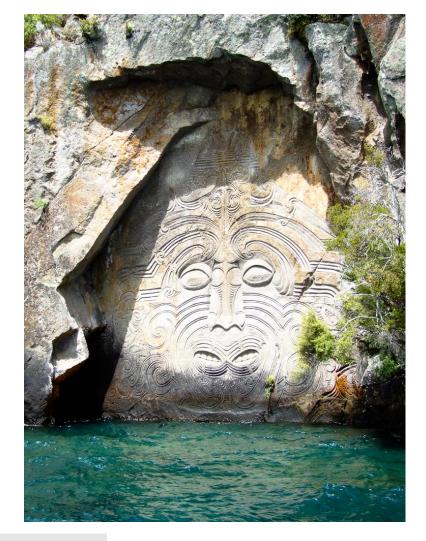
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Goals of our review

- This independent review of the Guardians of New Zealand Superannuation (the Guardians) and the New Zealand Superannuation Fund (the Fund) covers governance and specific terms of reference outlined by the Treasury
- Our approach has been less about providing details of the Guardians' activities and processes (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
- The goals of this Review fall in two parts:
 - Feedback to Treasury and to the Guardians to assess how well the Guardians has been equipped and is presently equipped to meet its vision and purpose
 - Value adding analysis of the opportunities for the Guardians to achieve vision and purpose outcomes in the future through organisational adaptation and change
- As described throughout this report, our feedback on how the Guardians has been and remains equipped to meet its vision and purpose is overwhelmingly positive, with the Fund standing exceptionally strongly amongst its global peers
- Global best practice is constantly evolving, and we make recommendations and suggestions for the Guardians to
 consider that we believe will help it to maintain its leading position, all of which we believe are achievable within
 the timeframe of the five-yearly review cycle



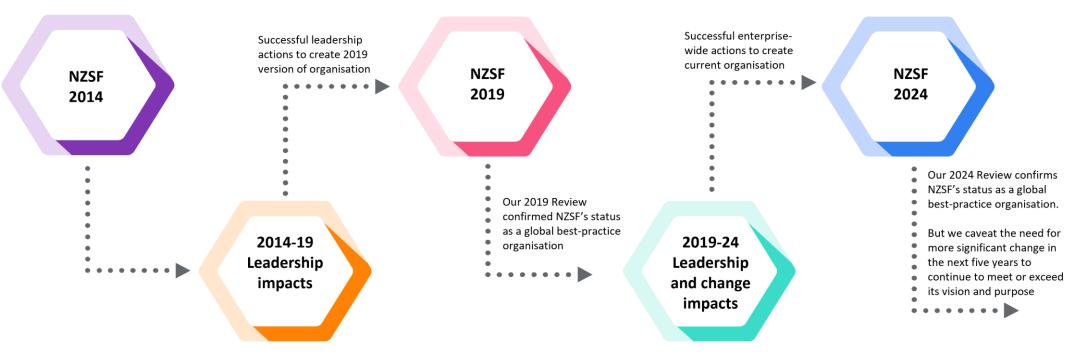
Roger Urwin
Global Head of Investment Content

Martin Goss Co-Head Investment Governance, Australia **Ellie Boston-Clark**Co-Head Investment Governance, Australia

The Guardians continues to operate at global best-practice levels

This has enabled an exceptional five-year performance record

- The Fund's results over the last 5 years have been excellent, reflecting the organisation's effectiveness in carrying out its mandate. At the present time the Guardians is operating at global best practice in its activities a state it has maintained for the past five years. In our view the Guardians investment process is completely exceptional among the asset owner community, its investment thinking is strong but has room to grow.
- It has achieved this state principally through the inspiration of its leaders past and present; its system design (defined in this report); and its culture which have together ensured that constant attention to improvement has been a defining characteristic of the Guardians.
- But we caveat the need for more significant change in the next five years: embedding new leadership and better leadership continuity; responding to increasingly likely headwinds to capital market outcomes; improving the system design; maintaining strong culture in a larger and more complex organisation; and undergoing a technology transition. These are all factors that can make the organisation more resilient



Key feedback (1/4): the organisation is operating at global best practice levels

Global best practice aligns with being strongly placed to meet the Guardians' vision and purpose; and also competitive with the very best asset owners globally. This assessment follows from our bottom-up analysis

- 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.
 - Over 50 meetings
 - Over 200 engagements with Guardians employees and Board members
 - Over 100 document reviews
 - One survey of board and leadership views
 - Consideration of over 50,000 data points from a Peer Study we recently completed comparing 26 big asset owners in the Guardians' peer group
- 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 Treasury in helping with this review, as well as with the independent Nominating Committee and with Guardians' Management and the Board. They have been extremely helpful; their enthusiasm and support for the review process has been exceptional
- We have assessed the quality of the Guardians and its activities by looking at the five model components that in our research make up an asset owner – i.e. its business model, governance model, people model, investment model and systems 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 bestpractice

Our overall assessment of the Guardians is as follows:

Business model:
Governance model:
People model (culture):
Investment model:
Systems model:

AA Excellent rating
Excellent rating
Excellent rating
Exceptional rating
Very good 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 most of what they do. A is a very good rating, with potential to develop into a higher rating
- Given these ratings, we are satisfied with the efficiency and effectiveness of the Guardians in being able to achieve its vision and purpose
- 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 <u>recommendations</u> (where we have greater conviction that the Guardians would benefit from adopting these) as well as <u>suggestions</u> (these can be thought of as "coaching points" for the Guardians to consider adopting)

Key feedback (2/4): the Guardians have certain time-sensitive challenges to take on

This conclusion follows from our top-down analysis and introduces WTW recommendations & suggestions for the Guardians to consider

WTW conclusions

WTW research into asset organisations has identified certain organisational top-down features that are responsible for outsized performance differences. We have made assessments of Guardians on their top-down features grouped into the categories of organisational design, edge and identity

- The full detail of these assessments are set out on pages 27 to 29. The top-down assessment is in line with a global best-practice status
- The Guardians has developed into an organisation that we consider to be best-practice in its
 activities and more capable of meeting its goals and achieving high performance than the vast
 majority of its peers
- This analysis highlights certain issues and opportunities, of which the most important are as follows:
 - Addressing the challenges arising from increasing business complexity by ensuring that the BbU ("business beyond usual") area and change function attract sufficient weight in the mix of work (where BbU is irregular tasks, particularly work on initiatives and change projects which are increasingly important and time-challenged)
 - Adapting to the fast-changing sustainable finance area where maturing the sustainability ambition is a subject for ongoing consideration by the Guardians, the Board and the principal stakeholders – the Crown, the Minister of Finance and the Treasury
 - Further integrating systemic risk (climate risk, geopolitical risk, inequality risk, etc) into the TPA (Total Portfolio Approach) design including in the Reference Portfolio
 - Continuing to evolve the insourcing design for private markets so that the portfolio gets sufficient exposure to global opportunities and co-investing (including controlling interests) opportunities
 - The need for pro-active skills development to support the fast-changing investment and enterprise landscape including the technology transition, which we suggest should be part of an organisation-wide program incorporating systems thinking
- Each of the above points have been the subject of recommendations see pages 9, 50 to 52

WTW conclusions (continues)

- In addition, we highlight the important transition that the organisation is making following
 the experience through the 2020 to 2023 Covid pandemic. Here we make a suggestion to
 use the opportunity in the office move in 2026 to align office design, hybrid design and EVP
 ("employee value proposition") and OVP ("organisational value proposition") where current
 work design arrangements may not be optimal
- The prospects for the Fund's investment returns going forward are more uncertain, with the returns for all asset classes over the next decade quite possibly lower than recent experience. This makes achievement of the mandate and its associated goals more challenging in the future. We believe the most significant issues for the Guardians will be:
 - The challenges of various systemic risks including geopolitical risks, climate risk, risk of social inequality and their inter-connections
 - The costs arising from the net zero transition which are considerable and will fall on different parts of the ecosystem – but some costs of the transition including a rising cost for carbon must fall on the corporate sector and in all likelihood reduce future asset owner returns
- The issues in the investment macro environment particularly with excessive levels of sovereign debt and mixed reactions from central banks and policymakers
- The Fund's large exposure to equity risk in particular means that it is exposed if equity returns disappoint over a prolonged period
- Investing requires learning, reflection and continuous improvement in order for the Guardians to maintain its status as a global best-practice asset owner. We have provided recommendations and suggestions for the Guardians to work on to maintain its best-practice characteristics (see pages 9, 53 for suggestions)
- These issues call for more adaptability and resilience built around a time-sensitive response to identify and complete certain initiatives related to these issues



Key feedback (3/4): The key ancillary (assurance) points in the review were satisfactory

As covered in the Terms of Reference, WTW is required to give opinions on a number of specific issues

WTW opinions

High level governance factors

- As a summary we note that the following high level governance factors, first confirmed in the 2019 independent review, are present in 2024 :
 - 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

SIPSP compliance

- Our assessment is provided on page 32
- Governance framework
 - Our assessment on some specific governance points specifically outlined in the terms of reference for this review is provided on page 33
- Ethical/Sustainable Investment Framework
 - Our assessment is provided on pages 34 to 36

WTW opinions

- The governance and management implications from the amendment to S59 in the Act allowing the Fund to take a controlling interest in an entity
 - Our assessment is provided on pages 37 and 38
- Appropriate use and periodic review of the internal versus external management
 - Our assessment is provided on page 39
- Evaluation of ex-post-performance
 - Our assessment is provided on pages 40 and 41
- Investment strategies: endowments, risks and liquidity
 - Our assessment is provided on pages 42 and 43
- Summary of WTW Risk Budget and Risk Proxy reviews
 - Our assessment is provided on pages 44 to 47
- Derivatives
 - Our assessment is provided on page 48
- · Valuation of assets
 - The Fund has a robust valuation framework. We would note that while the Fund's
 policies have remained quite consistent over this period, valuation policies in some
 global jurisdictions have been under significant scrutiny and there may be benefit in
 assessing learnings from elsewhere.
 - While not used for financial valuations, the Fund also maintains a comprehensive Valuation Consistency Guide, most recently updated in August 2023, to ensure internal valuation models maintain a high level of consistency across the Fund. This guide spans both general modelling practice and specific assumptions.



Key feedback (4/4): The recommendations and suggestions arising from this review

Recommendations are explicit areas where WTW believes Guardians action are highly desirable, suggestions are areas for exploration

WTW recommendations (further detail on pages 50 to 52)

These WTW recommendations have followed principally from top-down analysis, but with bottom-up considerations included.

- Develop a set of complexity principles and strategies. Address certain system design imbalances that have developed from increasing complexity. Ensuring that the BbU (business-beyond-usual) area and change function attract sufficient weight in the mix of Guardians' focus and strategy. Systems design is defined on page 71 and explained on page 73
- Evolve the TPA model. Develop greater integration of systemic risk into the TPA design through the use of horizon scanning. Consider models that include left-tail risk measurement and management. Ensure the Reference Portfolio is fully joined-up with the investment approach
- Mature the insourcing of private market investment. Consideration of establishing an overseas presence (e.g. London) to improve access to talent, GP and peer relationships and deals
- Mature the sustainability proposition and model. Building out the sustainability factors by integrating the combined
 proposition. Maximising risk-adjusted return working within universal ownership/3D investing principles (see page 71 for
 definition). The focus should extend more significantly into systemic stewardship. Consider additional resourcing
- Elevate the ambition of the Guardians' learning and development platforms. The accelerating speed of change in the industry calls for a much larger response to upskilling: including pro-active skills development to support the technology transition ushered in by AI; extending the program to cover system thinking; including the upskilling of the team in Python and other relevant applications (see pages 71 and 72 for definitions)

These WTW recommendations follow more from the bottom-up analysis:

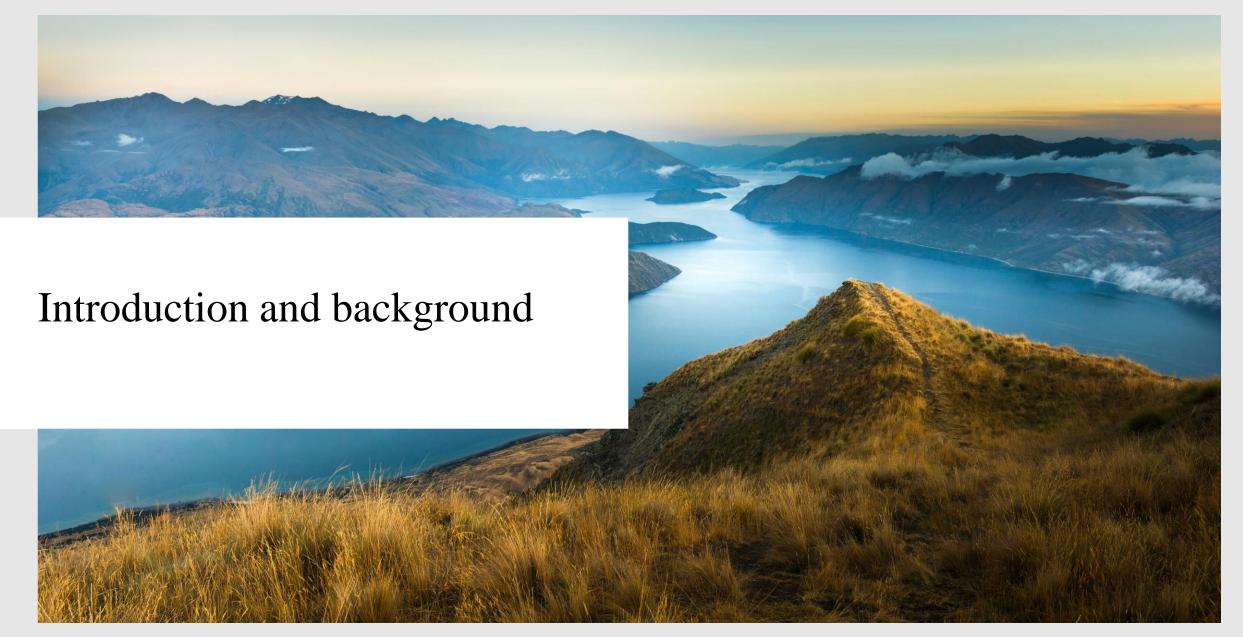
- Strengthen the technology proposition. The Guardians should consider how to increase the degree of integration of technology users and specialists, including alternative models used by peers (e.g. including T-shaped teams with innovation specialists in between users and specialists)
- Ensure strong leadership succession practices. The Board, Management and Nominations Committee should review their practices for succession planning and succession more generally and position the organisation in a stronger place to respond to continuity challenges in top leadership roles notably Board chair, CEO and CIO

WTW suggestions (further detail on page 53)

The following areas were considered as appropriate <u>suggestions</u> for the Guardians to consider. The Guardians context and bandwidth may or may not make these desirable to pursue

- Deepen the existing investment beliefs particularly on sustainability. Consider the integration of organisational beliefs and principles with the investment beliefs
- Review the Reference Portfolio for better fit with universal ownership principles, notably considering the merits of forwardfacing benchmarks and the opportunity to work with other asset owners on this. Develop a stronger Board and Management position on universal ownership, with continued open communication with the Guardians' principal stakeholders – the Crown, the Minister of Finance and the Treasury
- Deepen Board Management engagement. There are various ways for better engagement to be developed. WTW considers consultant intermediation and facilitation, in the form of dedicated board advisory support, to be worth considering
- Reposition the hybrid work design to increase social capital. Use the opportunity in the office move in 2026 to align office design, hybrid design and EVP and OVP (organisational value proposition) to increase the social capital which is needed for collaboration to thrive and to support superteams principles. We are aware that Management is reviewing its options on this matter. We are urging that more attention is given to the evaluation of alternative work design arrangements (e.g. hybrid versus office) with particular regard to the social capital factor





Framing of this review

Context and Introduction

- 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 an autonomous Crown entity with the role of managing and administering the Fund and the Venture Capital Fund established under the Venture Capital Fund Act 2019
- 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. A key purpose of the review is to assess how effectively and efficiently the Guardians are performing their legislative functions, and to provide an independent assessment of the performance of the Guardians and the Fund. The terms of reference and focus of this review is the Fund and its oversight by the Guardians
- To conduct the review it is necessary to understand 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
- Throughout this report we raise subjects for consideration by the Guardians, the Board and the principal stakeholders the Crown, the Minister of Finance and the Treasury. We recognise that the Guardians operates with operational independence, and acknowledge this structure as being global best practice. But we also believe that within this framework some subjects can and should be socialised more widely when considering the Fund's ultimate stakeholders, the people of New Zealand, while preserving the operational independence of the Fund
- Some of the information needed for our review can be derived from a review of documents, but much can only come from direct engagement with the key leaders from Management, the Board and Treasury
- The idea of an independent review represents strong governance in its own right. Such a
 process supports accountability and enables more valuable feedback to emerge to help
 with the development of the organisation
- This review provides an opportunity to deliver significant value to both the Treasury and to the Guardians about future development pathways. The premise is that feedback can arise from such analysis to help adjust course, particularly in the context of fast-moving change

- The previous Independent Review was carried out in 2019 by WTW and confirmed NZSF's status as a global best-practice organisation
- WTW 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, as well as our involvement in the 2019 Independent Review, is of particular value. Second, we have a detailed and up-to-date knowledge of most of the Guardians' peers, including insights from our recent work on a global peer study, and this is critical to the assessment of the concept of "best practice", discussed later
- 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 <u>uncertain</u>;
 - The impacts on stakeholders are multiple and highly complex; and
 - The secrets of organisational effectiveness are highly contextual and ambiguous
- As a result, the assessment of an asset owner resembles the creation of an intricate "mosaic".
 made up of a number of small parts 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 <u>Clark and Urwin, 2007</u>) 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

Framing of this review

Best practice of asset owners and insight into peers

Best practice

- We define "best practice" as a state where the organisation functions with a margin of safety over meeting its purpose, vision 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.
 WTW has specialised expertise 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. Notably, many large asset owners, including the
 Guardians, have developed their insourcing capabilities as part of a best practice model
 and become more rounded as complete investment organisations with reduced
 dependencies on outsourcing of investment management
- Best practice is a stronger state than a "fit-for-purpose" state, where the organisation merely functions in line with meeting its purpose, vision 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 purpose, including reputation, which is how the
 stakeholders' view of the organisation compares with the standards expected of it

Asset owners

- 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
- 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 <u>Thinking Ahead Institute's Asset Owner 100, 2023</u> and <u>Thinking Ahead Institute and P&I's Top 300 Pension Funds, 2023</u>)

Global Asset Owner Peer Study 2024

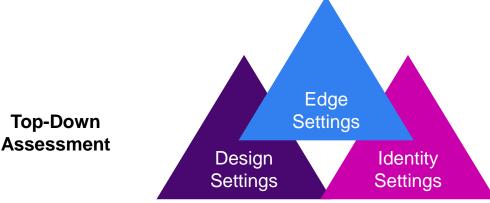
- WTW, working in partnership with Australia's Future Fund, carried out a <u>Global Asset Owner</u>
 <u>Peer Study</u> at the start of 2024. This study followed a peer study project in 2017 which was
 published in the report <u>Smart Leadership</u>, <u>Sound Followership</u>
- The 26 funds in the peer group for the 2024 study, which includes NZSF, were selected for their strong governance, significant size, and thoughtful international perspectives. The group were taken from pension funds and sovereign wealth funds (SWFs) globally with assets under management from \$40bn to \$1,400bn. Together, the group represents over USD\$6 trillion of extremely influential capital
- The lessons and discoveries from this study has given us invaluable insight into the key elements of best practice which has been incorporated into this review. Further commentary on the learnings from the 2024 study are included later in this report

The review process in summary

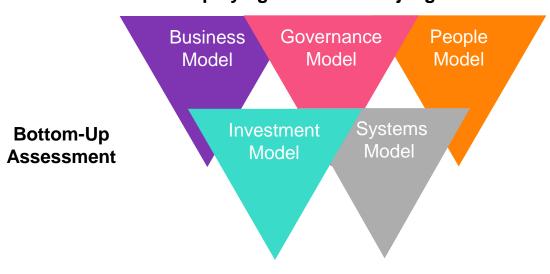
The assessment of an investment organisation resembles building a mosaic

The review in narrative

- The legal requirement for an independent review process to take place at least once every five years represents strong governance in its own right. Somewhat surprisingly we have not found other leading asset owners that have the same legal obligation. The review supports accountability and provides constructive feedback on alignment to best practice and ideas for improvement.
- The central design of this review involves two 'lenses' being combined:
 - Top-down assessment of three component settings or features of the organisation— Design, Edge, Identity
 - Bottom-up assessment of five component models Business, Governance, People, Investment, Systems Model
- Best practice assessment involves judgment, not least because it is not a static concept and is formed by piecing together component parts
- Our work essentially involves building a 'mosaic' of the key elements of the organisation. We summarise this in three concepts employing the thinking on systems design (the value of the concept of systems thinking and systems design is covered in the Appendix)
 - Connecting dots making sure the multiple organisational pieces (the 'mosaic') fit in place together and make sense as a whole
 - Recognising patterns understanding how the future is likely to evolve given the study of recognisable patterns that organisations should expect to occur in future
 - Socialising solutions identifying actions that follow from the work and doing so using a co-creation process engaging key stakeholders
- In addition, the Terms of Reference require WTW to evaluate performance and provide opinions on a number of important ancillary issues which are covered on pages 32 to 48



A mix of objective and subjective assessment employing evidence and judgement



Snapshot of the Guardians' responses to the 2019 independent review recommendations

We note the Guardians extensively reviewed and responded to the recommendations and suggestions provided in the previous review

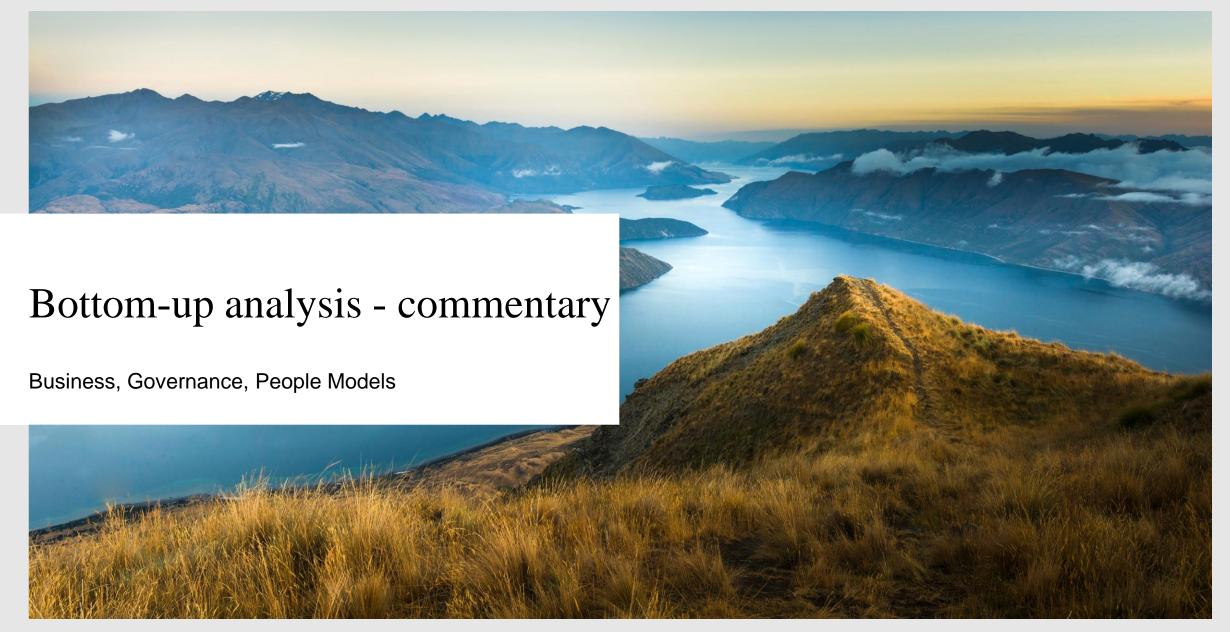
	Recommendations from 2019 review	Summary of the Guardians' response
1	 The Guardians should review its beliefs, values and strategic principles: The Board should review its high-level investment beliefs Management should identify and document their organisational beliefs, values and strategic principles, and This should include consideration of stakeholder expectations and particularly the sponsor's (Crown's) position 	 A review of investment beliefs was completed in June 2020 which involved internal workshops with the investment team, discussion at the Investment Committee and a Board Strategy session in 2019 The most material change to beliefs was to strengthen the ESG beliefs and to explain how the investment beliefs impact the portfolio and how they invest A new strategic framework, purpose, vision statements, and new values have been adopted. The strategic framework has three key focuses: relationships, risk and goals and there has been significant focus on and development of the 2025 strategic plan 'Guardians of the Future' These changes incorporate a deeper consideration of stakeholder expectations with relationships being a key focus
2	The Guardians should review its compensation structure, to assist with developing a stronger employee value proposition	 A remuneration review was carried out during 2019-2020 and included an internal and external assessment of the current state, a review of relevant peer organisations confirming key remuneration and bonus design principles, and implementation actions and timelines In 2021 – 2022, the Guardians included corporate staff in Fund performance components of the incentive scheme to recognise the integral support provided by all employees to investment activities and a stronger connection to the purpose and performance of the Fund
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	 The use of risk factor frameworks has been explored to test the additional understanding they could provide. A conclusion was drawn that such frameworks did not greatly increase insight into the portfolio compared with their risk budgeting process Macro risk factor work has been incorporated into investment environment and scenario analysis
4	The Guardians should allocate more resources to focus on responsible investing (RI) issues	 Focus has shifted from RI to sustainable investment (SI) and sustainable finance. There is a multi-year programme of improvements in SI The size of the Sustainability team has increased over the past five years and continues to be monitored SI is recognised as important for long term outcomes and the SI framework is integrated through the investment process meaning that the dedicated SI resource has substantial support from the investment team Of note, sustainable investment has been incorporated into the Fund's organisational purpose and investment strategies
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	 Regular stress testing/pre-mortems are a feature of the Fund's Funding and Treasury Group activities. In February 2020 the testing considered a combination of a cyber-attack, bank failure, reductions in liquidity, a triggering of market circuit breakers and market closures The Covid-19 pandemic was a major real-life stress test and the portfolio performed as expected A Reference Portfolio review that was carried out in 2019-20 included the development of a new Reference Portfolio model, which was independently reviewed. This model was used to test a wider range of scenarios

Key changes to the investment process since the last review

WTW observations

- Since the 2019 Review there have been a large number of changes and enhancements to the investment processes worth highlighting
- As outlined on the previous page, there have been several changes made directly in response to the recommendations and suggestions that were an outcome of the previous review
- In addition, we have identified certain other process changes the Guardians have made over the past five years which we believe have enhanced the investment process

- From a total portfolio perspective, access point team strategists have been introduced to facilitate regular total portfolio discussions, which occur at Investment Committee (IC) level. A suite of Power BI reports has been developed to support this discussion and enhance the decision-making process, which details:
 - Risk usage relative to target/budget
 - Relative attractiveness of all current and prospective investments
 - Impact of current and future commitments on liquidity
- The liquidity risk appetite of the Fund was reviewed and lowered, taking a more conservative approach to liquidity management. Liquidity
 considerations are now incorporated into the budgeting of active risk
- · Several key changes were implemented throughout the risk budgeting process, including:
 - Tail risk is now explicitly considered in the review process
 - Risk budgets are reviewed every two years
 - Introduced direct allocation of risk budget to individual opportunities
 - Reduced the number of risk basket teams
 - Incorporated sustainability into the risk budgeting process
- The risk proxy system was changed from total risk to equity risk matching to increase simplicity, alongside the introduction of cash into the proxy/funding system
- There has been an important shift from Responsible Investment to Sustainable Finance, which now accounts for the impact of investments on society/environment. The Paris Aligned benchmarks for the Reference Portfolios equity exposure were adopted, and the impact investing framework was introduced
- The introduction of a First Screen for new investments has provided more visibility on the total portfolio and enterprise considerations, allowing for quicker determination of whether to proceed to full due diligence. The creation of the data and analytics team, development of the co-investment framework and increased delegations to the CIO and further sub-delegations to members of the investment team are further improvements that have been made
- · Improvements have been made to the investment exposures report and to IC and Board reporting



Business model

The Guardians works to a coherent business model. We suggest it should be flexible to new circumstances

WTW commentary

Purpose and vision clarity and alignment

- There is considerable clarity of the purpose and vision of the organisation; and alignment of stakeholders to this purpose and vision; and clear goals and roles reinforcing a shared vision
- These elements were subject to substantial examination under Matt Whineray's impressive leadership with significant support across the organisation for the move in focus from responsible investment to sustainable finance. The organisation has put forward its new purpose and vision following this work
- While we believe this all seems like good progress, we have some doubts that the sustainable finance vision and strategy has been completed

Rightsized sustainability ambition and commitment

- Rightsizing sustainability is one of the biggest challenges faced by asset owners. It involves a challenging balancing act between the primacy of financial goals and non-financial goals, noting that investments that may seem on the surface to be non-financial may have longer term financial consequences (net zero investing is a case in point)
- For the Guardians, choosing and pursuing a realistic sustainability goal that fits with the mandate given to
 the Guardians and is matched to its mindset and skills and opportunities has involved an extremely tricky
 balancing act. That goal has been selected by the Guardians mindful of practical opportunities for tangible
 real-world outcomes, while ensuring the risk-adjusted return is supported not compromised by
 sustainability. This is often referred to as not allowing any concessions to return
- We support the steps taken by the organisation so far. But we have raised the challenge of whether the
 position goes far enough with respect to dealing with real-world impacts like the net zero ambition and
 other possible real-world impacts of relevance to the Guardians. Our views are captured by strengthening
 the universal ownership / 3D investing principles (see page 62) by adding to the intentionality and
 measurement of real-world impacts. This is covered in a recommendation later in the paper

Strong and well-integrated technology

- The Guardians technology environment is committed to be aligned to the needs of the business and to the
 workforce needs. It is clearly work-in-progress in realising this commitment. The challenge is in particular
 in the cohesive collaboration between technology experts and investment professionals where difficulties
 arise in areas of language, communication, motivations and values
- We have put forward a suggestion on creating better connections for technology through a combination of
 organisational design, culture and goal-setting. The thesis here is that technology progress is as much
 about changes to investment team values, behaviours, motivations as the technology team equivalents

WTW commentary

AI/ML that is foundational to technology strategy

- WTW believes that AI/ML will prove critical to technological progress in a relatively short time-scale.
 AI is a general-purpose technology (GPT) that can affect an entire economy at a national or global level. Through its impacts on all knowledge workers, it will directly affect all asset owners' workforces.
 As an example, the widespread use of Microsoft Co-pilot suggests AI has transformational potential in helping staff in asset owners to increase their productivity
- One other use case is particularly important and relevant. Investment is overwhelmed with data of various types. Much of the alternative-data sources have previously been excluded from consideration because they are too soft. But AI can be used to integrate soft data and hard data and parse it to a synthesised state where human judgement can take on the data in decision-useful form, applying creativity, context and ethical factors areas where human judgement is well-placed
- The ideal future state for the Guardians is a focus on technology leadership through innovation and the commitment of time and investment. The Guardians will require rigorous standards in managing the associated risks with robust safeguards

Effective alignment with sponsor and key stakeholders

- The Guardians has been effective in its stakeholder relations by conducting itself to very high levels
 of transparency and giving priority to effective communications, while supported by a durable and farsighted framework. The Guardians' operating independence has been a positive feature of the Crown
 relationship
- The Guardians' sponsor is the Crown; specifically the Responsible Minister is the Minister of Finance; the monitoring agency is the Treasury. The organisation and its sponsor share a cohesive vision with minimal structural barriers. Goals are strategically set for net positive outcomes with stakeholders under the commercial mandate that has been present throughout the Guardians' existence

Competitive positioning and comparative advantage

The Guardians is clear in its application of comparative advantage through its endowments and
competencies. There is a well-developed internal capability in areas where external expertise is
difficult to access. There is a good balance in internal / external resourcing. We note these issues are
not fixed in time and the insourcing / outsourcing mix should be re-examined

Governance model

The Guardians governance model is excellent. But there is room to improve

WTW commentary

Governance practices across board and management

- 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. We believe viewing governance through this broader lens
 creates a more holistic picture of organisational effectiveness
- Very strong appreciation of the importance of governance was normalised under Adrian Orr's leadership
 more than a decade ago. The disciplines this produced were enhanced through the additional parameters of
 clear independence and clear commercial goals. The good governance is validated by standards of
 transparency, board meeting conduct, use of committees, quality papers, good management practice and
 chairing

Effective allocation of time budget

Most organisations struggle with time management in meetings, but our experience with Guardians suggest a
discipline in this area that is quite unusual. Most meetings at the Guardians have a clarity of purpose, with
relatively brief but on point content in papers, with discussions also staying on point, with good inclusion. The
organisational culture respects the scarcity of time and the value of productivity

Investment and organisational beliefs

- The Guardians has been disciplined over time in developing and applying investment beliefs in the investment process. Our view is that widening and deepening the use of beliefs in the organisation is a relatively low hanging fruit. The reason why we say that is related to their value in:
 - 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
- As in 2019 we have the sense that the Guardians beliefs could go both wider (into organisational issues) and deeper (into sustainability issues and systemic risks for example). We emphasise the importance of beliefs to the organisation, and ensuring their use by all staff

Real-time decisions

The Guardians is an organisation that passionately believes in applying real-time processes that take
decision-making through to implementation. The Total Portfolio Approach and strategic tilting process are live
examples of fast, effective process when speed is of the essence

WTW commentary

Effective compensation aligned to goals

- Effective compensation and incentive practices are critical to all investment businesses. The
 Guardians response to the 2019 recommendation on improvements to compensation was a
 positive one, and we noted a lower level of discussion on this subject in our 2024 review
- The compensation of the Board generally attracts much lower attention than compensation of Management, but this is not a valid perspective. Boards are subject to similar thinking in responding to incentives and a culture of being fairly remunerated
- The Board members at the Guardians have had unusually low compensation relative to global best practice. The Board has not visibly suffered from a shortage of excellent candidates willing to serve so far. That could change in future. More importantly, board members who feel appropriately remunerated are far more likely to go the extra mile for the organisation. Getting more from a Board is a very valuable addition. We emphasise the importance of the Crown/Public Services Commission reviewing Board compensation at suitable intervals, and particularly at the current time

Board is effective

- Board effectiveness is reviewed through a separate process. Our understanding is that the
 feedback provided in that process has been positive. In this review our interactions with the Board
 have left us with a strong impression of the capabilities and commitments that make a very
 effective asset owner Board; first competencies as prescribed in the role; secondly, capability with
 complex issues through its numeric skills and capacity for logical and critical thinking and to think
 about risk and probability; third, there is good board and management engagement
- Most asset owner boards operate with an asymmetry of domain knowledge on investments. The Guardians' board has by design identified the need for domain knowledge in its selection and composition. This enables it the opportunity to play an active role in engaging on investment issues: acting as a sounding board; challenging where the Management team's paper and presentation is considered incomplete or unconvincing; over-riding in limited circumstances where alternative decisions are supported; pro-active prompting on areas the Guardians can draw on the Board's diverse experiences; and the Board exploring new issues in dialogue with Management before the proposition is put to the Board
- We believe Board Management engagement is of a high standard, but we have later in this report made a suggestion on deepening this engagement on investment content



People model (1/2)

The Guardians has very strong practices in supporting an effective culture

WTW commentary

Organisational culture

- We define culture as the collective influence from shared values and beliefs on the way the organisation thinks and behaves (Urwin, TAI, 2019)
- 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
- The Guardians has participated regularly in studies 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 over six assessments with the latest in 2022. The Guardians has a constructive culture
 with excellence, personal integrity, and support for others as key components. This assessment was
 taken during the pandemic period but produced improved scores over 2019
- 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 and we suggest the positive value created from the
 Guardians' strong culture is clear in the people-culture, purpose-driven (including sustainability),
 investment culture and elements (described and referenced in the 2019 review)
- 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 in 2014 to about 130 in
 2019 to around 240 currently in 2024. The impacts of this growth on culture seem to have been
 managed so far
- 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. We <u>emphasise</u> the importance
 that Management and the Board should give in continuing its focus on maintaining and evolving the
 cultural effectiveness of the Guardians

Team culture

- Teams are critical to the Guardians' success. We define teams as groupings in the range of 3 to 30 with a particular focus and set of goals. By this definition, the Guardians is a large team of teams
- The Guardians has clear values when it comes to teams 'we support each other, team not hero'.
 There is a recognition of the important dynamics of teamwork and team thought in the collective intelligence that powers team thinking and action

WTW commentary

- Team effectiveness requires diversity in its sophisticated form of diversity, equity and inclusion (DEI)
 and this can help to attain the cognitive diversity needed to solve difficult problems and form a cultural
 bedrock that embeds belonging and a strong group identity. The ideal team is cognitively diverse with a
 culture consistently applying inclusion and exercising trust
- We highlight two challenges to team culture. First, there is the issue of sub-cultures where finding the sweet spot between desirable cultural nuances and disruptive differences will require continued attention. The most visible form of this is having a different culture between the investment team and the wider enterprise teams, an issue that has been well-managed so far
- Second, there is the evolution to hybrid work arrangements. These arrangements have merits, but they
 carry a cost in reducing the social capital in teams. There is a risk to the cultural traits of trust and
 inclusion as a result. We comment later on the work design issue

Diversity, equity and inclusion

- The Guardians' Diversity and Inclusiveness Policy has been in place since 2015/16 and has been added to in subsequent years via various enhancements, always with good thinking and practice
- Diversity, equity and inclusion (DEI) combine structural states (reflective of past practices) and cultural states (as embodied in current practices) of the organisation with diversity the full spectrum of human attributes, perspectives, identities and backgrounds; equity fairness of access, opportunity and advancement for all within an organisation; and inclusion: a state of operating in which any employee can be and feel respected, valued, safe and fully engaged
- The Guardians sees diversity through a convincing thesis that diverse groups of people bring more and different ways of seeing problems and, thus, better ways of solving them
- The Guardians has given considerable attention to DEI via its principles and practices, and this has
 enabled a more significant focus to develop. The peer study (pages 56 to 70) puts the Guardians in a
 prominent place in its implementation of various gender diversity measures
- The focus on gender diversity at the Guardians has been successful, the other facets like ethnicity less so. There is considerable room to develop in these aspects. The identity issues are complex and make this subject extremely sensitive, we visualise organisations increasingly challenged on these points
- We <u>emphasise</u> the importance of managing DEI sensitively and intelligently, not least because the bar for DEI is getting higher. The Guardians has been a very effective employer and has maintained very positive culture and engagement, it will need to be focused and agile in this area



People model (2/2)

The Guardians has very strong practices in attracting, developing and retaining talented professionals

WTW commentary

Talent

- We are impressed with the quality of the Management team. This covers the investment team and the
 wider leaders of the enterprise where the Guardians has managed to strengthen its talent over the
 years as its employer brand has improved
- Overall staffing levels are high relative to peers. The ratio of FTE per USD billion is the second highest
 of the 26 funds analysed in the peer study (at around 5). The proportions of non-investment
 professionals are higher than the peer average. Overall, we judge these staffing levels as appropriate
 and see the organisation as well-resourced relative to its demands
- 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 engagement with peers is an important element in augmenting the knowledge and intelligence in the organisation. Senior leadership and board members are particularly prepared to travel to access the most stimulating conversations and situations, both in the form of meetings with peers, provider and also conferences. There is a well-organized protocol for qualifying opportunities and covering peers
- 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

Leadership

- We define leadership as 'influencing a collection of people to achieve a common goal through strategy, motivation, and development'. Leadership should be seen as a role of all staff
- · Leadership is part of the enabling of culture; it is in the extended definition of 'culture'
- The most significant cultural dimension of leadership is flatness/hierarchy and is captured by the degree of distributed power how culture empowers. Leadership roles and cultural influence can be played by many people in the organisation. Management and leadership intersect but are different

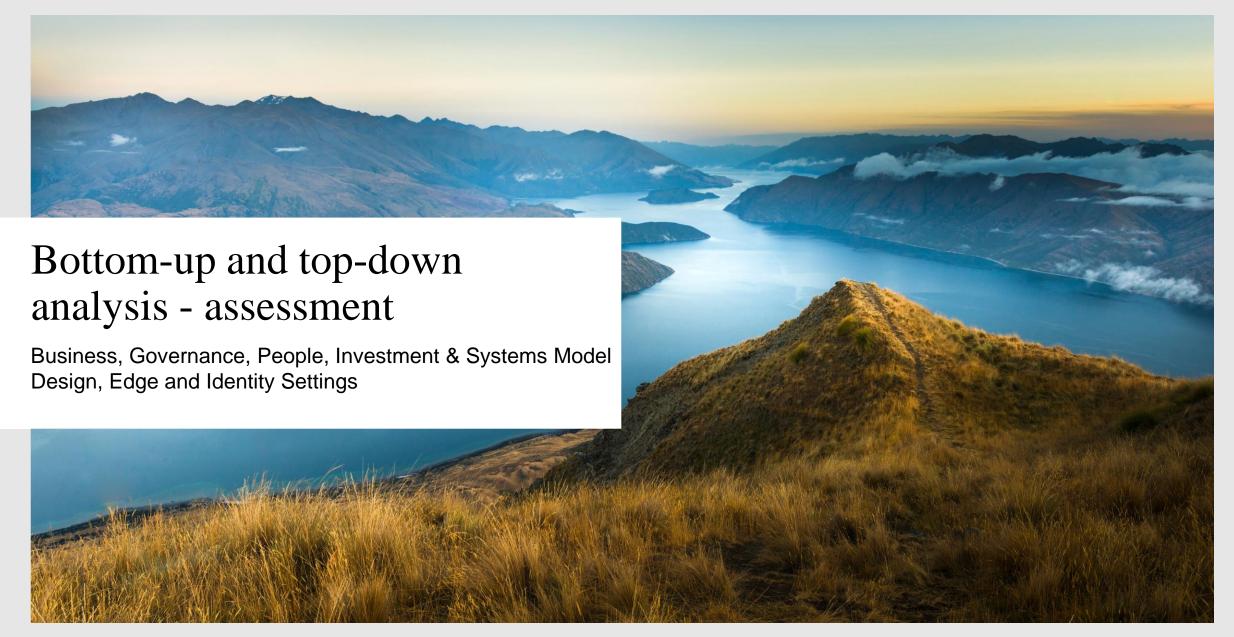
WTW commentary

- Leaders have wisdom and get their people to follow their example; while managers have competency
 and have their people follow their instruction. Leaders are shapers of culture, managers are carriers of
 culture
- The Guardians' leadership model has adapted well to increasingly complex contexts in which command
 and control styles may be poorly positioned because they lack the information for good decisions, the
 connections to build intrinsic motivations and the openness to secure alignment. So, while good leaders
 have generally been strong operators with good execution skills ('dominant leadership'), this attribute
 may be less effective in the future, although remaining important for times of crisis or organisational
 stress
- Leadership attributes that are increasingly sought and can act as complements to dominant leadership include servant leadership and transformational leadership
- · We found considerable evidence of commitment to strong leadership. Examples include:
 - An engaged Board being involved with influencing and inspiring the organisation
 - Strong habits to apply socialising to challenging issues to support alignment
 - Coherence of thinking and action within the senior leadership team with a 'number one team'
 orientation. That is, prioritising what is best for the organisation ahead of what is best for an
 individual's functional team
- That said, the Guardians has had a period of leadership discontinuity in the last nine months or so
 which will require a transition over time to secure a strong leadership presence going forward

Learning and development (L&D)

- Learning and development requires both the cultural support and platform to implement learning and development outcomes. This is a balancing act to ensure the give and get of the Guardians' 'offer' to its people aligns with their 'take'. This involves individual and organisational motivations and actions
- The Guardians is ahead of its peers in its ambitions in this area, but less so in its execution. The
 development of the Investment Academy platform is positive. But along with other peers there should be
 a move beyond the self-directed and self-driven approach to L&D which has not shown consistency in
 outcomes
- We have included a recommendation on L&D in later pages





G	Green =	Lime =	Amber = Moderate practice	Red =
alysis	Best practice	Good practice		Poor practice
tings	AAA, AA	A, BBB	BB, B	CCC & below

Bottom-up WTW analysis (1/5): Business model

AA - excellent overall rating

Business Model features	AA	WTW Assessment of the Fund
Purpose and vision clarity and alignment Clarity of the purpose and vision of the organisation Alignment of stakeholders to purpose and vision Clear goals and roles reinforcing a shared vision	AA	 NZSF has thought about purpose and vision throughout existence and continues to do so well as evidenced in Guardians of the Future Key leaders and leading stakeholders all appear to be quite clear on the vision and purpose of the Guardians and its boundaries, but some questions on vision and purpose as it relates to sustainability
Rightsized sustainability ambition and commitment Choosing and pursuing a realistic sustainability goal that is matched-to-mindset and skills Choosing that goal mindful of practical opportunities for tangible real-word outcomes Ensuring the risk-adjusted return is supported not compromised by sustainability	A	 Mindset is strong on sustainability, and well-embedded. The financial case is keenly applied throughout the investment process. Specialist resources have increased but are still stretched in an increasingly complex operating and reporting environment. NZSF is respected in the SI industry but not at the forefront relative to global best practice Level of ambition both a consideration for the Guardians and its principal stakeholders
Strong and well-integrated technology The IT environment is fully aligned with workforce demands It delivers adaptable, cost-effective, and efficient information flow There is cohesive collaboration between tech experts and investment professionals	Α	 Global best practice in tech and data is being led by the larger asset owners, where the significant cost is spread over a much larger asset base With smaller tech budgets the Guardians have not developed their capacity to be responsive to investment use cases
Al/ML that is foundational to technology strategy Al/ML is integral to the tech strategy, and very widely and actively used across use cases There is a focus on leadership through innovation and investment in Al/ML Al/ML applies rigorous standards in managing associated risks with robust safeguards.	BBB	 NZSF use of AI in portfolio management is positively differentiated and suggestive of applying new tech in a positive experiment Relative to new norms for best practice on the developing field of AI, the Guardians do not yet project a strong vision or strategy
Effective alignment with sponsor and key stakeholders The organisation and its sponsor share a cohesive vision with minimal political or structural barriers. Goals are strategically set for net positive outcomes with stakeholders The organisation has robust ties and bonding with its end investors.	AAA	 NZSF takes alignment with stakeholders seriously, communicates clearly and consistently and continues to be a global exemplar One of the key legacies of previous practice is high levels of transparency which has become a key points of culture
Competitive positioning and comparative advantage The investment philosophy reflects comparative advantages, endowments and competencies. There is a well-developed internal capability in areas where external expertise is difficult to access. There is a good balance in internal/ external resourcing	AAA	 Insourcing / outsourcing has been carefully choreographed over time with good balance While NZSF has higher staff to FUM ratio than larger global peers, resourcing is carefully considered and has been designed for and clearly demonstrated value for money The organisational design in private markets is particularly thoughtful and competitive



RAG	Green =	Lime =	Amber = Moderate practice	Red =
Inalysis	Best practice	Good practice		Poor practice
Ratings	AAA, AA	A, BBB	BB, B	CCC & below

Bottom-up WTW analysis (2/5): Governance model

AA - excellent overall rating

Governance Model features	AA	WTW Assessment of the Fund
Strong governance practices across board and management Strong governance parameters are in place with independence and commercial goals. Good governance is tracked through transparency, board cadence, meeting conduct, use of committees, quality papers, good management and chairing	AAA	 Management papers for the Board are detailed, perhaps sometimes overly so, with high quality analysis. Management spends considerable time to socialising issues with Board. The Guardians has in recent years suffered from discontinuities in Board composition. The leadership triangle of Board chair, CEO, CIO has been a positive dynamic to governance
Effective allocation of time budget The organisational culture respects the scarcity of time and productivity; Each element in the board's agenda are resourced with an appropriate time and resourcing budget; There is a focus on the importance and impact of each item.	Α	 The Guardians' Board has over time conducted its business at a more detailed and complex level which has made strategic oversight harder to spend time on This has stretched the agenda coverage with increasing time demands that has not been fully anticipated, and it has become harder to plan optimal time allocations
Strong investment and organisational beliefs Strong beliefs covering investment, sustainability and organisational effectiveness that inform decisions. Beliefs are documented that are sophisticated and edgy and command organisation-wide support. The beliefs are actively reviewed and socialised	AA	 In general, comparative advantage considerations and investment beliefs are strong and reasonably well embedded in the decision-making and governance processes We have some questions on the strengths of sustainability beliefs and links to vision, purpose and financial outcomes
Real-time decisions The organisation utilises decision-making systems that function in real-time not calendar-time; Board processes and discussions are not sources of organisational delay; Portfolio management has time-sensitive completion to optimally adjust portfolio positions	AA	 The delegation's framework is explicitly set up to ensure real-time and decisive processes The Board does not slow down decision-making Real time decision-making, as linked to a strong total portfolio approach, appears a relative strength
Effective compensation aligned to goals Effective compensation and incentive practices are used to build team strength and align actions to the vision and purpose; The comp strategies are varied as appropriate according to context; Contributions to teams attract appropriately large weightings	AA	 Incentives for Management are well aligned with a total portfolio approach Attracting the best staff from a global talent pool could be challenged by the Fund's remote location from global financial hubs and the high pay scales in some of these locations, but the standing of the organisation appears to offset this concern Board remuneration is below what seems appropriate. But the Board is very high quality
Board is effective The Board is capable with complex issues through its numeric skills and capacity for logical and critical thinking; There is an ability to think about risk and probability, and deal with uncertainty and ambiguity; There is good board and management engagement	AA	 Board's challenge to management is presented firmly and fairly Board member changes makes this element challenging to assess forward looking Over the past five years there have been challenges and Board turnover, but this does not appear to have a significantly adverse impact on board effectiveness



AG	Green =	Lime =	Amber = Moderate practice	Red =
nalysis	Best practice	Good practice		Poor practice
atings	AAA, AA	A, BBB	ВВ, В	CCC & below

Bottom-up WTW analysis (3/5): People model

AA - excellent overall rating

People Model features	AA	WTW Assessment of the Fund
Effective organisational culture Clear preferences for certain positive values, aligning behaviours in client and people-centric ways. Applying the principles of a learning organisation operating in joined-up ways. Commitment to excellence in results and relationships	AA	 Culture is well assessed and considered through the organisation including the culture measurement process The growth mindset is given special status in Guardians values A significant success point was that culture factors did not drop during the Covid pandemic
Effective team culture Culture of identity, shared purpose and equality of voice; The team is seen as critical to organisational accomplishments; The team is highly motivated to work towards becoming effective	AA	 Interactions suggest a high-performance team rather than a collection of star performers as called out in the 'Team not Hero' mantra We have some concerns that the hybrid work culture has reduced in-office interactions. There is a longer-term risk to culture with significant leadership changes occurring
Strong DEI (diversity, equity and inclusion) practiced Diversity is observable in differences, equity and inclusion are observable in the respect for difference and the leverage of differences. DEI values provide clear benefits to culture. DEI supports innovative thinking and complex problem solving	Α	 There is clear incorporation of strong practice DEI implemented through the People and Culture team Diversity is clearly work-in-progress with room to develop. The energy is there to support this We did not experience group think, although some voices dominate discussions Guardians has been an innovative organisation throughout its existence
Talent at all levels and in all disciplines Attracts and retains high quality investment professionals and support professionals. No difficulties from geographical constraints or structural constraints; Strong employer brand provides good pipeline to grow	AA	 Strong purpose and standing of the organisation positive for attraction and retention The single location avoids geographical constraints but should be weighed against opportunities from international presence Significant leadership changes in 2024 suggest a watching brief is justified
Inclusive and empowering leadership Servant leadership is practiced, power is well distributed, progress reflects delivering outcomes and helping others; Leaders are engaging, empowering, trustworthy and trusting; Leaders act as stewards, designers, and teachers	AA	 Positive perspectives indicated from leaders of the past that have created a high bar Losses of senior leaders have left the leadership layer relatively untested Evidence of a certain amount of servant leadership and systems leadership There is a particular need to ensure the team remains inclusive and empowered
Learning and development prioritised The organisation has an effective model for delivering learning through tools and other resourcing. Individuals take responsibility for their learning and aim to understand complexity. The areas of soft skills, T-shaped skills and leadership are prioritised	AA	 The skillsets of the team exhibited a good mix of specialists and generalists, with a focus on common understanding across teams Efforts were identified as underway to strengthen via the Investment Academy Board education practices are strong including a peer program



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analysis	Best practice	Good practice		Poor practice
Ratings	AAA, AA	A, BBB	вв, в	CCC & below

Bottom-up WTW analysis (4/5): Investment model

AAA - exceptional overall rating

Investment Model features	AAA	WTW Assessment of the Fund
Strong risk budgeting framework A framework for the effective allocation and adjustment of the total portfolio risk. Attribution of factor exposures and manager contributions into fund diversification. Focus on net return, realistically sizing ex ante expectations of skill-based strategies	AAA	 The framework for effective allocation of risk and relative ranking of existing investments and new opportunities has significantly strengthened over the past five years and is a strong investment process enabler The Guardians has a very realistic grasp of realistic ex ante returns
Effective portfolio construction An effective process for sourcing new ideas and approaches from multiple sources. Manager selection is effective at sourcing skill-based strategies. Total portfolio thinking is used with decisions as competitions for capital without constraints	AA	 The frameworks and decision tools in place to inform decision-making across the whole portfolio are excellent Some questions on the value of the risk and return contribution of a number of the smaller positions in the portfolio where net value add is small
Comprehensive measurement & reporting An integrated approach to performance measurement, with attribution and narrative across key areas. An integrated approach to risk measurement with risks measured through multiple lenses. Reporting that includes slicing and dicing of results	AA	 Robust, detailed process enables comprehensive attribution External reporting to stakeholders via Annual Report is exceptionally clear and is a global best practice benchmark Board has a reporting package that helps it appraise what has happened
Effective in long horizon investing Long-horizon investing skillsets and a long-horizon investing mind-set supported by long-term measurement metrics. Understanding and adaption away from behavioural biases. Ability to manage the interplay of short-term exigencies and long-term goals	AAA	 NZSF heavily relies on its long horizon endowment in the main contributors to its performance, being strategic tilting and tactical credit Performance expectations linked to expected drawdowns and mean reversion timeframe expectations are clearly communicated
Effective liquidity management Liquidity is understood, measured, and managed efficiently, both from a demand and supply view. Liquidity is effectively positioned in a trade-off with respect to overall portfolio quality assessment. Appropriate pricing of the liquidity premium is applied	AA	 Liquidity is considered a principal risk and accorded considerable attention Liquidity has been rigorously researched over the past five years, with the impacts of liquidity on derivative positions in particular carefully considered, leading to a reduction in the liquidity budget
Strong in sustainability Financial and extra-financial factors are integrated over stakeholders and time horizons. Clearly recorded sustainability ambitions and commitments in rightsizing. Follow through with resourcing and skill to integrate sustainability into investing-as-normal	Α	 NZSF has a strong sustainability capability and integration throughout the team It still lags in resources behind leading asset owners in this space and doesn't yet have a thought leadership profile it deserves. Senior leadership attention has grown. More focus on universal ownership / 3D investing principles and practice would add value



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analysis	Best practice	Good practice		Poor practice
Ratings	AAA, AA	A, BBB	ВВ, В	CCC & below

Bottom-up WTW analysis (5/5): Systems model

A – very good overall rating

Systems Model features	Α	WTW Assessment of the Fund
Deep understanding of the investment industry Colleagues and leaders are inquisitive about the industry ecosystem and use a systems mindset. The organisation has a developed worldview and understanding the big picture. There is commitment to learn from peers and from other industry organisations	Α	 There is a strong sense of academic inquisitiveness in the team with inquisitiveness in relation to systems thinking and early signs of appreciating its use. There are limitations in interactions with global peers as impacted by the Fund's location. The Guardians can be less connected to the global industry as a result
Deep understanding of the organisation Self-aware about the organisation's strengths and weaknesses, and its complexities and adaptiveness. Information flows well through the organisation and ensures priorities and progress are identified. There is a culture of openness and transparency	AA	 Discussions with various teams in the organisation indicated consistent thinking and understanding of strengths and challenges Cross-team roles are well designed to enable information flows The culture encourages exploration through openness and transparency
Learning organisation, culturally and structurally Growth mindset is sought with curiosity, development and exploration and practical support for learning. The organisation prioritises building a shared vision, beliefs, and team learning; The organisation uses story-telling and other cultural artefacts.	AA	 Discussions with the team indicated a desire for continuous improvement and challenge Observed research projects over the past five years were varied, well-focussed and thorough, including healthy external challenge commissioned by Internal Audit
Joined-up across internal teams and providers in the value chain Inclusive organisational design with a combination of hierarchy and networks in which the politics is limited; The organisation encourages system thinking and systems leadership; There is a joined-up risk model and risk culture	Α	 While the voices of key leaders were evident throughout the review, all team members came across with strong contributions and the indications are of a well-functioning, 'low politics' team Risk consistently considered across the team, but technology less joined up
Joined-up in thinking, investment, measurement, and reward The key measures are ones that are fully aligned to goals, including the TPA parts. The management through measurement that is practiced is agile and behaviourally sound. The incentives and cultural values in the organisation are aligned to organisational goals	Α	 Strong application of the total portfolio approach at NZSF leads to consistent focus on the overall outcome and not appearing anchored to the status quo Ideas are challenged and a willingness to cut opportunities where appropriate. Some challenges in addressing the parts of the system where measures are absent
Strong change capability There is a mindset to be pro-active and agile with respect to organisational change. The organisation has PMO – project management office – capabilities and resources. There is experience and track record of good handling change programs and processes	Α	 The tech change programs have had industry-standard success patterns. Over-runs of programs have resulted in re-sets. NZSF recognises its scale limitations in the number and scale of change programs to run The specialist change resources at Guardians are relatively limited



Top-down WTW analysis (1/3): the key design features of top asset owners

The Guardians has strong design but with room to grow. The complexity challenge is particularly important

Key design features	NZSF	NZSF Assessment and Opportunity
 Managing complexity. Balancing BaU ("business as usual") tasks with BbU tasks and their speeds of execution; resourcing and planning for increased complexity; resources and competencies for managing change 	ВВ	 In common with other leading asset owners, the Guardians has had increasing challenge in progressing long-term ambitions to advance enterprise-wide capabilities and given the increasing complexity of addressing near-term challenges this is both a risk and an opportunity The opportunity is to re-set the organisational balance in this design. This is covered in our recommendations
2. Total portfolio approaches (TPA). Governance frameworks that are goals-centred, adaptable and flexible; joined-up allocation for capital in a competition for the best ideas; teams work for the total portfolio interests not for their team interests	AA	 The Fund has been managed under total portfolio principles for more than a decade and has evolved the beliefs and implementation process and culture successfully There is the opportunity to continue to develop stronger joined-up principles in the implementation of TPA - something that requires considerable continuing attention There is a particularly important opportunity in integrating systemic risk into the overall Fund risk management
 Insourcing system. Well-designed line-ups of skills and resources; , cultural alignment and joined-up risk exposures with all mandates; co-investing models and directs model with well- integrated cost and value assessment 	A	 The Fund has evolved the insourcing/outsourcing design successfully and is positioned in an effective overall design with balancing and complementary characteristics There are opportunities to improve the overall mix by evolving the private market use of co-investing and taking controlling interest in an entity The Guardians should consider whether they would reap net benefits from an overseas presence (e.g. London)
4. 3D investing model. Balancing risk, return and real-world impacts sustainably and systemically; allocating to listed markets holistically with respect to externalities; inclusion of systemic stewardship and other universal ownership activities	A	 The Guardians have evolved their sustainability model into a sustainable finance position which uses universal ownership /3D investing principles to support the primacy of maximising risk-adjusted returns There are opportunities to develop the real-world impacts of the Fund through investing and stewardship activities while maintaining the financial primacy of the Guardians' goals. This involves developing the Fund's practices on the intentionality of impacts and correspondingly the measurement and reporting of the outcomes (noting additionality)

RAG	Green =	Lime =	Amber = Moderate practice	Red =
analysis	Best practice	Good practice		Poor practice
Ratings	AAA, AA	A, BBB	BB, B	CCC & below



Top-down WTW analysis (2/3): the key edge features of top asset owners

The Guardians has a strong edge in culture. But with room to grow on joined-upness and the work design

Key edge features	NZSF	NZSF Assessment and Opportunity
 The soft stuff is the hard stuff. Successfully managing talent, culture and governance; applying strong leadership principles including servant leadership and systems leadership; maintaining the EVP (employee value proposition) with appropriate alignment of comp 	AA	 The Guardians have maintained culture at a strong level through the pandemic and return-to-office; they have kept high hiring standards; compensation aligns with strategy and EVP; the organisation has had the benefit of strong leadership in the past, but leadership continuity has been uneven in the last six months The re-establishment of a leadership edge within the relatively new leadership layer is an opportunity
 Joined-upness. Effective combinations within and across teams and across providers, reducing siloes in the organisation; wherever possible working with shared values across teams and groups 	ВВВ	 In common with the maturity cycle of other leading asset owners, the Guardians have experienced more challenge being joined-up with recent headcount growth. But to their credit, the organisation has put energy into maintaining a cohesive and holistic culture and way of working The opportunity is to blend the complexity challenge with this joined-up challenge and be more intentional and deliberate around this highly soft area
3. Design and execution of the work model. Effective hybrid design (the in-office/ virtual mix and its tacit 'rules'; superteams principles (strong team design in culture, governance and cognitive diversity); connecting the design of location and time to innovation/ execution	ВВВ	 The Guardians leadership see the hybrid model – taken in its fullest context – as working quite well, and WTW tends to agree, with one qualification. There is a building challenge that the social capital that goes with a hybrid model is likely to be lower following significant leadership turnover, with implications for collaboration There is the opportunity in the office move in 2026 to align office design, hybrid design and EVP and OVP (organisational value proposition)
4. Learning organisation. Learning and development platform; building organisational synergy by aligning individual and organisational motivations and actions; inspiring a cultural upsurge in learning to address increasingly fast speed of change in work imperatives	A	 The cultural foundations of learning at the Guardians are very strong. Encouraging a growth mindset is part of this culture. The development of the Investment Academy is an important initiative to build a more systematic approach to learning and development The need for pro-active skills development to support the technology transition is critical which we would suggest should be part of an organisation-wide systems thinking program

RAG	Green =	Lime =	Amber = Moderate practice	Red =
analysis	Best practice	Good practice		Poor practice
Ratings	AAA, AA	A, BBB	BB, B	CCC & below



Top-down WTW analysis (3/3): the key identity features of top asset owners

The Guardians understands the soft benefits of a very strong organisational identity

Key identity features	NZSF	NZSF Assessment and Opportunity
1. Organisational purpose, vision and values How the purpose and vision of the organisation aligns with its values; how this is motivational to the organisation and helps with the alignment of behaviours and actions; having a coherent link between these elements of organisational design and the whole ecosystem	AA	 The organisation has kept faith with its endowment of a particularly long time horizon and vision about the future which has produced a virtuous cycle in which preparedness for adversity and periods of drawdown is particularly resilient The Guardians work in leadership team and the Board on the 'Guardians of the Future' has developed a coherent and visionary strategy for the organisation that is based on a realistic view of current issues and opportunities There is the opportunity to be more explicit with the challenge of sustainable finance in balancing the risk and return, and sustainability and systemic factors with respect to ambition and goals
2. Shared history and heritage as influenced by leadership How the organisation's history is respected and informs behaviours and actions in a way that motivates and helps joined- upness; how previous leaders have contributed to the organisation's present state; how present leaders are contributing to the present and future state	AAA	 Leadership continuity has been excellent over the vast majority of the Guardians' history (see footnote). But that continuity has not been present in the recent turnover in both Board and Management top leadership Distinguishing marks of the organisation have been the motivational force emanating from the Guardians' vision and purpose, the belief in the power of a positive culture and the value of intellectual rigour in addressing complex investing challenges. These have been present throughout from its origins There is a significant opportunity and importance for present leadership, notably in Board Chair John Williamson and CEO Jo Townsend, to play a large and distinguished part in guiding the Guardians' future

Footnote. The history of the Guardians includes the influence of outstanding leadership from a number of individuals: Michael Cullen, who established the Fund in 2001 as Minister of Finance, the three prior CEOs of the Guardians: Paul Costello, Adrian Orr and Matt Whineray; and the four Guardians Board chairs: David May, Gavin Walker, Catherine Savage and Catherine Drayton. It is hard to overestimate the positive influence that these individuals have had in developing the organisation to its present state

RAG	Green =	Lime =	Amber = Moderate practice	Red =
analysis	Best practice	Good practice		Poor practice
Ratings	AAA, AA	A, BBB	BB, B	CCC & below



RAG
analysis

Green = Lime = Amber = Red = Poor practice

Ratings

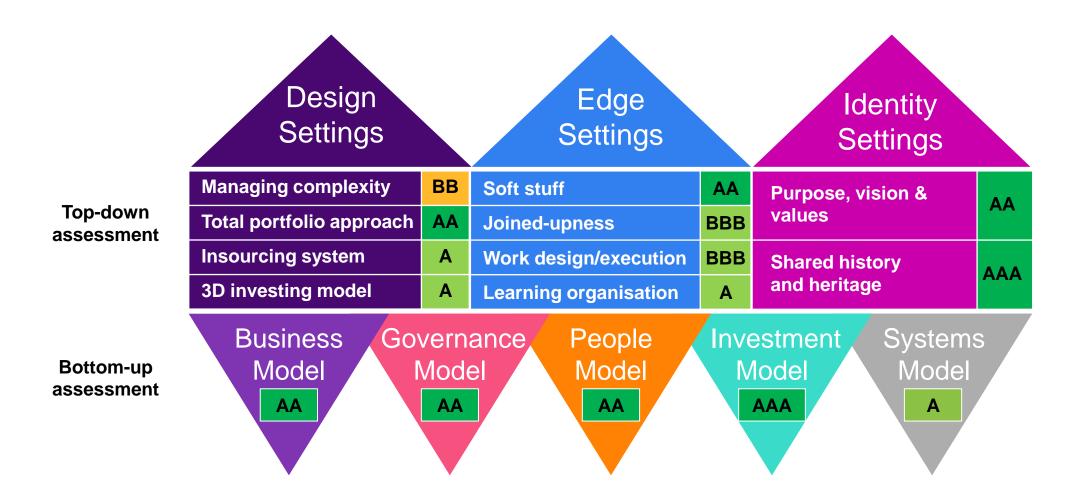
AAA, AA

A, BBB

BB, B

CCC & below

WTW Analysis Summary





Specific review assessments



Governance framework

Ethical/Sustainable Investment Framework

 The governance and management implications from the amendment to S59 in the Act allowing the Fund to take a controlling interest in an entity

- Review of internal vs external management
- Evaluation of ex-post performance
- Investment strategies: endowments, risks and liquidity
- Summary of WTW Risk Budget and Risk Proxy reviews
- Derivatives

Evaluation of Statement of Investment Policies, Standards and Procedures

WTW observations

- 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 bordered in red form part of the NZ Super Fund SIPSP

Statements of Investment Policies, Standards and Procedures (SIPSP) for NZ Super Fund and Elevate Fund



- We believe that the Guardians has a very well-thought-out policy framework
- Most of the policies are more principles-based than a list of prescriptive processes and rules, which we believe is the more effective approach. That said, there are logical exceptions such as the Investment Valuation Policy, which by its nature needs to be more prescriptive
- 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 to ensure that all the underlying policies and procedures included in the SIPSP are
 integrated through the organisation
- Each section of the SIPSP and each underlying policy and associated procedures and standards is assigned a subject matter expert for review and update and at the most recent review in June 2023 the subject matter experts and policy owners confirmed
 - Reviews had been completed (noting underlying policies are on a five yearly review cycle)
 - The documents were fit for purpose, and they were consistent with the statutory mandate for the relevant fund and
 - That they were not aware of any material non-compliance issues
- Five years ago, we noted that there were a number of policies which were quite detailed and lengthy and culture survey results at the
 time had a common theme that what people liked least about working at the Guardians is the heavy focus on process and policies,
 which had the risk of stifling creativity and making innovation more difficult. Pleasingly we note that in the past five years the
 Guardians has commenced a programme to simplify policies and improve readability and accessibility. While this programme was deprioritised when covid hit, recent rolling policy reviews have been focussing on the new simplification template with positive internal
 response received
- There have also been some logical changes to the policy structure:
 - The Direct & Externally Managed Investment Policy is the consolidation of the prior Direct Investments Policy and the Externally Managed Investments Policy
 - The Strategic Tilting Policy was retired effective 22 February 2024, as the key matters relating to the Strategic Tilting strategy are covered by policies elsewhere
- 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
- We believe that the Guardians' policies and procedures are in line with global asset owner best practice and that they are helpful in enabling the Guardians to achieve its vision of "an inclusive team creating a better future through investment excellence"

Evaluation of Guardians' governance frameworks

WTW observations

- In the previous section we have comprehensively assessed the Guardians against our global best practice framework, both top down and bottom up
- In this section we provide our perspective on some specific governance points specifically outlined in the terms of reference for this review and whether they are in accordance with best practice:
 - (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
 - Internal Board alignment and communication (bearing in mind multicountry domiciles)

- Effective delegations are a combination of the right decisions being made at the correct level by decisions makers with the right level of skills, clear reporting of delegations implemented, appropriate escalation of issues and guidance requested, strong oversight and trust throughout the decision-making structure that is appropriately earned through positive actions. In our view the Guardians have developed strong delineation of Board and Management responsibilities and delegations consistent with best practice, noting that as with organisations globally, this past five-year period stress-tested the framework as the Fund adapted to the Covid environment
- In particular, our review has identified that, consistent with most organisations, Covid challenged communication lines, both Management to Board
 and within Board, especially the challenges of onboarding Management staff and Board members in a virtual environment. That said, the Guardians'
 measures of culture through this period remained high, illustrating a level of resilience and adaptability to the extreme circumstances
- Significant components of the investment process are delegated to Management, which is positive for real time decision making/timeliness and consistent with best practice. However, the Board's retention of responsibility for the Reference Portfolio and the Active risk budget, which are the primary risk setting parameters for the Fund, and policies and constraints, as the guardrails for decision-making, are consistent with best practice
- The papers we have reviewed from Management to the Board are comprehensive. We also observe matters of significant strategic perspective, such as the five-year planning and repositioning from responsible investment to sustainable investment, gaining significant Board attention from Management. That said, as discussed elsewhere we see value in the Board expanding its dialogue with Management on risk in the Reference Portfolio review
- Record keeping is thorough and meeting minutes are in accordance with best practice
- The Guardian's Codes of Conduct for both Management and Board members are comprehensive. The six-monthly reporting of conflicts of interest from Management to the Board is thorough and there is strong Board attestation, both at each meeting and via six-monthly confirmation that interests are up to date
- The process for selecting Board members arms-length via a separate nominations committee continues to identify strong candidates with a global perspective. This process and the conduct of the nominations committee are exemplary. One of the outcomes of this is that Board members can be located in quite different time zones. This can generally be adjusted for regular meetings with demonstrated flexibility for individual members but is more challenging for arranging out of cycle meetings as experienced in Covid. The importance of the Chair and the Chief Executive to manage communication is key in this area, and while only early in the tenure of both of the individuals in these roles, our experience has been positive
- The Board has been operating at its minimum number of Directors (though we note this has risen to six Directors as of April 2024), which can
 present challenges when turnover is experienced, as the workings of sub-committees may be hindered; and it realistically takes more than a year for
 new Directors to understand the workings of the Fund. We therefore emphasise the desirability of targeting the upper limit of seven Directors, noting
 this also benefits succession planning

Evaluation of Guardians' Ethical/Sustainable Investment Framework (1/3)

WTW observations

- As noted previously, the Fund has made significant strides forward in sustainability since the last review. We note global best practice has also progressed significantly in this time, meaning leadership aspirations in this area are a challenging moving target
- The Fund's move from a responsible investment (RI) approach to a sustainable investment strategy has been a significant commitment. Over the past 5 years the Fund has:
 - Developed the 'Resetting the RI Compass' RI strategy which involved developing an approach that is both consistent with the mandate and feasible to implement. Changing mindsets, transforming finance and financing transformation are the three focus areas
 - Developed a sustainable finance goal which involves incorporation of ESG into investment decisions, with the intention of advancing sustainability whilst fulfilling financial purpose, considering the impact of ESG on investments and the impact of investments on society and the environment, and working with others to overcome barriers to a sustainable financial system
 - Shifted to Paris Aligned Benchmark Reference Portfolio
 - Added alignment with sustainability goals as a positive factor in the risk budgeting framework
 - Continued to develop its climate investment strategy
 - Enhanced impact investing through an impact investments plan and framework in 2022/23 based on global good practice
 - Deepened engagement & voting activities across the portfolio

- We have considered four lenses of sustainability, and have observations on each as follows:
 - 1. Top-down approach to sustainability relative to global best practice
 - We see significant evidence of consideration of sustainability in a whole of Fund context, including thinking on how to incorporate net zero into the reference portfolio via Paris aligned benchmarks in listed equities
 - While this is leading practice globally, we see global best practice peers deepening their principles on why they are evolving their
 practices (e.g. what is the benefit in investing sustainably) and what intended outcomes they are pro-actively targeting, with a focus
 on intentionality and additionality
 - 2. Bottom-up incorporation of sustainability relative to global best practice adopting integrated ESG
 - Within asset classes and at the individual opportunity level we see strong evidence of sustainability being incorporated alongside traditional risk and return assessment. In this area we assess the Fund as operating at a level consistent with best practice peers
 - This includes consideration of the intentionality of impact, particularly in domestic investments where arguably the Fund can have the strongest proportional impact. The development of the real-world impact via intentionality and measurement is work-in-progress
 - 3. Stewardship relative to global best practice
 - We see good evidence of influence in the domestic market and recognise the challenge with respect to voting impact on international holdings (this is an area where much larger peers are able to leverage their funds under management muscle)
 - We also see involvement and influence in policy engagement on a global scale, but recognise the resource burden this involves and suggest additional resources could be beneficial based on comparison with global peers
 - 4. Speed and progress made in implementing the Crown Responsible Investment (RI) Framework
 - The Fund has made significant strides in implementing the Crown RI Framework and also is to be applauded for its leadership and quidance provided to other Crown entities
 - Much of the work required involves a significant reporting requirement and, while much progress has been made, this necessarily impacts available resourcing in the team for other sustainability initiatives
- Overall, our major question is the level of ambition the Fund has to be a global leader in sustainable finance and fully aligning with universal ownership / 3D investing principles (both these terms are defined on page 71). This requires top-down influence; the Guardians is clearly operating at best practice levels with respect to bottom-up influence

Evaluation of Guardians' Ethical/Sustainable Investment Framework (2/3)

WTW observations

• In the table below we have assessed the progress the Guardians has made in implementing the Crown RI Framework and find it is on track, although consistent with comments in the rest of this section we see a couple of areas for potential enhancement shown *in italics* (noting these can occur above and beyond the Crown RI Framework)

Crown RI Framework requirement	Evidence		
Measure			
Carbon Footprint metrics	Carbon footprint and target data provided for climate change for equities and liquid credit publicly in each year's Annual Report. More explicit consideration/quantification of climate transition and physical risks in the measurement framework to ensure that focus on financial aspects is maintained would be beneficial		
Taskforce for Climate-related Financial Disclosure reporting recommendations	Evident in annual report and other papers reviewed		
Consistency of measurement standards across the Crown Financial Institutions	Evidence of collaboration and exchange of sustainable investment resources with three other New Zealand Crown Financial Institutions: the Accident Compensation Corporation (ACC) the Government Superannuation Fund Authority and the National Provident Fund		
Reduce			
Carbon Neutral by 2050	2021 pledge to achieve net zero by 2050 (with interim reduction targets)		
Challenging interim minimum carbon reduction targets	Short-term carbon reduction targets to reduce the potential emissions from fossil fuel reserves by >= 80% and carbon emission intensity of the Fund by >= 40% by 2025		
Interim targets aligned with best practice	 To achieve best practice we suggest consideration of targets based on: Portfolio alignment, being forward looking alignment of the portfolio with net zero pathways (i.e. where the portfolio is going in the future rather than how it has been) Contribution to transition finance and climate solutions to capture the aspect of reducing real world emissions in addition portfolio decarbonisation 		
Interim targets refreshed every five years	Completed to date and committed to update 2030 targets in 2025		
Take leadership positions ahead of minimum reduction expectations where investment strategies allow	The Fund believes its sustainable investment focus is consistent with maintaining an appropriate leadership position and our assessment of the bottom-up approach is consistent with this view		
Influence			
Utilise long-term risk and return strategies to identify positive investments	Commitment to, and evidence of, investing in climate solutions and investing in assets that are aligned or aligning with the climate transition		
Utilise position as a significant investor to engage with New Zealand and global companies to develop transition strategies	Commitment to, and evidence of, engaging with management of companies/assets which are not aligning to the suitable transition strategies, particularly in New Zealand		

Evaluation of Guardians' Ethical/Sustainable Investment Framework (3/3)

WTW commentary

Global best practice

- We have assessed the Guardians on our view of the elements of a global best practice sustainable investment model:
 - As discussed on the previous page, the Fund has significantly stepped up its goals and commitments in sustainable investment and upgraded policies. There is much to admire in the latest stage of the Guardians' sustainability journey
 - There has been significant improvement in the last five years on goals for key topics such as both long term and interim Net Zero targets and integration of sustainability into the strategic process
 - However, as discussed below, we believe global best practice is developing further on topdown goals and targets, and at a significant speed
 - The Fund is a leading exponent of TPA and has integrated bottom-up sustainability considerations well into the portfolio construction process. This includes the use of Parisaligned benchmarks discussed previously. But global best practice is seeing evolution to more transition-focused forward-looking benchmarks
 - A lot of resource is required, and has been deployed, to measure and assess sustainability, and in particular climate, metrics and the Fund has been strong in its engagement, particularly in New Zealand
 - The Fund is leading global best practice in its public disclosure of its beliefs, policy and progress against SI goals

WTW commentary

Real-world impact

- In our view the Fund is operating consistent with the approach taken by most best practice asset owners to first address the bottom-up perspective on real-world impact
- What we find less evident is top-down guidance on "to what end". This would require more
 coverage of what are the explicit impact goals/targets, and how exactly impact is weighed against
 financial risk/return noting that not every impact investment or strategy that the Fund could make
 will involve a financial and non-financial win-win
- At a high level this top-down guidance exists in the Fund's purpose statement, but the framework
 adopted is what we would describe as '3D-lite'. Given its stated ambition the Fund could be
 making stronger plans to move towards '3D-full-on' adopting integration of sustainability at the risk
 allocation level via top-down guidance and assessment at the opportunity-level. This would accord
 fully with universal ownership / 3D investing principles (as explained on page 62)

Systemic risk

- Sustainability connects with the developing subject of systemic risk. See Appendix page 73 for additional discussion on systems thinking and systemic risk
- The challenges of evaluating climate risk are covered in the peer study in the Appendix
- We comment elsewhere in the report on the need to build a clearer and more tangible view of how systemic risk and climate risk in particular will affect the Fund's finances. These are critical areas for all asset owners to explore

Governance and management implications from the Amendment to S59 of the Act (1/2)

These changes produce improved flexibility in the private markets area

WTW observations

- This terms of reference of this review include a requirement to assess the governance and management implications from the potential amendment to Section 59 in the Act allowing the Fund to take a controlling interest in an entity
- Until June 2024 the Superannuation and Retirement Income Act 2001 (the Act) prohibited the Guardians as manager and administrator of NZSF from holding controlling interests in entities
- A review of section 59 of the Act in 2011 led to the introduction of section 59A of the Act which gave the Fund the ability to invest in Fund Investment Vehicles
- A review of whether the restriction on the Fund taking a controlling interest in other entities that was put in place at the formation of the Act in 2001 remaining appropriate has just been completed and resulted in Section 59 of the Act being amended by Royal Assent on 4 June 2024, with a new Section 59 replacing Sections 59 to 59B
- Section 61(fa) has also been amended to reflect the changes to Section 59. This now requires the Fund's SIPSP to cover the governance framework for the implementation and operation of all entities that are controlled by the Guardians or that are formed by the Guardians for the purpose of holding, facilitating, or managing the investments of the Fund

WTW commentary

- Direct investments are a much more common feature of best practice portfolio management today than was the case during the creation of the Act in 2001 or the review that occurred in 2011. We therefore support the removal of the previous restriction on allowing NZSF to take a controlling interest in other entities
- The extended use of direct investments will expand the investment options available, particularly the investments available to the Fund's Direct Investments and External Investments and Partnerships teams. In particular, for Direct Investments, the amendment enables wider options and flexibility of ownership and co-investments as well as extends opportunities that are now available to drive better SI outcomes
- The maturity and growth of the Fund mean that enabling the Fund to hold controlling interests in an entity is a natural evolution of and logical step for the Fund
- The key principles for controlled direct investments include the need for them to maintain operational independence and therefore be separate stand-alone entities from the Guardians and that the board and management team of a controlled direct investment be responsible for managing that entity and business
- Management has engaged extensively with the Board on the implications of the amendment passing on the Guardians' existing policies framework and key principles have been discussed for the SIPSP as well as the implications for relevant parts of other existing Guardians' policies. This review process has been, in our view, extremely comprehensive
- The Guardians' have well established and robust processes in place for managing interests in non-controlling direct investments. This lays the foundation for extension of these processes to additional controls required as a result of increased control and associated risks. The Guardians and the Fund have diligently considered the myriad of governance, management and operational implications and risks that would occur in preparation for the passing of the amendment to S59
- The Guardians have drafted proposed enhancements to the established framework to be put within the SIPSP following on from the amendment with several high-level principles that all represent normal best practice
 - ensuring strong underwriting of the thesis and fit with the total portfolio
 - that the Guardians' Board maintains a high level of oversight to any directly controlled investments with clear separation between the Guardians and those investments; and correspondingly the Guardians policies, standards and principles do not cascade down
 - that the role is just as a (significant) investor, there is no executive authority implied
- These design principles have been drafted to keep risk to acceptable levels, aligns well with the Guardians skills as investors not business
 operators, enables the Guardians board to apply influence in the risks that are involved. These design principles also align with the best practices
 at peers

Governance and management implications from the Amendment to S59 of the Act (2/2)

WTW commentary

Private assets and section 59 implications

- The joint IP consideration is critical to decisions in the private market area where the alternative choices are generally presented as threefold: investment as an LP (limited partner) in externally managed funds, co-investing alongside other investors and GPs (general partners) and direct holdings managed internally
- The Section 59 amendment that gained Royal Assent on 4 June 2024 widens the choices available to the Guardians to the full set of three choices. As observed on the previous page, the Guardians have drafted proposed enhancements to the established decision and monitoring framework to apply following the completion of the Section 5 amendment. Following on from the amendment being enacted, we believe the Guardians' Board will be able to maintain best practice arrangements in the oversight to any directly controlled investments and ensure that clear separation is in place between the Guardians and controlled direct investments
- This suggests that while decisions about fund management structure in privates will in some instances be more complex, the Fund is well-placed to deal with this complexity
- Best practices for private market investment including direct investing encompass a range of considerations for the Guardians to consider going forward. These were discussed and evolved in the Peer Study work as set out on page 67. We note the following features of this range of considerations:
 - The highest level of consideration arise from the enablers that support the strategy and the execution;
 - After this there is the desirability of applying design principles to manager structure, where the relative merits of funds, co-investing and directs can widely differ in different contexts;
 - The front-line investment strategy and execution is the most detailed; and
 - The growing complexity has created increasing need for internal expertise even with a large proportion of assets outsourced
 - The resourcing commitment to direct investing with controlling interests given a slightly extended responsibility as an investor
- Overall, we stress the importance of a well-designed private market structure which is covered in the WTW recommendation on maturing the privates investing design

WTW commentary

Board role in direct holdings with controlling interests

- Policies are in place to support the widening of powers notably in the SIPSP and the Direct
 and Externally Managed Investments Policy that guide Management and Board actions. The
 changes to the SIPSP and to the Delegations Policy are the central governance changes. We
 have reviewed the planned changes to the SIPSP in replacing the existing clause 7A relating to
 Fund Investment Vehicles (FIVs) to specify the key overarching principles applicable to
 controlled entities and controlled direct interests
- The Guardians' Board will have a bigger role to play going forward with respect to this widening
 of the opportunity set. The Guardians has been placed in a similar situation to big global peers
 in having these wider permissions and will likely experience a similar range of experiences,
 including:
 - More complex multi-faceted 'deals' where Board oversight has a challenge in working at a strategic level
 - The exercise of board appointment rights is a common (investor) board consideration
 - The growing importance of applying ESG policies and considerations with impact opportunities
 - Considering reputational risks and working within current reputational processes
 - Dealing with wider stakeholders, notably that can be the Crown, or other nation states where particular direct holdings may involve national interests
 - In this context, Board priorities should be to establish a natural place in the agenda for direct investing issues; and engage where required with respect to approvals and in due course placing oversight on Guardians' controlling interest direct investments
- The influence of various mega-trends should be part of the Board's considerations. Bigger
 government, the growth in infrastructure investing particularly in renewables, social, digital, and
 utilities, and sustainability factor all make direct investing more interesting but more complex,
 with economic, social and governance factors at work in most situations.
- The Guardians' Board has for a time faced an increasingly complex and time-hungry agenda.

 We note that it should be able to allocate time commensurate to the importance and its ability to add value in this significant new area of investing



Review of internal vs external management

WTW commentary

Global best practice review

- We have reviewed the Guardians' policies and practice with respect to its decisions on insourcing and outsourcing investment management ('fund management structure'). This area of governance is covered by the Guardians' Direct & Externally Managed Policy
- The Fund's arrangements have developed over the period of the Guardians' lifetime in accordance with best practice principles. There has been a shift from the original arrangements that were wholly externally managed to the current situation with substantial internal management
- The Guardians decide on the investment manager structure by reference to the internal and
 external skills available, the relative costs and resource intensity, and alignment of interest
 considerations. The key determinant is achieving the best net of costs risk-adjusted returns
 taking a whole of fund perspective. This highlights that decisions on one mandate have
 influences on other parts of the portfolio and the Guardians' efficient functioning overall
- The recent transition of passive mandates in developed market equities from external
 managers to internal management is a good example of how the Guardians applies strong
 governance to its investment management structure decisions and implementation via the
 considerable attention and analysis of Management, the Board and the Audit Committee
- The Fund has evolved to roughly equal weighting of internal and externally managed portfolios with bonds predominantly internal, alternative assets predominantly external and listed equities somewhere in the middle
- While control and performance may be judged to improve in certain transitions to insourcing, as
 the model matures there will be growing cultural and governance problems with internal scale,
 joined-upness, team alignments, and total portfolio co-ordination. In short, there is a changing
 balancing act to make sure that the organization doesn't become too large to be effective
- 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 large
 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 valueenhancing initiatives

WTW commentary

Decisions on appropriate use of internal versus external management

- Peer fund best practices have always considered in detail the merits of internal versus external
 mandates. They do this by bringing various factors into an equation of costs and benefits based on
 the skills, costs, resourcing, alignment, control and liquidity factors. No single trigger applies
 although costs and alignment rank higher. The Guardians has been very thorough in the past in
 applying these criteria where it has judged moving to insourced mandates might be advantageous.
- The conviction framework the Guardians use is a crucial general foundation to the thinking, but it has had most use with decisions on external firms. This framework was reviewed in October 2023. The aim continues to be a consistent and disciplined framework for selecting, monitoring and terminating managers where the Guardians' practices accord with other peers, although the trail it uses is more systematic and disciplined than most. The transparency of the process reduces any biases which can exist that could unduly distort judgements. Performance, conduct factors and self-reported factors drive the analysis which has both quarterly and annual cadence. This has high objectivity and the focus on this as a forward-looking framework supports good buy/hold/sell decisions
- We find a somewhat different approach is applied to internal mandates. It is natural that there would be some differences, but this puts the onus on trusting the objectivity and transparency to ensure the best decisions are reached, as opposed to gaining reassurance from the clear process. The conviction process used on internal mandates seems less substantial than on external mandates
- Among the best peers we see instances where various internal mandates may be tried and sometimes don't work well enough to be supported and are discontinued. Such creative tension is desirable. We emphasise the importance of maintaining consistent standards and expectations from the insourcing/outsourcing mix, and encourage more 'contests for access', similar to the contest for capital that is central to the TPA philosophy
- This is not to advocate for much turnover in internal or external appointments. Provided the original underwriting is soundly based which we believe it is through the Guardians' attention to good process then performance-based decisions will likely turn out to be out of sync with cycles
- The Guardians maintains a sensible review cycle for performance that looks at quarters' results lightly and considers annual and triennial results more heavily. The test of a good performance culture is to avoid reading too much into short-term results but to respect the narrative and the numbers in the longer term



Evaluation of ex-post performance (1/2)

The Fund's performance over the last five years has been excellent

WTW commentary

• The Fund's performance to 31 December 2023 is shown below:

As at 31 December 2023	Since inception ¹	Last 5 years
Fund return (p.a.)	9.8%	10.3%
Reference portfolio return ² (p.a.)	8.3%	8.9%
Value added (p.a.)	1.5%	1.3%
Value added (\$bn)	\$9.14	\$3.20
Long term expectation ³ (p.a.)	6.1%	4.7%
Value added (p.a.)	3.8%	5.6%
Active risk (p.a.)	2.3%	2.8%
Information Ratio ⁴ (IR) (p.a.)	0.65	0.47

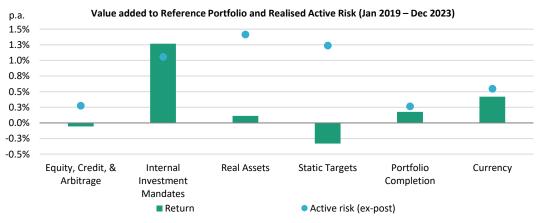
lotes:

- 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 (2.7% till 30 June 2020 and 2.8% from 1 July 2020 onwards)
- Value add divided by active risk

Source: Data provided by NZ Super, calculations produced by WTW. Returns are after costs, before NZ tax

- NZSF has outperformed both of the performance benchmarks which it uses to measure investment success, over the last 5 years and since inception. The Fund's performance over the last 5 years has been driven both by strong returns delivered by the Reference Portfolio (8.9% p.a.) as well as positive contribution from value-adding activities (1.3% p.a.)
- The strong performance over the past 5 years demonstrates that the active strategies deployed by
 the Fund have been effective in adding value. The realised ratio of historical value add to active
 risk (IR) over the last 5 years is lower in comparison to the since inception figure, however this
 remains notably higher than the expected fund-level IR assumption of 0.25 that is used as the
 basis of the long-term return expectation set out in the table above
- The table above indicates that total fund realised active risk outcomes have been meaningfully below the NZSF active risk budget of 4%. The primary driver constraining the use of the risk budget has been (and will continue to be) the liquidity risk appetite, as there are limits to the number of value-add opportunities that can be accessed via liquid markets. We discuss this further on the following pages under Investment Strategies and the Risk Budgeting Framework

- NZSF groups investment opportunities into four categories. Specifically, three time-varying
 allocation categories and one for static targets. The chart below shows the value-add contribution
 of each category as well as portfolio completion and currency hedging activities, to the total value
 added to the Reference Portfolio return, from January 2019 (around the time that the last
 Independent Review was carried out) to December 2023. The chart also includes shows the
 average measure of realised (ex-post) risk for each activity over the period
- The strong performance of the Internal Investment Mandates category over this period is in large driven by the success of Strategic Tilting and Tactical Credit, noting that Strategic Tilting has also been the Fund's biggest contributor to value-add since inception. The static targets category marginally detracted from performance over this period, noting this is mostly from weaker performance in 2023. Portfolio completion and currency have contributed positively, indicating the Fund (and specifically the activities undertaken by the Portfolio Completion Team) are adding value through efficient implementation, management, and reduction of costs



Data provided by NZ Super, calculations produced by WTW. Returns are after costs, before NZ tax

Evaluation of ex-post performance (2/2)

Active risk analysis and strong CEM Benchmarking results

WTW commentary

• The chart below highlights the average realised active risk and active risk budgets for the total Fund and the main opportunity categories (since these groupings were incepted in September 2021, which is the beginning of the data set provided by NZSF).



Data provided by NZ Super, calculations produced by WTW. Returns are after costs, before NZ tax

The level of realised active risk by Internal Investment Mandates (IIM) is a notable contributor to NZSF running structurally below target levels, specifically the strategic tilting program. The previous assumption for the level of active risk that could be generated by strategic tilting (which has the largest active risk allocations of all opportunities in the portfolio) was found by NZSF to be unrealistically high. NZSF subsequently reduced the risk budget allocation to strategic tilting to reflect this updated view

- As noted in WTW's 2023 review of NZSF's Risk Budgeting Framework, the reduction in the active risk budget allocated to strategic tilting is reasonable, although further reductions in the active risk assumption could potentially be justified given that strategic tilting has historically run well below the (lower) target risk level over an extended period. The fund-level of active risk (2.7%) is now running at about 50bps below what NZSF can run in a way that is consistent with its liquidity risk appetite. We provide further comments on NZSF's liquidity risk framework and the allocation of active risk on the following pages
- The Fund continues to participate in an annual survey conducted by CEM Benchmarking.
 Comparisons of the Fund against peer funds included in the survey continue to identify the Fund as being in the "lower cost, high value-add" quadrant, which is consistent with the previous review
- The survey involved 76 funds spanning 15 geographies, comparing performance, cost, Governance and RI. The Fund's value added was in line with the peer average and above the global average. The same survey indicates that the level of risk taken by the Fund (based on the reference portfolio) would still place it at the top of the survey in terms of portfolio risk. The overall cost performance score results in the Fund sitting below peers but above the global average
- Notably, research conducted by the <u>Global SWF organisation</u> in <u>May 2024</u> ranked the Fund as the second best performing sovereign wealth fund/public pension fund out of 50 funds over the past 10 years, returning 10.8% per annum between FY14 and FY23 (and was the best performing multi-asset fund over this period)
- The same organisation in a <u>parallel study</u> (released 1 July 2024) gave the Guardians a perfect score of 100% in their GSR (Governance, Sustainability & Resilience) Scoreboard for 2024. They were one of only five funds out of 200 state-owned investor funds that achieved this rating

Investment strategies: endowments, risks and liquidity (1/2)

We support a concentrated exposure to a small number of opportunities

WTW observations

- From a purely theoretical perspective the mathematically "optimal" portfolio would have risk allocations
 to each strategy/opportunity that are broadly proportionate to the information ratio (IR) for each
 opportunity, i.e. the higher the IR, the higher the risk allocation. In practice this is overlaid with
 qualitative judgment recognising that NZSF's objective is to maximise the wealth generated by taking
 active risk
- In addition, investment is fundamentally a competitive activity. This means that even if a given opportunity theoretically has a high IR if an investor does not have the ability to fully realise the value-add from the opportunity then the allocation to the opportunity should be moderated accordingly
- A key driver of the feasibility/potential to realise the IR from an opportunity is the extent to which said opportunity is well aligned to an investor's endowed comparative advantages. NZSF identifies the following four endowments:
 - Long term horizon the ability to invest in illiquid assets and to ride out short-term market movements
 - Operational independence Fund investments are made on a purely commercial basis
 - Sovereign status enables lower tax liabilities in some jurisdictions and is often favourably regarded by business partners
 - Governance The Guardians is designed to operate at arms' length from government
- An important qualitative aspect of the NZSF risk budgeting framework is an opportunity-level
 questionnaire which includes questions that assess alignment with the four endowments set out above.
 This then influences the IR for each opportunity that is used within NZSF's optimisation process
- The result of this process is that the majority of the NZSF active risk is allocated to four opportunities –
 strategic tilting, tactical credit opportunities (TCO), multi-factor equity and timber. The remainder of the
 budget is distributed across a long tail of smaller risk allocations which is managed by having a
 minimum risk budget allocation to avoid immateriality at the total portfolio level
- The resulting portfolio contains around 30 active opportunities in total that span a broad range of asset classes and investment approaches. Around 10% of the portfolio is allocated to domestic assets, compared to a 5% allocation in NZSF's Reference Portfolio

WTW commentary

- NZSF has a very clear and transparent approach for qualitatively assessing the alignment of the
 opportunities in the portfolio with its endowments. The process used for incorporating this assessment
 into the portfolio construction/risk budgeting approach is sensible and robust in our view. The shift in
 the risk budgeting framework to focus more on opportunity-level risk allocation allows an even more
 deliberate tilt of active risk allocation towards opportunities that exploit NZSF's endowments
- Supporting this the four opportunities receive the majority active risk allocation are all aligned with NZSF's endowments as shown in the table below (assessment based on WTW independent views):

	Strategic Tilting	Tactical Credit Opportunities	Multi-factor equity	Timber
Long term horizon	++	0	+	++
Operational independence	++	+	+	0
Sovereign status	0	++	0	+
Governance	++	++	0	+

- There are clearly many opportunities that NZSF could deploy to exploit its endowments. However, at this point we do not believe that there are any material "gaps" in the portfolio in this regard
- There is a natural trade-off between holding a concentrated portfolio that allocates to a small number of high conviction opportunities versus holding a highly diversified portfolio that contains a large number of small, ideally lowly correlated, "bets". The NZSF portfolio strikes a balance between large allocations to a small number of high conviction opportunities and a number of smaller opportunities to diversify the risk that a concentrated exposure to a given opportunity underperforms. We believe that the concentrated exposures to a small number of opportunities is justified both by alignment with endowments and also realised performance
- We do however believe that NZSF should consider whether the longer tail of smaller positions is efficient from a resourcing and governance perspective, particularly in the context of the resources required to enhance other parts of the investment model (e.g. sustainability integration) and also the potential to reduce the amount of Board governance oversight required
- Allocating within New Zealand is a natural way of exploiting NZSF's natural endowments which supports the material overweight to domestic assets relative to the Reference Portfolio

Investment strategies: endowments, risks and liquidity (2/2)

NZSF demonstrates a pragmatic approach to liquidity risk

WTW observations

- NZSF has a well-established Liquidity Framework that considers:
 - An extreme market volatility (EMV) event which is defined as a market stress event where
 equities and other risk assets fall, treasuries rally and the NZD depreciates against other
 currencies
 - Potential calls on liquidity, i.e. obligations to pay cash during the defined stress event occurs
 - The number of EMVs that need to occur in succession before available liquidity (taking into account both cash and securities that can be readily sold) is used up
- A liquidity risk appetite dashboard is produced regularly as part of the portfolio monitoring process which sets out sources and calls on liquidity and the current EMV score. The portfolio is managed to average around
 - 4.5 EMVs over a cycle. Board reporting and reporting of action plans is required if liquidity falls to 3 EMVs and immediate steps to replenish liquidity is required at 2 EMVs
- Since 2019 NZSF has also more formally integrated considerations of liquidity risk appetite (LRA) and the extent to which opportunities consume this in its risk budgeting framework. A result of this is that the liquidity risk appetite is a primary factor that constrains the ability of NZSF to use its active risk budget. One key outworking of this is that the active risk budget allocated to strategic tilting has been meaningfully reduced since the 2019 review

WTW commentary

- NZSF's Liquidity Framework is well thought out and comprehensive in terms of its scope and level
 of detail. The approach taken to assess both the sources of available liquidity and the demands
 for liquidity in a stress scenario is sensible and, in our view, no major sources or demands for
 liquidity have been omitted from the framework
- We believe that calibrating the EMV to the worst conditions experienced in the Global Financial Crisis, combined with the requirement to replenish liquidity at 2 EMVs and a target operating level of 4.5 EMVs over a cycle represents a prudent approach to managing portfolio liquidity. We therefore would assess the residual risk of NZSF being unable to cover calls on liquidity in the event of a significant adverse market event as being very low
- The strategic tilting program will typically "lean into" market stress events by going long risk assets as prices are falling. A major liquidity-related risk that could impair NZSF's ability to generate value add and exploit its endowments is the risk that an extreme market event results in the forced closure of derivative positions supporting the strategic tilting program. Our view is that the way in which this has been incorporated into the risk budgeting framework is robust and that the resulting impact on active risk allocations are reasonable in the context of the Board's stated liquidity risk appetite
- As a result, liquidity risk appetite (or lack thereof) is a constraint on the ability of NZSF to take active risk and fully exploit its endowments. This can be seen on the previous pages, where the realised active risk has been structurally below the active risk budget. There is once again a natural trade-off here, in this case between the level of residual risk that NZSF could be unable to cover its short-term obligations in a stressed market event and the ability to take a higher level of active risk and potentially generate greater value-add over the Reference Portfolio. On balance we believe that NZSF has made a pragmatic balance here between being able to take sufficient active risk to achieve its long-term financial objectives while keeping residual liquidity risk low

WTW Risk Budget Review Summary (1/2)

Fit-for-purpose Risk Budgeting allocation framework

WTW commentary

NZSF operates a Total Portfolio Approach (TPA) which seeks to deliver material added value relative to a liquid, passive Reference Portfolio comprised of listed equities and fixed income. In order to do this, NZSF by necessity takes exposure to risks and opportunities that are not contained in the Reference Portfolio, resulting in the actual portfolio exhibiting active risk relative to the Reference Portfolio. The use of active risk by NZSF is controlled via two frameworks:

- A total portfolio active risk budget, set by the Board, which defines the amount of active risk (i.e., tracking error relative to the Reference Portfolio) that the Fund is expected to take on average over the long-term; and
- A risk budget (RB) allocation framework that determines the amount of active risk allocated to individual investment opportunities based on the attractiveness of those opportunities at a point in time

Note that active risk is also constrained by Board limits. Although the Fund has not been close to those limits, the Board limit of 8% active risk usage is also one of the controls governing use of active risk

In November 2023, WTW completed an independent review of the RB Framework.

- The process for completing this review involved extensive documentation review and interviews with key investment staff. WTW assessment methodology comprised of nine criteria, drawing on academic and our own research, as well as our knowledge of other leading asset owners. The fit-for-purpose assessment was organised across four broad sections: TPA alignment, IR construction, allocation process, and practical operation to capture the overlapping nature and applicability of the assessment criteria across the entire RB process. WTW also conducted an in-depth operational review and provided future state considerations
- Overall, the NZSF RB allocation framework was found to be <u>fit-for-purpose</u>, with only a handful of areas for potential improvement. The main areas which WTW identified for NZSF to consider improving upon related to assumption methodology and practical simplicity. WTW's review did not highlight any risks or internal control weaknesses. An extract of the scores against each fit for purpose criteria is shown on the right-hand side

Extracts from WTW Risk Budget Review (November 2023) – Fit for purpose assessment

Factor	Criteria definition			Fit for purpose assessment
Effectiveness		The RBF is effective in guiding the allocation of risk from a top-down perspective and complements bottom-up competition for capital		
Context alignment	The RBF appropriately r	reflects investor's context and	competitive advantages	
IR construction	The RBF is supported by	y a robust process for deriving	and adjusting IR assumptions	s
Optimisation process		The RBF uses an appropriate optimisation process, and where relevant is supportable by academic and empirical evidence		
Pragmatic	The RBF balances quan allocations	The RBF balances quantitative and qualitative considerations in determining allocations		
Practical simplicity	The RBF is implemental	The RBF is implementable in practice and is no more complex than necessary		
Robustness	The RBF produces intuitive and stable results through time			
Flexibility	The RBF is adaptable and can effectively accommodate adding/removing opportunities in real time			ties
Review process	There exists a structured process for reviewing and sense checking the overall framework structure, outputs (allocations) and operation			
Overall assessment	Overall assessment			Fit for purpose
Кеу	Fit for purpose	Mostly fit for purpose	Partially fit for purpose	Not fit for purpose

WTW Risk Budget Review Summary (2/2)

Recommendations for potential improvement to the Risk Budgeting process

Extracts from WTW Risk Budget Review (November 2023) - Key findings of review

We highlight the following comments from WTW's review of the RB framework:

- The framework is effective at guiding the allocation of capital and linking top down with bottom-up considerations as evidenced by the comprehensiveness of the overall process and the resulting risk budget allocations being suitable for NZSF. The shift in process following the 2022 RB review has created better alignment with total portfolio considerations (i.e., sustainable finance and the liquidity risk appetite)
- Linkages with NZSF endowments and context are well considered at the opportunity level, however there is scope for NZSF to improve assessment of alignment from a top-down perspective. The framework is not overly biased to or reliant on opportunities without justification, however there are diversification and governance trade-offs for NZSF to consider around the longer tail of smaller opportunities
- The RB framework is implementable in practice, however there are a number of areas where scope may exist for simplification, such as the IR methodology, opportunity questionnaire and qualitative overlays. There is potential for a better balance to be achieved between detail and simplicity within the framework, particularly given the number of manual and qualitative adjustments in the process and to final outputs
- The RB framework is operating well in practice, however (per the above) there are a number areas where scope may exist for practical simplification. Achieving an appropriate balance between detail and simplicity will ensure the RB framework continues to be implementable in practice. The RB framework is delivering outcomes in line with expectations, noting that the total fund realised active risk outcomes have been structurally below the NZSF active risk budget of 4%. In our view, there is scope for NZSF to review fund-level strategic parameters to be more realistic
- We expect the RB framework will remain fit-for-purpose as NZSF grows in AUM. However, significant AUM growth has broader implications, which lead to an investment model that is more complex. This creates additional challenges (and opportunities) for embedding TPA thinking across the team and ensuring bottom-up and top-down considerations are joined up throughout the investment process

Extracts from WTW Risk Budget Review (November 2023) - Key recommendations

WTW provided NZSF with a handful of recommendations and suggestions for potential improvement. These recommendations and suggestions were accepted by the Head of Asset Allocation, for Portfolio Design Team consideration and action over the next 12-18 months. **We provide an extract of the key recommendations from WTW's review below:**

TPA alignment

- Review fund-level expectations for active risk (lower in line with LRA) and IR (less conservative)
- Develop a structured framework for assessing whether final allocations at the total portfolio level adequately reflect NZSF competitive advantages and beliefs

IR Construction

- Simplify IR methodology where possible, for example: reducing the number of inputs and simplifying the number of considerations within the opportunity questionnaire; developing a simpler approach for ranking opportunities.
- Continue to develop the approach to incorporating sustainable finance considerations in the RB and broader investment process, including an assessment of whether incorporating this via the IR methodology is the best method for NZSF going forward

Allocation Process

- Continue to monitor optimisation outcomes from incorporating the LRA as a constraint
- Develop a structured process for defining/grouping "like" investments as a precursor to any new opportunities in the future.
- Develop a method for consistency around PD [Portfolio Design] team overlays by keeping a detailed record
 of these, given these are less structured

Practical Operation

 Develop a more structured and streamlined approach for refreshing and updating risk budget allocations in interim reviews.



WTW Risk Proxy System Review Summary (1/2)

Fit-for-purpose Risk Proxy System

WTW commentary

The NZSF Reference Portfolio reflects the risk tolerance of NZSF, as decided by the Board of the Guardians. It is a requirement for NZSF to control the risk of the actual portfolio in line with the Reference Portfolio as it takes exposure to risks and opportunities that are not contained in the Reference Portfolio. The Risk Proxy (RP) System is the mechanism through which NZSF achieve this risk control:

- The RP system aims to maintain the level of risk (defined as volatility) of NZSF's portfolio in line with the Reference Portfolio, by matching the level of equity risk (defined as equity beta). Previously, the system sought to directly match total volatility.
- The RP system achieves this by assigning a growth proxy weight (equal to the levered equity beta of the opportunity) and an income proxy to opportunities, with the weight of the income proxy determined as a balancing item equal to one minus the growth proxy weight.

In March 2024, WTW completed an independent review of the RP system.

WTW's overall assessment was that the NZSF's RP system is <u>fit for purpose</u>. In assessing the RP system, we considered 7 criteria – Model Risk, Soundness, Sensitivity, Robustness, Simplicity, Scalability and Governance. There were a handful of minor suggestions and recommendations for improvement.

We assessed the extent to which the RP system framework was fit-for-purpose and concluded this is well implemented in practice, and that the methodology should result in ex-ante and ex-post risk being in line with that of the Reference Portfolio. This included a review of realised outcomes (ex-post-performance), testing the efficacy of the RP system (whether portfolio risk remains in line with the reference portfolio) including an analysis of residuals between opportunities and their respective proxies.

Our analysis (noting the limitations) suggested that the Risk Proxy system, using the two-factor model, is not overlooking any additional systematic risks. The review did not highlight any risks or internal control weaknesses.

Extracts from WTW Risk Proxy System Review (March 2024) – Fit for purpose assessment

Factor	Criteria definition		Fit for purpose assessment	
Soundness		The extent to which the system is justifiable and where relevant supportable by academic and empirical evidence		
Simplicity	The extent to which the than necessary	The extent to which the system is implementable in practice and is no more complex than necessary		
Model risk		The extent to which the system is reliant on a large number of assumptions, and the degree of uncertainty associated with the underlying assumptions		
Sensitivity		The extent to which the system is sensitive to changes in parameters, e.g. do small changes in assumptions result in large changes in proxy weights?		
Robustness	The extent to which the	The extent to which the system is stable/requires adjustments over time		
Scalability	The extent to which the	The extent to which the system can easily incorporate new strategies in the future		
Governance	The extent to which the governance, decision making and controls around the RP system are adequate			
Overall assessmen	t			Fit for purpose
Кеу	Fit for purpose	Mostly fit for purpose	Partially fit for purpose	Not fit for purpose

WTW Risk Proxy System Review Summary (2/2)

Recommendations for potential improvement to the Risk Proxy System

Extracts from WTW Risk Proxy System Review (March 2024) - Key Findings

We highlight the following comments from WTW's review below:

- The RP framework is intuitively logical, and if the equity beta assumptions of opportunities reasonably capture the realised risk profile of opportunities, the level of equity beta in actual portfolio should be in line with that of the reference portfolio. The shift to equity-risk matching represents a meaningful improvement to the RP system, and the benefits of equity risk matching outweigh the costs by reducing complexity, improving transparency and independence from the sequencing of opportunities in the calibration of return hurdles and performance benchmarks, and reducing model risk. We view the introduction of Cash as a second income proxy as a positive practical addition to the RP system.
- The RP System is implementable in practice and the shift to equity beta matching has further
 reduced complexity. While a rigorous approach to setting equity beta assumptions is warranted
 given this is the primary determinant of the growth proxy, there is a trade-off in simplicity as NZSF
 need to review these estimates on a regular basis.
- The RP system can easily incorporate new strategies in future as NZSF grows in AUM. The improvements in shifting to equity beta matching, such as the independence of proxy assumptions, and including Cash as an income proxy further improve scalability at the margin as the framework is easier to parameterize and apply compared to the previous version.
- NZSF have an adequate framework for decision making, governance and controls around the Risk Proxy system. The simplicity of the equity matching approach is beneficial from a governance perspective as the system is easier to understand, communicate and is better embedded across the wider investment team.
- Overall, the process which NZSF followed to derive the respective assumptions for each
 opportunity considered is both rigorous (consideration of a number of different approaches and
 estimates) and sensible, in that pragmatic judgment was applied in arriving at estimates that are
 defensible. We view NZSF assumptions for each of these opportunities as reasonable, however
 some of NZSF estimates are towards the more conservative (i.e., higher) end of what we would
 view as a reasonable range for these estimates.

Extracts from WTW Risk Proxy System Review (March 2024) - Recommendations

WTW provided NZSF with a small number of recommendations and suggestions for potential These recommendations and suggestions were accepted by the Head of Asset Allocation, for Portfolio Design Team consideration and action over the next 6 months improvement – noting that the last three of these fall under the BAU processes of the Portfolio Design team activities or relate to monitoring that is already undertaken (item four).

We provide an extract of the key recommendations from WTW's review below:

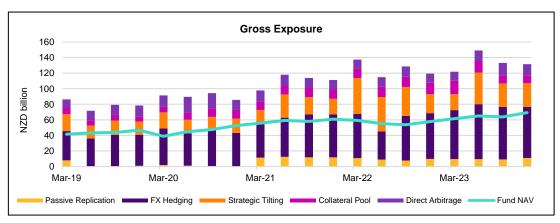
- 1. We suggest NZSF create a more standardised framework to forming equity beta estimates for opportunities (e.g., a maximum of 2-3 inputs to estimates, placing consistent emphasis on historical analysis, as well as consistency around the number of inputs used at the opportunity level and access point level).
- 2. We recommend NZSF continue to monitor whether the risk outcomes of Global Macro strategies remain suitably grouped under the default proxy.
- 3. We recommend NZSF review the beta assumptions for Skilled VC and Opportunistic RE as these allocations increase (and reach around 2% of the total portfolio).
- 4. We recommend NZSF continue to review and monitor the ability of the proxy system to control for non-equity risk sources and the correlation of residuals across opportunities.

Derivatives and leverage

Derivatives and leverage are soundly managed within the Guardians' risk framework

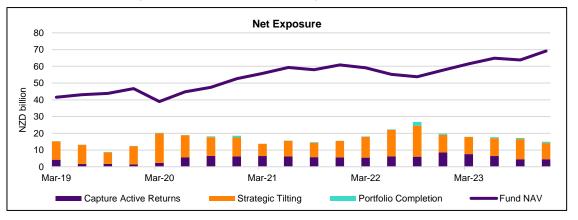
WTW commentary

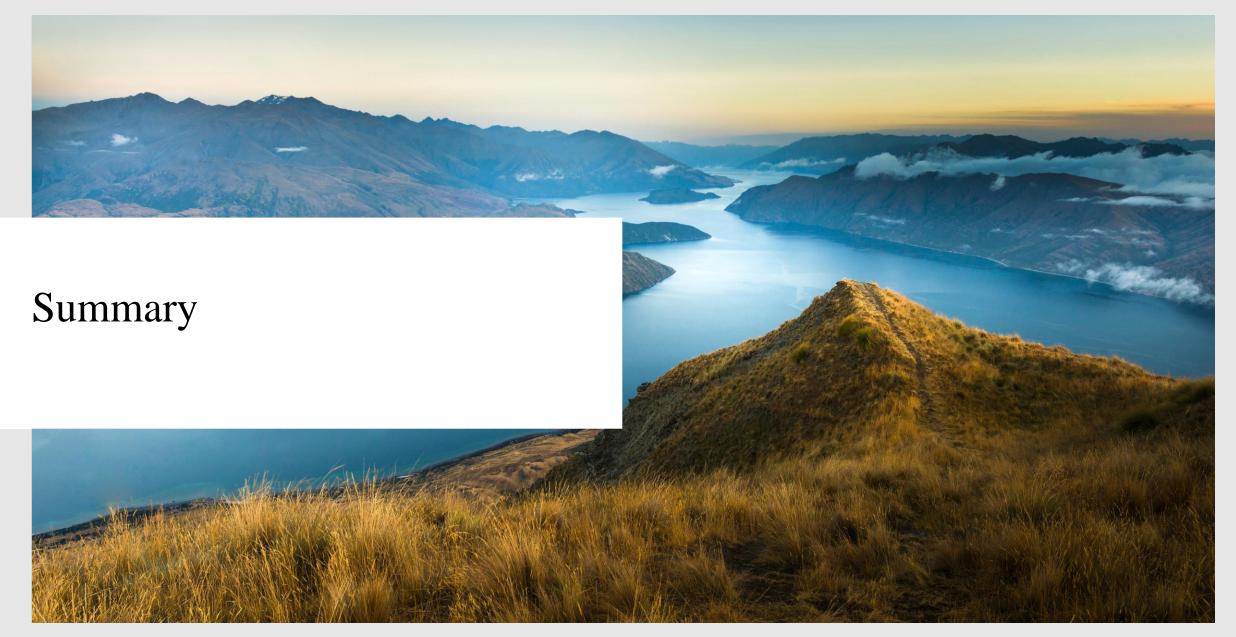
- The Guardians have consent from the Minister of Finance to enter into derivative transactions, subject to certain conditions, including that they are only used as part of an investment strategy and are consistent with the objectives of that strategy
- The Guardians use derivatives for purposes which 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 (which as noted under the ex-post evaluation, has been NZSF's biggest contributor to positive value-add relative to the RP since inception). We believe that the bases on which the Guardians uses derivatives are sound
- The charts below show the Fund's gross derivatives exposures over the last 5 years and the 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. These charts form part of the very comprehensive reporting of the Fund's derivatives exposure via the derivatives dashboard



Data provided by NZ Super, calculations produced by WTW

- · Overall, the net exposure and gross exposure to derivatives has remained around similar levels over the past 5 years (since the previous statutory review)
- The Guardians maintain a comprehensive derivatives policy. Our high-level assessment is that this policy and the various controls, frameworks, and delegations around NZSF's various derivative uses, remain effective at ensuring compliance with investment, governance and legislative requirements
- NZSF has a sophisticated internal capability and is able to implement the portfolio in a cost effective and efficient manner. 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. As noted previously Portfolio Completion activities have added a meaningful level of value add to the portfolio over the last 5 years
- 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





WTW recommendations (1/3)

These recommendations follow from our top-down and bottom-up analysis

Area covered by recommendation	Build on relevant work by the Guardians	Undertake future work With clear from → to transition
 Develop a set of complexity principles and strategies Address certain system design imbalances that have developed from increasing complexity. Ensuring that the BbU (business-beyond-usual) area and change function attract sufficient weight in the mix of time and strategy Ensuring there is the recognition and adaption when a system doesn't have the right balance of focus and activities to achieve its goals e.g. when complexity produces an undue focus on complex short-term execution relative to long-term mission-critical initiatives 	 The Guardians of the Future project has considered growth in complexity Complexity has been considered in the technology strategy Complexity has been seen as a consequence of the headcount increase 	 Build a more pro-active set of principles related to managing and limiting complexity Evolve practices and strategies for dealing with complexity Address the change management area in the Guardians, developing the mindset, resources and methods to step up in this area From: Complexity is implicitly accepted in the Guardians' arrangements To: Full understanding of the state of complexity in the Guardians and agreed principles and strategies for addressing it
 2. Evolve the TPA model Develop greater integration of systemic risk into the TPA design through the use of horizon scanning. Systemic risk work can be evolved to include increased quantitative coverage on top of scenarios Consider models that include left-tail risk measurement and management. Move towards some quantification of systemic risk in tail risk terms Ensure the Reference Portfolio is fully joined-up with the investment approach. Identifying optimal risk appetite including mission impairment risk 	 Climate CVar (conditional value at 	 Use horizon scanning process to scan for size, likelihood & impacts of systemic risks Undertake exploration of multiple perspectives of risks as part of Reference Portfolio review Explore different versions of 'risk' in Reference Portfolio review scenarios and stochastic formulation including consideration of risk as mission impairment and the development of TCE measures From: The Guardians is rated 4/5 on the TPA spectrum To: The Guardians moves to 5/5 on the TPA spectrum

WTW recommendations (2/3)

Area covered by recommendation	Build on relevant work by the Guardians		take future work lear from → to transition
3. Mature the insourcing model of private market investment • Consideration of establishing an overseas presence (e.g. London). To improve access to talent, general partners (GPs) and peer	 Establishing overseas offices has been considered previously Insourcing design is under continuous review Preparation for legislative progress with respect to allowing controlling interest stakes 	case i includ	ider desirability of establishing an overseas office by assessing the business in terms of access to deals and talent and GP and peer relationships; ding considerations on the scale and maturity of private market and global ting. Recognising challenges in joined-up operation of new location
relationships & deals. Continue to evolve the		From:	The contribution from outsourced IP in private markets is significant
insourcing design for private markets so that the portfolio gets more competitive exposure to global opportunities and co-investing opportunities (and in due course controlling interests)		То:	A more mature insourcing design that adds more insourced IP with a stronger value proposition
 4. Mature the sustainability proposition and model • Building out the sustainability factors by integrating the combined proposition. Maximising risk-adjusted return within sustainable finance/wider social license/Universal ownership. • The focus should extend more significantly into systemic stewardship. Consider additional resourcing 	 Completion of net zero commitment and very considerable workload in implementing it Evolution of Reference Portfolio (Paris Aligned) benchmark in listed equities Significant move to Paris aligned low carbon indices for >40% of the portfolio Bottom-up integration and intentionality of impact alongside return and risk Integrated issuer-level stewardship Sustainability progress in fixed income Increase in sustainability resourcing 	persp owne • Note involv – the • Consi comm the wi	ore the more holistic approach to balancing risk and return from the top-down bective, by acting sustainably and systemically aligning with universal briship / 3D investing principles this work should consider the size and focus of real-world impact and would be continued open communication with the Guardians' principal stakeholders. Crown, the Minister of Finance and the Treasury ider deepening the principles and beliefs that underpin the net zero initment, proposition and approach, and consider extending this deepening to rider sustainability field, paying particular regard to intentionality and surement of impacts (noting additionality) A 3D lite model in which intentional real-world impact is small
			·
		То:	A 3D full-on model in which intentional real-world impact is managed and measured

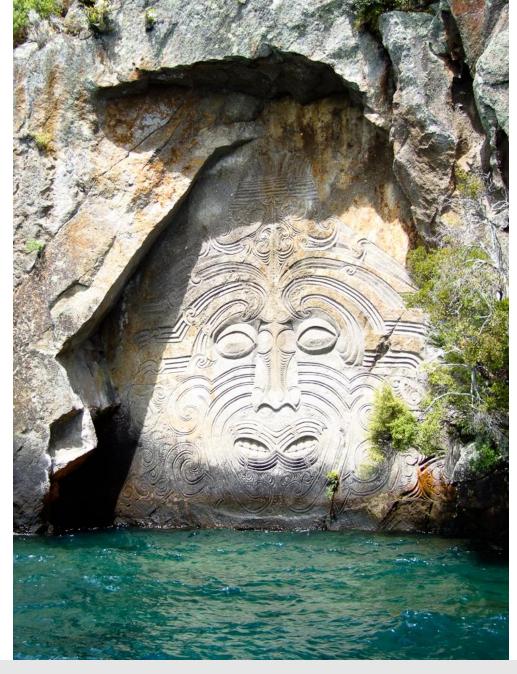
WTW recommendations (3/3)

Area covered by reco	ommendation	Build on relevant work by the Guardians		ake future work ear from → to transition
accelerating speed calls for a much larg including pro-active support the technology	on of the Guardians' lopment platforms. The of change in the industry ger response to upskilling: skills development to ogy transition ushered in by ogram to cover system	The development of the 'Investment Academy' is a current initiative sponsored by the CIO There are career development and learning modules planned in the Oracle Human Capital Management platform There is a culture at Guardians of encouraging personal responsibility for personal development embedded in line management	including platform. • The some leaders	ians should consider the L&D best practices of other financial services organisations ng asset owner peers, recognising that most organisations with excellent L&D ms have had the benefit of greater scale than Guardians coping of the focus of L&D is a key consideration, where technology (like Python) and ship (like alternative leadership models) seem particularly relevant, along with cal skills that are not generally covered in professional training (like systems theory) L&D platform used sparingly under self-guided principles L&D platform used extensively under stronger organisational influence
achieve its follower should consider how integration of technoling including alternative (e.g. including T-sho specialists in between	chnology proposition. To ambition, the Guardians to increase the degree of clogy users and specialists, a models used by peers aped teams with innovation en users and specialists). ing of the team in Python applications.	 Technology and Data strategies are being developed and implemented in line with the Enterprise Strategy in the Guardians of the Future work Engagement of the investment team has increased on technology projects over time 	organis extrem • The wo engage	nanges that asset owners would ideally wish to achieve are part cultural, part sational design, part technical and part technology-transformation. This mix is nely ambitious ork we suggest that might be undertaken is more specifically targeted at the stronger ement factor where the organisation (in common with its peers) doesn't make good ctions between users and specialists Technology specialists and investment staff are partially joined-up Technology specialist and investment staff are well joined-up
Nominations Comm practices for succession more ge organisation in a str	rd, Management and hittee should review their ssion planning and hererally and position the honger place to respond to his in top leadership roles —	Succession planning is an area in the Guardians where the HR practices are quite mature and solid; succession planning is conducted annually; Leadership Team meets to discuss plans and the Succession Plan is approved by EPRC The Board is very conscious of its succession responsibility	 triangle Understripping proportion but often 	eview can be quite targeted given the circumstances in which the key leadership to have all departed in a six-month period standing and attributing causes to failures should always warrant clear but tionate responses; the learning can be significant where process has been deficient; then there are circumstances that mitigate the amount that be learned and adapted in process (i.e. sometime stuff happens) Leadership succession issues front of mind Substantial confidence in leadership succession processes and outcomes

WTW suggestions and points of emphasis

The following areas were considered as appropriate <u>suggestions</u> for the Guardians to consider. The Guardians context and bandwidth may or may not make these desirable to pursue. In addition, we have included six <u>points of emphasis</u> made in the report

WTW suggestions	With clear from → to transition
Deepen the existing investment beliefs particularly on sustainability. Consider the integration of organisational beliefs and principles with the investment beliefs	From: Specialised investment beliefs that are not joined-up with wider factors To: Investment beliefs that are part of a bigger framework of organisational beliefs
2. Review the Reference Portfolio for better fit with universal ownership principles, notably considering the merits of forward-facing benchmarks and the opportunity to work with other asset owners on this. Develop a stronger Board and Management position on universal ownership, with continued open communication with the Guardians' principal stakeholders – the Crown, the Minister of Finance and the Treasury	From: First generation climate risk management which largely stands on its own To: Second generation climate risk management which is integrated with universal ownership/3D investing principles
3. Deepen Board – Management engagement. The Guardians, in common with most asset owner boards, engages at a high level on investment content. The Peer Study suggested how better engagement can be developed and would add value. WTW considers consultant intermediation and facilitation, in the form of dedicated board advisory support, to be worth considering	From: Board engagement on investment content is relatively high level To: Board engagement that involves deeper Board oversight of the portfolio
4. Reposition the hybrid work design to increase social capital. Use the opportunity in the office move in 2026 to align office design, hybrid design and EVP and OVP to increase the social capital which is needed for collaboration to thrive and to support superteams principles. We are aware that Management is reviewing its options on this matter. We are urging that more attention is given to the evaluation of alternative work design arrangements (e.g. hybrid versus office) with particular regard to the social capital factor	From: Hybrid design is relatively liberally applied with wide dispersion in practice and limited co-ordination; and the office can have a relatively flat atmosphere To: Hybrid design that is more top down guided with narrower dispersion of practice and stronger co-ordination; and the office has a magnetic pull
WTW emphasises these points	WTW emphasises these points
 The importance of beliefs to the organisation, and ensuring their frequent use by all staff The importance of Management and the Board giving continuing focus to maintaining and evolving the cultural effectiveness of the Guardians The importance of managing DEI sensitively and intelligently, not least because the bar for DEI is getting higher 	 The importance of maintaining consistent standards and expectations in relation to decisions on the insourcing/outsourcing mix The desirability of targeting the upper limit of seven Directors, noting this also benefits succession planning The importance of the Crown/Public Services Commission reviewing Board compensation at suitable intervals, and particularly at the current time



Conclusions

Our key findings

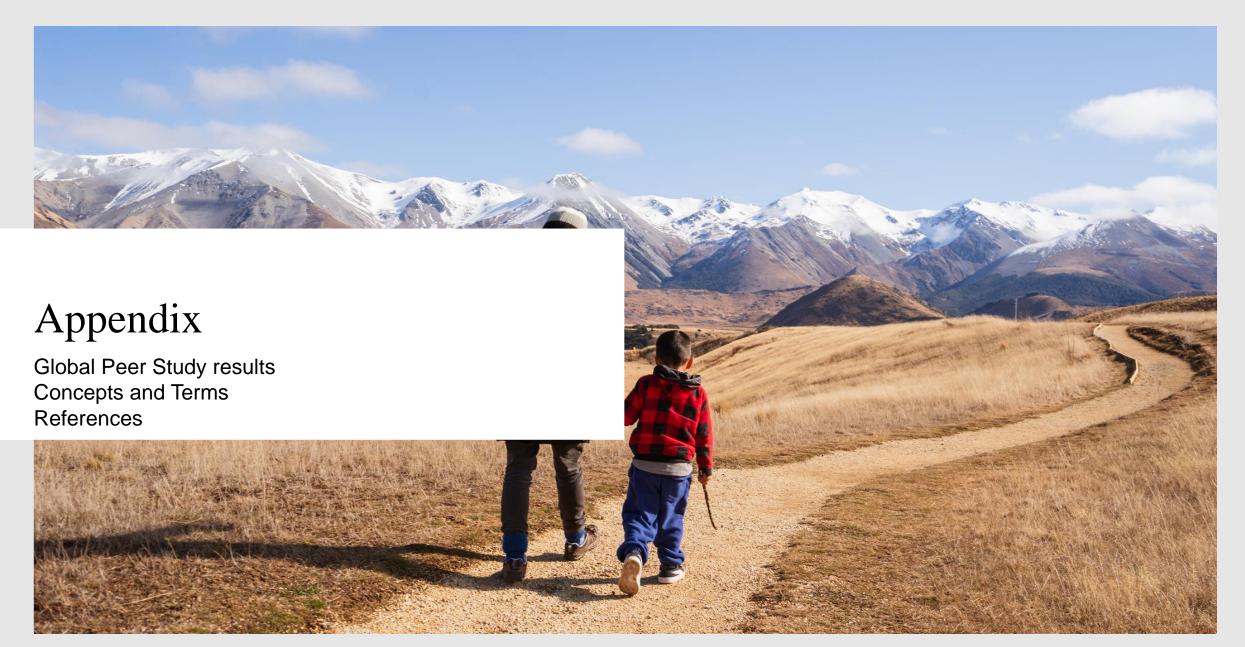
- The Fund's results over the last 5 years have been excellent, reflecting the organisation's effectiveness in carrying out its mandate.
- At the present time the Guardians is operating at global best practice in its activities a state it has maintained for the past five years.
- It has achieved this state principally through the inspiration of its leaders past and present; its system design (defined in this report); and its culture of constant attention to improvement
- But we caveat the need for continuous change/improvement in the next five years:
 - embedding new leadership and better leadership continuity;
 - responding to increasingly likely headwinds to capital market outcomes;
 - improving the system design; maintaining the culture within a larger and more complex organisation; and
 - undergoing a technology transition.

These are all factors that can make the organisation more resilient

Appendix

The Appendix contains data and findings from the WTW/TAI Global Asset Owner Peer Study in which the first phase was conducted in March 2024 and work is now ongoing in a second phase

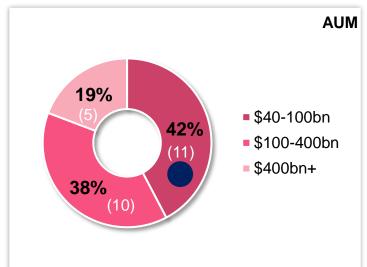
The Appendix materials also include definitions of terms and concepts, reference documents and page links to cross-reference the original terms of reference for this review

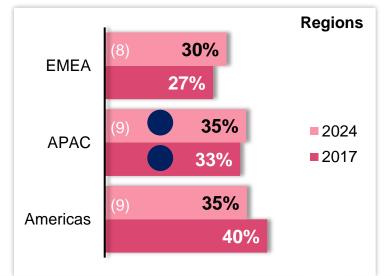


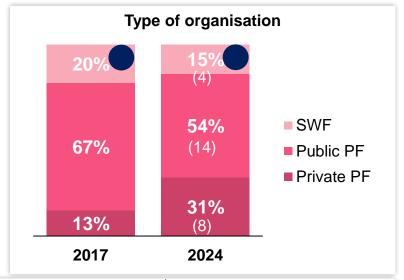


Global peer study coverage

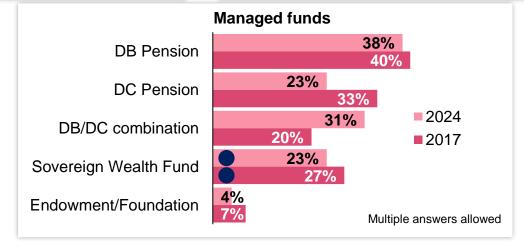
This Study was convened by WTW/TAI to consider leading asset owners' strengths and weaknesses. The 26 funds in the peer group for this study were selected for their strong governance, significant size, and thoughtful international perspectives

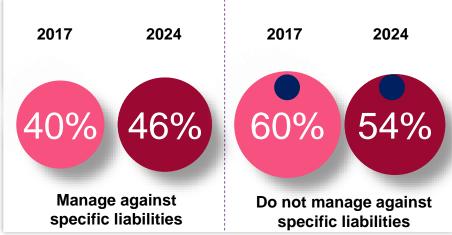










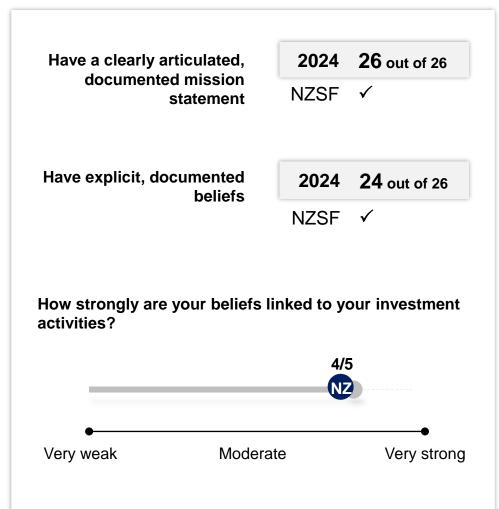


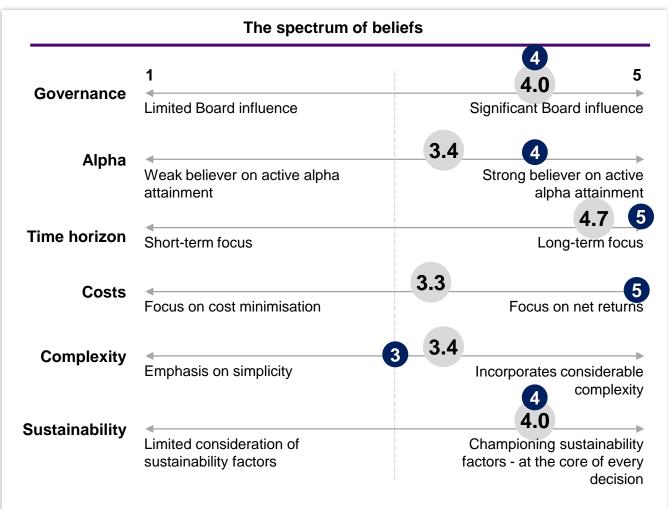




Asset owners are forward-thinking and pragmatic

Asset owners reveal strong governance, long-term investment, and sustainability with strategic clarity of mission and beliefs. The Guardians has similarity in these regards to most funds in this peer group



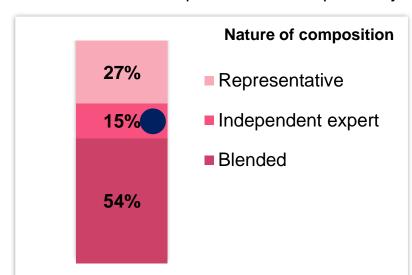


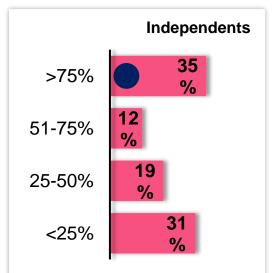


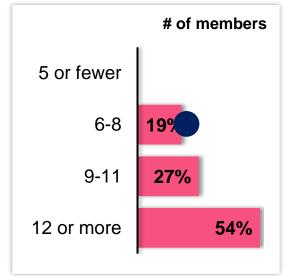


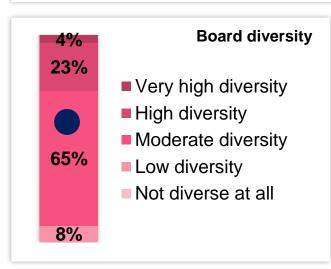
Board composition – emphasis on independence with moderate diversity

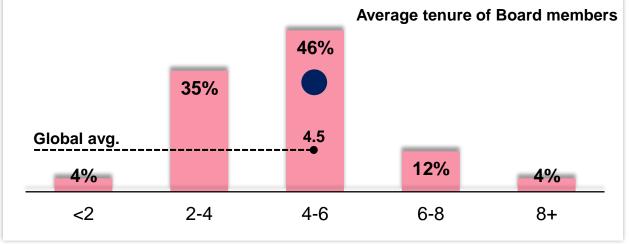
The Guardians is positioned more positively than the peer funds on expert composition and size of Board

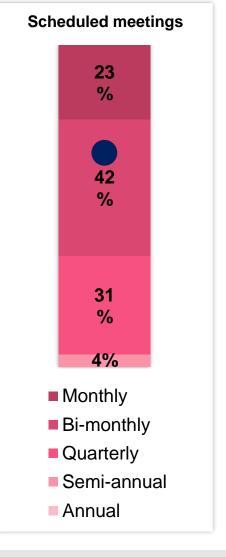














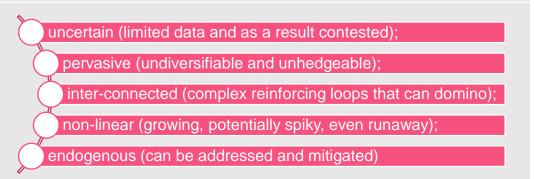
Systemic risk

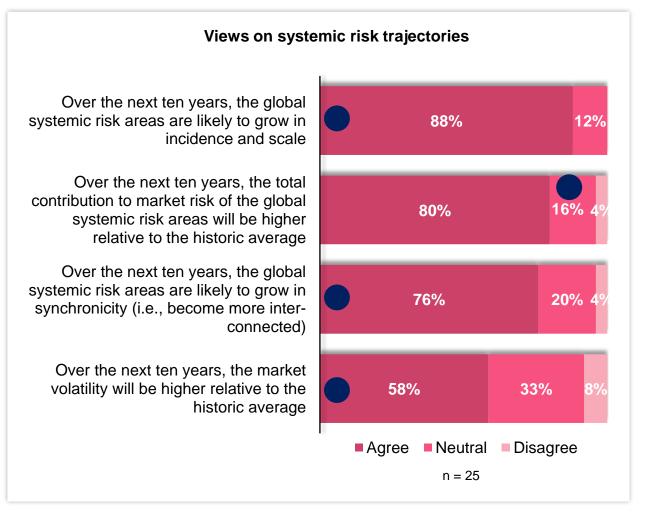
Strong view across participants that systemic risk is a big and growing issue

Systemic risk

- A special part of market or systematic risk
- Arising from malfunctions in the system that cascade through the whole market
- Very different from core market risks in term structure and path dependence
- Very different from classic market risk in being an endogenous risk

- Pricing this risk is near impossible (the risk has high uncertainty and irreducibility)
- Climate example: no past, long future; tipping points; high codependency; model uncertainty
- Future risk distribution has limited upside and potentially severe downside
- Need for systemic resilience and mitigation

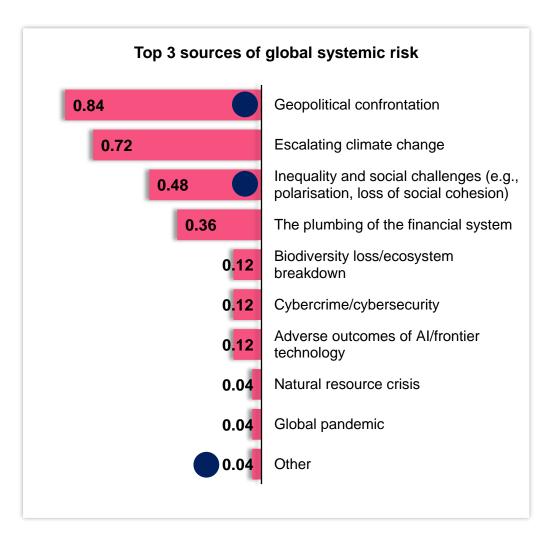




Geopolitics and climate change at the head of systemic risk surge in the next 10 years

This area seems to represent an industry gap in best practices. These risks have not been fully integrated into the investment process

1	The rise of systemic risk given the increasing weight of anthropogenic (human-induced) planetary change and complexity in multi-polar geopolitics
2	The rise of systems thinking to address systemic risks Systems thinking helps. Risk is more tangled and inter- connected than what we thought
3	Modelling. Needed to gain a firmer foothold on the slippery slope of systemic risk. The problems of integrating different levels of statistical tractability and reducibility
4	 New strategies to address systemic risks Extended investment scope – climate solutions and systemic stewardship Develop organisational resilience through governance and risk culture Develop portfolio resilience Measure progress via scorecards Source: TAI Systemic risks paper series 1 and 2



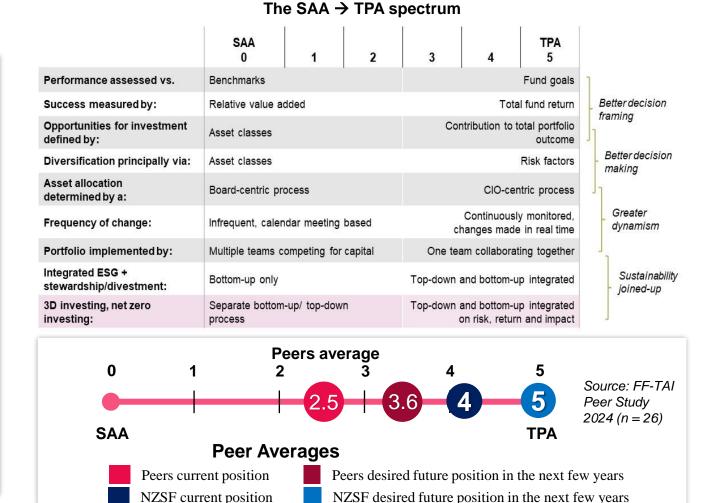




Total portfolio approach (TPA)

The peer funds are evenly spread on this attribute. The Guardians is in the leading group of peer funds adopting TPA

- TPA will be defined in different ways having both technical, governance and cultural elements
- Our definition is as follows
 - TPA is developing the best quality portfolio for the particular fund goals adopting best ideas, dynamic management and a holistic approach
 - SAA is creating a policy benchmark suited to the longer-term fund goals and allocating to asset class portfolios that are sized to align with the benchmark
- Present practices are not a case of polar points (either SAA or TPA), they are more like a spectrum represented in the 0
 → 5 scale across
- The 2.5 out of 5 current average shows the split of practices, the 3.6 out of 5 ambition shows the tide of the argument, but most organisations speak of the multi-strand change program needed to transition

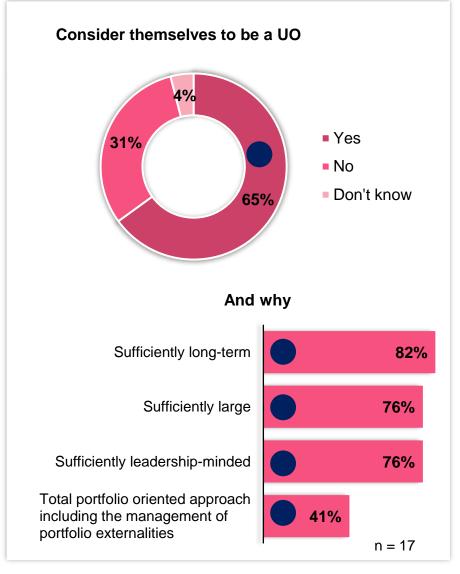




Universal ownership

The theoretical underpinnings

- Universal owners (or universal investors) are generally defined as very large investors that own a slice of the world economy and world portfolio and with it a slice of all corporate externalities and systemic risks
- Some universal owners that are long-term and leadership-minded adapt their strategies to mitigate their risks through achieving real-world impacts and positive system effects
- In the fullest version of this strategy the mindset is to achieve particular real-world impacts on the environment / societal system in order obtain better financial and non-financial outcomes for beneficiaries. They do this by taking a total portfolio approach to managing longer-term risks, particularly externalities
- The universal ownership strategies that produce suitable real-world impacts include:
 - In listed markets, moving capital away from the backward-facing market-cap benchmarks and toward portfolios that lean into the future economy
 - In unlisted markets, providing primary capital and transition finance to support sustainability factors (e.g. climate solutions to support net zero alignment)
 - Deepening the stewardship practices with respect to individual investments and industries and in public policy engagement through systemic stewardship
- These strategies require a broader framework suggestive of using balanced scorecards that account for progress and success including reporting on non-financial measures
- Universal ownership can be captured in the term '3D investing principles' which is defined
 in TAI research as balancing risk, return and real-world impact. *Universal ownership/3D*investing principles is the umbrella sustainability term we use in this report



Source: WTW Global Asset Owner Peer Study 2024

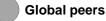
Sources: TAI: An Agenda for Change: Transformational change for investment organisations

CFA Institute: Net Zero in the Balance | Roger Urwin



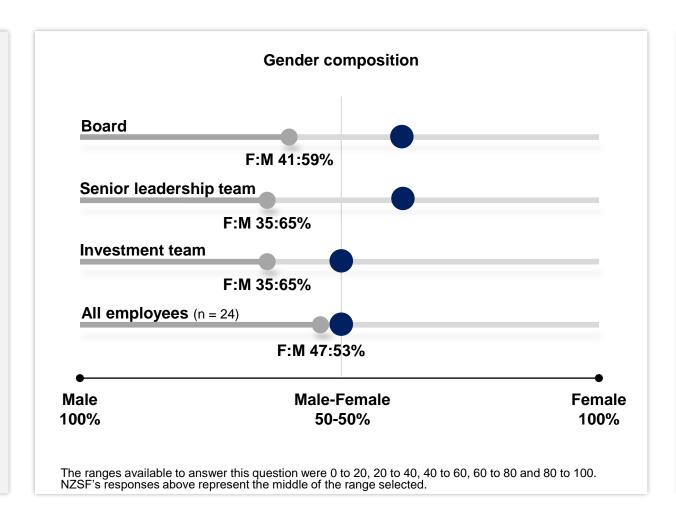


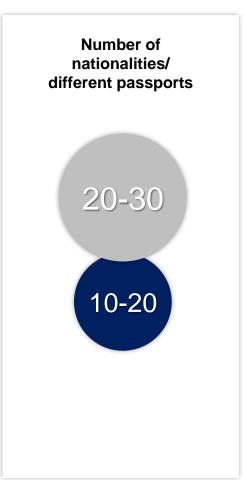




Attention continues to be given to gender as a visible aspect of diversity and inclusion Gender balance looks positive at Guardians

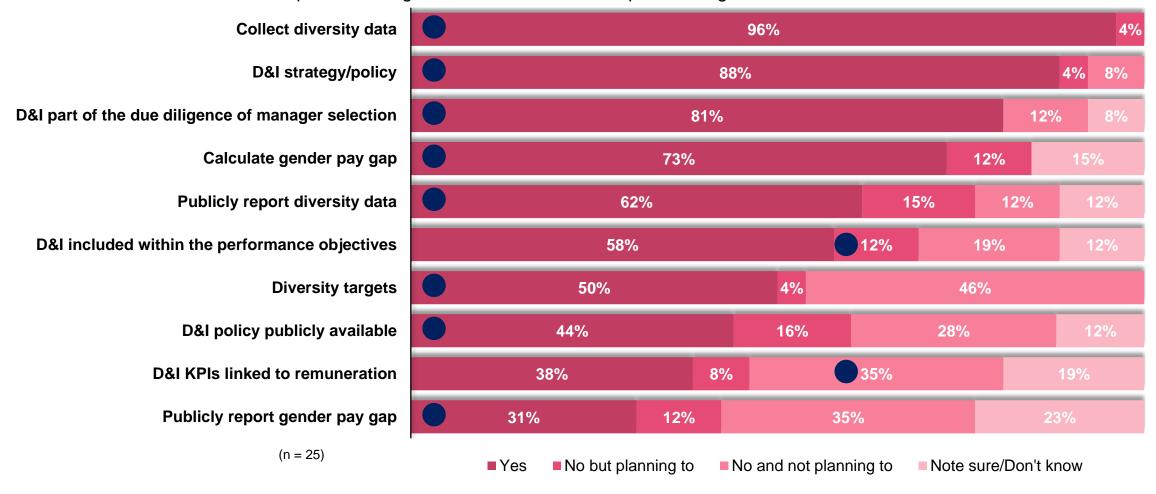
- Gender balance is one aspect of diversity and has been given increasing attention at most peers
- Guardians is ahead of its peers in reaching a positive state on these metrics
- The peers are generally on the right track with gender balance, but many are adopting a slow pace on this
- More focus has been given to cognitive diversity as a key driver of better thinking and teamwork





Peer funds embrace D&I, but transparency and accountability are lagging somewhat Gender balance looks positive to Guardians

The Guardians has matured its DEI practices on gender and is ahead of the peer averages





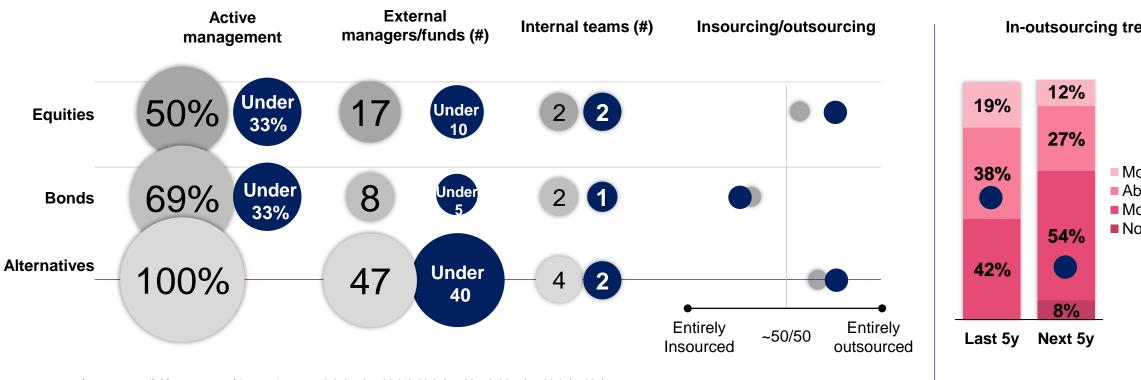


Key components of portfolio management

It takes a system to manage a system

- The in-outsourcing strategy is a critical system design feature
- Insourcing has grown and is expected to continue to grow
- But all models have a place for outsourced expertise, including strategic partnerships, subject to a clear value proposition

- Outsourced mandates must adapt to the TPA configuration in which joining up is critical, and strategic relationships add value
- The system for this in private asset mandates involves a highly specialised joined-up mix of LP & GP skill, relationship & role



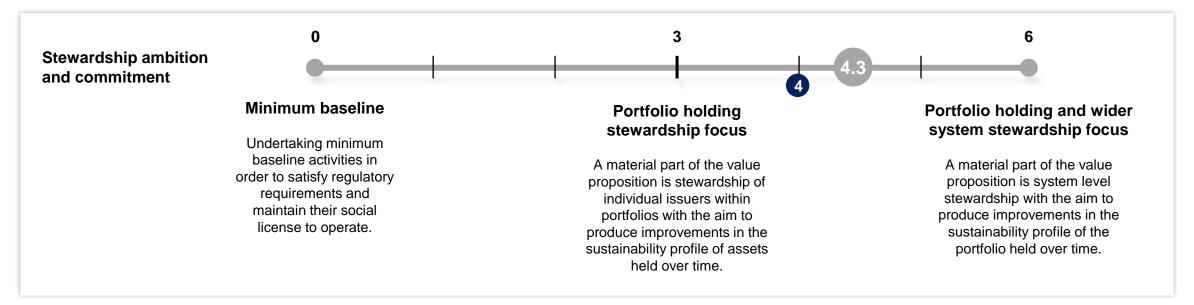
In-outsourcing trend More outsourced About the same More insourced ■ Not sure

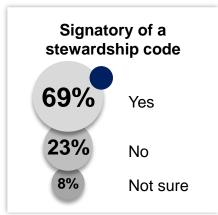
The ranges available to answer this question were 0%, 0.1% to 33.3%, 33.3% to 66.7%, 66.7% to 99.9%, 100%

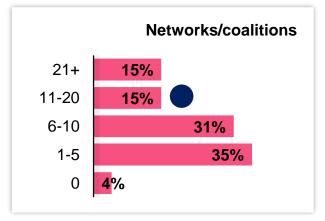


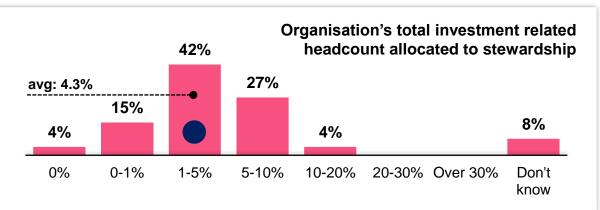
Average stewardship focus

The Guardians aligns with peers on its stewardship ambition and commitment











The private markets 'system' to manage the system

The following items make up the complicated set of best practice principles that apply to private market portfolios

Front-line investing and strategy

- Investing in line with tight underwriting criteria based on total portfolio principles
- Building sustainability, regional, other themes into strategy alongside size and time horizon
- Quality of external relationships and selections
- The speed and accuracy of response in agreeing private market deals
- Management of owned assets including sustainability factors
- Negotiation and management of costs

System design – the strategy for the strategy

- Using offshore locations for deal access/ relationship depth/ talent
- Having culture aligned with other parts of the organisation
- Rigour in aligning the alts portfolio with the total portfolio on the macro, factors, themes
- Skills and resourcing in managing funds/co-investing
- Skills and resourcing in allocating to/managing direct opportunities
- Rigour in measurement, with insight into cost and value when these may be soft

Enablers – that support strategy and the execution

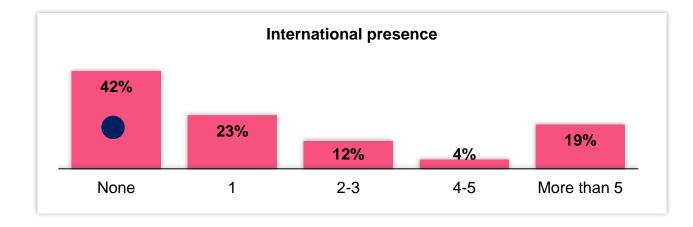
- Managing reputational considerations, with sustainability a factor
- Fund governance at board and exec level provides oversight and input
- Quality and culture of investment team including connection across team
- Skills with adding value via asset corporate governance on boards and otherwise
- High quality reporting for stakeholders/management
- Mid-office function supportaccounting, legal, HR, etc

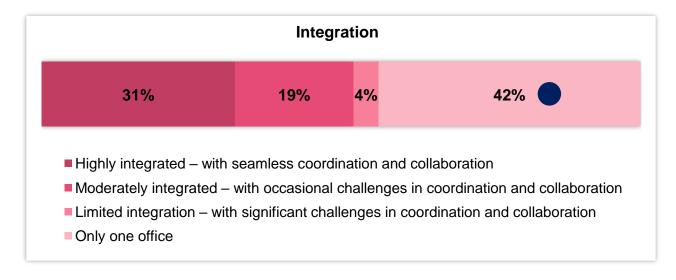


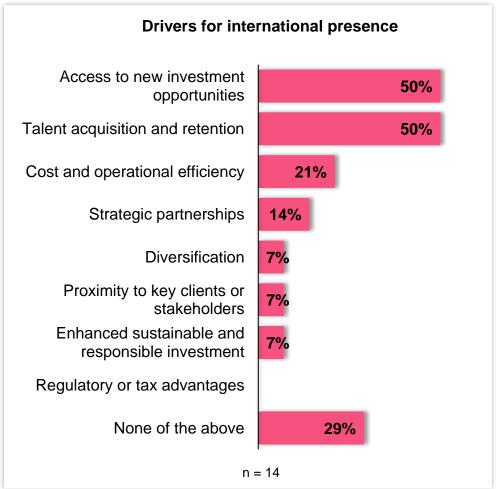


Global peers

Over half of the peers have an international presence Investment opportunities and talent are primary drivers for international expansion





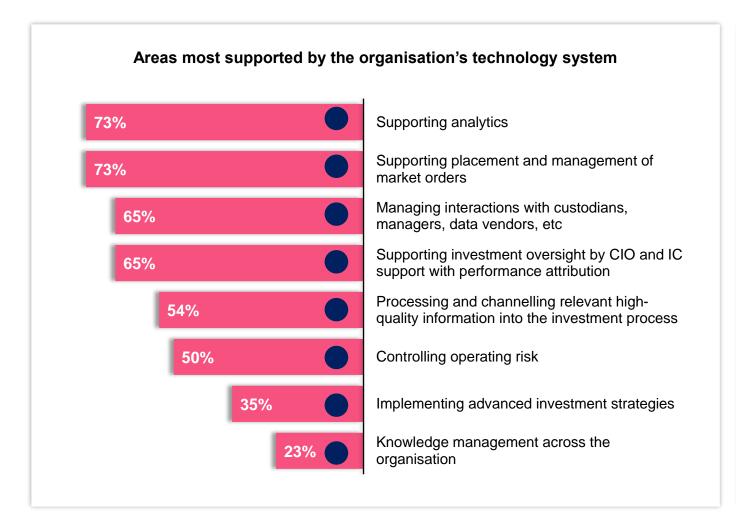


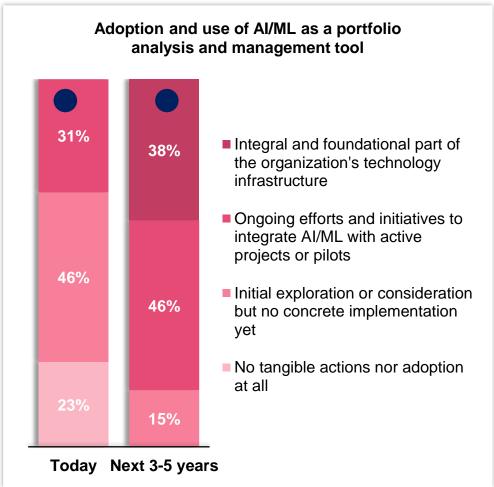




All-round impact of technology and AI adoption accelerating

Peers increasingly focused on a stronger data platform and more joined-up



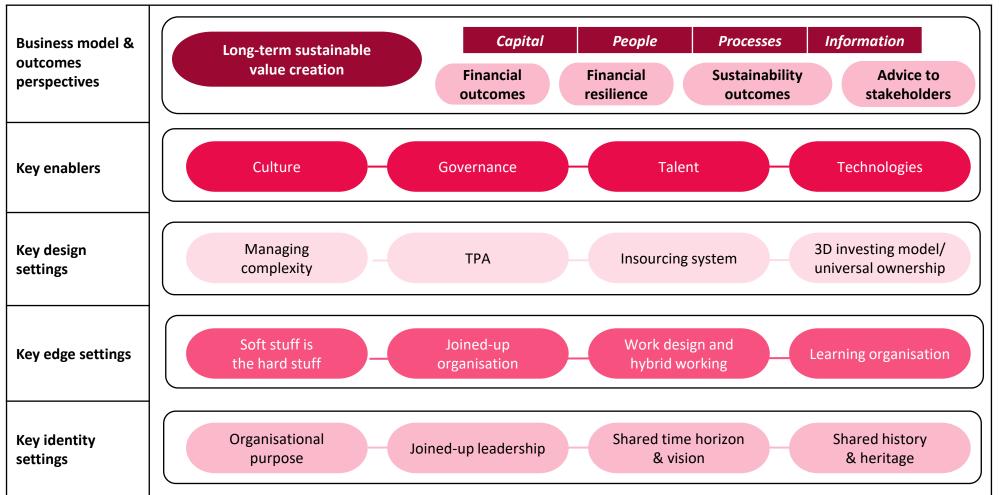




Concepts used in this report - the organisational grid

These are the top-down factors that matter in the asset owner business model and the organisational alpha*.

These include the systems design features discussed in this analysis – managing complexity, TPA, Insourcing system and 3D model



Notes: Integrated thinking and 'joined-upness'

The organisational challenge is aligning management in its understanding, incentives, decisions, accountabilities and reporting. It responds well to 'integrated thinking' based on the connectivity and interdependencies between a range of factors that affect an organisation's ability to create value over time. We often refer to this area as 'joined-upness'. The organisational grid tries to identify this range of factors

^{*} Organisational alpha is the shorthand for the level of skill generating value added through people and process

Terms used in this report (1/2)

Terms used	What is it	What are the implications
Systems thinking	Emphasising the whole over the parts, the collective over the individual, the inter- connectedness, the emergent properties of the system over time Connecting dots, recognising patterns, socialising solutions	 Approach and understand systemic risk Pursue financial outcomes within a healthy system Build better team connections, reducing siloes
Systems leadership	A set of skills and capacities for an individual or organisation to support the process of systems-level change. It combines collaborative leadership, coalition-building and systems insight	 Approach, learn and apply systems thinking Co-create wellbeing within the system Think more deeply and freshly about what is happening in the organisation
System design	The design of the organisation with respect to various features including dealing with complexity, TPA, use of insourcing, and sustainability ambition (rightsizing)	 Understanding when a system doesn't have the right balance of focus and activities to achieve its goals e.g. when complexity produces an undue focus on short-term execution activities relative to long-term initiatives
Systemic risk	Systemic risk – with its principal examples of climate change, biodiversity and geopolitical security – is the special part of market or systematic risk arising from malfunctions in the system that cascade through the whole market.	 Recognising and quantifying its move from an infrequent and marginal risk to being a major part of future financial risk Integrate with core market risks but respect differences in term structure and path dependence
Total portfolio approach (TPA)	An approach to portfolio construction that is a "more joined up" process that starts with clearly specified investment goals, and applies a competition for capital among all investment opportunities, in a dynamic approach	 Cultural and governance support for whole portfolio thinking/management Streamline the portfolio construction approach via portfolio quality dashboards
Horizon scanning	The systemic analysis of potential threats and opportunities and likely future developments	 Build a 5–10-year view on key strategic trends and build better beliefs Provide self-awareness of gaps in strategy Stress test organisational preparedness and resilience
Universal ownership/ 3D investing principles	Universal owners are generally very large investors that own a slice of the world economy and world portfolio and with it a slice of all corporate externalities; and in many cases are adapting their strategy to improve or indeed exploit their position. 3D investing principles align with universal ownership in managing funds to balance risks, returns and real-world impacts	 Consider real-world impacts on the environmental/societal system by reference to stated intentions and explicit measures Obtain better outcomes through long-term support of the system – both better financial and non-financial outcomes Universal ownership / 3D investing is a category of the wider term 'sustainable finance' which encompasses the full spectrum of ESG, SI and impact investing

Terms used in this report (2/2)

Terms used	What is it
Best practice	A state where the organisation functions with a margin of safety over meeting its purpose, vision 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
Fit-for-purpose	A fit-for-purpose organisation functions in line with meeting its purpose, vision and benchmarks and compares adequately by reference to peers
Asset owners	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
Fiduciary capacity	 Investing having regard to principles of loyalty: acting in accordance with the specific power of investment by putting the interests of beneficiaries first and prudence and care: investing prudently, exercising good judgement and reasonable care; diversify according to accepted investment theory While pension funds have legal obligations to follow under fiduciary duty, sovereign wealth funds like NZSF are influenced by their specific mandate
Culture	The collective influence from shared values and beliefs on the way the organisation thinks and behaves (Urwin, TAI, 2019)
T-shaped teams	T-shaped people have natural advantages as contributors to cognitive diversity. Their mix of subject depth (the vertical bar of the 'T') and subject breadth (the horizontal bar of the 'T') suits the profile of cognitively diverse teams through their wider perspectives across many fields and disciplines
Organisational alpha	Shorthand for the level of skill generating value added through people and process

Terms used	What is it
Leadership	influencing a collection of people to achieve a common goal through strategy, motivation, and development. Leadership should be seen as a role of all staff
Joined- upness	Effective combinations within and across teams and across providers; limited siloes in the organisation; shared values across the organisation. Connecting ideas across the organisation in both portfolio and the enterprise
EVP	Employee Value Proposition - culture and leadership, policies and actions that attract, retain and develop the people in the organisation
OVP	Organisational Value Proposition – the value delivered to the organisation by its people
DEI	Diversity, Equity and Inclusion. Diversity as the presence of differences, equity as respect for differences, inclusion as the leverage of differences.
AI/ML	Artificial intelligence / machine learning
BaU	Business-as-usual: regular work and inter-actions which are increasingly complex and time-consuming
BbU	Business beyond usual: irregular work, tasks, and inter-actions, particularly work on initiatives and change projects which are increasingly important and time-challenged e.g. the 5-year Review is a BbU task that, by being designed into the Guardians' mandate, is given reserved time in the Guardians' governance budget
IP	Intellectual property
Principal stakeholders	Principal stakeholders includes the Crown, the Minister of Finance and the Treasury

Concepts used in this report - systems thinking

The concept of systems thinking has particular relevance to the Guardians

WTW observations

The tools that come with systems thinking

- Systems thinking comes with a number of practical tools for analyzing problems and implementing solutions, such as the use of the following:
 - System patterns (archetypes): Using common patterns in systems to understand what is happening now and to prepare for what might happen in the future, especially when we cannot rely on past experiences to predict what is to come
 - Systemic risk models: Using models and scenarios that consider risks affecting entire systems, which is very helpful in managing risks and helps assess how much overall market risk is influenced by these sources
 - Systems leadership models: Using leadership models that see problems as shared systems-related challenges, approach them with a holistic and longer-term perspective, and encourage teamwork and cooperation to find solutions

Ways of simplifying the complex

- Because of the investment ecosystem's complexity, looking at the asset owner across all
 factors at once runs the risk of creating confusion; there are too many moving parts to do
 this satisfactorily. Thus, in our work we separate investment organisations and their
 sustainability ambitions into sub-systems or "models": the systems model, the business
 model, the investment model, the governance model, and the people model. Viewing the
 investment ecosystem through these models enables us to study the issues at the highest
 level, concentrate our attention on understandable and usable chunks, and focus on best
 practice principles.
- The thinking also introduces the powerful principle to value narrative equivalent to numbers. Most of the meaningful data we seek is extremely soft and needs to be given a narrative that qualifies it.

WTW observations (continued)

• It also introduces the framing of this analysis. First top-down looking at good design. Secondly, bottom-up looking for good planning, execution and review. Thirdly, by reference to past results. And fourth by reference to ancillary factors that describe desirable results or states – these items are more like a box-tick. They are important as part of an evaluation, but a small part of the whole picture.

Advantages of systems thinking

- A number of advantages flow from this way of thinking:
 - We can understand organisations at a relatively nuanced level
 - We can make progress with understanding some of the tricky patterns that organisations experience – like the problem that there is a cost and value to everything in our ecosystem but it's mostly unmeasurable
 - We can incorporate some of the tricky moving patterns experienced in organisations – like the problems of the arms race in which winner can take all or the tragedy of the commons or the tragedy of the horizons where failure to recognize a reality can be damaging
 - The thinking enables the storyline unfolding in future (like what to expect over the next year) can be embedded in a theory where we have the figures as evidence
 - We can compare different perspectives from both different angles, but from different levels. Systems thinking involves being comfortable moving in agile fashion from a high level (think of the meta level looking down at the entire investment ecosystem) to a low level (think of the micro-level zooming in on an individual or a team). Adding these perspectives together has a critical value to thinking and acting



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- 15. Global SWF | May 2024 Newsletter
- 16. Global SWF | 2024 GSR Scoreboard



Statutory Review 2024 Terms of Reference - links to pages in this report (1/3)

Objectives		
Sect	ion 71 (3) of the Act requires periodic independent performance reviews of the Guardians. At a minimum, the reviewer must form an opinion on:	
(a)	whether or not the investment policies, standards, and procedures, established by the Guardians in relation to the Fund are appropriate to the Fund;	32, 54
(b)	whether or not the investment policies, standards, and procedures, established by the Guardians in relation to the Fund have been complied with in all material respects; and	32
(c)	the investment performance of the Fund.	40, 41
In ac	Idition to meeting the above legislative requirements, this review is intended to focus on the following aspects of the Guardians' operations:	
•	Investment strategies: endowments, risks and liquidity. Evaluating the Guardians' investment strategies against the opportunities provided by its endowments including their relationship or dependency around liquidity.	42, 43
•	Ethical/Sustainable 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.	34, 35, 36
	Governance Framework: to assess whether the Guardians' governance frameworks are in accordance with best practice.	18, 22 to 30, 33
	The governance and management implications from the potential amendment to S59 in the Act allowing the Fund to take a controlling interest in an entity.	37, 38
	Ex-Post Performance: to evaluate the performance of the Fund. This will include an emphasis on the measurement and reporting of performance, including the risk adjusted drivers	
	of return and the contribution of leverage and derivatives to these returns.	40, 41
	How the Fund assesses the appropriate use and periodic review of the internal versus external management of an asset class or strategy.	39
1)	Appropriateness of and Compliance with the Statement of Investment Policies, Standards and Procedures (Section 71(4) (a&b) of the Act).	
1.1	Section 61 of the Act states that, at a minimum, the statement of investment policies, standards, and procedures (SIPSPs) "must cover (but is not limited to)" [12 specified criteria]	
1.2	In assessing whether the Guardians' SIPSPs are appropriate and compliant, the Reviewer should focus on any changes since the date of the last statutory review. Where there	
	have been any material changes or additions the Reviewer should opine on whether they are appropriate and complete, both in relation to; the Guardians' capabilities, and with regard to meeting the requirements set out in Section 58 of the Act. This opinion should take into consideration:	
(a)	An evaluation of their (SIPSPs) appropriateness, in the context of global investment management best practice, taking into consideration relevant peers.	32
(b)	A capabilities assessment should cover human and technology needs.	17, 19, 20
(c)	The Reviewer should note areas of non-compliance; as well as highlighting short comings which may present areas of risk for the Fund.	9, 50 to 53
1.3	The New Zealand Superannuation and Retirement (Controlling Interests) Amendment Bill is currently being considered by Parliament and may be passed during the review period. If passed, this will remove the current restriction on the Guardians from taking a controlling interest in entities, with a consequential requirement that the SIPSP be amended to outline "the governance framework for the implementation and operation of all entities that are controlled by the Guardians or that are formed by the Guardians for the purpose of holding, facilitating, or managing the investments of the Fund". The review should address:	
(a)	(If the Bill has been passed) the appropriateness and robustness of the above governance framework for entities which the Guardians may control; or	37
(b)	(if the Bill has yet to be passed) the appropriateness and robustness of the proposed governance framework for entities which the Guardians may control in the event the Bill is passed.	n/a
(c)	In either case, assess the processes for managing controlled entities against what other sovereign wealth funds do in managing their controlled entities.	38



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This	review is to focus on the following areas within the Guardians' SIPSPs:	Pages
1.4	Investment strategies: endowments, risks and liquidity	42, 43
	In view of section 58 of the Act, the Reviewer will evaluate the Guardians' investment strategies against the opportunities provided by its endowments including their relationship or	
	dependency around liquidity. In particular, the review should examine:	
(a)	How effectively the Guardians is optimising the NZ Super Fund' endowments. Identify any gaps or missed opportunities reflected in the investment strategies from these endowments which are:	
	i. Long term horizon - the ability to invest in illiquid assets and to ride out short-term market movements.	
	ii. Operational independence - Fund investments are made on a purely commercial basis.	
	iii. Sovereign status – enables lower tax liabilities in some jurisdictions and is often favourably regarded by business partners.	
<i>(</i> 1.)	iv. Governance - The Guardians is designed to operate at arms' length from government.	
(b)	the effect liquidity has on the Fund's ability to capitalise on its endowments;	
(c)	the appropriateness of the number and span of the Fund's investment strategies; and	
(d)	liquidity risk management: There should be an assessment of whether the risk the Fund is exposed to can be adequately covered in the event of a significant adverse market event.	
	The Reviewer should also evaluate the Guardians' risk allocation and budgeting process, including a focus on New Zealand investment; commenting on the robustness of methodologies	
	utilised; and the completeness of documentation with regard to the following: supporting analysis; subsequent decisions; and Governance of the risk budgets.	44 to 47
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1.5	The Guardians' Ethical/Sustainable Investment Framework The Positionary vill and water the Guardians' attriactionable investment framework in relation to Scotion 59/(3)/(a) of the Act, as well as in the context of intermedianal heat assetication.	34 to 36
	The Reviewer will evaluate the Guardians' ethical/sustainable investment framework in relation to Section 58(2)(c) of the Act, as well as in the context of international best practice standards, and make recommendations where appropriate.	
	Since the last independent review, the Guardians has moved from a responsible investment approach to a sustainable investment strategy and committed to net zero by 2050; new	
	climate reporting guidelines and requirements have been introduced in New Zealand and globally; and the Minister of Finance has issued an Enduring Letter of Expectations to the	
	Guardians setting out a new Crown Responsible Investment Framework. The reviewer should assess how well the Guardians' new sustainable investment strategy measures up to global	
	best practice; as well as the speed and progress the Guardians has made in implementing the Crown RI Framework.	
4.0		
1.6	Governance	40.004-00
	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	18, 22 to 30,
(0)	addressing this question, the following areas should be considered: Scope of Board and delineation of Board and Management responsibilities.	33
(a) (b)	The appropriateness of Board and Management delegations.	
(c)	Information flow to the Board: Timeliness/Relevance/Completeness.	
	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.	
(d)		
(e)	Conflicts of Interests: The process of recognising, recording, and managing any such conflicts at both the Executive and Board level.	
(T)	Internal Board alignment and communication (bearing in mind multi-country domiciles).	

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2)	The Investment Performance of the Fund (Section 71(4) (c) of the Act).	Pages
2.1	It is expected that the Reviewer will evaluate the ex-post performance of the Fund since inception of the 'Reference Portfolio'; this is expected to incorporate a time period analysis	
	since the last Independent Review. The Reviewer should form an opinion on the drivers of these returns over these time periods: commenting on the contribution, if any, of leverage	
	and derivatives in returns.	40, 41
	The reviewer is expected to evaluate the role of the Guardians' "value adding strategies" in the Fund's performance over the above time horizon. Consideration should be given to	
	appropriate evaluation metrics; including risk adjusted measures.	40, 41
	The reviewer is expected to evaluate the appropriate use and periodic review of internal versus external management of an asset class or strategy.	39
2.2	It is expected that, in this evaluation, the following areas will also be considered:	
2.2.1	Measurement:	8
(a)	The reviewer is expected to be satisfied with the classification and calculation methodologies for asset classes and instruments contained in the 'Actual Portfolio'.	
(b)	If internal model-based valuations are used in the calculation of investment returns the Reviewer should be satisfied with the methodologies used; both in terms of their robustness,	
` ,	and the control process around their validation and use.	
2.2.2	Reporting:	40, 41
(a)	The Reviewer should be satisfied that the Guardians' investment return reporting, referenced in Section 61(c) of the Act is consistent with the determination outlined in Section 61(b) of the Act.	
(b)	The Reviewer should also be satisfied that the Guardians' reporting is consistent with the requirements stated in Sections 58 and 65 of the Act.	
(c)	The Reviewer should examine the following:	
	i. The adequacy, and completeness of the contribution analysis used to inform stakeholders of the Fund's performance drivers.	
	ii. The suitability of investment return reporting, from both an absolute and relative return perspective.	
	Making recommendations where appropriate.	
(d)	The Reviewer must be satisfied that the; measurement, calculation and reporting of the Fund's performance is consistent with "best practice" standards in the investment management industry.	
	Where there are any areas of material divergence these should be noted and commented on.	
	·	
3)	In the process of undertaking the review, the Reviewer should be satisfied as to the effectiveness and efficiency of the Guardians and the Board in undertaking their functions in	
-,	relation to the above terms of reference.	4, 5, 22 to 29
		., 0, 22 10 20
4)	The Reviewer should make general observations on the review; noting the engagement and transparency of the Guardians and the Board towards the statutory review process.	6
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