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Review of the Guardians of New Zealand Superannuation

New Zealand Treasury on behalf of
The Minister of Finance

MERCER

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Foreword

We are please to submit our report on the review of the Guardians of New Zealand Superannuation which has been prepared at the request of the New Zealand Treasury. The Guardians of the New Zealand Superannuation have a significant responsibility in protecting and growing the NZSF to assist in meeting future superannuation needs of New Zealand.

Mercer was commissioned to undertake this review on 10 August 2009. We were most enthusiastic to undertake this most challenging project as we are acutely aware of the importance of the Fund to new Zealand and the important governance role that this review performs.

Of great assistance in the preparation of the report has been the input received from the Chairman David May, the Chairman of the audit and risk committee, David Newman, the CEO Adrian Orr, the leadership team and key personnel at the Guardians.

We also appreciate the carefully considered guidance provided by Andrew Blazey, Gerry Verhaart and Dominic Milicich of the New Zealand Treasury.

In view of the highly specialist nature of the Fund, Mercer formed a core team of specialists to undertake this review. The core team comprised Patricia Pascuzzo, Heathcliff Neels, John Gallacher, Lournada David, Robin Solomon, David Scobie, Bruce Gregor, Helga Birgden, and Garth Gregory.

The core team was supported through review from Tony Cole, Simon Eagleton, Martin Lewington, Stacey Scapino, Anthony Lane and Nick White. The team was further supported through input from Mercer's National Funds Consulting Group that brought significant expertise from its collective experiences in working with sovereign wealth funds from across the globe.

We thank the New Zealand Treasury for giving us the opportunity to undertake this important review.

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Executive Summary

Summary

Mercer's assessment is that the Guardians is implementing appropriate investment strategies, governance arrangements and operational activities to position itself to meet its long-term objectives.

Our review at the end of 2009 has found an organisation that has grown considerably since its inception, both in terms of scale and sophistication. It has implemented important improvements to its governance and investment strategy, particularly in recent years, to better deal with the complexities of managing and building long-term wealth.

During this time, it has also endured the worst global financial crisis since the Great Depression, and this experience has served to undermine its short-term financial performance. Given that the investment horizon of the Guardians is 20 - 30 years, it would be inappropriate to focus unduly on short-term performance results.

The Guardians' approach of continually refining its investment strategy and implementation demonstrates a commitment to evolutionary improvement and learning from its experiences. This is appropriate and essential for such a young organisation operating in a dynamic financial environment. It is our assessment that the implementation of the strategic and operational measures that the Guardians has foreshadowed, together with the enhancements identified in this Review, will ensure that the Guardians remains well placed to meet its long-term objectives.

Background

One of the remarkable features of the past couple of decades has been the rapid growth of sovereign wealth funds. While sovereign wealth funds existed long before the New Zealand Superannuation Fund (the Fund)[1], its establishment coincided with a dramatic increase in the number of similar funds around the globe. In fact, the term "sovereign wealth fund" was not coined until 2005.[2]

The accumulation of national wealth that drove the creation of many of these investment vehicles was the result of economic developments and the incorporation of countries' economies into global commodity chains, trade and exchange.

Sovereign wealth funds exist for a variety of reasons, including reducing the volatility of government revenues, countering the boom-bust cycles' adverse effect on government spending and the national economy, or building up savings for future generations. The Guardians falls into this last category, along with the Canadian Public Pension Plan, Future Fund of Australia, National Pension Reserve Fund (Ireland), and Pension Reserve Fund (France). The emergence and recognition of this category of fund

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[1] The Kuwait Investment Authority was established in 1953.

[2] Andrew Rozanov, "'Who holds the wealth of nations?' in Central Banking journal, May 2005, Volume 15, Number 4.

provides a useful peer group to assist in assessing the Guardians. As a result, it is instructive to note that:

- The Guardians is still relatively young and continues to evolve as an organisation, grow (in terms of assets and staff numbers) and develop its investment strategies.

- Best practice for its peer group is also still evolving and comparisons should be treated with care.

Sovereign savings funds are a particular type of sovereign wealth fund created with the primary aim of transferring wealth from current generations and creating further wealth for future generations. These sovereign funds are characterised by the absence of explicit short-term liabilities and the ability to invest with a long-term horizon to fund long-term obligations.

The Guardians began to implement its investment strategy in September 2003 and developed strategies designed to take advantage of the Fund's long range horizon. As such, the Guardians has been operating for a relatively short period of time, rather than assessing at this time whether the Guardians has been successful, the focus of this review is on whether the Guardians is on track to meet its objectives, recognising that it is still within its formative years.

While some care needs to be taken when assessing investment performance over a much shorter period than the intended horizon, it is appropriate to address the issue of whether the evolving investment structure is reasonably on track at this point. Also, if it is, whether the management processes in place offer a high degree of comfort to the Crown that the Guardians will ultimately achieve its objectives.

Our performance review

The purpose of the review was to assess whether the Guardians is complying with best practice across all aspects of its operations. In making its assessment, Mercer was required to:

- Form an opinion about whether or not the investment policies, standards and procedures established by the Guardians are appropriate to the Fund; and whether or not the investment policies, standards and procedures established by the Guardians have been complied with in all material respects;

- Form an opinion as to whether the Guardians' operations across all aspects of the organisation are consistent with best practice, as appropriate given the size and nature of the Fund;

- Form an opinion on the investment performance of the Fund to date;

- Form an opinion on whether the Guardians is satisfactorily positioned to meet the objectives for the Fund under its legislation in the future; and

- Identify anything else considered relevant to the performance of the Fund.

Out of scope of the Review was the legislation under which the Guardians operates, and a detailed quantitative analysis of the asset allocation of the Fund adopted by the Guardians.

This review has covered the performance of the Guardians generally but has emphasised two specific areas – its performance in relation to achieving its investment objectives and its performance in relation to investment operations.[3] These emphases were agreed by the Minister of Finance via the Treasury prior to the commencement of the review. The governance arrangements put in place by the Guardians had been covered by the Office of the Auditor General (OAG) Review 2008, and the Guardians have implemented most of the OAG's Recommendations. Mercer took these relative emphases on board. Nonetheless, all aspects of the Guardians' activities remained part of the Review.

Our assessment and recommendations

The remainder of this chapter is an outline of the primary sections of the report.

Mercer has made several recommendations to the Guardians that it considers necessary to ensure it achieves its long term objectives. Mercer notes that many of these recommendations relate to activities that were already planned by the Guardians and in other cases the Guardians has already agreed to adopt them as part of its business planning.

In undertaking its review, Mercer has also been cognisant of the particular features of the market environment during the period in which the Guardians has been operating. The early period of the Fund was a very favourable investment environment. Global share market returns were strong and stable.[4]

Towards the end of 2007 began a period of much greater financial market turbulence where markets were subjected to major shocks. In hedged terms, global share market returns became heavily negative, culminating in a quarterly loss of -20% in December 2008, with poor returns continuing into the first quarter of 2009.

In view of the extreme circumstances of the review period, Mercer has been careful not to review with the benefit of hindsight and over-emphasise short-term experience. As such, Mercer's approach has been to review the governance and investment decision-making practices given the state of knowledge and information available at the relevant times. Rather than reviewing past decisions, the main focus of our review was to assess whether the Guardians' investment decision-making approach and investment strategy were appropriate for achieving the objectives of the Fund in the long-term.

Investment objectives

The Fund has been endowed with certain significant attributes that confer on it a competitive advantage in the market. The Guardians identifies these endowments as its "long investment horizon and liquidity that allows it to tap into investment opportunities not available to many investors, while being able to deal with harsher market environments without having to resort to forced sales". The Fund's endowment of a long-term investment horizon for choosing, managing and measuring the success of

[3] Investment operations cover all aspects of managing and monitoring the Guardians' processes for implementing, maintaining and changing its investment strategies and ideas.

[4] Expressed as hedged in NZ$.

investments is reflected in the values and investment philosophies and within the overall mission statement of the Fund.

Consistent with best practice for institutional investors, the Guardians uses its philosophies to anchor its investment decision-making. At certain times there has been cause for the Guardians to review its philosophies in light of market experience. This has resulted in recalibration of its strategies, such as in the areas of active investment management. Revisiting foundation beliefs from time to time is appropriate from a governance perspective to allow for more effective strategies to be developed consistent with those beliefs.

There are various different ways that investment objectives may be determined and specified in financial terms. The Guardians has interpreted its legislative requirement of 'maximising return without undue risk' as requiring an appropriate balance between return and risk. Consistent with its interpretation of its long-term mandate, it has simultaneously determined to adopt: a high growth strategic asset allocation (SAA) (approximately 80% growth and 20% defensive assets); a return objective to exceed, before New Zealand tax, the return on 90 day Treasury bills over a 20 year period; and an investment expectation to exceed the return on 90 day Treasury bills plus 2.5% over a 20 year rolling average period.

It is acknowledged, however, that there are other equally valid ways of articulating investment objectives. For instance, the Crown may have itself specified a realistic rate of return target.

Any method, appropriately constructed, has its advantages and no method is intrinsically superior. Whichever method is chosen, it is important that it is clearly understood and has the buy-in of the key stakeholders. Another important consideration for a long-term fund is to avoid radical changes in its mandate.

Recommendation 3.1: Clarify the investment expectation

Recognising the importance of mission clarity, that the Guardians communicates with stakeholders to ensure a clear understanding of the meaning of its investment expectation to exceed the return on 90 day Treasury bills rate plus 2.5% over a 20 year period and how it was derived.

Recommendation 3.2: Reconsideration of the specification of the financial metric

While recognising the importance of a stable mandate, that the Crown gives consideration to whether an actual investment rate of return or risk target would provide a clearer benchmark against which to judge the Guardians' performance over the medium term, rather than the current expectation to exceed the return on 90 day Treasury bills plus 2.5% over rolling 20 year periods. If so, that the Crown determines an appropriate investment target in consultation with the Guardians.

Responsible Investing

In this review, we examined whether the Guardians has appropriate policies and procedures to ensure that it is meeting its statutory objective of investing and managing the Fund in a manner consistent with avoiding prejudice to New Zealand's reputation as a responsible member of the world community. Initially the Guardians interpreted the requirement as meaning compliance with New Zealand Treaties and conventions such

as those promulgated by the United Nations and International Labour Organisation and adopted by New Zealand and to have a responsible investment (RI) policy. This legislative requirement has since been interpreted by the Guardians to encompass the belief that long-term financial performance can be affected by environmental, social and governance (ESG) issues. As such the Guardians has developed a Responsible Investment Policy that sets a framework for encouraging companies to meet international standards in these areas and to exercise the Fund's voting rights in line with good corporate governance practice.

RI is typically understood to include the integration of ESG considerations into investment analysis, stock selection and active ownership practices in the belief that doing so can help improve long-term risk/return outcomes.

Mercer's review against 12 peer sovereign wealth and other funds of national significance concluded that:

- The Guardians has a thoughtful and focussed governance and policy approach towards RI, consistent with its investment belief that ESG can contribute to portfolio value and sustain the Fund's long-term commitment to the Crown. With regard to policy, the Guardians rates very well, particularly in relation to progress against the voluntary global standard of the United Nation's Principles for Responsible Investment (UNPRI)
- On investment strategy, the Fund appears to be assessing some ESG investment opportunities and has commenced investigation of public and private equity managers. However, it is yet to develop a link between the Fund's investment policy and beliefs directed towards ESG outcomes and its SAA.
- The Guardians rates reasonably well on implementing its policy through its voting and engagement activities and participation in global voluntary collaboration and debate.

Recommendation 3.3: To further improve the Fund's ESG practices and bring them more in line with its general investment objectives and beliefs, we suggest that the Fund fully explores the link between ESG factors and its SAA and based on the result, pursue investment opportunities that will improve the Fund's long-term return.

Recommendation 3.4: The Fund should:

- communicate more clearly to its current investment managers its position on responsible investment and ESG issues; and
- request its external investment managers report on the extent to which ESG factors have been integrated into its investment policies and processes.

Investment strategy

Since 2009, the Guardians has articulated its strategy to add value relative to the passive portfolio benchmark in a number of ways:

- Private markets investing – including a diverse range of assets ranging from timber to private equity to infrastructure. This strategy seeks to exploit the Fund's long-term horizon and high tolerance for illiquidity

- Active manager selection – in public markets
- Strategic tilting – a new addition to its value added levers that seeks to exploit its belief that returns from asset classes are partly predictable over the long-term. It involves developing a framework for projecting expected returns from certain asset classes and then tilting to or away from its Strategic Asset Allocation ("SAA") target weights when those expected returns are extraordinarily high or low
- Implementing operational efficiencies.

The key method at the Guardians' disposal to manage financial risk is through determining the optimal mix of market exposures, referred to as the SAA. Determination of the investment strategy, including the SAA, therefore, has a major bearing on the achievement of the Guardians' objectives. Guiding Mercer's review were two critical questions:

- Whether the approach taken in developing the SAA and investment strategies is appropriate?
- Whether the Fund's investment strategy and asset allocation are appropriate given the investment performance targets and the expected rate of return?

Strategy development methodology

There is no objective way to determine whether the approach to the development of the SAA is optimal. Experience cautions against relying too heavily on modelling to predict the future. Numerous decisions must be made in the design of these models and different judgements will be applied by different modellers. No single approach is conclusively superior to others. As a result, Mercer's review sought to assess whether the approach taken was a disciplined one which adopted appropriate use of alternative macroeconomic scenarios, stress testing and alternative perspectives.

Mercer has assessed the Guardians' methodology as being robust and rigorous. It is noted that the Guardians is giving consideration to treating liquidity premium as an excess return element rather than as a core "beta" component of the strategy. A development of this nature would impose greater discipline around decisions concerning allocations to illiquid assets in the portfolio strategy.

The added level of transparency created through separating liquidity premium would also assist in addressing a matter identified by this review that a large proportion of the Guardians' investments in private markets have been in liquid markets, such as commodity futures, listed infrastructure and listed property, rather than their illiquid counterparts.

Recommendation 4.1: The exclusion of sources of excess return, including liquidity risk premia, from the core benchmark of the Fund ought to be considered as a means of placing further discipline on risk budgeting decisions.
Recommendation 4.2: Further research and analysis is required on the existence of and best methods to harvest liquidity premia. It is important to shift the basis for exploiting one of the key endowments of the Fund from a qualitative judgment to one based on qualitative and quantitative analysis.

Given the important influence that the Fund's SAA has on the achievement of the Guardians' objectives, a heavy focus and significant Board and management time is devoted to strategy review and SAA model development. To ensure the effectiveness of the strategy development process, and that the Guardians derives greater value from the resources it devotes to strategy development, Mercer provides the following recommendations.

Recommendation 4.3: To seek to ensure that the approach to strategy development continues to improve and remains at best practice, that the Guardians' SAA model and modelling work be made publically available including through the New Zealand Superannuation Fund web site. Given the importance of the Guardians to the New Zealand economy and its significant standing among the sovereign wealth fund community, the scrutiny and challenge engendered through this would create an external driver of continual development and improvement.

Recommendation 4.4: To mitigate the risks associated with strategy models developed internally, structured business and project management processes (including assessment, specification, testing, change control, review and formal sign off on models) are critical to increasing the likelihood of efficient and effective implementation of model development. It is understood that such processes are in place for more recent models such as the strategic tilting model. The monitoring and development of these business and project management processes in relation to strategy models should be a formalised part of the Guardians' risk management plan.

Recommendation 4.5: Sensitivity testing of the investment strategy process is a critical part of the strategy review and we recommend that it incorporates alternative cashflow profiles. This additional sensitivity testing, in conjunction with that employed for models and assumptions, would allow the Guardians to assess the level of reliance (if any) the set of cashflows assumed has on its strategy setting decisions.

Recommendation 4.6: In respect of the SAA modelling, two technical improvements are:

- With a view to ensuring that low probability extreme events are given an appropriate degree of attention in strategy development, short-term tail risks should be modelled in the primary model used to assess the strategy.
- While recognising the importance of the longer term timeframe for the Guardians' mission, it is recommended that more emphasis be given to the consideration of short-term timeframes through the incorporation of initial and long run assumption settings in the primary model used to assess the investment strategy.

Strategic Asset Allocation

We have assessed broadly the appropriateness of the Guardians' investment strategy. The appropriateness of the strategy has been tested relative to its investment objective or expected outcomes.

In assessing a strategy, a critical element is whether the level of confidence of achieving an outcome is appropriate. A second critical element is whether the assumptions underlying the strategy are realistic. Certain assumptions, such as the diversification benefits associated with each asset class, have a major impact on the

outcome of the strategy. Such assumptions are ultimately matters of judgement informed by analysis and beliefs.

There are certain universal principles in determining an investment strategy:

- A lower risk / lower returning strategy will likely have a lower expectation of achieving the long-term investment objective, but with the advantage of less short-term volatility
- A higher risk / higher returning strategy may have a higher expectation of achieving the long-term investment objective, but with the disadvantage of more short-term volatility

Mercer has reviewed the Guardians' strategy and considers it appropriate given the Fund's objectives.

Recommendation 4.7: A SAA of approximately 80% growth assets corresponds to a high level of confidence of meeting an expected return equivalent to 90 day Treasury bills plus 2.5% over a rolling 20 year period. This allocation to growth assets should be maintained. Stability of investment mandate is highly important for long-term wealth creation. However, should circumstances alter such that a focus on shorter term risks becomes more pressing, then a lower risk strategy for the Guardians would correspond with:

a) a lower confidence level of meeting the same objective; or

b) the same confidence level, but with a lower hurdle.

Investment Risk Management

Two key areas of investment risk management that this review examines relate to:

- Dynamic asset allocation - dynamic adjustment to the SAA to take into account changes in the risk premia embedded in asset exposures from time to time.
- Scenario analysis - strategic risk management that recognises the underlying risk factors, embraces uncertainty and is able to deal with a broad range of alternative plausible futures.

Dynamic asset allocation

The process of developing a SAA is based on long-term expectations of asset class risk and return characteristics. However, market experience demonstrates that different asset classes' expected risk and return may from time to time deviate considerably from the long-term trend expectations.

Investors with the appropriate governance and expertise may seek to capture additional value-add by implementing dynamic adjustments to their SAA that seek to exploit such medium term deviations in asset valuation from their fundamental value. This approach, referred to by various titles, such as dynamic asset allocation or strategic tilting, provides institutional investors with another lever for managing investment risk.

The implementation of this approach is not without risks as poorly executed tilts can exacerbate risk. Therefore, it should only be considered by investors with appropriate levels of governance and expertise. It is the case that many sophisticated institutional investors engage in strategic tilting and there is evidence that it can be successfully implemented.

The Guardians has in recent years developed its internal framework and process for strategic tilting and executed its first tilt in the last quarter of 2008. In view of its recent introduction, it is not possible to assess the effectiveness of the Guardians' approach nor to determine whether the Fund's performance would have been improved if it had developed strategic tilting earlier; this would depend on how well its methodology identified mis-pricing signals and its effectiveness in implementing dynamic tilting.

The Guardians has established its tilting framework in a manner that is consistent with the available risk budget. A 10% range on the combined weight of global large cap shares and global listed property and a 10% range on hedged offshore exposure, together, would amount to an active tilt of reasonable size making the process worthwhile.

As the process has only recently been introduced, there is by definition little organisational experience at either the Management or Board level in implementing strategic tilting. The Guardians' process reserves a very strong role for judgement, which Mercer considers appropriate. However, difficulties could be encountered if certain initial large tilts prove 'early' (or even simply wrong). Given these circumstances, it would be advisable to maintain active 'tilting' to relatively small ranges until the Guardians has developed more comfort that tilting has become an established source of excess return or risk management.

It is beyond the scope of this review to undertake a backcasting exercise to test how the strategic tilting framework and process may have operated if it had been available during earlier periods. However, Mercer understands that the Guardians did such backcasting (over long historical periods) as part of their evaluation of strategic tilting.

The implementation of strategic tilting needs to be underpinned by a rigorous governance framework where Management is delegated the responsibility for implementing the tilts within parameters set by the Board. Accurate performance attribution is necessary to determine whether the tilts are adding value as compared with the SAA.

The Guardians has developed a governance model for the implementation of tilting. Under this model, the Board approves parameters within which management can exercise discretion, subject to transparency about the process being followed and the impact on portfolio returns. Prior Board approvals are not required for tilts made within the discretion parameters.

The discretion parameters specify what types of tilts can be taken, and the maximum size of the tilts (individually and in aggregate). Prior Board approval is required before Management can exercise discretion to take different types of tilts, or to take larger tilts.

Mercer considers that the governance arrangements relating to the Guardians implementation of strategic tilting are appropriate.

Recommendation 5.1: The adoption of strategic 'tilting' by the Guardians is appropriate. It should be restricted to relatively small ranges until the Guardians has

developed more comfort that tilting has become an established source of excess return or risk management. The Guardians' performance and governance model should be reviewed after twelve months of operation and recalibrated as necessary.

Scenario Analysis

The investment environment in the future is subject to great uncertainties and may be less favourable than the past. This suggests less focus on risk as a singular concept of volatility and much greater need for scenario analysis to stress test investment strategies.

Best practice risk management involves risk assessment of parameters beyond the traditional mean/variance/correlation view of portfolio risk. This would include a multidimensional view of risk - including factors such as liquidity risk, interest rate risk in relation to liability, credit spread, and operational risks. Once such risks are identified and analysed, a governance process is needed that translates the knowledge gained from the ongoing risk assessment to possible changes in strategic tilting and SAA policy.

In the Guardians' forthcoming strategy review, greater emphasis than ever before is being placed on better defining the Board's risk tolerance and the use of scenario analysis. The Board is undertaking a survey of risk appetite across investment strategies to ensure a common platform of beliefs going forward. The Board is also incorporating consideration of macro-themes which it defines as including:

- Long-term influences on the global economy that have far-reaching, game-changing effects, are indifferent to business cycles and are relatively immune to financial and economic shocks; and
- Potential sources of stress on the portfolio or starting points for informing views on the long-term investment environment.

How the Guardians incorporates the macro-themes into its decision-making is yet to be established.

Recommendation 5.2: Adoption of scenario analysis in portfolio management

Given the critical importance of incorporating investment risks outside the traditional mean-variance view within portfolio management, the Guardians' planned identification and analysis of macro-economic themes is endorsed. It is recommended that the Guardians gives a high priority to scenario analysis including developing a methodology and disciplined governance processes for incorporating implications of these factors as appropriate into its SAA and other areas of discretionary management, such as strategic tilting and active management.

Recommendation 5.3: The external review of the investment strategy and the strategy development process, covering both a lateral perspective of the broad methodology as well as the technical view, should be a formalised part of the Guardians' risk management plan. In doing so, that the Guardians' seeks to incorporate a diverse range of perspectives to critically challenge its approach.

Portfolio Construction and Investment Manager Selection

Portfolio construction refers to the strategic approach taken in defining the intended portfolio exposures within an asset class or classes. It provides the framework for selecting a combination of investment managers to, as far as possible, capture the desired strategic capital markets exposures/risk premium, as well as where appropriate, to maximise the potential for sustained above benchmark performance through genuine active management skill.

The Guardians' approach to portfolio construction and active management strategy has evolved over time. Where previously the Guardians sought long-only, top quartile managers in the same proportions as the Fund's SAA, the Guardians then moved to improve the efficiency and diversification of the alpha streams through alpha/beta separation and removal of the long-only constraint.

This approach did not provide the desired excess return outcomes, albeit during a very challenging period for active management (the global financial crisis). Going forward, the Guardians is planning to identify strategies, characteristics or markets that are considered to offer a potential excess return and then consider the best way of accessing the excess return. As part of this approach, greater emphasis will be placed on the life cycle of asset classes, with a view to indentifying those asset classes that are more likely to produce significant excess returns for active management.

Mercer notes that the evolution of the approach to portfolio construction by the Guardians was very similar to that experienced by certain other large institutional investors over the review period. Mercer considers that the Guardians' approach going forward is a valid one. However, we make the following observations.

Generally SAA and implementation of strategic tilting would together be expected to have a greater impact on the returns achieved than active management.

The Guardians' approach to portfolio construction has tended to encourage the inclusion of certain types of investment manager strategies and styles, particularly systematic active managers (quant managers) and multi strategy/market neutral mandate types. Mercer considers that a portfolio construction approach that is more neutral in its designs and results in a greater diversification of investment styles will deliver better outcomes over the long-term than approaches that are biased towards particular styles.

Mercer cautions against placing too great an emphasis on alpha/beta separation because of the practical challenges of doing so in certain market segments, e.g. small cap markets, distressed debt and private equity, where there are no low cost means to remove unwanted beta exposures. Being limited to what is truly market neutral would have the effect of removing significant potential excess return.

The Guardians' planned "lifecycle" approach to determining the allocation to the different sources of alpha is conceptually sound. At the same time, it relies heavily on conviction in its own ability to identify and select managers with strategies, characteristics or markets that offer a potential excess return.

The Guardians acknowledges that even where alpha exists it may be transient, sooner or later being arbitraged away as other market participants recognise the pricing

inefficiency. It may also be cyclical, prevailing only in certain periods of the economic cycle. The success of the Guardians' strategy will rely on the ability of its investment team to identify when alpha opportunities have temporarily dried up or are temporarily heightened. Both of these factors (transience and cyclicality) are challenging ones to respond to from a management perspective. The adoption of a methodical approach which includes the documentation of the reasons for pursuit of that alpha opportunity, and potentially even more importantly, the factors that may be used to determine when the opportunity set has disappeared (and be a catalyst for exit), would assist in the successful implementation of this approach.

Recommendation 6.1: The Guardians develop a formal portfolio structure for each of the underlying asset classes, in terms of targeted strategies and exposures. While this approach is core to how the Guardians' approach SAA, it is not clear that the same structured process is applied at the single asset class level. Such an approach - breaking down the asset class into its risk drivers and addressing exposures to each of the risk drivers individually - may greatly enhance the efficiency of these sub-portfolios, and ultimately the multi-asset class portfolio.
Recommendation 6.2: In the context of the Guardians' planned "lifecycle" approach to determining the allocation to different sources of alpha over time, we recommend the development and documentation of process which sets out the methodology for assessing relative attractiveness. In particular, for each alpha source there may be different metrics used. It is important to document the reasons for pursuit of that alpha opportunity and the factors that may be used to determine when the opportunity set has disappeared (and be a catalyst for exit).
Recommendation 6.3: The Guardians consider whether greater diversification in manager styles should be more explicitly taken into account in the portfolio construction process. Associated with this is reconsideration of the degree of reliance on quantitative/systematic-based external fund managers for generating alpha (currently relatively extensive).
Recommendation 6.4: Investment manager operational due diligence is an area of focus at the Guardians. We note it should be a formalised part of the investment due diligence process prior to a new manager mandate being appointed. This could be achieved through incorporating the investment manager operational due diligence checklist from the document "Public Markets Due Diligence Process" (January 2009) into the Investment Due Diligence Policy, and potentially also the Investment Manager Selection Policy.

Governance and decision-making process

The Guardians has also been endowed by the Crown with two important features that are essential for wealth funds:

- operational independence from the Crown, which allows it to pursue its mission without political interference; and
- a reasonably stable mandate that allows the Guardians to pursue its long-term strategy with confidence.

The OAG reviewed the Guardians' governance arrangements in May 2008. It concluded that the Guardians' internal control activities generally meet or exceed accepted international practices and guidelines for operating investment funds. Further, it concluded that the Guardians is putting in place the types of internal control systems processes and procedures needed to prudently manage and govern the Fund.

The OAG made a number of recommendations for further refinement and improvement of governance structures. Mercer's review took the OAG report as its starting point and reviewed the Guardians' progress in implementing the OAG recommendations and also indentified further areas of development. Mercer notes that the Board has made considerable progress in fully adopting the OAG recommendations.

Mercer's assessment is that the Guardians has governance arrangements of a high standard including a clear delineation of responsibilities between the Board and Management and an organisation-wide risk management framework. Mercer further considers that the Guardians' monitoring of the internal management practices and controls would be enhanced through:

- Inclusion of investment performance attribution analysis in regular reporting to the Board. In addition to market returns, attribution data should also be provided in line with the levers that the Guardians adopts for creating excess return, namely: investing in private markets; active management selection; strategic tilting and looking for implementation efficiencies.

- Improving the focus of regular reporting to ensure that the Board is receiving better targeted, and not excessive, information, so as to enable the Board to properly monitor the performance and risk management of the Fund.

Rationalisation and centralisation of the Board's policies (30 in total) would assist with gaining organisation-wide understanding and better ensure that Board policies and standards are followed. We understand that the Guardians is currently undertaking such a rationalisation process.

The effectiveness of the implementation of risk management and compliance activities by the Guardians is addressed in subsequent Sections of this report.

Recommendation 8.1: Performance attribution data be included in regular reporting to the Board. In addition to market returns, relevant attribution data should be provided in line with the levers that the Guardians adopts for creating excess return, namely: investing in private markets; active management selection; strategic tilting; and looking for implementation efficiencies. Further, reporting of projections of year by year private equity forward commitments of capital against the Fund's liquidity situation would enable better monitoring by the Board.
Recommendation 8.2: Regular reporting to the Board should be rationalised and better focussed on the Board's responsibility to monitor Management's performance against its objectives. It is noted that the Guardians' Board in September 2009 received recommendations on amending the contents of the Board dashboard report and these will be implemented.

Organisational structure

While the Guardians outsources most of its investment management as appropriate, the operating model it has adopted relies relatively heavily on internal expertise to provide investment advice and develop investment and operational solutions. Rather than relying heavily on outsourcing of services, the Guardians has built deep expertise within its internal management with a view to achieving greater flexibility and control in activities.

For a given complexity of investment strategy, a certain critical mass of people is required to undertake the activities required of an investment fund. These activities include, but are not limited to, internal control and risk management processes to ensure an appropriate segregation of roles and responsibilities exist. Thus, the size of the team may not necessarily correlate directly with the level of funds under management. The Guardians' total number of investment and operational personnel is commensurate with the range of activities that the Fund undertakes internally.

While benchmarking analysis indicates that in 2008 the Guardians' cost structure was below that of a global peer group, this largely reflected lower external management costs[5].On the other hand, internal oversight, custodian and other costs were above those of its peer group.

The economics of funds management increases the pressure on smaller funds like the Guardians to scrutinize their cost structure and review the value and cost-effectiveness of their in-sourcing and outsourcing choices.

In-sourcing and internally developed solutions may have the benefit of being better tailored to the particular needs of the Fund, giving greater management flexibility and control, and providing greater alignment with the objectives of the Guardians. However, there are limits to which it would be appropriate for a Fund to rely on internally developed solutions where there is a competitive external market that can effectively meet its needs.

Recommendation 9.1: The Guardians regularly assesses the economics of managing activities internally relative to outsourcing. A prudent approach would be to undertake a business case assessment to determine the most optimal option for the Fund in respect of sourcing different activities. Ongoing development of the internal cost/capital allocation model would provide greater rigour in allocating staff resources commensurately with the allocation of the risk budget and financial/operating budget.

Overall, Mercer's view is that the organisational structure of the Fund is appropriate to meet its investment strategy and operational requirements. Two areas that could be improved in the structure relate to Treasury operations and risk management.

From an operational perspective, operational roles are relatively well defined and duties are adequately segregated within the lower ranks of the organisation, with the exception of the Treasury functions. While Treasury is a distinct business unit, it is situated within the operations division and reports to the General Manager Operations. Best market practice is to house these functions separately. Allowing execution and

[5] CEM Benchmarking (2008) Defined Benefit Investment Cost Analysis, New Zealand Superannuation Fund.

settlement to be overseen within the division lacks the controls generally accepted as being required to protect against fraud.

The Audit and Risk Committee provides organisation-wide risk management oversight; however, at the management level, the responsibility for risk management processes is shared among several members of the leadership team. Consideration should be given to appointing a Chief Risk Officer (CRO) to assume an organisation-wide responsibility for risk management and to establish a regular internal review, assessment and testing process. This is particularly important with an increased investment focus on private equity, hedge funds and commodities as these investments require greater due diligence and coordination of compliance, tax, operations, legal and other matters.

Recommendation 9.2: The Guardians segregate Treasury functions from the operations division to be consistent with best practice risk management models.

Recommendation 9.3: Consideration should be given to appointing a CRO to assume an organisation-wide responsibility for risk management and to establish a regular internal review, assessment and testing process. This is particularly important with an increased investment focus on private equity, hedge funds and commodities as these investments require greater due diligence and coordination of compliance, tax, operations, legal and other matters.

Compliance with Legislation

Mercer recommends reform of the Guardians' compliance regime to better reflect its current scale and level of operational sophistication. This requires greater awareness and involvement by staff below senior management level. Mercer notes that the Guardians has already identified the shortcomings highlighted in this report and is taking steps to address them.

Recommendation 11.1: The Guardians establishes a compliance obligation register and undertakes a formal test methodology to provide ongoing sufficient assurance of compliance with legislation.

Investment management fees

Overall the investment management fee levels and structures appear competitive for a fund of this size and type. Most mandate fee arrangements are at or below what Mercer regards as market norms for these asset classes. For private markets investments, where survey data is less comprehensive and assessment is based on the knowledge and experience of Mercer's specialists, fees are in the range expected for competitive managers of each type of investment. We note that, at the margin, there is often the opportunity for investors of some size (or status) to attempt to drive fees to minimal levels. However, this is not always of mutual benefit given expectations for servicing and the need for the manager to adequately fund resourcing to deliver on their mandate objectives.

The Guardians has no explicit policy in place with regard to negotiating fees in cases where there are multiple mandates with the same manager. While the Guardians has indicated that the existence of multiple mandates is taken into account during fee negotiations for the applicable mandates, for clarity, it would be appropriate to have a more formalised policy for dealing with fee negotiations in such circumstances.

Investment Manager and custodian monitoring

Adequacy and comprehensiveness of agreements between the Guardians and third parties are important in ensuring clarity of the Guardians' requirements, performance obligations of the service providers, appropriate mechanisms to measure and monitor service providers' performance and a better alignment of interests.

In relation to the custodial arrangements, Mercer has formed a positive overall assessment of the Guardians' service level agreement (SLA) with its custodian, Northern Trust. However, a number of key performance indicators (KPI) could be renegotiated to reflect a standard more in line with market best practice. In particular, the SLA with Northern Trust should be amended to incorporate all key information that relates to service standards including information currently documented elsewhere, such as the issue escalation process and the relationship matrix. Furthermore, appropriate KPIs should also be incorporated into the SLA to enable the Guardians to measure the accuracy, responsiveness and flexibility of its custodian.

Recommendation 13.1: The Guardians to establish a number of key performance indicators with its custodian to better reflect market best practice. In particular, the SLA should incorporate all key information that relates to service standards including information currently documented elsewhere, such as the issue escalation process and the relationship matrix. Also, appropriate key performance indicators should be incorporated to measure the accuracy, responsiveness and flexibility of its custodian's overall service.

Securities lending

Under the best practice guidelines, it is critical that funds participate in a well managed and controlled securities lending program (SLP). At the same time, it is also required that participants in such programs have the appropriate knowledge, experience, systems and internal controls to oversee the SLP and manage the risks associated with the program. Furthermore, funds are also required to establish a formal monitoring framework and review process when participating in an SLP.

Our review of Guardians' securities lending protocols has been a retrospective analysis, as the Guardians is not currently participating in an SLP. In our view, the Guardians' SLP and related arrangements have been in line with market practice. In some cases, the Guardians' practices have been above market standards, particularly in relation to monitoring credit ratings of borrowers, failed activities, income collection and utilisation performance.

In Mercer's view, it is normal and standard practice to invest all collateral in one vehicle, which minimises the operational and investment risks for the participants. Best practice would dictate that this be a customised mandate with attendant investment guidelines and transparency through reporting.

The Guardians managed the Fund's cash collateral through a pooled collateral vehicle which reduced transparency and its ability to manage its collateral and liquidity risks. The Guardians did not receive detailed information regarding the pooled investment on which to properly assess the risks it was exposed to. We note the provision level of detailed information on the underlying collateral pool would not have been in line with market practice, at the time.

The collateral and liquidity issues faced by the Guardians in relation to the pooled collateral vehicle are not isolated to the Guardians. They have also been faced by many other large and sophisticated institutions in the global markets, across a multitude of SLPs.

When investing in pooled collateral vehicles, it is important that Funds obtain regular data regarding the activities and position of the collateral pool. Further, internal managers who are the recipients of SLP monitoring reports must assess the content, be able to draw inferences from that content and be in a position to act upon those inferences.

Recommendation 14.1: In any future SLP, that the Guardians obtains regular data regarding the activities and position of the collateral pool. Also that it ensures that it has the necessary internal management expertise to assess the content of SLP monitoring reports, be able to draw inferences from that content and be in a position to act upon those inferences.

Risk and Return Performance

The Fund's overall performance expectation must be interpreted according to the legislation. The Guardians' interpretation has been guided by emphasis on the long run horizon over which the Fund's investment structure was and is expected to perform, and the fact no draw-downs were to be made from the Fund for at least 20 years. Mercer considers that an investment structure comprising 70% to 90% growth assets is consistent with its legislative requirements.

The Guardians' investment structure has been designed with a 20 year plus horizon in mind, and it is targeting additional market premia available largely to long run investors. Insufficient time has elapsed for these premia to be harvested.

While the Fund has been invested for 5 years, sufficient time has elapsed, in theory, to judge the performance of selected fund managers. Fund manager value added is expected to be harvested over at least a full economic and market cycle, or least 3 to 5 years. However, for two out of the most recent five years the financial world has been in the grips of the worst crisis since the 1930s and its aftermath. Mercer believes that the crisis impacted in such a way as to hinder the performance of active fund managers generally.

Bearing in mind the foregoing comments Mercer has the following principal conclusions about the Fund's investment performance. Unless otherwise stated investment performance is calculated before any New Zealand income tax has been deducted and after fund manager fees have been deducted.

- Since inception (September 2003) to 30 June 2009 the Fund has returned 24.3%, or an annualised rate of 3.9% p.a. This rate compares with the New Zealand inflation rate of 2.9% p.a. over the period.
- The value lost by the Fund relative to its benchmark amounted to an average annual value of -0.45% p.a. over the period (before tax and after fees). It has underperformed its own expectation of 90 day Treasury bills plus 2.5% by an average annual value of 5.26%. The bulk of this underperformance occurred during the height of the global crisis.

Mercer views the performance of the Fund as being broadly consistent with other funds of the same type through the same period. The crisis conditions of 2008 and 2009 saw all major growth assets sell off simultaneously. Traditional sources of diversification dried up with asset classes such as equities, bonds and property all losing value. Many institutions, mainly in the US and Europe, were caught with a desperate need for liquidity, with any assets that could be sold being liquidated to relieve balance sheet pressures. Some assets could not find a bid price, putting even greater pressure on the prices of 'liquid' assets or those which could attract bids. Mark to market returns generally disguised the 'true' asset quality of large investment funds, especially those with a long run horizon that did not share the same desperate need for liquidity.

The Guardians has designed an investment structure for the long-term (20 to 30 years ahead) and its investment performance over much shorter periods needs to be considered in the light of the extreme market conditions of recent years.

The Fund has and is targeting value-added through exposures relevant to a long-term fund. The potential value added by fund managers has been made difficult to realise by crisis events.

Further performance information is detailed in Chapter 15.

Private markets

Consistent with its long investment horizon and high liquidity, the rationale for the Guardians' target SAA to private markets was the opportunity through a long-term horizon, to earn an additional premium in investment return because of the illiquid nature of private markets and commodity investments. Low correlations between public and private markets was an important but secondary driver.

The Guardians' actual private markets investment experience (excluding property) has at certain times provided some portfolio diversification benefit. In the last two years, investment in private markets and commodities combined has partially offset the downside movement from equity markets. There was some year by year diversity amongst the different private markets, property and commodity investment segments with the exception of 2008 when there was substantial dislocation in valuation of all investments due to the global financial crisis.

There has been substantial volatility of the commodities investment during this time period. This investment is implemented through traded futures on commodities following market index weight rather than real commodities. It is questionable whether this form of implementation displays similar characteristics as that of the SAA modelling that generated the weighting for commodities.

The Guardians' transition into private markets commenced from mid-2005 in property, infrastructure, timber and commodities and progressed fairly quickly towards the current strategic targets. Very little investment exposure emerged in private equity. This partly reflected the nature of private equity, which does take time to build exposure and to the postponement of the private equity program relating to changes in advisers and internal decision making processes. This limited exposure to private equity relative to other more volatile segments, particularly infrastructure and commodities, resulted in a more volatile portfolio compared with a more even build up to the target SAA weights.

Recommendation 16.1: If the Guardians expect proxies to continue to comprise a significant portion of private markets, property and commodities (PPC) in the short to medium term, then it is recommended that the SAA development and portfolio construction processes should incorporate this expectation.

Examination of the actual investments that have occurred in private markets and property also indicates that a large proportion of these investments (apart from the substantial investment in timber) are in traded markets (commodity futures, listed property, listed infrastructure) rather than illiquid markets (unlisted property, private equity, unlisted infrastructure).

It is evident over recent years that the Guardians has made extensive use of the public market proxies in certain sectors, with a relatively slow transfer of investment into illiquids. Overall portfolio risk might be better managed over the short to medium term by less ambitious short to medium term SAA targets for illiquid private markets investment categories and a less significant role listed proxy investments.

As the Guardians seeks to increase its allocation to private equity it will be important that it develops a rigorous framework for regular monitoring and reporting of projections of year by year forward commitments of capital against the Fund's liquidity situation. This is particularly important given the Crown's decision to pause contributions. Market practice is that investors who have committed funds to a private equity investment and do not respond to a call on commitments face significant penalties. Greater transparency of the future implications of this at Board level should be included in regular reporting and strategy reviews.

Recommendation 16.2: In the light of the pause in contributions to the Fund, we recommend a review of the targeted composition of new commitments to illiquid investments, both from an ability to have sufficient cash flow to fund commitments and how best to complement the low level of diversification of the current concentrated mix of illiquid investment.

Mercer sees much merit in the Guardians adopting more formalised assessment processes relating to its private market investments. In particular the application of:

- required hurdle rate of return to private market investments that reflect the assessed risk of each investment;
- a comprehensive summary of the hurdle rates expected from all investments in the private markets categories and their use in investment selection; and
- internal rates of return (IRR) progressively tracked against a target return over the timeframe of investments (which could be very long in some cases).

Mercer considers that more emphasis should be given to valuation processes to support timing of all of the investments in the private markets category, particularly given plans to extend investment into direct investment, including direct investment in New Zealand. In addition to having access to external valuation providers to assist decision making in selection of new investments, as it is now doing, it would be important for the Guardians to also have internal valuation models for different investment categories.

Recommendation 16.3: The Guardians develops hurdles for all private equity,

property and commodity investment categories for monitoring performance and that all investments involving progressive draw down of committed capital have internal rates of return calculated and monitored against targets.

Recommendation 16.4: The Guardians develops and the Board regularly reviews, operational reporting of Fund exposures and commitments and investment selection resourcing including:

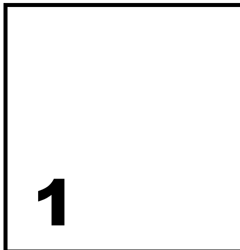
- Valuation methods and assumptions to use at the point of selection of investment in all PPC investment categories in all markets.
- Forward projections of estimated annual drawdowns of commitments (for each investment and total Fund) expected to be called on each year for investments which have already had commitments made but not fully drawn.
- Forward projections of estimated annual cash flow (including net cash flow from private equity) and liquidity (split by different durations of expected minimum redemption period for all investments) of total Fund investments.
- Allocation of responsibility for maintenance of these resources.

Positioning for the Future

Mercer has reviewed the likelihood of the Fund achieving the Guardians' investment objective of 90 day Treasury bills plus 2.5% p.a. with an allocation of approximately 80% to growth assets. Under our modelling assumptions we consider that the Guardians is expected to achieve its expectations over rolling 20 year periods.

The principle measure of the Guardians' success will be its investment performance over 20 years. It's difficult to assess whether the Guardians is performing adequately and adding value over shorter time periods. There are measures that are being, or can be developed that can assist with the dichotomy of monitoring short-term without placing the long-term success at risk. In particular, this should include investment performance attribution reporting which, in addition to market returns, provides attribution in line with the levers that the Guardians adopts for creating excess return, namely: investing in private markets; active management selection; strategic tilting and looking for implementation efficiencies.

Recommendation 17.1: The Guardians continues to develop and implement a set of metrics that measure the value add by each of the sources of investment performance, plus the four sources of value add over the passive portfolio.



1 Introduction

New Zealand superannuation provides eligible residents over the age of 64 a pension irrespective of their income or assets. The system is effectively “pay as you go”, with current pensions paid for from general taxation. At present, in New Zealand, one in eight people are over the age of 65. By 2030, the ratio is expected to increase to one in four. As a result, a significant increase in the cost of providing New Zealand superannuation is expected. One way to alleviate the consequent funding pressure is to move from a complete reliance on the 'pay-as-you-go' system to a partially pre-funded or smoothing system, which is what New Zealand has done with the creation of the New Zealand Superannuation Fund (the Fund).

The Fund was established under the New Zealand Superannuation and Retirement Income Act 2001 to reduce the tax burden on future taxpayers of the future cost of funding New Zealand superannuation payments.

The Fund operates as an investment fund that accumulates and invests Crown contributions paid out of general taxes. Up until 31 August 2009 the Fund had received $14.88 billion in contributions from the Government. Due to fiscal restraints, the Government reduced its capital contribution from a rate of ~$2 billion p.a. to $250 million in 2009/10 fiscal year, with no further allocations expected until 2020/21 (subject to review). By law, the Government is not allowed to withdraw any capital from the Fund until 2020, although under current predictions, it will not begin to draw down from the Fund until 2031.

The Fund is governed by a separate Crown entity, the Guardians of New Zealand Superannuation (Guardians), overseen by a Board selected by the Minister for Finance for their skills and experience. While accountable to the Crown, the Guardians operates at arm's length from the Crown. The Guardians must invest the Fund on a prudent, commercial basis and, in doing so, must manage and administer the Fund in a manner consistent with:

a) Best-practice portfolio management;

b) Maximising return without undue risk to the Fund as a whole; and

c) Avoiding prejudice to New Zealand's reputation as a responsible member of the world community.

Since inception, the Fund has grown into a major Crown asset and the largest investment fund in New Zealand, with total assets under management of $14 billion as of 31 August 2009. Even allowing for the temporary suspension of contributions, it is expected to exceed $200 billion by 2050.

1.1 Review

In accordance with the requirements of the New Zealand Superannuation and Retirement Income Act 2001 (Act), Section 71, the Minister of Finance (Minister) is required to direct a review of the performance of the Guardians at least every five years. The objective of the review is an assessment as to how effectively and efficiently the Guardians are performing their duties. The review must be conducted by an independent person, appointed by the Minister, and the subsequent report must be presented to the House of Representatives.

The first review under the Act was conducted in 2004. This is the second review.

1.2 Terms of Reference

The Minister must set the terms of reference for the review. For the purposes of this review the following terms of reference were established by The Treasury on behalf of the Minister:

The outcome of the review is an assessment as to whether the Guardians is complying with best practice across all aspects of its operations.

In making this assessment, the reviewer is required to:

- Form an opinion about whether or not the investment policies, standards and procedures established by the Guardians are appropriate to the Fund; and whether or not the investment policies, standards and procedures established by the Guardians have been complied with in all material respects;
- Form an opinion as to whether the Guardians' operations across all aspects of the organisation are consistent with best practice, as appropriate given the size and nature of the Fund;
- Form an opinion on the investment performance of the Fund to date;
- Form an opinion on whether the Guardians' is satisfactorily positioned to meet the objectives for the Fund under its legislation in the future; and
- Identify anything else considered relevant to the performance of the Fund.

Out of scope

The reviewer was not required to:

- Review the legislation under which the Guardians operates; or
- Complete a detailed quantitative analysis of the asset allocation of the Fund adopted by the Guardians.

1.3 Our Approach

Our review followed four stages:

Stage 1: Fact Find

- Consulting with The Treasury on context and key issues
- Developing of an analytical template and methodology
- Determine statutory and regulatory requirements
- Identify documentation requirements
- Initial on site meetings with the Board and staff of the Guardians

Stage 2: Review and Analysis

- Analysis of documentation and information using analytical template
- Developing findings
- Comparing findings to global best practices, statutory and regulatory requirements and consistency with meeting Fund objectives
- Follow up meetings to discuss and clarify information
- Documenting methodology for the review and gap analysis

Stage 3: Evaluation and Reporting

- Preparing a draft report bringing together all the components of the review and summarising the key findings of Mercer's analysis
- Evaluating key findings and peer review of the report

Stage 4: Presentation and Finalisation

- Presenting / discussing Mercer's draft Report with The Treasury and the Guardians
- Incorporating feedback relating to qualitative aspects, errors or omissions
- Finalising the report for tabling in Parliament

During the review we liaised with The Treasury on a regular basis, including two scheduled progress meetings.

1.4 Our Process

Due to the broad nature of the review, we engaged specialist knowledge across our organisation to undertake the review. This included specialists in the areas of strategy, portfolio construction, manager selection, governance, responsible investment, investment operations, alternative assets, and dynamic asset allocation.

In addition to this specialist input, we used an array of proprietary systems, tools and resources.

We were given access to, and reviewed in detail, a broad array of documentation including formal board papers and comprehensive investment management reports. We reviewed the processes and practices of the Guardians by comparing, where appropriate against:

- Global best practice principles and frameworks
- Global peers
- Statutory and regulatory requirements
- The Guardians' own policies and objectives.

We held interviews with the:

- Chairman of the Board
- Chairman of the Audit and Risk Committee
- Chief Executive Officer
- Leadership team of the Guardians
- Other management of the Guardians.

We also placed reliance on the Controller and Auditor General's Performance Audit report on the Guardians of New Zealand Superannuation: Governance and management of the New Zealand Superannuation Fund, dated May 2008.

2

2 Background context

This review has examined many aspects of the Guardians' operations in detail and there is a risk that the wider perspective may be lost in the process. Accordingly, this section outlines the broader context of the Guardians that will assist with placing this review in an appropriate context. In this regard, three aspects deserve mention:

1. The emergence of sovereign wealth funds
2. Investment time horizon
3. Financial markets and the global financial crisis

2.1 Emergence of sovereign wealth funds

One of the remarkable features of the past couple of decades has been the rapid growth of sovereign wealth funds. While there were sovereign wealth funds around long before the New Zealand Superannuation Fund (the Fund)[6], the establishment of the Guardians coincided with a dramatic increase in the number of similar funds around the globe. In fact, the term "sovereign wealth fund" was not coined until 2005.[7]

The accumulation of national wealth that drove the creation of many of these investment vehicles was the result of economic development and the incorporation of countries economies into global commodity chains, trade and exchange.

Sovereign wealth funds exist for a variety of reasons, including reducing the volatility of government revenues, countering the boom-bust cycles' adverse effect on government spending and the national economy, or building up savings for future generations. The Guardians falls into this last category, along with the Australian Future Fund (established in 2004 for the purpose of pre-funding superannuation obligations to civil servants).

[6] The Kuwait Investment Authority was established in 1953.

[7] Andrew Rozanov, "'Who holds the wealth of nations?' in Central Banking journal, May 2005, Volume 15, Number 4.

The emergence and recognition of this category of fund provides a useful peer group to assist in assessing the Guardians. However, it is instructive to note that:

1. The Guardians is still relatively young and continues to evolve, grow (in terms of assets and staff numbers) and develop its investment strategies.

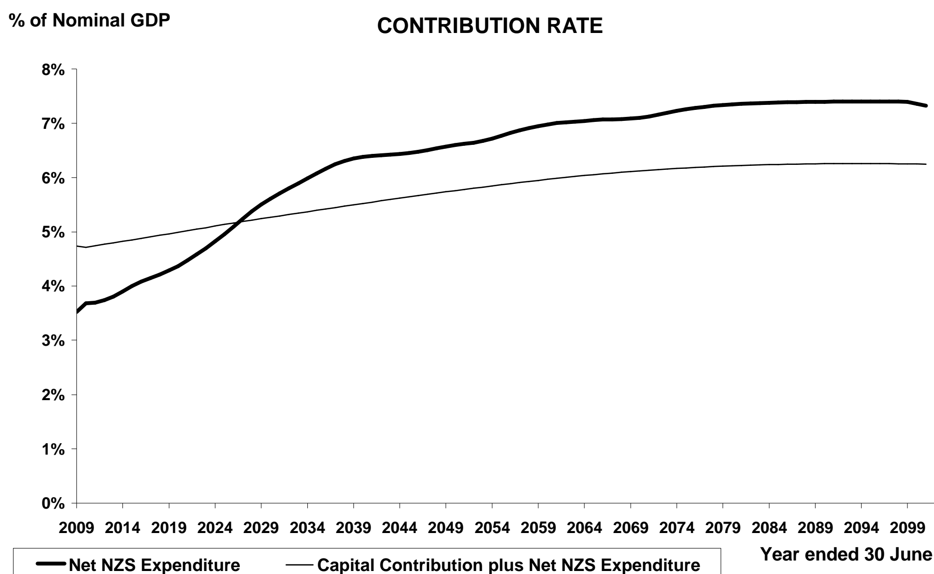
2. Best practice for its peer group is also still evolving and comparisons should be treated with care.

2.2 Investment horizon

Sovereign savings funds are a particular type of sovereign wealth fund created with the primary aim of transferring wealth from current generations and creating further wealth for future generations. These sovereign funds are characterised by the absence of explicit short-term liabilities and the ability to invest with a long-term horizon to fund long-term obligations.

Chart 2.1 demonstrates the long-term nature of the undertaking, illustrating how annual contributions to the Guardians over this period help to smooth the amount required to meet NZ superannuation obligations in later years. Capital drawdowns from the Guardians begin where the lines cross.

Chart 2.1 NZ Government Contribution to New Zealand Superannuation



This chart is a recent illustrative example (from NZ Treasury) prior to the Government's 2009 decision to defer annual contributions.

Following the recent Government decision to defer contributions, the current expected date of the first draw-down (based on the latest Treasury Model estimates) is 2030.

The Guardians began to implement its investment strategy in September 2003 and developed strategies designed to take advantage of the Fund's long range horizon. As such, the Guardians has been operating for a relatively short period of time, around a third of the horizon over which the Fund is expected to achieve its targeted return.

Some care needs to be taken with investment performance over a much shorter period than the intended horizon. However, it is appropriate to address the issue of whether the evolving investment structure is reasonably on track at this point, and if so whether the management processes in place offer a high degree of comfort to stakeholders that the structure will ultimately achieve its objectives.

2.3 Financial Markets 2004 to 2009

The period under review, at least from an investment perspective, falls into two distinct sections. The early period was a very favourable investment environment:

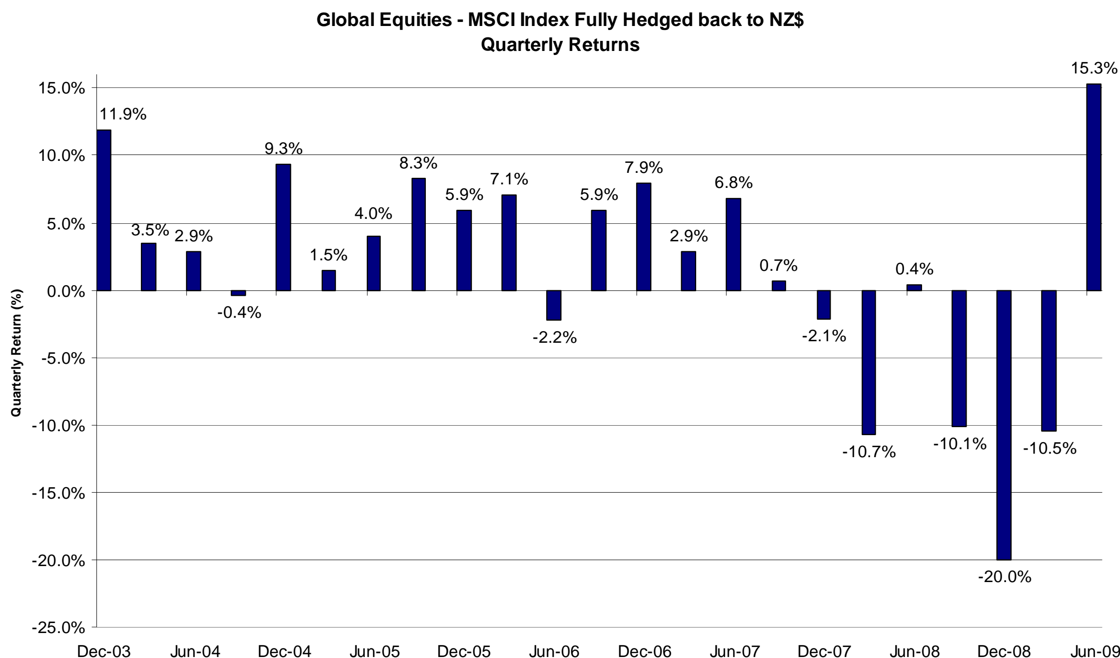
- Global share market returns were strong and stable (when expressed as hedged NZ dollar returns)
- Global property returns were also strong and stable
- Global bonds (aggregating sovereign and corporate bonds) produced very healthy returns for the asset class
- New Zealand cash returned between 6% p.a. to 8% p.a.

However, toward the end of 2007, this period of relatively stable growth evolved into a period of turbulence and decline:

- In hedged terms, global share returns turned heavily negative, culminating in a quarterly loss of -20% in December 2008
- The hedged global property return for the same quarter was -37%
- During 2008 aggregate global bond returns continued to do quite well, but the relative performance of sovereign to corporate bonds was dramatically positive
- New Zealand cash returns fell from 9% p.a. towards 3% p.a.

Chart 2.2 illustrates the contrasting fortunes of hedged global equity returns over the period.

Chart 2.2 Quarterly returns on Global Equities



Of course, we now classify this latter period as the global financial crisis. Any investment review of this period must recognise the significant nature of the crisis and its impact on investment returns. Three aspects of the crisis are worth brief examination:

- It was extreme and it was unexpected. By its very nature, a crisis is not expected. If it was, it would have been averted. The global financial crisis resulted in the most severe economic downturn since the 1930s. The policy response from governments around the globe was unprecedented and largely responsible for preventing a sustained global economic depression (at least so it would seem). Although the returns from markets during the crisis were exceptionally negative, it is worth noting that these returns were still within the bounds of Mercer's modelling assumptions.

- The returns from 'risky' assets were highly correlated over this period. That is, almost all investment returns were sharply negative, with the exception of returns on government bonds and cash. Uncorrelated or lowly correlated returns are a key part of any diversified investment strategy, including the Guardians.

- Active managers struggled across the board. That is, very few investment managers added value over the period of the crisis, largely as markets were characterised by fear and a strong requirement for security and liquidity. As a result, many investment assets were sold, regardless of any inherent or fundamental value.

Any assessment of the Guardians and its investment managers over this period needs to take into account the effect of the global financial crisis. Moreover, it should recognise that an assessment part way through a cycle can be problematic, if not misleading. The extent of recovery in investment returns and the quantum of value add by investment managers since mid-March 2009 reinforces this point.

2.4 Conclusion

In view of the short time frame of the review relative to the investment horizon of the Guardians, and the timing of the review immediately following the global financial crisis, care must be taken in assessing the aggregate quantitative investment performance of the Fund. At the aggregate level, at least, it is not useful to analyse the performance of the Fund over 6 years, as being indicative for the remaining 14 years of the first 20 years of its existence.

Moreover, it would be unwise to draw full conclusions based on returns part-way through an extremely volatile market cycle, particularly for a Fund that, by its very nature, expects to 'ride out' short-term ups and downs in the market.

At the sub-aggregate levels (such as individual investment managers and asset class returns) it is appropriate to evaluate how these have been and are tracking, and relate progress in these areas to management processes. However, even these evaluations turn out to depend on a fairly substantial degree of judgment because of the nature of the global economic and financial environment for much of the period.

3

3 Investment Objectives

The Act requires the Guardians to "invest the New Zealand Superannuation Fund (the Fund) on a prudent, commercial basis and, in doing so, must manage and administer the Fund in a manner consistent with:

- Best-practice portfolio management
- Maximising return without undue risk to the Fund as a whole
- Avoiding prejudice to New Zealand's reputation as a responsible member of the world community"

The Act further requires that the Guardians establishes and adheres to investment policies consistent with the above objectives and specifies the range of items that those policies should cover.

This section examines the appropriateness and clarity of the investment objectives set by the Guardians to achieve the objectives as required by the legislation.

3.1 Portfolio Management and Investment

3.1.1 Best Practice

For many organisations, the governance challenge is to orchestrate collective action in a timely and effective way. Such orchestration is all the more important for investment funds that must be responsive to highly dynamic market environments. Such institutions are also subject to substantial agency issues as there may be an extensive network of agents whose motivations and rewards may not be aligned and this lack of alignment may be difficult to observe and manage. Certain characteristics relating to objectives setting demonstrated by institutions operating at best practice portfolio management include:

- Clarity of mission and the commitment of stakeholders to the mission.

- Strong investment beliefs commanding wide support that inform all decision-making and to which operational goals are aligned. These beliefs take into account the institution's own capacities and its acknowledged limits.

3.1.2 Guardians' approach

The Fund's purpose is to reduce the tax burden on future taxpayers of the cost of New Zealand Superannuation. The Guardians' function is to invest, manage and administer the Fund.

The Guardians developed a Statement of Investment Policies, Standards and Procedures (SIPSP) that establishes the framework for the governance and investment of the Fund. It includes the Guardians' investment beliefs and philosophies that provide an anchor for all investment decision making. This document is subject to regular review and amendment as the strategy for managing the Fund evolves. The Guardians has also developed internal polices and procedures that provide additional detail to some of the policies and procedures in the SIPSP.

Table 3.1: The Investment philosophies of the Guardians

- We are a long-term investor that is building the best (i.e. most cost-effective and fit for purpose) portfolio.
- When building the portfolio we un-bundle risk and accept only those risks that enhance our overall portfolio efficiency.
- We invest in a manner that best exploits a liquidity premium, and we put effort and resource into seeking excess (alpha) returns only where we have a competitive advantage and core competencies.
- When outsourcing, we manage principal-agent risks through contracts and appropriate fees and incentives.
- When allocating capital, we are fully aware of all financial and opportunity costs, and monitor all activities against relevant benchmarks.
- We act as a responsible investor, promoting positive environmental, social and governance behaviour as a shareholder, and we look to be rewarded for this effort.
- We behave consistent with our values in relentless pursuit of our vision.

Source: Statement of Investment Policies, Standards and Procedures, 23 June 2009

The Guardians defines "endowments" as inherent features of the Fund. The Guardians identifies these endowments as its "long investment horizon and liquidity that allows it to tap into investment opportunities not available to many investors while being able to deal with harsher market environments without having to resort to forced sales". The Fund's endowments of a long-term investment horizon for choosing, managing and measuring the success of investments is reflected in the values and investment philosophies and within the overall mission statement of the Fund.

As required by the Act, the Guardians has developed a Statement of Intent (SOI) that provides guidance as to the challenges posed by the operating environment, what the Guardians is trying to achieve and how it proposes to go about it. The Guardians identifies two core tasks. The first is to efficiently administer the Fund and the second is to grow it. On this basis, the Guardians seeks to deliver a "cost effective, fit for purpose, portfolio". It aims to do this through three interrelated tasks:

- Determining an asset allocation that is considered optimal to serve this purpose.
- Replicating that allocation structure to the extent possible with an equivalent portfolio of low-cost passive investments.
- Modifying the passive market exposure portfolio through a variety of active investment strategies to add further value.

The Fund is part of the core Crown balance sheet. The Guardians has determined that returns should be considered after all fees, expenses and foreign taxation but before NZ taxes. To achieve the legislative requirement of "maximising return without undue risk to the Fund as a whole" the Guardians initially specified the return objective of the Fund to exceed, before New Zealand tax, the return on 90 day Treasury bills over a 20-year period. This objective was communicated externally in the early years of the Fund by the Guardians.

Based on the strategic asset allocation (SAA) designed in 2007, the Guardians then set an objective, later labelled an internal expectation, to deliver a rate of return averaging at least 2.5% p.a. above 90 day Treasury bills over rolling 20 year periods. Recognising that 20 years is too long a period to wait to judge performance, the Guardians also monitors a 5 year rolling average period as a useful intermediate target.

Other financial performance benchmarks set by the Guardians:

- How the Fund would have performed if it had invested only in the passive portfolio. The difference between this measure and the actual Fund returns provide the value added by active management. The mid-point value added target is 0.5% p.a.
- Total cost structure expressed as a ratio of total costs to the value of the Fund. The Guardians expects a reduction in total costs per dollar of Fund size from 73 to 64 basis points (excluding performance fees) from 2010 to 2013.

Table 3.2 compares the financial and non-financial performance objectives of the Fund to those of some of its peers.

3.1.3 Mercer's Assessment

Consistent with best practice institutional investment, the Guardians uses its philosophies to anchor its investment decision-making. At certain times there has been cause for the Guardians to review its philosophies in light of market experience. This has resulted in recalibration of its strategies, for example, active management as discussed in Section 6. Revisiting beliefs is appropriate from a governance perspective.

Having identified its "endowments", there is some evidence that the Guardians takes these into account in the development of the investment strategy. For example, the SAA incorporates the Fund's strengths and accordingly splits assets between income assets (bonds) and growth assets (including equities). However in certain respects, the

implementation of the Guardians investments has not been totally consistent with its investment strategy the beliefs. While its belief that it has no immediate need for liquidity and is well placed to exploit the expected liquidity premia, the implementation of its private market investments have primarily been in listed markets, as discussed in Section 16 Private Markets.

The Crown's return target and risk tolerance is not clearly defined in the Act which requires it to 'maximise returns without undue risk'. Certain other Sovereign Wealth Funds (SWFs) (e.g. the Australian Future Fund and the Norwegian Government Pension Fund - Global) have had a long-term investment objective specified to them by the government. The Guardians defined its risk tolerance through the same process it used to establish its SAA. It set an SAA at the point at which modelling indicated there were diminishing marginal returns from taking additional risk, and has specified an internal expectation rather than a financial objective. Subsequent reviews have sought to recalibrate the SAA to better the expected returns while seeking to reduce the overall level of risk. Successive Ministers of Finance have accepted the return target and risk tolerance of the portfolio through their successive acceptance of the Fund's Statement of Intentions.

Given the risk/return expectation is determined simultaneously with the determination of the SAA, its appropriateness is partly dependent on the appropriateness of the SAA, a matter assessed in Section 4 of this Report. In this context it is worth commenting on the appropriateness of the Guardians' approach of specifying a financial expectation rather than setting a financial objective.

In respect of strategy and investment objectives setting, there are three key features that are considered when reviewing or initiating an update.

- The general mix of growth to income assets.
- The investment objective(s), that may be based on expected return and may be short or long-term in nature.
- A risk measure that may be short-term or long-term in nature.

In executing a review of SAA, it is common practice to maintain one of the above key features (strategy, risk or return) and analyse the impact of assumption and model updates on the other two. A mechanical adoption of this approach however can in certain circumstances lead to perverse results. For example, a review could be undertaken on what strategy changes are required to maintain either the:

- Likelihood of achieving a long-term return target.
  - In an environment where the expected reward per unit of risk has declined (e.g. during a boom) the implication of this approach is to increase risk, and vice versa; or
- Riskiness of the asset strategy.
  - In an environment where the expected reward per unit of risk has declined (e.g. during a boom) the implication of this approach is that the chances of meeting investment objectives are reduced; and vice versa.

As can be seen from the above examples, the three features of mix, return and risk are closely interrelated and achievement of one feature if pursued independently

compromises achievement of the others. However, the approach of fixing one of the features that the sponsor is particularly concerned about, if applied correctly with recognition of any short to medium term deviations from equilibrium equity risk premia, has the advantage of providing an anchor against which to judge performance.

The alternative to fixing one feature is to 'solve' these three dimensions simultaneously through an iterative process. Based on its interpretation of the legislative requirement to maximise returns without undue risk and the guidance provided by successive Ministers, the Guardians appears to have adopted the approach of solving all three features simultaneously.

Neither approach, fixing one feature or solving the three simultaneously, is clearly superior and the choice between the approaches depends on the subjective judgement of the sponsor and the Board. The validity of either approach however relies on its acceptance by the sponsor, in this case the Crown. Best practice governance would require that any ambiguity relating to financial objectives or expectations be clarified. This may be addressed either through re-specification of the expectation/objective or through clearer stakeholder communication of its meaning.

Mercer sees merit in a clearer return target being set by the Crown. Alternatively the Guardians might move to adopt a single target that includes compensation for the risk undertaken by the Fund through a premium over a risk free rate.

Recommendation 3.1: Clarify the investment objective and expectation

Recognising the importance of mission clarity, that the Guardians communicates with stakeholders to ensure a clear understanding of the meaning of its investment expectation to exceed 90 day Treasury bills plus 2.5% p.a. over a 20 year period and how it was derived.

Recommendation 3.2: Reconsideration of the specification of the financial metric

While recognising the importance of a stable mandate, that the Crown gives consideration to whether an actual investment rate of return or risk target would provide a clearer benchmark against which to judge the Guardians' performance over the medium term, rather than the current expectation to exceed 90 day Treasury bills plus 2.5% p.a. over rolling 20 year periods. If so, that the Crown determines an appropriate investment target in consultation with the Guardians.

Table 3.2: Performance objectives of the Fund and peers

Non-financial performance objectives	Financial performance objectives
New Zealand Superannuation Fund	
To invest on a prudent, commercial basis and, in doing so, manage and administer the Fund in a manner consistent with: ▪ Best-practice portfolio management. ▪ Maximising returns without undue risk to the Fund as a whole. ▪ Avoiding prejudice to New Zealand's reputation as a responsible member of the world community.	▪ To exceed, before New Zealand tax, the risk-free rate of return (the interest rate on New Zealand 90 day Treasury bills) by at least 2.5% p.a. over rolling 20 year periods.

Norway Government Pension Fund	
▪ To create added value through active management. ▪ To foster the owners' long-term financial interests through active corporate governance. ▪ To implement the owners' management strategy in a cost-effective and prudent manner.	▪ To add 25 basis points to the return on the fund over time.
AP 3 (Sweden)	
▪ To manage assets to provide the maximum benefit for the income-based retirement pension system.	▪ Generate a real return of at least 4% per year over the long-term. ▪ Achieve annual average nominal alternative investment returns of 15% for private equity, 10% for real estate and 12% for life science investments.
Alaska Permanent Fund	
▪ Apply the Prudent Investor Rule to all investment decisions in exercising fiduciary responsibility. ▪ Maximize Fund's total return over time consistent with the long-term objective and risk tolerance. ▪ Minimize Fund's risk through asset diversification.	▪ To achieve a real rate of return of 5% per year. ▪ Through a mix of appropriate asset class that is on or near as possible to the efficient frontier (i.e. the optimal risk/return characteristics).
Canada Pension Plan	
▪ To diversify the investment portfolio by risk/return and by geography. ▪ Deepen internal investment, management, technology and operational capabilities to allow them to meet long-term investment mandate.	▪ Achieve or exceed a value-added performance target of 53.7 basis points relative to the benchmark Canada Pension Plan Reference Portfolio.
National Pensions Reserve Fund (Ireland)	
▪ To secure optimal financial return consistent with the purpose and payment requirements of the Fund, subject to prudent risk management. ▪ To meet as much as possible the cost of public service pensions to be paid from 2025 to 2055.	▪ The Government invests equivalent of 1% of Gross National Product in the Fund annually in order to lessen the cost to future generations of the pensions for today's workforce.
Harvard Endowment Fund	
▪ To take a long view with direct investments in the capital markets that adds value in every element of the investment stream.	

Future Fund	
▪ To accumulate financial assets sufficient to offset the Commonwealth's unfunded superannuation liabilities by 2020.	▪ An average return of at least the Consumer Price Index (CPI) plus 4.5 to 5.5 percent per annum over the long-term with an acceptable level of risk. The long-term is interpreted as rolling ten year periods.
FRR (France)	
▪ To optimize returns on its investments while preserving the real (inflation adjusted) value of the Fund's endowment. ▪ Generate the best possible outperformance while complying with the principles of caution and risk diversification.	▪ To achieve the investment objective the Fund has established a reference portfolio built around the major asset classes which aims to achieve an estimated 6.3% p.a. in the years to come.

3.2 Avoiding prejudice to New Zealand's Reputation

In this review we examined whether the Guardians has appropriate policies and procedures to ensure that it is meeting its statutory objective of investing and managing the Fund in a manner consistent with avoiding prejudice to New Zealand's reputation as a responsible member of the world community and to have a Responsible Investment Policy.

Initially the Guardians interpreted the requirement as meaning they had to comply with New Zealand Treaties and conventions such as those promulgated by the United Nations and International Labour Organisation. This legislative requirement has since been interpreted by the Guardians to encompass the belief that long-term financial performance can be affected by environmental, social and governance (ESG) issues. The Fund has developed a Responsible Investment Policy that sets a framework for encouraging companies to meet international standards in these areas and to exercise the Fund's voting rights in line with good corporate governance practice.

RI is typically understood to include the integration of ESG considerations into investment analysis, stock selection and active ownership practices in the belief that doing so can help improve long-term risk/return outcomes. In terms of investment practices, it places an emphasis on the integration of ESG factors into investment decisions and active ownership via voting and engagement.

In this review we examine:

- Governance of RI (including policies)
- How RI considerations are integrated into the development of investment strategies
- The integration of RI considerations into implementation of investment strategies active ownership.

Mercer compared the Fund's RI policy and implementation against its objectives with 12 other SWFs and other funds of national significance spanning the US and Canada,

UK and Europe, Asia Pacific and the Middle East. The Fund performed well across a range of criteria used to compare RI practices with those of peers and included assessment of:

- Policy formulation
- Negative screening application
- Proxy voting activity
- Engagement practices
- Divestment practices
- Themed fund investments focussed on directly addressing issues such as climate change
- Resources for RI implementation: Internal staff and/or external parties
- Participation in collaborative initiatives
- ESG integration into investment processes.

3.2.1 Governance of Responsible Investment

Guardians' Approach

The Guardians has established a RI Committee that researches, develops and implements policy, standards and procedures in relation to responsible investing encouraging best practice corporate governance by investee companies.

The RI Committee monitors the Guardians' implementation of RI policies, standards and procedures on behalf of the Board through regular reporting.

The RI Committee considers environmental and social risks (within the RI analytical framework) associated with:

- Greenhouse gas emissions
- Climate change impacts
- Manufacture and testing of nuclear explosive devices
- Manufacture of cluster munitions.

Investment opportunities considered by the RI Committee are not publicly disclosed.

In terms of staff resources, the Guardians has a Manager of RI and an RI analyst to manage the implementation of the RI Policy which includes proxy voting activities. In addition, the RI manager engages with internal staff on relevant issues. In interviewing other internal investment staff, Mercer noted the Guardians' internal investment managers have not explicitly integrated ESG in their own investment thinking and decision-making and could be encouraged to do so going forward.

Mercer's Assessment

The Guardians is not a signatory to the UN Global Compact but include this as a standard in the RI Policy against which to benchmark corporate behaviour.

The Guardians demonstrated considerable improvement from 2007 to 2008, as a signatory to the United Nation's Principles of Responsible Investment (UNPRI) and when its performance is compared with that of other signatories. Detailed results are provided in Table 3.3 below.

One of the two areas where the Guardians rated lower than some peer funds was in the area of asset allocation to thematic funds such as clean technology or investment into strategies directed towards responsible investments. However, only three of the 12 peer funds reviewed rated at the highest level within this category. The Guardians rated at the level of Medium in regard to its commitment to resourcing its policy implementation ambitions and practice.

Table 3.3: Review of activities of signatories to UNPRI (2008)

Activity Type	Comprehensive	Medium	Limited	No activities
Themed fund investments such as climate change	Asset allocation to thematic funds such as cleantech. Invests in a range of thematic funds	Invest in a particular category of thematic funds such as sustainability themed funds or cleantech funds	Is evaluating opportunities related to thematic investments	There is no plan to consider investing in ESG related thematic funds.
Internal staff and/or external staff	Well resourced (internal and/or external resources) deployed to deal with ESG/RI policy and implementation	Relatively well resourced (internal or external resources deployed)	Has limited resources available	There is no plan to employ any resource.

3.2.2 ESG considerations in investment strategy

Some of the Guardians' peer funds invest in several specialist mandates that are themed on sustainability issues, and examples include:

- Sustainability themed Equity Funds
- Global Forest Funds
- Climate Change Funds
- Microcredit Funds
- Clean Technology Funds

In selecting external managers and ensuring their goals are aligned with the Guardians' objectives, the Guardians could consider ESG issues. However at this stage the Fund has not committed to assets that are sustainability themed, although a recent research project is addressing this question.

As discussed in subsequent sections of the report, greater emphasis has also been given in the forthcoming review to incorporating consideration of macro-themes including:

- Long-term influences on the global economy that have far-reaching, game-changing effects, are indifferent to business cycles and are relatively immune to financial and economic shocks
- Potential sources of stress on the portfolio or starting points for informing views on the long-term investment environment.

This includes consideration of climate change and sustainability (being an off shoot of a resource depletion theme). Such thematic considerations suggest that the Guardians is developing long-term macro economic views as regards risk and return and is in the company of leading institutional investors. How the Guardians incorporates the macro economic themes into its decision-making is yet to be established.

3.2.3 ESG considerations in implementation

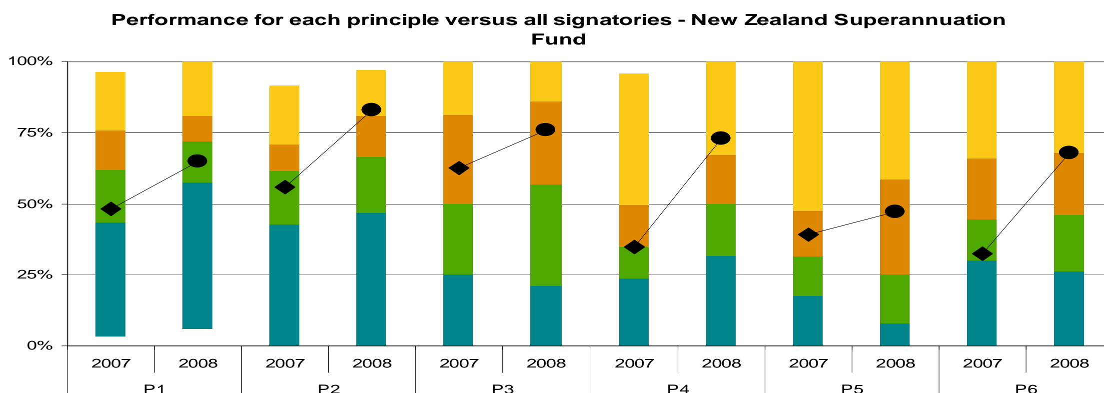
While the Guardians reviews managers annually, Mercer believes that it could enhance its programme in a systemic way to better monitor and encourage managers' inclusion of ESG in their investment processes. In addition, the Fund has yet to determine an approach among Property managers.

According to two internal reports to assess what progress, if any, had been made by the Fund's public market managers against the UNPRI, only one had a comprehensive RI policy.

Among private equity managers, one manager explicitly undertook ESG analysis. Side letters relating to ESG for private equity managers have been provided to two such managers.

The following figure and tables detail the UNPRI assessment of the Fund.

Table 3.3: UNPRI Assessment Annual Result



As can be seen in the above figure, the Fund has improved its performance in all six principles from 2007 to 2008. Further its relative position has improved to first or second quartile for Principles two to six. For Principle one the performance improved, as did the peer group's performance.

The following Tables further detail the assessment.

Table 3.4: UNPRI Six Principles

Integration (P1[8])

	Completed and compliant
	Under development
	Not addressed or non compliant

Public Markets	Stage of integration		Comment
	Previous	Current	
IM Conviction Rating			Develop RI criteria to integrate into conviction 2 Annual review of IM RI policies in progress
Positive investment[9]			Review in progress

Private Markets[10]	Stage of integration		Comment
Private Equity Guidelines			UNPRI and GNZS PE guidelines under development
Property & Infrastructure			RI requirements for Property advisor, peer review.
Timber			Formalise guidelines[11] for NZ & global timber
Positive investment			Review in progress

Operations (P1, P2)

Item	Procedures implemented	Comment
Portfolio Monitoring		
Exclusion list		Portfolio compliant.
Monitor against intl. standards		MSCI in place; ex-MSCI (supplier review in progress)
Voting[12]		Proxy voting in place; POA renewals in progress

[8] P1 = UNPRI Principle 1

[9] Strategic Plan Activity 15

[10] Strategic Plan Activity 7 & 14

[11] NZ Timber meets FSC and/or other environmental and social standards

[12] See six monthly voting report

Engagement & Research (P2, 3 & 5)

Item	Status	Action
Breaching RI standards (6)		Engagement in progress for all priority companies
Weak States and Conflict Zones		UNPRI Sudan engagement group; companies active in Myanmar (Burma) require attention
RI Research		ESG beliefs; human rights standards
CFI resource sharing		1st quarterly meeting held; RFP underway.

Communication[13](**P4&6)**	**Overall RI Media Position**	**Neutral**

Media Issue[14]	**Status**	
Nuclear weapons	**neutral**	Mixed: positive in exclusions; negative on scope
Other holdings	**negative**	Negative on controversial holdings
Public reporting	**neutral**	Voting report (Mar 09); RI in Practice (in progress)

Source: NZSF Board Dashboard Report April 2009

3.3 Mercer's Assessment

Mercer's review against 12 peer SWFs and other funds of national significance concluded that:

- The Guardians has a thoughtful and focussed RI approach toward governance and policy, consistent with its investment belief that ESG can contribute to portfolio value and sustain the Fund's long-term commitment to beneficiaries.
- In regard to policy, the Guardians rates very well, particularly in regard to progress against the voluntary global standard of the UNPRI.
- On investment strategy, the Fund appears to be assessing some investment opportunities and has commenced some investigation and assessment of public and private equity managers. It has yet developed the linkage between the Fund's investment policy, beliefs and asset allocation directed towards ESG outcomes and ESG considerations.
- The Fund rates reasonably well on implementing its policy through its voting and engagement activities and participation in global voluntary collaboration and debate.

[13] Strategic Plan Activity 17

[14] See communications plan for RI issues. Issues will vary.

Recommendation 3.3: To further improve the Fund's ESG practices and bring them more in line with its general investment objectives and beliefs, we suggest that the Fund fully explores the link between ESG factors and its SAA and based on the result, pursue investment opportunities that will improve the Fund's long-term return.

Recommendation 3.4: The Fund should:

- Communicate more clearly to its current investment managers its position on responsible investment and ESG issues; and
- Request its external investment managers report on the extent to which ESG factors have been integrated into its investment policies and processes.

4

4 Investment strategy development

The purpose of this section is to review the approach of the Guardians in relation to the development of the investment strategy. The key method at the Guardians' disposal to manage financial risk in pursuit of its long-term return objectives is through determining the optimal mix of market exposures (ie systematic risk premia – so-called "beta"), referred to as the Strategic Asset Allocation (SAA). Determination of the investment strategy including the SAA therefore has a major bearing on the achievement of the Guardians' objectives.

The period under review includes the 2008 global financial crisis where markets were subjected to major shocks the likes of which have not been experienced globally since the post War period, if not the Great Depression. In view of the extreme circumstances of the review period, Mercer has been particularly cognisant of not reviewing with the benefit of hindsight and over-emphasising short-term experience.

We have therefore focussed on the previous governance and investment decision making method given the state of knowledge and information available at that time. Rather than reviewing past decisions, the main focus of our review was to assess whether the Guardians' investment decision-making approach and investment strategy are appropriate for achieving the objectives of the Fund in the long-term.

This section addresses the following questions:

- Is the approach taken in developing the SAA and investment strategies appropriate?
- Is the Fund's investment strategy and asset allocation appropriate given the investment performance targets?

A related question, whether the Guardians adopts appropriate investment risk management approaches is considered in Section 5. The development of investment objectives is discussed in Section 3.

4.1 Investment Strategy Development

4.1.1 Assessment Principles

An investment strategy refers to the short, medium and long-term plans an investor has for the capital they intend to invest. As for most areas of investments, there is no one best practice approach to developing investment strategy. This is in part due to no two investors having exactly the same characteristics and strategic objectives, and the inherent uncertainty of capital markets.

Notwithstanding this, it is possible to identify certain principles that should underlie an effective and coherent approach to investment strategy development. The key principles underlying Mercer's assessment of the Guardians' strategy development process are below.

Long-term plan: *A rigorous approach to the development of a Strategic Asset Allocation that avoids cyclical changes in strategy.*

The traditional approach to setting an investment strategy is that the SAA is set by

- Developing a set of long-term assumptions about the expected behaviour of key economic variables and asset class returns.

- Analysing combinations of asset classes iteratively or mathematically; and from this the portfolio that maximises the likelihood of achieving the investment objectives is identified. It should be noted that mathematical optimisation approaches typically over-simplify real-life circumstances (which involve multiple dimensions such as potentially different stakeholder timeframes and implementation constraints) and hence cannot replace qualitative judgement.

Medium term plan: *Dynamic adjustment to the SAA (strategic tilting) to take into account medium term changes in the expected risk premia embedded in asset exposures from time to time.*

- Recognising that over shorter periods risk premia in markets change considerably, portfolio allocation should prudently take into account such changes. As an example due to market participant behaviour momentum can drive asset prices significantly away from "fair" values. This creates risk (or opportunities) in the short to medium term that can be exploited. This needs to be underpinned by a rigorous governance framework including performance attribution to ensure any tilts from SAA are adding value.

Multiple Assumption sets: *Strategic risk management that recognises the underlying risk factors, embraces uncertainty and is able to deal with a broad range of alternative plausible futures.*

- The investment environment in the future is subject to great uncertainties and may be less favourable than the past. This suggests less focus on risk as a singular concept of volatility and much greater need for scenario analysis to stress test investment strategies.

Short-term plan: *Flexibility underpinned by strong governance to take advantage of market opportunities wherever they present themselves.*

- Financial markets operate at rapid speed and there may only be short windows of opportunity to take advantage of the best investment offerings. Successful

institutional investors have in place governance arrangements that allow timely investment decision –making to occur within the parameters set by the governing board.

Underlying risk drivers: *identifying and giving consideration to risk factors underlying each asset class across the portfolio, such as equity risk premia, illiquidity, skill, inflation in reviewing portfolio allocation.*

This section focuses on the long term plan while subsequent Sections cover the remaining principles.

4.1.2 Guardians' Approach

The Guardians has determined a SAA that in its view best meets their statutory obligations, including to maximise returns without undue risk to the Fund as a whole. The SAA has been set by the Guardians to exploit the following[15] [16] [17] features, previously identified as comparative advantages and now defined as endowments:

- A very long investment horizon [2003, 2005, 2007]
- Tax non-neutrality [2005, 2007]
- Regular capital contributions [2003]; and
- Limited need for liquidity [2005, 2007].

The SAA has been reviewed at approximately two-year intervals since the inception of the Fund. The SAA specifies long-term target weights for various market exposures including exposure to private and public market investment and to foreign currency.

Table 4.1 below shows the changes in the Fund's SAA target weights over time.

[15] 2003 Strategy review, pg 19

[16] 2005 Strategy review, pg 31

[17] 2007 Strategy review, slide 7

Table 4.1 Fund Target SAA weights

	SAA (%)			
	2003 Review	**2005 Review**	**2007 Review**	**2007 Review**
	Target[18]	**Target[19]**	**Target SAA (before proxies)[20]**	**Proxy-adjusted SAA[21]**
NZ Equities	7.5	7.5	7.5	7.3
Global equities (large/mid-cap)	48	42.5	32.0	39.1
Global small cap equities	8.5	7.5	5.5	6.7
Emerging market equities	3	2.5	3.0	3.7
Total equities	**67**	**60**	**48**	**57**
Property	**6**	**7**	**10**	**10.3**
Commodities	1	5	5	5.0
Private equity (NZ &Overseas)	2	1	5	0.4
Infrastructure	1	3	5	5.2
Other	3	4	10	4.4
Total private markets	**7**	**13**	**20**	10
Fixed interest	**20**	**20**	**17**	**17.7**
"Growth" Assets	**80**	**80**	**83**	**82.3**
"Income" Assets	**20**	**20**	**17**	**17.7**

The approach to setting strategy has developed with each review. Mercer's analysis of the key features of each review follows:

[18] SAA Review May 2003

[19] SAA Review March 2005

[20] SAA Review December 2007

[21] SAA Review July 2007. This column represents a snapshot in time, and the Proxy-adjusted SAA adjusts through time to reflect changes in the Fund's actual private market exposures.

Table 4.2 Key Features of each SAA Review

Review	**2003**	**2005**	**2007**	**2009 (pending)**
Strategy provider	External, external review	Internal	Internal, external review	Internal, external review
Change in Model	Not Applicable	Yes	Yes	Yes
Continuity across reviews?	Not Applicable	No	Yes	Yes
Current market Conditions affect recommended SAA	No	No	Yes	Ability to tilt means technically No
Benchmarks	Average Weekly Earnings (AWE) +3.5%, Ten year government bonds+1%	T-Bills+2.5%	T-Bills+2.5%	To be determined as a part of the review
Timeframe of Benchmark (years)	20	20	20	To be determined as a part of the review
Focus	Nominal returns	Global Wealth Portfolio, liquidity premia, $ of benefit to Crown	Public Markets benchmark, Proxies for Private market exposure Mean reversion, liquidity premia, $ of benefit to Crown	To be determined as a part of the review
Stress testing	Consumer Price Index/Gross Domestic Product (GDP) scenario sets	One year risk-returns,	Multiple Equity Risk Premium (ERP) settings	Thematic scenarios, Scenario testing Illiquidity risk premium treated as excess return
Crown drawdown date	20 years	2025/2026		2030/31
Fat Tail modelling?	Yes	No	Yes	Yes
Short -term Risk Measure	A 1% chance of -20.2% or worse in any year	3 year averaging period	A 0.7% chance of a return of -20% or worse in any year	To be determined as a part of the review

As can be seen, attributes of the strategy process have varied across the reviews. Over time highly detailed analysis has been carried out in the areas of:

- Equity Risk Premium analysis; and
- Definition of the risk free benchmark.

Key developments implemented since the 2005 review are discussed below:

- Development of Public Market index proxies for Private Market assets.
- Tilting of the strategy away (to) from asset classes perceived to be over (under) valued.

Public market proxies

Having established a target private market allocation, it may take some time before a fund is able to achieve that allocation given the lumpiness of investments and the availability of appropriately priced assets. Recognising this, the Guardians has adopted specified public market proxies to substitute for a greater or lesser exposure to Private Markets.

Proxies for each private market asset class	Private equity	Infrastructure	Other private markets	Timber	Unlisted Property
Global equities	125%	30%	25%	20%	0%
Listed property	0%	0%	0%	40%	100%
Fixed interest	-25%	70%	75%	40%	0%
Total	100%	100%	100%	100%	100%

Source: SAA Review 2007, page 19

Strategic Tilting

The Fund's target market exposures are further modified by target strategic tilting exposures. Strategic tilting is a portfolio strategy that temporarily adjusts (tilts) the Fund's market exposures from the (proxy adjusted) SAA targets in response to changes in expected returns. The Guardians' approach is assessed in Section 5.

Technical Analysis of the Models and Assumptions used

Investment models are an attempt to formalise assumptions about how markets perform in order to predict future risk and return characteristics of different asset classes. As observed by the Fund "all models are wrong but some are useful". The models used by the strategists have generally been of two types:

- Monte Carlo (MC) simulations
- One year independent identically distributed (IID) return distributions

Both models are attempting to capture features of the asset class return distributions. Statistical features of these distributions are expected return, variability of return to itself (volatility) and other asset classes (correlation), skew and kurtosis properties of the distributions.

Table 4.3: Analysis of Capital Markets Models

Year - Model	Return	Volatility of return	Correlation of return	Skew of returns	Kurtosis of returns
2003 - 1	MC: Serial correlation and mean reversion of yields	Variable	Variable for returns, parameterised for yields	Yes	Parameterised for yield distributions
2003 - 2	IID: For mix of local to global assets in portfolio	Constant	Constant	Yes	No
2005 - 1	IID: Construction of set of 'beta' return assumptions based on global Capital Asset Pricing Model (CAPM)	Constant	Constant		No
2007 - 1	MC: Mean reversion of yields model	Variable	Variable	No	No
2007 - 2	IID model	Constant	Constant		No
2007 - 3	IID model, fat tailed	Constant	Constant	Feature of fat tail model	Feature of fat tail model

The findings from all models are susceptible to biases within the model structure and to parameter mis-estimation. The 2007 review addressed these issues by comparing model 2007-1 results to those from 2007-2 and 2005-1.

4.1.3 Mercer's Assessment

There is no objective way to determine whether the approach to the development of the SAA is optimal. Experience cautions against relying too heavily on modelling to predict the future. Numerous decisions must be made in the design of these models and different judgements will be applied by different modellers. No one approach is conclusively superior to others. Hence in this review we are looking to assess whether the approach taken was a disciplined procedure which adopted appropriate use of alternative scenarios, stress testing and alternative perspectives.

Mercer considers that the Guardians' approach to successive strategy reviews, particularly the 2007 review, has been a very thorough and comprehensive. Mercer's detailed assessment, including some areas for future consideration, is discussed below under the following headings:

- Methodology
- Capital markets assumptions
- Capital markets models
- Analysis

Methodology

The long-term strategy setting has broadly been consistent since inception. The focus of the methodology and the type and extent of stress testing has however shifted across various facets, as summarised in Table 4.5 above.

Broadly speaking, a level of asset risk (80% Growth assets, 20% income assets) was established in 2003. Subsequent reviews have sought to improve the return for this

level of implied asset risk through the greater exploitation of diversification, liquidity risk premia capture and developments as to what constitutes the least risk benchmark.

A desire of the 2005 review was to reduce reliance on the equity risk premium through substantially increasing target allocations to Private Markets and Property, from 13% to 30% of total assets. The rationale was to reduce risk and improve returns by incorporating asset classes that were considered to have low expected correlations with publically listed securities. This approach was based on qualitative assessment relating to Private Markets.

Investing in Private Market requires higher levels of governance and internal investment expertise than investing in public market indices. Success with private market investing is highly dependent on the Fund executing deal-specific sales and purchases on favourable terms (i.e. investment manager skill is required to realise the risk premium). The implementation of the Guardians' private markets strategy is discussed in Section 16 of the Report.

Strategically, the expected risk premia from liquidity can be treated as an excess return in a similar vein as manager skill. This then gives the Fund the ability to implement and measure performance of the strategy on a truly passive public market index basis.

The Guardians is giving consideration to treating liquidity premium as an excess return element rather than as a core "beta" component of the strategy. A development of this nature would impose greater discipline around decisions concerning allocations to illiquid assets in the portfolio strategy.

The added level of transparency created through separating liquidity premium would also assist in addressing a matter identified by this review that a large proportion of the Guardians' investments in private markets have been in liquid markets such as commodity futures, listed infrastructure and listed property, rather than their illiquid counterparts.

Recommendation 4.1: The exclusion of sources of excess return, including liquidity risk premia, from the core benchmark of the Fund ought to be considered as a means of placing further discipline on risk budgeting decisions.

Capital Markets Assumptions

Since the Fund's inception, the Equity Risk Premium (ERP) has been identified as a key determinant in the Fund's success in adding value to the Crown. The 2007 review extensively investigated the case for a risk premium of this nature and analysed the impact to the Fund of realising higher or lower risk premia than assumed.

The Fund has estimated and updated the ERP on an ongoing basis. Yet at the time of the 2007 strategy review, future contributions were the main component of future asset values. As such the future prevailing ERP is also important (i.e. its value at the time of future investment). Thus it may be important to model ERP in two stages: an initial value based on current market conditions and a long run equilibrium value. The initial value will most influence existing capital, whereas the long run assumption will more influence future contributions (and drawdowns). The post May 2009 shape of future contributions is no longer a smooth series of future cashflows, so developments of this nature could well influence long-term SAA findings.

The Guardians' investment strategy seeks to utilise its identified comparative advantages / endowments to exploit liquidity risk premia expected in Private Markets. The 2005 and 2007 reviews allowed for slightly higher rewards per unit risk in Private Markets compared with Public Markets when setting the long-term assumptions, presumably due to acknowledgement of greater inefficiencies in private markets. A dividend to manager skill – at least for the better managers – is widely considered an important component of successful Private Market investment.

Conversely however these past strategy reviews did not include in their assumptions the potential for active manager stock selection skill to improve returns from Public Markets. This may, at the margin, have biased the strategy towards private markets investment. We also note that many Private Markets strategies such as private equity also generate returns primarily through – often highly levered - capture of the ERP. Other systematic risk premia such as "value" and "small capitalisation stocks" are also present in private equity investment. It should also be noted that academic opinions vary significantly as to the size of the liquidity risk premium, if any. Hence a degree of caution as to the true diversification benefits of some Private Market investment is warranted.

Recommendation 4.2: Further research and analysis is required on the existence of and best methods to harvest liquidity premia. It is important to shift the basis for exploiting one of the key endowments of the Fund from a qualitative judgment to one based on qualitative and quantitative analysis.

As per the table of model features, return is not the sole feature of a distribution of assumed asset class returns. Variability of returns between and within asset classes are also critical assumptions.

As the experience of 2008 demonstrated, diversification between active managers and diversification between asset classes can break down during periods of extreme market dislocation. The IID models used (2003-2, 2007-2 and 2007-3) are intrinsically flawed in assessing tail risks for passive and active returns as long-term diversification (or independence of excess returns) is assumed to hold over the one year time horizon of the model.

In comparing the market risk and return assumptions generated for the 2007 strategy review to those used by Mercer at the time, some differences are observed. For local and large cap equities Mercer's assumptions for ERP are higher and riskiness of growth asset classes is higher. The sensitivity tests performed by the Guardians allowed for higher ERP assumptions, and the issues relating to lower one year volatility assumptions are discussed below.

In establishing volatility of asset class assumptions the Guardians has had to address a conundrum that all modellers need to address; to set the forward-looking assumptions based on either:

- An historic average that reflects what has happened most of the time; or
- A level that allows in full or part for historical spikes in risk.

The 2007 review tended more towards the former approach through use of the model labelled 2007-1, with model labelled 2007-3 in the above table addressing tail risk issues specifically. One year volatility assumptions were based on the longest time series available for the asset classes.

The consequence of this approach is that the derived asset class assumptions were much more moderate than investment market experience across the global financial crisis, resulting in underestimation of short-term (one-year volatility) risk.

Capital Markets Models

As identified in Table 4.5, the various models used to undertake the 2005 and 2007 reviews were fully developed internally by the Guardians. To the extent that the 2009 SAA review will require new features to be modelled, a fifth strategy model is expected to be developed internally.

The 2007 review was very comprehensive in detailing the key structural differences between the three 2007 models and accounting for modelling risk by analysing the 2007 assumptions using the 2005 model.

The development of investment models is a highly skilled and resource intensive activity. Many institutional investors choose to outsource the development of investment models and focus their internal resources on the interpretation and stress testing of the results; and on other strategy related developments.

Conversely, the Guardians has decided that strategy modelling is a core capability that needs to be conducted internally. This approach however is not without risks. If this activity is to be carried out internally, much development work is required to maintain best practice modelling and to attract and retain skilled strategists. The allocation of resources to model development may also delay or defer progress on the development of other areas of strategy.

Like all areas of investment, financial innovation and the drive for innovation and competitive edge means that what constitutes best practice in SAA development is constantly evolving. With the internal development of SAA modelling, there is a particular challenge to ensure that the approach remains at best practice. One way the Guardians seek to achieve this is through networking with other similar organisations. We suggest that another, potentially more effective, means for maintaining best practice would be to make the SAA model and modelling work publically available including through the New Zealand Superannuation Fund web site. This would include providing not just the summary of the SAA review outcomes but also the detailed modelling and analysis. Given the importance of the Guardians to the New Zealand economy and its significant standing among the sovereign wealth fund (SWF) community, the external scrutiny the modelling would be exposed to would generate continual development and improvement.

Recommendation 4.3: To seek to ensure that the approach to strategy development continues to improve and remains at best practice, that the Guardians' SAA model and modelling work be made publically available including through the NZSF web site. Given the importance of the Guardians to the New Zealand economy and its significant standing among the sovereign wealth fund community, the scrutiny and challenge engendered through this would create an external driver of continual development and improvement.

Recommendation 4.4: To mitigate the risks of development of strategy models developed internally, structured business and project management processes (including assessment, specification, testing, change control, review and formal sign off on models) are critical to increasing the likelihood of efficient and effective implementation of model development. It is understood that such processes are in place for more recent models such as the strategic tilting model. The monitoring and development of these business and project management processes in relation to strategy models should be a formalised part of the Guardians' risk management plan.

Analysis

The timeframe for the review has grown from 20 year to 30 year rolling time horizons.. Under most models, a 20 year or 30 year focus will lead to little tangible difference in the distribution of results as the impact of mean reversion over the shorter term will already be diluted. Rightly, the focus in the 2007 review was on varying the assumptions and models for the nominated 30 year period to test for biases.

Examining model results over shorter time frames is also important for long-term investors. Such analysis is critical to testing the risk tolerance of key stakeholders, recognising the varying time horizons that may be involved.

During market dislocations, short-term events can impact a long-term investor in unanticipated ways; for example, in their sponsor ceasing contributions. In the 2003 and 2007 review, the Guardians analysed extreme one year events suggesting a -20% benchmark return in a year represented a one in 100 - 120 year event.

Best practice developments in strategy development for SWFs adopt the equivalent of asset and liability modelling (ALM) for pension funds[22]. ALM refers to the Monte Carlo projection of future potential financial statements of the entity, in terms of stock and flow financial values. For pension funds the future benefit payments are finite to the Plan membership and can be capitalised into a liability 'stock' value. For funds that have an element of perpetuity to them, 'ALM' refers to the modelling of the 'flow' values of future contributions, investment returns and benefit obligations. SWFs can then model stochastic interrelationships between GDP, wage inflation, sovereign interest rates, contributions and investment returns; rather than focussing primarily on modelling stochastic investment returns. Such analysis is often best carried out from a whole of government perspective, something which the New Zealand Treasury is giving careful consideration to.

In developing the SAA the Guardians took into account the forecast of Crown annual contributions as provided by the New Zealand Treasury. Such forecasts are however intrinsically difficult to make with any great degree of accuracy because they rely on highly uncertain economic forecasts. We understand the Guardians' SAA development did not explicitly take into account the uncertainty associated with these forecasts and that the circumstances of the Crown could change leading to a change in its ability or

[22] Research, conducted by EDHEC Risk and Asset Management Research Centre in cooperation with Deutsche Bank, suggests that it is desirable to analyse the optimal investment policy of a sovereign wealth fund in an asset-liability management framework that allows one to formalise the impact on the optimal allocation policy in the presence of risk factors affecting the state surplus dynamics (this is the "where is the money coming from" aspect), and the (implicit or explicit) liabilities (obligations) the fund is facing (this is the "what the money is going to be used for" aspect).

willingness to continue to make capital contributions. In recent years, there has been increasing recognition by sovereign wealth funds of the need to take into account the financial circumstances of the sponsor (the Crown).

The changes in the expected future cashflow profile of the Fund will likely necessitate changes to the modelling approach in relation to the timeframes chosen for analysis. Moreover, selection of a particular year for capital outflows may no longer be appropriate due to the highly contingent nature of future cashflows.

Recommendation 4.5: Sensitivity testing of the investment strategy process is a critical part of the strategy review. The sensitivity testing also now needs to incorporate alternative cashflow profiles. This additional sensitivity testing, in conjunction with that employed for models and assumptions allows the Guardians to assess the level of reliance (if any) the set of cashflows assumed has on its strategy setting decisions.

Recommendation 4.6: In respect of the SAA modelling, two technical improvements are:

- With a view to ensuring that low probability extreme events are given an appropriate degree of attention in strategy development, short-term tail risks should be modelled in the primary model used to assess the strategy.
- While recognising the importance of the longer term timeframe for the Guardians' mission, it is recommended that more emphasis be given to the consideration of short-term timeframes through the incorporation of initial and long run assumption settings in the primary model used to assess the investment strategy.

4.2 Asset Allocation

This section addresses the question of whether the Fund's investment strategy and asset allocation is appropriate given the investment performance targets and the expected rate of return.

4.2.1 Guardians' Approach

As described in the previous section the approach has been focussed on maintaining a level of asset risk and adjusting long-term and short-term return expectations accordingly.

The initial investment objective was for a 20 year return objective of 90 day Treasury bills plus 2.50% p.a. (hereafter referred to as T-bills plus 2.5%).

This approach is bolstered by the strategic tilting process, as signals that an asset class is materially over or under valued relative to various measures can be addressed more frequently than the biannual strategy review.

The approach however, is built on the basis that the current level of risk or the current level of growth assets exposure remains enduringly appropriate. The separation of long-term and short-term market considerations is highly beneficial as short-term concerns around low or high levels of ERP can be dealt with using tilting.

4.2.2 Mercer's Assessment

The purpose of this section is to assess broadly the appropriateness of the Guardians' investment strategy. The appropriateness of the strategy is tested relative to its investment objective or expected outcomes.

The key considerations in setting an investment objective for a particular strategy are:

- The appropriateness of the objective measure
- The performance hurdle associated with the objective
- The timeframe
- The expected likelihood of achieving the objective in the required timeframe

In assessing a strategy, a critical element of the assessment is whether the level of confidence of achieving an outcome is appropriate. In the absence of knowing the sponsor's wishes in this regard, it is up to the strategist to form a judgement.

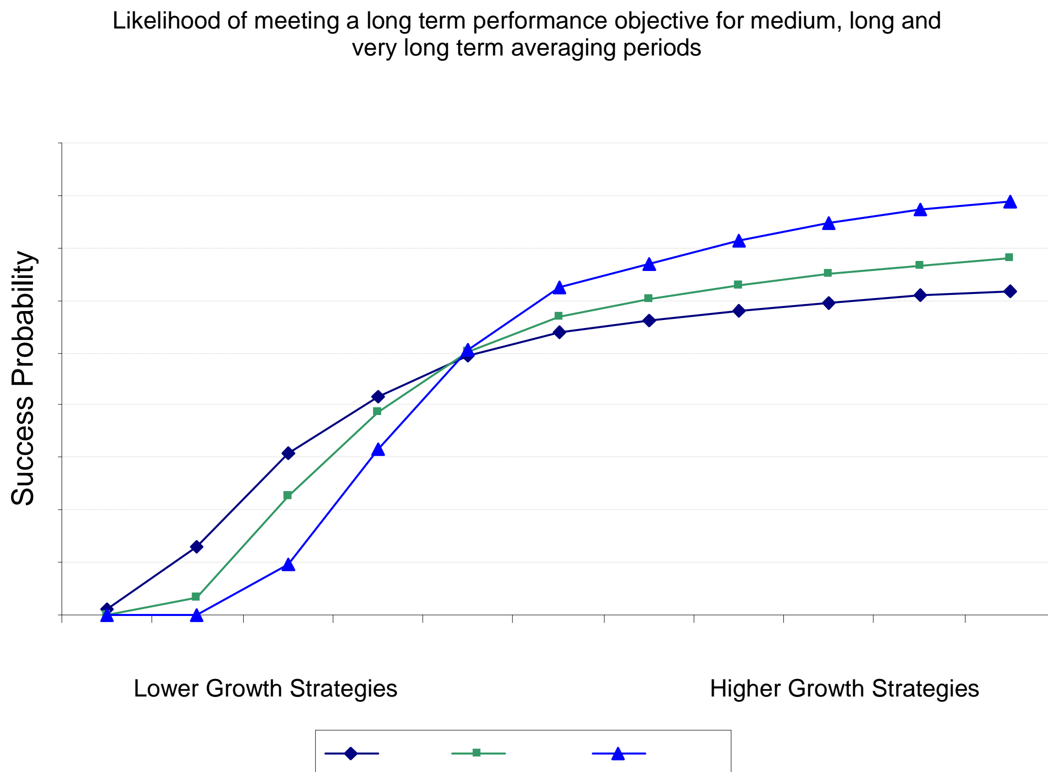
A second critical element is whether the strategist agrees with the assumptions underlying the strategy. Certain assumptions, such as the expectation of the degree of ongoing diversification expected from the asset classes invested in have a heavy impact on the outcome of the strategy. Such assumptions are ultimately matters of judgement informed by analysis and beliefs, however there are not absolute correct answers. Assumptions are discussed separately.

There are certain universal principles in determining an investment strategy:

- A lower risk / lower returning strategy will likely have a lower expectation of achieving the long-term investment objective, but with the advantage of less short-term volatility.
- A higher risk / higher returning strategy may have a higher expectation of achieving the long-term investment objective, but with the disadvantage of more short-term volatility.

These principles are demonstrated in Chart 4.1 below.

Figure 4.4: Likelihood of meeting expectation of T-Bills +2.5% p.a.



Note: Based on Mercer's 2009 pre-tax assumptions. The strategies are Mercer's 2009 model portfolios. Diamond = medium term, square = long-term, triangle = very long-term.

Figure 4.1 demonstrates the impact of timeframe as to the probability of success of an investment objective. As can be seen:

- No asset allocation or timeframe has a success likelihood of 100%
- The longer the timeframe the greater the success rate for risky asset exposure (the line is steeper for longer timeframes)
- The higher the risky assets exposure above a certain level the higher the success rates by increasing timeframe.
- Low growth strategies, over the long-term are not expected to achieve the high performance objective. A longer timeframe compounds this failure rate

The Fund has approximately 80% growth assets in the portfolio.

Mercer typically recommends a probability of success of over two thirds assuming a passive portfolio (as assumed in the Chart) with a view to excess returns lifting the success rate to some four fifths. As noted above, what constitutes an appropriate probability of success (level of confidence) is however a matter of judgement.

The 2007 strategy review was based on a set of assumptions with low expectations for equity risk premia. The outcome was that, under these assumptions, the Guardians believed that the likelihood of meeting or exceeding T-bills + 2.5% over the time horizon was low at 43%.

In conclusion, the investment strategy has maintained its exposure to growth assets at roughly 80% since inception, although the mix within growth assets has changed over time.

Under Mercer assumptions and processes a strategic asset allocation of 80% growth assets corresponds to a high level of confidence of meeting the objective of 90 day Treasury bills plus 2.5% over a rolling 20 year period. Should circumstances alter such that a focus on shorter term risks become more pressing, then a lower risk (and return) strategy for the Fund would correspond with a lower confidence level of meeting the same objective or the same confidence level but with a lower hurdle.

The legislative requirement as to what constitutes undue risk becomes important. For a Fund with very long-term obligations a focus on long-term risks is critical, and is central to the approach taken by the Guardians.

Recommendation 4.7: A SAA of approximately 80% growth assets corresponds to a high level of confidence of meeting an expected return equivalent to 90 day Treasury bills plus 2.5% over a rolling 20 year period. This allocation to growth assets should be maintained. Stability of investment mandate is highly important for long-term wealth creation. However, should circumstances alter such that a focus on shorter term risks becomes more pressing, then a lower risk strategy for the Guardians would correspond with:

(a) a lower confidence level of meeting the same objective; or

(b) the same confidence level, but with a lower hurdle.

5

5 Investment Risk Management

This chapter addresses the following three questions:

- Does the Guardians have a thorough process for identifying and responding to investment risks?
- Has the Guardians identified the significant investment risks they are exposed to?
- Are there any investment risks that appear to be unmanaged by the Guardians?

5.1 Introduction

In line with the requirements of the legislation the Guardians has produced and maintained a Statement of Investment Policies, Standards and Procedures (SIPSP). The current Statement (June 2009) addresses a number of issues including investment risk. The Guardians aim to achieve best practice in its management of investment risk and to this end, provides in this Statement and elsewhere, a transparent and comprehensive listing of its risk management processes and policies. The processes and policies are open to public scrutiny and debate. They are also subject to review and development by the Guardians.

Mercer has identified the following processes by which investment risks are identified and responded to by the Guardians:

1. Strategic Asset Allocation (SAA) reviews, which include:
   - Assessment of risk – return – diversification characteristics of asset classes
   - Stress testing of the strategy for alternative equity risk premium (ERP) scenarios
   - Scenario testing the strategy for alternative Growth and Inflation scenarios

- Analysis of extreme downside eventualities
- Analysis of the risks involved in use of the strategy models

2. Dynamic asset allocation – or strategic tilting – which has been recently developed and introduced by the Guardians.

3. Scenario analysis is under development by the Guardians, including macroeconomic or thematic analysis of the wider environment
    - Investment trends
    - Macro and geo-political risks

5.2 Risk management and strategic asset allocation

5.2.1 Guardians' approach

The approach to SAA modelling has undergone several evolutions over the years. The 2009 strategy review, similar to the 2003 review, will include scenario analysis to stress test the strategy against different inflation and growth assumptions.

5.2.2 Mercer's Assessment

External peer reviewing of internal modelling work is important and has generally been adopted by the Guardians. The Board recognises this and will obtain a broader peer review that will challenge the strategy from a lateral perspective rather than one that focuses on a technical review of the model. The Office of the Auditor General (OAG) report recommended formalising the independent review of the SAA and to consider the independence of the reviewer. The OAG further recommended the scope of the review should include validation of independent asset class benchmarks applicable to the SAA.

The thoroughness and completeness of the 2007 Strategy review is addressed in Section 4. In terms of identifying significant investment risks, the Guardians' experience during the global financial crisis provides a useful case study of their ability to deal with crisis situations. Mercer identified the following examples of foresight and hindsight relating to the global financial crisis:

Mercer believes that an appropriate level of consideration of these risks was made.

Box 5.1: Identification of significant risks – Global financial crisis case study

The benchmark return on the New Zealand Superannuation Fund (the Fund) for the year ending 30 June 2009 was -18%.

- 2003 Strategy Report stress tested the strategy for an event of a global financial crisis magnitude. In doing so, it indicated a one year benchmark loss of -20% or worse was a possibility, with a ~1% probability of occurrence. Alternative Inflation – Growth scenarios were also modelled.
- 2005 Strategy Report, pg 78
  "Scenario analysis is beyond this paper, but it is possible to envisage either

sustained inflationary and deflationary pressures ahead. Inflation could stem from oil shocks, rising competition for resources from emerging regions (e.g. China) or even a deliberate policy response to inflate away private sector debt. Conversely deflation could follow adverse demographics and/or debt-deflation following a major credit crunch. Commodities and property are appropriate assets for the former scenario, long duration Government debt for the latter. The point is that given forecast uncertainty, a mix of economic exposures is preferable."

- 2007 Strategy Report indicated a one year loss of -20% or worse was a possibility, with a ~1% probability of occurrence. Alternative equity risk premia (ERP) assumptions were modelled, four strategy models were utilised.

- 2007 Strategy Report, pg 11
  "The ability of the Fund to maintain policy in the face of such shocks is paramount. This is a factor for the Board to consider when evaluating the level of risk it wishes to accept"

- 2007 Strategy Report, pg 40 Summary of external risks

Issue	Implication	Decision
'All models are wrong'	Projections may be misleading	Change strategy as modeling evolves?
Mean reversion?	Lowers long-term risk	Increase risk profile?
Lower ERP?	Reduces reward for risk	Reduce risk profile?
Bumps along the way	Stress on Fund inevitable	Reduce risk profile?

- 2009 May Board Paper: Macro Themes for Scenario Analysis and Stress Testing.

- 2009 July Board Paper: Inflation and Growth Risks; inflation and Gross Domestic Product scenarios explored.

5.3 Strategic tilting

5.3.1 Guardians' approach

The Fund's target market exposures are further modified by target strategic tilting exposures. Strategic tilting is a portfolio strategy that temporarily adjusts (tilts) the Fund's market exposures from the (proxy adjusted) SAA targets in response to changes in expected returns.

As part of this process the Guardians forecast expected returns for a number of asset class exposures, using a variety of models. When expected returns are extreme using core models, a 'tilting signal' is generated. However, strategic tilting decisions also involve a judgmental 'overlay'. Alternative models and sensitivity analysis help to inform these judgments. The expected returns and the corresponding tilting signals are reported at the Investment Committee in a regular Strategic Tilting Report.

The Guardians documents the models that are used to generate expected returns for strategic tilting, along with its data sources. It describes both the core models that are used to generate a best or central estimate of risk premia and some alternative models that are used as a cross-check on the core models. Expected returns forecasts are mapped onto mechanical tilting signals and tilting positions, and key judgements are taken in this process. The Guardians has detailed decision-making and control processes governing adjustments to the core models.

Strategic tilts are applied to the public market asset classes given their underlying liquidity and the Fund's net unhedged foreign currency exposures. Ranges over which the exposures may tilt from the SAA are set by the Board. Table 5.1 shows the ranges over which the exposures may tilt from the SAA.

At any point in time the actual Fund weights will deviate from the target modified SAA weights. Different returns for the various asset classes cause the asset class weights to vary over time. Rebalancing transactions back towards the target weights are triggered if risk based tolerance thresholds are exceeded. Absolute and relative risk measures attributable to asset class weights are used as triggers.

Table 5.1 Strategic tilting parameters

	Current recommendations			**Ranges**
Asset Class	**Model-based**	**No constraint**	**Previous decision**	(percentage point deviations for strategic tilting targets from the proxy adjusted SAA targets)
Equity				
Global Large Cap equity exposure	0.0%	+0.1%	+2.6%	+/- 7.5%
Property	+2.5%	+2.5%	+2.5%	+/- 2.5%
Fixed Interest				
Global credit spread exposure	0.0%	0%	0%	+/- 10%
Global duration exposure	-2.5%	-2.6%	-5.1%	+/- 10%
Net Unhedged Foreign				
Currency Exposure	0%	0%	0%	+/- 10%
Tracking error	36bp	36bp	62bp	140bp

Source: Board paper, Strategic Tilting Update, Table A.1, 28 July 2009

5.3.2 Mercer's Assessment

The process of developing a strategic asset allocation is based on long-term expectations of asset class risk and return characteristics. However, market experience demonstrates that different asset classes may from time to time deviate considerably from their long-term trend values.

Investors may seek to capture additional value add by implementing dynamic adjustments to their SAA that seek to exploit such medium term deviations in asset valuation from their fundamental value. This approach, referred to by various titles such as dynamic asset allocation or strategic tilting, provides institutional investors with another lever for managing investment risk.

The implementation of this approach is not without risks as poorly executed tilts can exacerbate risk. Therefore it should only be considered by investors with appropriate levels of governance and expertise. It is the case that many sophisticated institutional investors engage in strategic tilting and there is evidence that it can be successfully implemented.

The Guardians has in recent years developed its internal framework and process for strategic tilting and executed its first tilt in the last quarter of 2008. In view of its recent introduction, it is not possible to assess the effectiveness of the Guardians' approach nor to determine whether the Fund's performance would have been improved if it had developed strategic tilting earlier as it would depend on how well its methodology was in identifying mis-pricing signals and its effectiveness in implementing dynamic tilting.

The Guardians has established its tilting framework in a manner that is consistent with the available risk budget. Similarly, a 10% range on the combined weight of global large cap shares and global listed property and a 10% range on hedged offshore exposure, together would amount to a reasonable active tilt making the process worthwhile.

The Guardians has developed a governance model for the implementation of tilting. Under this model, the Board approves parameters within which management would exercise discretion, subject to transparency about the process being followed and the impact on portfolio returns. Prior Board approvals would not be required for tilts made within the discretion parameters.

The discretion parameters specify what types of tilts can be taken, and the maximum size of the tilts (individually and in aggregate). Prior Board approval is required before management can exercise discretion to take different types of tilts, or to take larger tilts.

As it is being implemented internally, there is little organisational experience in the process at either the portfolio management or Board level. The process reserves a very strong role for judgement, which Mercer consider appropriate. However this could run into some difficulty if some initial large tilts prove 'early' (or even simply wrong). Given these circumstances, it would be advisable to maintain active 'tilting' to relatively small ranges until the Guardians have developed more comfort and it has become an established source of excess return or risk management.

Recommendation 5.1: The adoption of strategic 'tilting' by the Guardians is appropriate. It should be restricted to relatively small ranges until the Guardians has developed more comfort that tilting has become an established source of excess return or risk management. The Guardians' performance and governance model should be reviewed after twelve months of operation and recalibrated as necessary.

5.4 Scenario Analysis

5.4.1 Guardians' approach

Greater emphasis has also been given in the forthcoming review to better defining the Board's risk tolerance than has been done before. The Board is undertaking a survey of risk appetite across investment strategies to ensure a common platform of beliefs going forward.

The Board is incorporating consideration of macro-themes including:

- Long-term influences on the global economy that have far-reaching, game-changing effects, are indifferent to business cycles and are relatively immune to financial and economic shocks.

- Potential sources of stress on the portfolio or starting points for informing views on the long-term investment environment.

5.4.2 Mercer's assessment

The investment environment in the future is subject to great uncertainties and may be less favourable than the past. This suggests less focus on risk as a singular concept of volatility and much greater need for scenario analysis to stress test investment strategies.

How the Guardians incorporate the macro-themes into its decision-making is yet to be established. Leading edge risk management involves risk assessment from parameters beyond the traditional mean/variance/correlation view of portfolio risk. This would include a multidimensional view of risk - including factors such as liquidity risk, interest rate risk in relation to the notional liability benchmark, credit spread risk, operational risk. Once such risks are identified a governance process would need to be developed to translate the knowledge gained from the ongoing risk assessment to implementable changes in their tactical and strategic asset allocation policy.

Recommendation 5.2: That the Guardians identifies and analyses implications of investment risks outside the traditional mean-variance view, including the macro-economic themes already identified. In addition, that the Guardians develops methodology and disciplined governance processes for incorporating implications of these factors as appropriate into its SAA and other areas of discretionary management such as strategic tilting and active management.

Recommendation 5.3: The external review of the investment strategy and the strategy development process, covering both a lateral perspective of the broad methodology as well as the technical view, should be a formalised part of the Guardians' risk management plan. In doing so, that the Guardians' seeks to incorporate a diverse range of new perspectives to critically challenge the approach.

6

6 Portfolio Construction and Investment Manager Selection

The strategic asset allocation (SAA) and objectives analysed in prior chapters determines the mix of asset classes on a market exposure (beta) basis. Portfolio construction determines the number and role of managers on an active (alpha) or passive basis. This Section reviews three dimensions of the Guardians' approach:

- Strategic approach to portfolio construction;
- Process of manager selection to populate portfolio exposures; and
- Active management investment performance of the New Zealand Superannuation Fund (the Fund).

6.1 Portfolio Construction

Portfolio construction refers to the strategic approach taken in defining the intended portfolio exposures within an asset class or classes. It provides the framework for selecting a means of attaining market exposure (through a combination of managers or use of derivatives) to, as far as possible, provide the desired strategic capital market exposures/risk premium capture on a cost efficient basis. Where active management is justified, portfolio construction should maximise the potential for sustained benchmark outperformance through genuine active management skill.

Active management involves taking active positions to achieve higher returns than the market return (referred to as beta). Active positions are taken by being overweight or underweight in assets relative to the benchmark index or reference portfolio based on market forecasts. The return achieved through active management is referred to as alpha.

6.1.1 Assessment principles

The broad process of portfolio construction for a single asset class is analogous with the development of an SAA for a multi-asset class portfolio (e.g. a mix of equities, bonds and property as per chapter 4), where characteristics of return, risk and

diversification are taken into account in assembling the optimal mix of different asset classes. In the single asset class, consideration is given to the return, risk and diversification aspects of the different approaches to security selection: namely identifying an appropriate mix of the systematic relative performance drivers (eg value, growth, momentum, quality, size, bias) and alpha.

Examples of identifiable risk premia are shown below:

Risk premium	Intuitive Reasoning	Academic Support
Value	Cheap becomes more expensive	Fama and French
Small caps	Early Stage Growth	Fama and French
Momentum	Past price/earnings strength is for a reason, the power of crowds	Various including AllianceBernstein
Low beta	High beta suffers from over-pricing and volatility drag	Clarke, deSilva, Thorley
Secular growth	Demographics, Sustainability	More reliant on qualitative reasoning

Quantitative modelling of excess return/tracking error is typically used to ensure the portfolio "alpha" makes maximum use of the active risk budget. Consideration is given to determining appropriate assumptions about the shape of the modelled distribution of excess returns and the extent to which idiosyncratic risks exist. Mercer has created a modelling framework specific for this purpose which disaggregates manager strategies into beta returns (e.g. broad equity risk premia, small capitalisation returns, and credit spread movements), and a residual return that is specific to the asset class return and which appropriately allows for non-normality in the distribution of returns .

These quantitative techniques supports qualitative judgement on how to balance individual manager contribution to active risk, the nature of the risk premia and the overall expected excess return outcomes. As most long-term wealth-maximising funds do not explicitly separate active manager skill (alpha) from underlying market returns (beta) components, they must also consider the resultant beta exposures when constructing portfolios of active managers. Even where strategic beta exposures are achieved mostly passively, in some cases the pursuit of excess returns requires accepting an 'unhedgable' exposure to beta as well (e.g. small caps, private equity etc).

In view of volatility of markets and risk premia, Mercer believes strongly that "set and forget" is a sub-optimal strategy in both a multi-asset class and single asset portfolio context. We believe manager allocations set strategically should be supplemented by a corresponding dynamic overlay wherever possible to reflect medium term market conditions and cyclicality in alpha opportunities although we acknowledge that considerable skill and judgement is required to do so successfully in practice.

We believe the above process leads to a soundly constructed outcome at the individual asset class level or alpha strategy as appropriate.

6.1.2 Guardians' approach

Initially the Guardians selected from long-only active managers in the same proportions as the Fund's SAA. Then the Guardians attempted to improve the efficiency and diversification of the alpha streams through alpha-beta separation and removal of the long-only constraint – moving from a strategy dominated by a small number of equity stock selection managers to one combining stock selection with a series of market

neutral strategies. The focus was on identifying managers with skill and then freeing constraints on the manager to deploy that skill as much as possible.

In mid 2009, the approach evolved further in response (at least in part) to Board reservations about the ability to identify and capture "alpha-generating managers". Under the new approach, the portfolio is constructed by identifying a type of strategy, characteristic, or market that is considered to offer a potential excess return and then to consider the best way of accessing the excess return. In this way, the group of active managers is treated as an investment portfolio of excess return strategies - analogous to a portfolio of assets - with the opportunity set of the strategies expanding and contracting over time. Going forward, more emphasis will be placed on the life-cycle of the asset class, with the view that those asset classes with a "tailwind" are more likely to produce significant excess returns from active management.

By focusing on the conduciveness of a market or strategy to generating excess return and only then thinking about the active managers pursuing that opportunity, the Guardians is seeking to reduce the pressure to pick "top quartile" investment managers. By confining the search to the most attractive markets or strategies the Guardians considers that the probability of the Fund receiving excess returns will improve.

6.1.3 Mercer's assessment

As outlined above, the Guardians' portfolio construction approach has evolved since inception. While initially top quartile managers were sought that would meet the hurdle analysis this approach was later modified as it did not deliver the desired excess return outcomes. This approach was used over a fairly short time period and one that has been a challenging one for active management as it encompassed the global financial crisis.

Mercer notes that many institutional investors globally are fundamentally rethinking their approach to active management. For instance the Norwegian Government Pension Fund is undertaking a detailed study that includes an examination of the active management experience of similar funds globally. This is an area where best practice will continue to be refined over time. It will be important for the Guardians to remain abreast of the latest thinking and its implications for the implementation of their approach not with a view to following a common approach but rather to take these market developments into account in refining its own approach.

We consider that the Guardians' emphasis going forward on the life-cycle of the asset class has merit from a conceptual point of view. It is broadly consistent with the approach adopted by Mercer in applying a dynamic overlay to reflect medium term market conditions and cyclicality in alpha opportunities as outlined above.

However the success of this approach will depend on the ability of the Guardians to be able to anticipate when opportunities in particular asset classes or segments are temporarily heightened and when they are about to dry up. So far, the Guardians is in the early stages of implementation of this approach and has not made any manager appointments. As such the success of this approach cannot be properly assessed. However, Mercer offers the following observations that we regard as worthy of further consideration by the Guardians.

Governance

The Guardians' planned approach acknowledges that even where alpha exists it may be transient either because it is related to cyclical factors or it is arbitraged away as other market participants recognise the pricing inefficiency. The transient nature of these opportunities and hence the need to be flexible and nimble in anticipating these opportunities, poses management and governance challenges for the Guardians.

The successful implementation of this strategy therefore requires thorough process development and documentation. In particular, for each alpha source there may be different metrics used to determine its attractiveness. Measures such as valuation spreads, or capacity measures such as total industry assets in long/short strategies, hedge fund universe gross exposure measures may be useful in this regard. Transaction cost hurdles should be considered as well. It will be important to document the reasons for pursuit of that alpha opportunity and, potentially even more importantly, the factors that may be used to determine when the opportunity set has disappeared (and be a catalyst for exit).

Alpha beta separation

In some markets, manager skill is effectively impossible to separate from the underlying systematic risk premia (i.e. beta). Examples include many small capitalisation markets, distressed debt and private equity where no low-cost means currently exist to remove unwanted beta exposures. In these markets it is often the case that alpha is actually the highest, and it would pass all of the criteria the Guardians is looking for (such as information asymmetry and existence of non-return maximisers).

Attempting to achieve pure alpha-beta separation, and being limited to that which is truly market-neutral, would have the effect of removing significant potential excess return. While the aim of the overall alpha portfolio is to generate returns independent of the direction of capital markets, it is acknowledged that the underlying alpha sources may from time to time be correlated with the market. Many market inefficiencies exist within the less liquid parts of the capital markets, and therefore some systematic exposure to liquidity risk may also be required to capture these excess returns.

Although alpha/beta separation has sound theoretical underpinnings, it is associated with significant practical hurdles. Stripping out unwanted beta exposures is a challenging exercise; it can be costly to execute and costly to get wrong. One must recognise the limitations of linear factor models that are often used for alpha beta separation. Many US endowment funds have experienced alpha transport problems stemming from alpha becoming highly correlated to beta during times of market stress. Certain alpha sources were discovered such as long credit/collateralised debt obligations (CDO) tilts that remained uncorrelated until the US housing market collapsed triggering the global financial crisis. This was then further compounded by liquidity issues, forcing many endowments to sell assets at distressed prices to cover cash flow needs.

Mercer considers that a pragmatic approach to alpha generation that accepts some inherent correlation with beta exposures in the pursuit of the highest alpha opportunities is likely to be more successful in the long run than a purer approach.

Global equity markets

According to the Guardians, the characteristics conducive to generating alpha do not appear prevalent in global equities stock selection – that market is relatively efficient, there are a significant number of active managers seeking excess returns, and managers with some unique characteristics appear rare. [23]

Mercer notes that while large cap global equity markets may offer less skill potential, they do offer vastly greater breadth and hence may indeed provide attractive avenues for sustained alpha generation. An analysis of long-only equity alpha in large cap global equities compared to the equivalent experience within single regions or countries supports this point (e.g. referring to Mercer data over the past 10 years, median global equity manager alpha has tended to be around 1% p.a. higher than combinations of median US, Japan and Europe, Australasia and Far East (EAFE) mandate alphas, with the upper quartile alpha difference being closer to 2% p.a. higher).

Furthermore, some alpha sources, such as secular trends, are best, or only, captured in a global context, possibly via a thematic manager, or a specialist theme-targeting fund (e.g. a healthcare fund).

Alternative Beta sources

In addition to seeking alpha sources, alternative beta sources ought not be overlooked as they offer the potential for adding further risk adjusted returns with lower associated fees. For instance, certain hedge funds beta strategies that could be considered as part of a diversified portfolio include convertible arbitrage, fixed interest arbitrage and risk arbitrage (M&A). Indeed, there are investment managers who "passively" target such betas at low-cost. Alpha-beta combination strategies, such as insurance linked bonds or distressed debt, could also be a good diversifier at a lower cost to equity market-neutral products. We understand the Guardians has taken steps towards obtaining such exposure.

Recommendation 6.1: The Guardians develops a formal portfolio structure for each of the underlying asset classes, in terms of targeted strategies and exposures. While this approach is core to how the Guardians approaches SAA, it is not clear that the same structured process is applied at the single asset class level. Such an approach - breaking down the asset class into its risk drivers and addressing exposures to each of the risk drivers individually - may greatly enhance the efficiency of these sub-portfolios, and ultimately the multi-asset class portfolio.
Recommendation 6.2: In the context of the Guardians' planned "lifecycle" approach to determining the allocation to different sources of alpha over time, we recommend the development and documentation of process which sets out the methodology for assessing relative attractiveness. In particular, for each alpha source there may be different metrics used. It is important to document the reasons for pursuit of that alpha opportunity and the factors that may be used to determine when the opportunity set has disappeared (and be a catalyst for exit).

[23] Active Management Programme Update, 8/7/09

6.2 Manager Selection

This section addresses manager selection. The approach that Mercer adopts in manager selection is provided in Appendix A. Our assessment of the approach adopted by the Guardians follows.

6.2.1 Guardians' Current Process

The Guardians' current manager selection process, based on the Investment Manager Selection Policy, is as follows.

Stage 1: Manager Identification - The identification stage will only commence if the Guardians' strategy advice is that exposure to the particular asset class/sector is appropriate for the Fund. There is no one preferred method for identifying managers: fairly formal searches, third party introductions, direct identification, cold calling or other methods may be utilised. This depends somewhat on the Guardians' knowledge of the sector. External advisors may be used to provide broad screening of available managers, particularly for "new" asset classes. It is envisaged that the lifecycle approach (described in section 6.1.2 above) will be included in this stage and guide areas of sector focus.

Stage 2: Due Diligence - Due Diligence must be performed before a manager is recommended. This is normally commenced through a formal Request for Information (RFI), except for collective investment vehicles which have standard offer documentation. An on-site due diligence visit is normally a pre-requisite for appointment. Investment due diligence incorporates the stages discussed below. Operational and compliance related information is requested in this stage (discussed elsewhere in this report).

Stage 3: Qualitative Evaluation (Conviction Scoring) - Firstly the manager has to pass though a series of "gates". The gates are evaluated as being either open or closed. Any one closed gate effectively removes a manager from the search process, or identifies an incumbent manager for potential termination. These gates encompass the following aspects:

- Asset capacity;
- Trust;
- Alignment of interest;
- Business viability; and
- Conflicts of interest.[24]

Following the gates a series of factors are evaluated based on a score of 1 to 5 (3 being average, 5 being the best). The factors are split into quite specific areas and are weighted to give an overall conviction score for the manager. A score of 4.0 or higher is the hurdle for a manager to be appointed.

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[24] This stage is central to manager evaluation, as described in the Fund's "Conviction Version Two" approach which was formally revised and introduced in early 2009.

Stage 4: Quantitative Evaluation - This stage incorporates regression analysis of past returns to evaluate exposure to underlying factors and an estimation of excess return (or alpha), using forward looking inputs, for the strategy. Fees (both base and performance) are incorporated into the analysis. This stage also provides a basis for the portfolio construction element of the process.

Stage 5: Relative Comparison - The final stage under the Investment Manager Selection Policy is to ensure that, in addition to meeting the prior stages, the investment is superior to the available alternatives.

Following the manager selection process above, the amount of funds to allocate to the strategy is determined. The forward looking expected excess rate of return for the strategy forms the basis of the portfolio construction for the Fund. Hurdle analysis is performed to establish if the strategy's expected return makes a meaningful contribution to the Fund's overall information ratio[25], and hence determines the amount of risk capital to allocate. The default position for the fund is to have passive or synthetic exposure to the asset class (depending on availability and cost), with active management only being employed when the hurdle is exceeded and the risk/reward characteristics of the fund are improved (on an after fees basis). This stage also includes assessing the correlation of the manager's alpha with the Fund's beta and other managers' alphas.

The expected excess return estimation is based on the work of Grinold and Kahn[26] such that expected alpha is based on a conviction score (determined in stage 3 above), manager skill, breadth of market, tracking error, transfer coefficient, market efficiency and the ability of the Fund to pick top performers - adjusted for fees and the cost of obtaining desired market exposure. The inputs used for these will have a significant effect on the outputs and hence the active risk exposures in the Fund.

6.2.2 Mercer's Assessment

It is worth noting that the Fund, by its nature, has some natural advantages in securing alpha. In particular: its long-term investment horizon with no near-term outflow requirements and, until recently, a fast growth-path of assets under management; it commenced its investment programme with a "clean sheet of paper" in terms of pre-existing investments or philosophies; and as a Sovereign Wealth Fund its "preferred client" status makes it of interest to the best active managers. Flowing from these factors is the scope to negotiate competitive fees. Accordingly it could be expected that the Fund has a better-than-average chance of being successful in pursuit of net of cost active management gains. At the same time, it would also be fair to say that the Fund's "preferred client" status has to some extent diminished with the recent curtailment of its growth trajectory.

The 2008 Office of the Auditor General (OAG) report reviewed the Guardians' manager selection policies and guidelines, which it concluded were generally good or adequate. Mercer has not sought to verify these findings directly. Rather, the focus of this review has been on the execution of these policies and the resulting manager structures.

[25] Information ratio is the ratio of reward per unit of risk, expressed on a backward or forward looking basis.

[26] Source: Fundamental Law of Active Management), YEAR

Overall the Fund's manager selection process is, in Mercer's view, well considered and at or near best practice in this area. There are differences when compared to Mercer's manager selection process, although as manager selection is a subjective and investor-specific process, this is not surprising. In essence there is no one "best practice", however, there are certain observations relating to the Guardians' approach that we consider worth highlighting.

Manager selection and termination processes

Mercer considers the Guardians' qualitative manager selection process is well-structured and comprehensive. The "gate" approach seeks to achieve an alignment of interests between those of the Fund and its external managers and may identify issues that could pose problems in the future.

The aspects covered by the factor analysis are appropriate, however prescribing pre-determined weights to the various factors risks being overly formulaic. We consider that different factors are likely to have differing relative importance in different situations and that judgement should be applied in determining how much weight to give to particular factors on a case by case basis.

The conviction scoring process is constructed so that managers can be rated using the same factors regardless of asset class. Asset class differences are captured through the inputs into the expected excess return calculation described above (stages 4 and 5 of manager selection process). For some asset classes, for example Multi-Strategy, factors such as risk management and portfolio construction could be considered to be of more importance than, for example, with long-only equity classes, and hence justify more weighting in the conviction scoring process.

Overall, while we view a fixed weight factor approach as being a somewhat artificial means of "systematising" judgement, the act of splitting the analysis up into many small factors ensures that all sections are covered and the rationale behind the conviction rating is thoroughly documented. We note that the Guardians has added the flexibility to "upgrade" any factor to a "gate" if deemed significant enough and so in a sense there is a judgement "over-ride" capability. In addition, documenting the research in this fashion aids in viewing changes in the relative ranking of managers over time, and maintaining continuity with internal staff changes.[27]

In reviewing circumstances for many of the manager terminations, the reasons for those terminations appear to be solidly documented based upon loss of conviction in the manager, detrimental changes at the manager such as breach in mandates, rather than purely a reaction to underperformance. This shows an ability to retain perspective with regard to the managers selected - supporting those where conviction remains high even though they may have underperformed and terminating those where the reasons for hiring have diminished. This approach reflects recognition by the Guardians that managers may not generate the targeted outperformance over one, three or even five

[27] As examples of the conviction scoring process in action, we have read the Fund's most recent reviews of GMO's Multi-Strategy (decision was to retain) and of Brook Asset Management (decision was to terminate). The assessments come across as detailed and involving much thought. In particular, the way changes in factor scores are discussed from previous assessments shows that the research is reactive to events at the manager, and areas of concern were clearly articulated.

years in some cases. We concur that pay-offs from skilled managers may take longer to materialise than desired, are often influenced by particular market conditions, and hence regard the Guardians' approach as appropriate.

Surveying the universe of managers

While the Guardians' research on an individual manager basis appears in-depth and conclusive, the overall number of managers/strategies researched is fairly low. In part this is a natural outcome of the Guardians' team being quite small in number and hence the number of managers they can research beyond a superficial level is limited. While complete and comprehensive coverage of a universe is not necessary to identify alpha generating managers, a certain level of confidence is required that there are not "better" managers available that need to be identified and researched. Mercer notes that outsourcing of screening is not the same as outsourcing of decision-making.

To some extent the Guardians recognises there is a role for a wider set of eyes on available opportunities, such as external advisers. At the end of 2008, it appointed specialist consultants to assist in assessing multi-strategy/hedge fund opportunities. It previously accessed commercially provided manager research databases containing information and research on a variety of more-traditional strategies.

Given that future research at the Fund will be directed towards those sectors deemed to offer the best "tailwinds" for manager alpha, success will require a certain degree of pre-emption identifying and researching relevant managers before the rest of the market has identified the opportunity and arbitraged away the premium return. Term Asset-Backed Securities Loan Facility (TALF) and certain credit opportunities are recent examples of narrow optimal windows of entry. Thus a challenge for the Guardians will be to identify, research and act on those opportunities in a timely manner. Resource constraints are more likely to constrain the capture of short-term opportunities than it will the identification, and capture, of secular trends.

Guardians' skill in appointing active managers

As noted, the active management approach adopted by the Fund is linked to academic work done in the US. Part of this research has entailed an emphasis on the importance of an investor having skill in identifying fund managers that have active management skill (the extent of this skill is described as the "sponsor information coefficient"). At the same time, these authors acknowledge this variable is amongst the most difficult to assess. [28]

In deriving its expected alpha forecasts, the Guardians assigns itself an information coefficient of 0.3, implying that around 65% of decisions to appoint managers will be correct and that alpha will be generated. We note that this is a critical underlying assumption - the Fund's own belief that it has a material edge versus other market operators will in turn drive most or all active management appointment decisions. The belief is inevitably subjective, but does relate to the natural competitive advantages of the Guardians noted above and the degree of rigour applied to the task.

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[28] For an example of this, which follows on from earlier work on "The Fundamental Law of Active Management" by Richard Grinold, see "Forecasting Fund Manager Alphas: The Impossible Just Takes Longer", by Barton Waring and Sunder Ramkumar, Financial Analysts Journal, Volume 64, Number 2, 2008.

The above conviction with regard to skill in manager selection is reflected in the Guardians' core investment beliefs. We understand there is an intention by the Guardians to tweak its belief from a belief that they "**can**" to a belief that they "**may be able to**" identify outperforming managers.[29] While this could be regarded as a minor adjustment Mercer suggest that the Guardians should review its "sponsor information coefficient" to confirm that it is aligned with its change in belief. A change to this coefficient could materially change the future active management strategy.

Operational due diligence

Recent experience with the Madoff case in the US demonstrated the risks of neglecting the operational due diligence of investment managers as part of manager selection and monitoring processes.

Investment manager operational and compliance due diligence is an area of focus at the Guardians. It is undertaken by different teams than those relating to manager selection/investment. We note the importance of ensuring that the manager selection process, undertaken from an investment perspective, should be linked with the operational due diligence process.

One possible method to link these processes is to amend the Investment Due Diligence Policy to incorporate the investment manager operational due diligence checklist.[30] The same checklist should also be added to the Investment Manager Selection Policy, to ensure all aspects of due diligence are completed before a new manager/mandate is appointed. We note that the OAG Report (2008) also highlighted the need to link the Investment Manager Selection Policy with the manager operational due diligence process (Recommendation 12).

Completing portfolio construction

The Guardians' final allocation to a strategy is determined by the expected improvement to the total Fund's information ratio after including the strategy. This is determined by the expected excess return estimation and the analysis of the hurdle required.[31] Mercer considers the hurdle analysis appropriate as it is not just a simple requirement for performance to surpass the higher fees for active management but takes into account the cost of access to the underlying market returns through other low cost means such as synthetic or passive exposure. In some instances the fund is effectively paid to invest through synthetics, thus making the hurdles for active management even harder to pass.[32]

The approach the Fund has taken to portfolio construction and manager selection has tended to encourage the inclusion of:

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[29] The 23 June 2009 Statement of Investment Policies, Standards and Procedures states that "we **can** identify managers that will outperform the benchmark (produce alpha) over time". The word "can" is being changed to 'may be able to'.

[30] As set out in NZSF document "Public Markets Due Diligence Process", January 2009.

[31] NZSF document "Forecasting Expected Alphas", June 2005

[32] This is due to spreads on swap products being below what is earned from the underlying collateral, thereby netting the Fund a margin.

- systematic active managers, i.e. those managers with a quantitative or model-based investment approach; and

- multi-strategy/market-neutral type mandates which have a very wide breadth of investible securities and relatively few investment constraints.

Quantitative investing provides a disciplined framework aimed at avoiding common behavioural traps such as a tendency to over-emphasise the most recent information received, or the tendency to over-weight information which confirms one's current beliefs and vice versa. Statistical techniques are used to identify, and capitalise on, common factors in security returns. Quantitative investing also applies a relatively scientific approach to incorporating risk into the overall investment process, i.e. that there is information from past returns that can be used to generate future returns.

Over the past two years many industry quant strategies failed to outperform benchmarks. In part this was influenced by value and momentum factors underlying the strategies. These factors are popular among quant managers because they are intuitive, time-tested, and backed by a large body of academic research across many asset classes. That said, there are times when value and momentum signals fail to deliver, even if the long-term success of these principles is reasonably compelling.

Crises and other significant economic events typically cause a rise in the correlation of active returns across a variety of manager types, not just quantitative managers. However, quantitative managers' correlations increased particularly markedly during the global financial crisis, peaking in late 2008. Investor risk aversion and a desire for liquidity were among factors heavily influencing market conditions and direction. A common perception is that markets have become more interconnected than they were, say, 10 years ago, with heightened contagion risk. Alpha performance of quant-oriented funds was relatively compelling from 2001-2005, but less so subsequently. Critics have referred to "crowded trades" (from crowded models) in the key components of core quantitative management – value and momentum.

The Guardians has noted that its alpha forecasting approach naturally favours long-short managers over traditional long-only managers, and that systematic market neutral managers tend to earn higher conviction ratings[33] This reflected a philosophy that if an investment manager is considered to have skill, then the fewer constraints and the greater the breadth of implementation (including the ability to short sell stocks), the better the risk-adjusted returns they will be able to generate.

The Guardians' portfolio construction process utilises regression analysis to determine the correlation of the excess return with the Fund's beta, other managers' excess return and various factors to seek persistent biases. This is a valid approach, which strives to identify "true" alpha, and is particularly relevant for market-neutral type strategies where other more subjective methods are not always applicable. However, using past returns to project future correlations can prove problematic, particularly through periods like the global financial crisis. In the case of the Guardians' significant multi-strategy exposures past returns suggested low (or even negative) return correlations to underlying markets/beta and to each other, and few "factors" in common. However, with the onset of the global financial crisis correlations spiked and the systematic strategies generally

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[33] New Zealand Superannuation Fund document : "Active Manager Selection: Overview of Public Market Activities", 5 May 2009

failed to deliver as intended. Furthermore, reliance on past returns can bias selections away from emerging managers with short track records.

We note that market-neutral/multi-strategy managers tend to operate more complex strategies than long only managers. Evaluating them requires more intensive process and deeper subject knowledge given the breadth of alpha levers that can be activated and the related risks (including shorting securities and the management of cash collateral). In internal documentation, the Guardians has noted "we believe that our conviction analysis enables us to objectively evaluate all active managers, regardless of where they are, regardless of their style and regardless of which markets they are operating in". This belief is fundamental to the Fund's decision to progress manager appointments in the multi-strategy space, and while possibly correct must be regarded as one that is challenging to execute.

Mercer notes that there are risks associated with how each style may perform during certain market conditions with certain styles exhibiting heightened correlation of risk and/or return. For this reason, Mercer suggests a portfolio construction approach that is more neutral in its outcomes and results in a greater diversification of investment styles will achieve superior outcomes over the long-term than approaches that are biased towards particular styles.

Furthermore, some excess returns are best captured via fundamental approaches in our view, e.g. thematic investing, deep value strategies focused on turnaround stories, and growth strategies which make qualitative assessment of management's propensity to deploy capital effectively. Evaluation of historic manager performance during market events and over cycles can tell us something about what to expect going forward, but it can only tell us so much. In short, Mercer recommends an approach that enhances overall portfolio diversification.

Recommendation 6.3: The Guardians considers whether greater diversification in manager styles should be more explicitly taken into account in the portfolio construction process. Associated with this is reconsideration of the degree of reliance on quantitative/systematic-based external fund managers for generating alpha (currently relatively extensive).

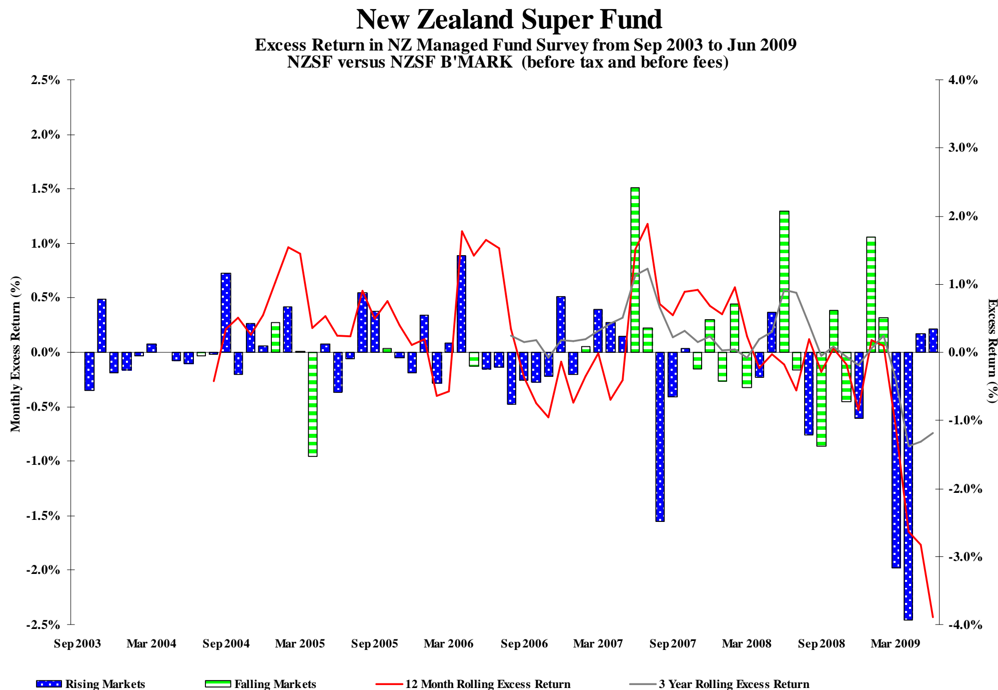
Recommendation 6.4: Investment manager operational due diligence is an area of focus at the Guardians. We note it should be a formalised part of the investment due diligence process prior to a new manager mandate being appointed. This could be achieved through incorporating the investment manager operational due diligence checklist from the document "Public Markets Due Diligence Process" (January 2009) into the Investment Due Diligence Policy, and potentially also the Investment Manager Selection Policy.

6.3 Performance

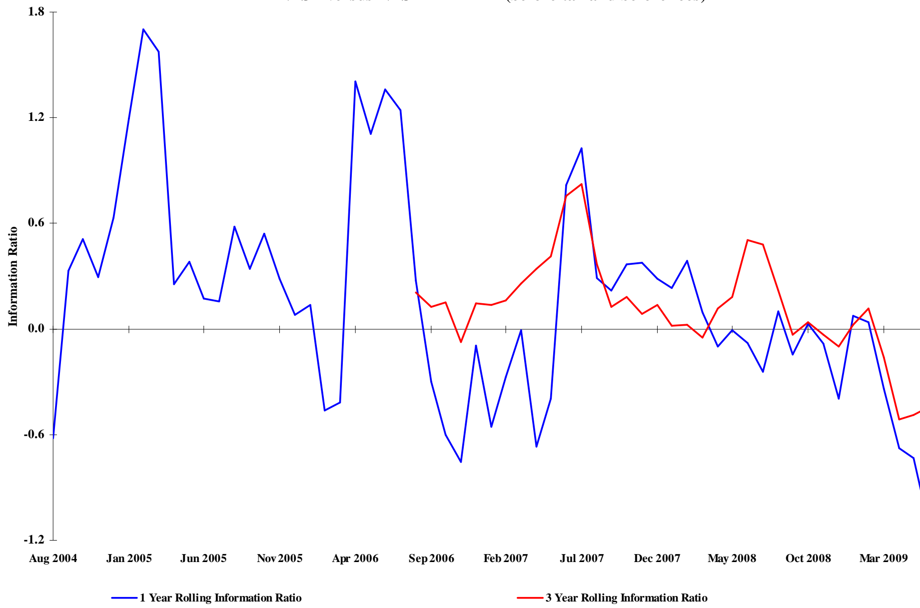
With regard to active manager performance, our approach has been to review performance at a sectoral level before focusing on specific areas where active risk lies and which have contributed most to variations in excess returns.

The Fund's total expected return over the long-term is currently 90 day Treasury bills plus 2.5%, with an overall goal from active management of +0.5% p.a. on a rolling 5 year basis net of all fees. [34] Since inception the alpha has been -0.77% p.a. versus the Fund's benchmark. If dynamic tilting is excluded Alpha has been -0.89% p.a. since inception. In particular, the Global equities sectors (including large cap, small cap and emerging markets) and Multi-Strategies have performed below expectations. New Zealand equities on the other hand have been a positive contributor to alpha since inception. There is currently only one active investment manager in this sector with the remaining funds managed essentially passively in-house.

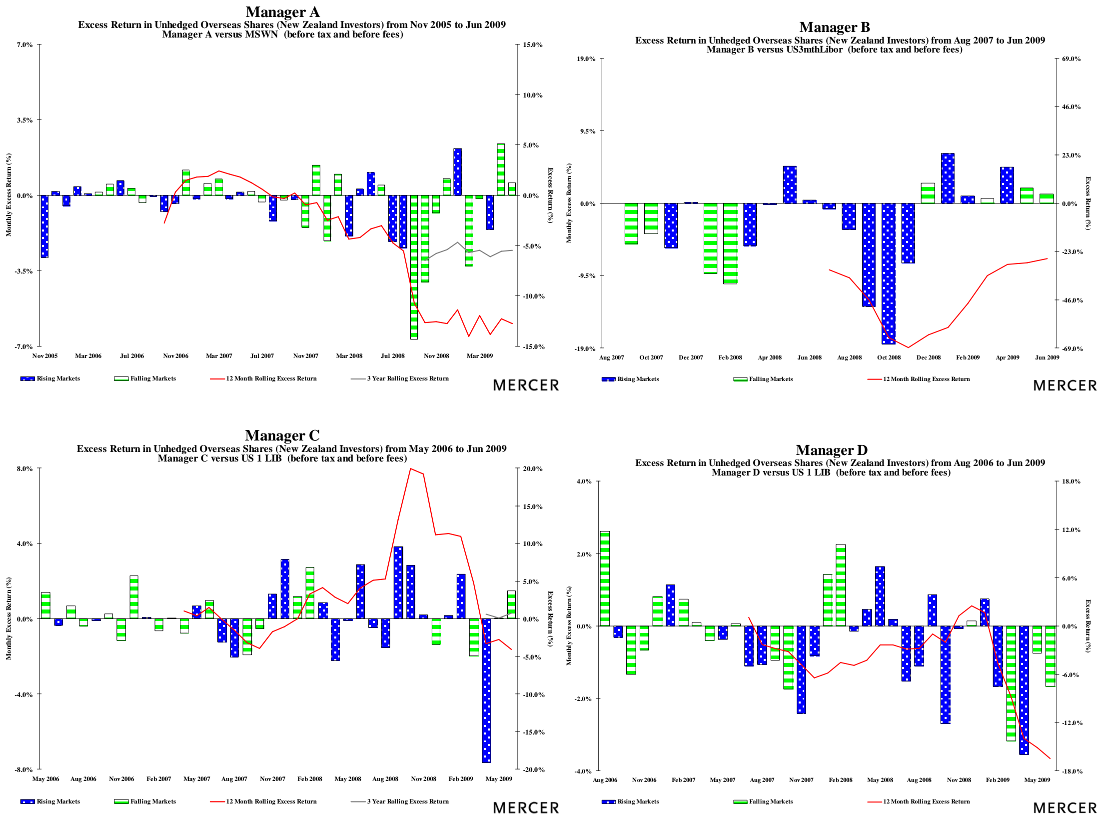
The two charts below show the relative performance of the Fund versus its benchmark over time and the Fund's rolling one and three year information ratios, respectively. It can be seen that the two months of March and April 2009 contribute significantly to the relative underperformance of the fund. This period, and other significant draw-downs in August 2007 and September/October 2008 (both clearly evident in Figure 6.1 are when quantitative processes suffered significantly). The most recent period in March/April saw momentum really suffer as markets bounced very sharply from deep negative territory.

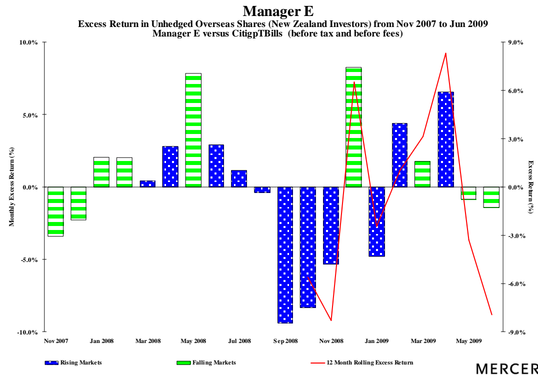


[34] (source: Statement of Intent 2009)

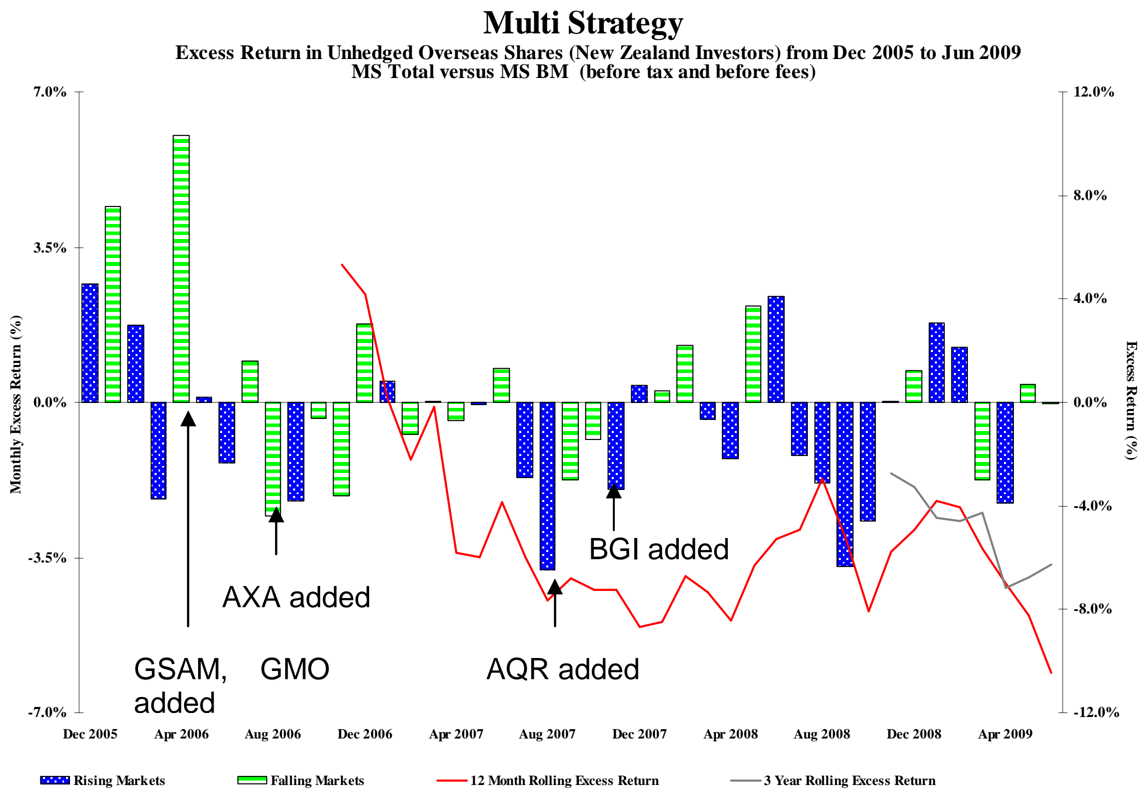


As can be seen in the following graphs on the Multi-strategy or Global Tactical Asset Allocation (GTAA) mandates, the performance relative to benchmarks has been quite volatile and on the whole in negative territory (albeit that relatively short-term performance is not a valid decision-making basis for long-term oriented funds).

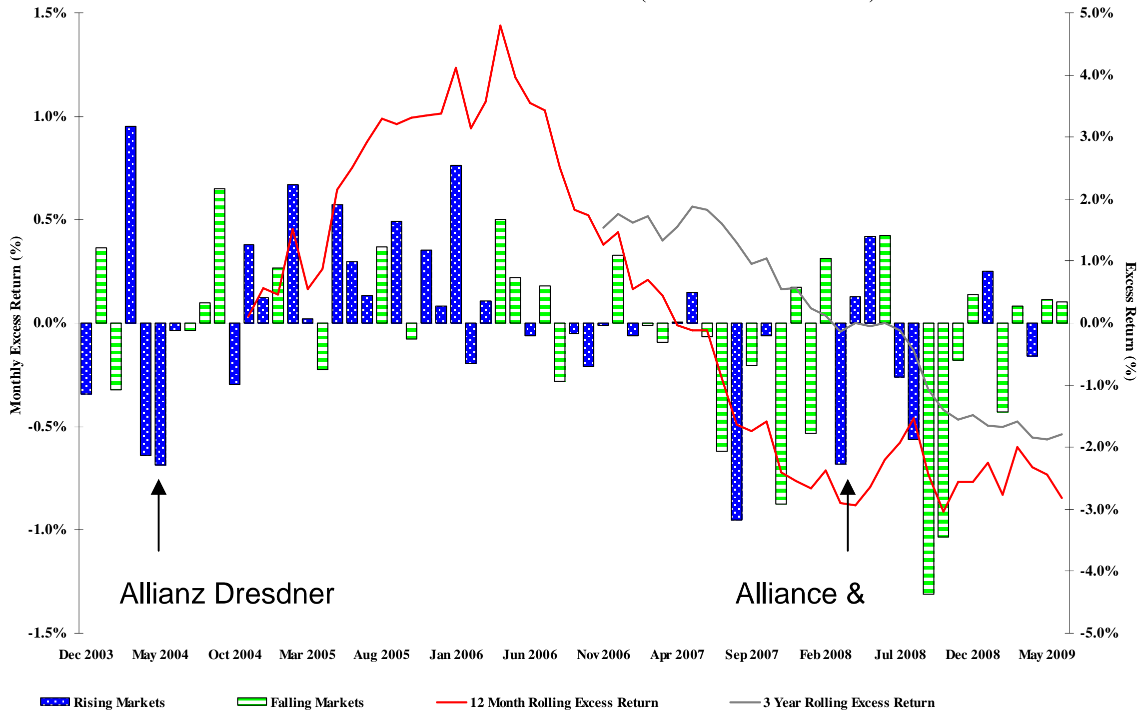


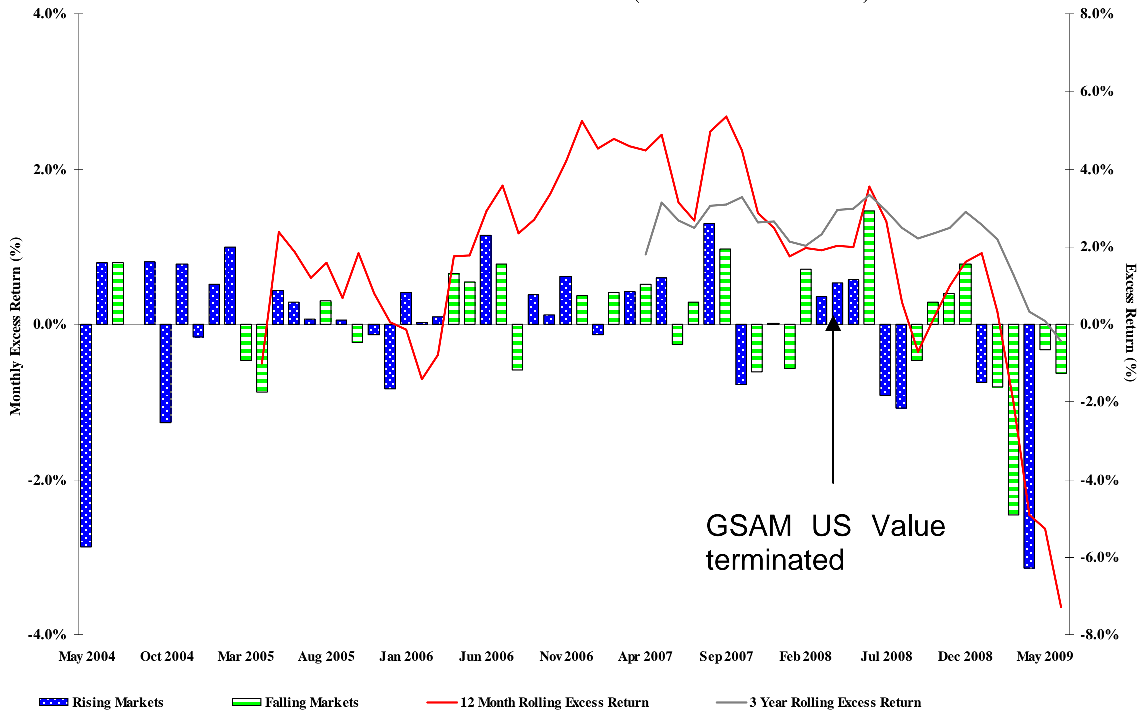


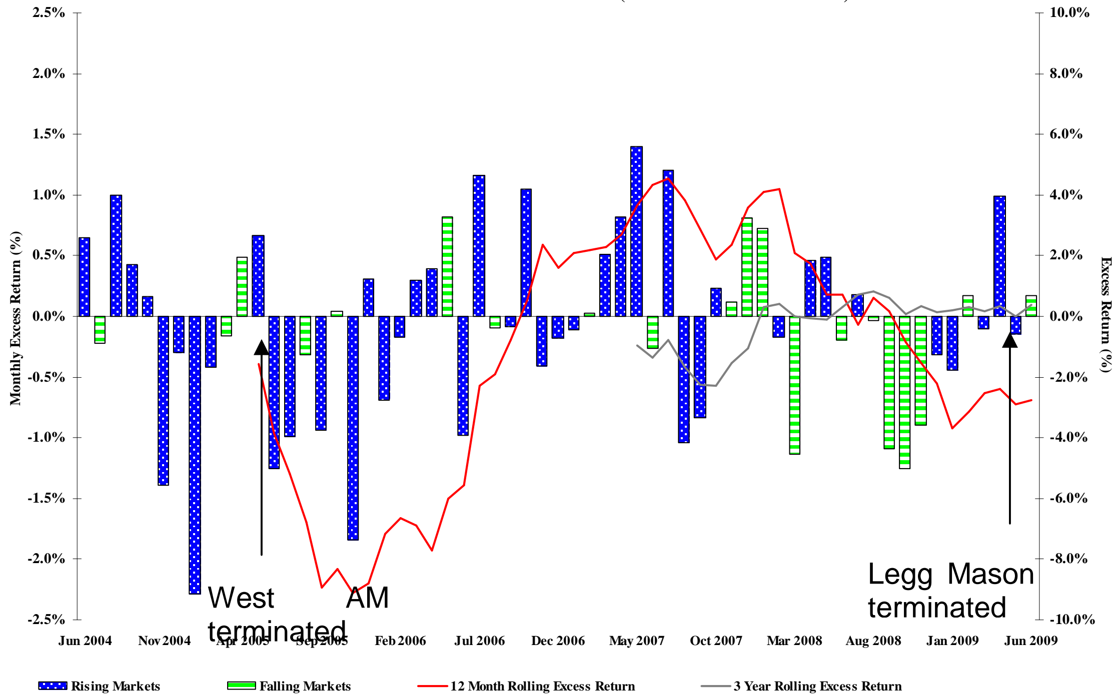
The following chart shows the multi-strategy sector as a whole. The individual managers are all benchmarked against cash in one form or another. Numeric is not included here as it is benchmarked to the MSCI World Index and hence included in Global Large Cap chart.



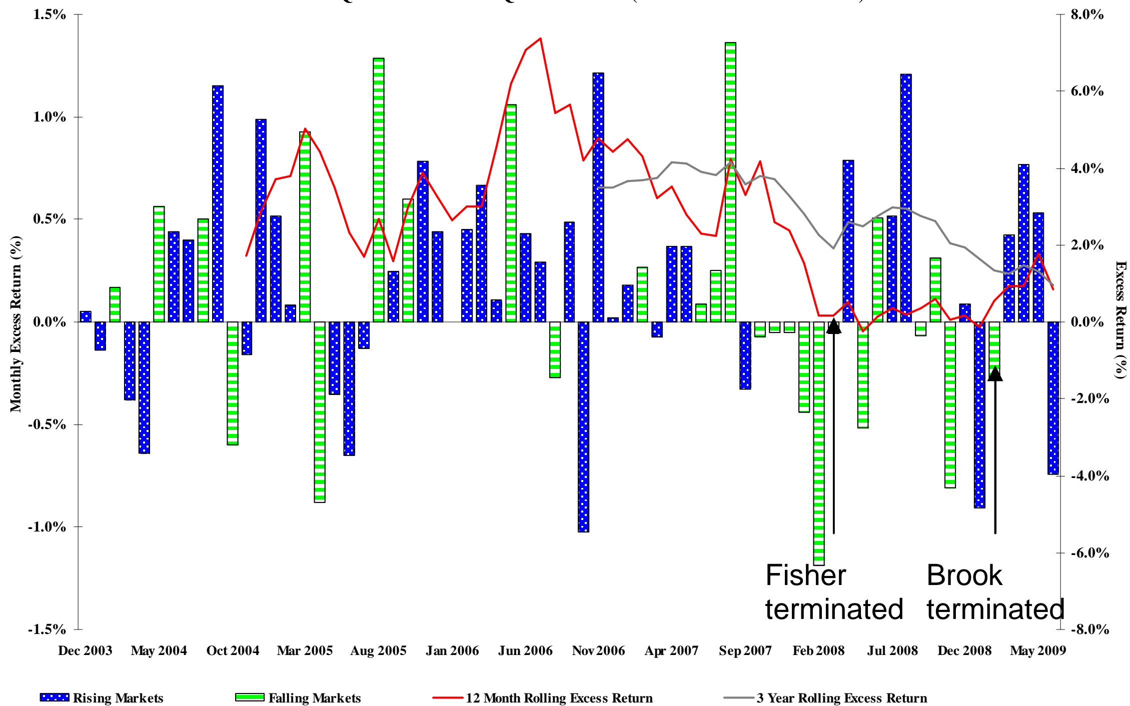
As noted, the following chart on Global Large Cap includes the returns of the Numeric Multi-Strategy mandate as this is benchmarked to the MSCI World Index. In addition, a significant amount of the Global Large Cap exposure is now achieved through synthetic instruments (>60% as at 30 June 2009).


Global Large Cap Equities
Excess Return in Unhedged Overseas Shares (New Zealand Investors) from Dec 2003 to Jun 2009
LARGE CAP versus LARGE CAP BM (before tax and before fees)
Monthly Excess Return (%)
Excess Return (%)
Allianz Dresdner
Alliance &
Dec 2003 May 2004 Oct 2004 Mar 2005 Aug 2005 Jan 2006 Jun 2006 Nov 2006 Apr 2007 Sep 2007 Feb 2008 Jul 2008 Dec 2008 May 2009
Rising Markets
Falling Markets
12 Month Rolling Excess Return
3 Year Rolling Excess Return


Global Equities Small Cap
Excess Return in Unhedged Overseas Shares (New Zealand Investors) from May 2004 to Jun 2009
SMALL CAP versus SMALL CAP BM (before tax and before fees)
Monthly Excess Return (%)
Excess Return (%)
GSAM US Value
terminated
May 2004 Oct 2004 Mar 2005 Aug 2005 Jan 2006 Jun 2006 Nov 2006 Apr 2007 Sep 2007 Feb 2008 Jul 2008 Dec 2008 May 2009
Rising Markets
Falling Markets
12 Month Rolling Excess Return
3 Year Rolling Excess Return



Following termination of Fisher Funds Management and Brook Asset Management, some of the allocation to local equities was managed passively. AMP Capital Investors remains as an appointed active manager.



The Table 6.1 highlights the alpha and information ratio of the different sectors since inception of that sector.

Table 6.1 Active manager statistics

Sector	Alpha (% p.a.)	Information Ratio	Inception
Global Large Cap	-0.3	-0.2	Nov 2003
Global Small Cap	0.0	0.0	May 2004
Emerging Markets	-1.2	-0.4	Jun 2004
NZ Equities	2.1	1.0	Dec 2003
Multi Strategy	-2.3	-0.3	Nov 2005

Does the above track record mean that the Guardians should refrain from active management in public markets and invest passively? Mercer acknowledges that selecting successful alpha-generating managers is not a straightforward exercise. However, over the long-term, a properly implemented active management strategy can contribute positively to an investor's return in many asset classes, based assuming that investors have the governance and process discipline to be able to select skilful managers.[35] There will always be periods where either active management generally under performs (such as during the global financial crisis) or where particular managers underperform for specific reasons. To benefit from active management requires a long-term view and the conviction to remain with it through challenging periods like the last two years.

While we have highlighted various strengths and possible weaknesses, and generally regard the manager selection procedures followed at the Guardians as relatively rigorous, we cannot be definitive in stating whether the Fund stands a reasonable chance of adding value via active management. The success or otherwise of investment decisions is typically determined over long periods. Very few investment returns are guaranteed or without risk. In terms of the Fund's investment environment , we regard this as being succinctly captured in one of Mercer's own guiding investment principles, reproduced below:

> *"Investors who of necessity must strike a balance between short and longer term objectives face an additional constraint not encountered by those who are able to focus exclusively on the long-term. Whilst the former group can successfully meet their own set of objectives, their long-term returns are likely to trail those of the latter group. This is because long-term investors are better able to structure their portfolios to take advantage of some of the risk premia available e.g. equity and liquidity premia, and to implement their decisions without undue concern about possible short run adverse consequences. It is incumbent on investors who assert they take a long-term perspective not to use short evaluation periods to draw conclusions to the success or failure of the portfolio structure or the managers used for its implementation on the basis of short-term performance. A long-term perspective which actually consists of a series of quarterly or annual evaluation/decision periods will not achieve the superior long-term returns of a genuinely long-term perspective."*

[35] Mercer's own experience in this area is that over the long term our A/A- rated managers have outperformed in the majority of asset classes (before fees and transition/monitoring costs).

7

7 Hedging Policy

Investment in overseas assets gives an investor the option of holding the asset on an:

- Unhedged basis, whereby movements in the domestic currency exchange rate affect the valuation, or
- (Currency) hedged basis where the hedging arrangement, in combination with the foreign asset lead to returns that are not as affected by currency movements.

The most common form of currency hedge contract is the forward exchange contract. New Zealand interest rates have been higher than most other developed countries for most of history. As such, a forward exchange contract can yield a positive return over time, due to the interest rate differential.

The view as to the extent and direction of the interest rate differential relative to the weakness in the currency has a direct bearing on the hedging policy. If the interest rate differential proves to be greater than the extent of experienced NZ dollar currency weakness, a gain is made by the investor.

This section addresses two questions:

- Is the foreign exchange hedging strategy adopted by the Guardians prudent and consistent with best practice?
- Was an appropriate process followed for determining the hedging strategy?

7.1 Guardians' approach

Since inception, the Guardians has maintained a high degree of benchmark currency hedging (a maximum of 80% of the value of the total New Zealand Superannuation Fund (the Fund)) implemented though a partial hedge on the foreign currency value of listed global equities and property. The benchmark policy position was raised to a maximum of 90% of the value of the Fund.

The Guardians' policy towards exposure to foreign currencies was changed at the strategic level in two steps since 2003. The 2003 strategic position determined a

foreign exchange exposure of 20%, which was lowered to 17.5% in 2004 – en route to a formal move to 10% in 2007. These were in line with internal 2004 research which was reviewed externally in 2004.

Mercer is supportive of the Guardians' view that active management of its foreign exchange exposures can add value and that there is scope for managing periods when policy ratios are being altered upwards or downwards, with some judgment as to the then value of the New Zealand dollar. Similarly, Mercer supports including the New Zealand dollar into the strategic 'tilting' framework in line with existing policy.

Mercer notes that in 2007 there were law changes in respect of the taxation of overseas equities. The introduction of the Fair Dividend Rate (FDR) regime meant that financial derivatives such as Forward Exchange Contracts were to be taxed on a different basis to assets taxed under FDR. As such, an expressed level of currency hedging differs depending on whether it is expressed on a before-tax or an after-tax basis.

The Guardians' currency hedging takes into account its particular tax status and hence consideration is made of returns net of foreign taxes and fees, and before NZ taxes.

We understand that the Guardians is seeking a law change to become a tax exempt investor. For tax exempt investors, currency hedging is the same on a before- or an after-tax basis.

7.2 Overview of currency hedging strategies

We note the Guardians has approached investment consultants and policy agencies such as the Reserve Bank of New Zealand and fund managers' personnel about this issue and that there are different views in the marketplace as to what constitutes the ideal level of currency hedging. Mercer itself has a different stance on currency hedging than that currently adopted by the Guardians. Set out below is a brief summary of the differences in approach and rationale on currency hedging.

The Guardians' 2004 internal report "NZSF's Currency Exposures" argued the case for a higher degree of hedging (from 80% to 90%[36]) on the basis of an expected sustained forward exchange premium for holding New Zealand dollars (by NZ based investors). This assessment was based on a long-term view around expectations on New Zealand's short-term interest rates relative to global short-term interest rates.

The Guardians has used a consistent set of modelling assumptions in this context. It was implicitly assumed that the premium for hedging the New Zealand dollar (by NZ based investors) would not be offset over time by a corresponding depreciation of the NZ dollar.

The alternative case can also be made that the expected returns and the expected volatility will be the same for unhedged as for hedged global equities over the long-term, albeit with material differences in the short-term. This arguments note that forward points are important, but not all-important, and that the global Cash markets

[36] These percentages relate to the proportion of the total Fund that is either currency hedged or a NZ asset.

are telling us something about the real structural risks to the New Zealand Dollar (even if the judgements frequently appear to be too pessimistic).

In the long-term therefore, an investor using this line of argument ought to be indifferent to whether they are hedged or unhedged. However, as the New Zealand Dollar frequently varies much more wildly than the forward points on offer, the strong correlation over long periods breaks down over short periods. Accordingly, the actual time paths of hedged and unhedged returns will vary significantly. In other words, it is expected that there is little correlation between hedged and unhedged global assets in the short-term.

This argument concludes that to minimise short-term volatility, the benchmark strategic foreign currency exposure (for global equities) should be neither 100% hedged nor 0% hedged after tax. Under current Mercer policy, the appropriate benchmark foreign currency exposure for the Fund would be greater than 10% and possibly greater than 20% (being some 50% of the Fund's global equities allocation).

7.3 Mercer's Assessment

Mercer's view is that the risk return benefits from being fully hedged and fully unhedged are the same over the long-term. However, due to low correlations between these two positions in the short-term, investors are advised to diversify their position. Mercer believes that the Guardians could reduce its short-term volatility by reducing its hedging levels, and therefore Mercer's preferred approach would be for the Fund to have a higher level of foreign currency exposure than the current pre-tax target of 10%.

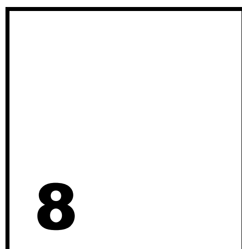
However, there is no consensus of 'best practice' on this issue in the market place, and the topic is one which generates an enormous amount of debate within the industry. The approach adopted by the Guardians is not at the extreme ends of market practice. Furthermore, the current policy stance may be classified as reasonable given that the process used by the Guardians involved receiving professional advice from more than a single source and acting upon that advice.

In addition, the Guardians' approach of adjusting the exposure according to market cycles is appropriate as a well-executed strategy has the potential to add value.

Mercer considers that the Guardians adopted an appropriate process for determining the hedging strategy. Advice was received and alternative views put forward, and debated widely within the organisation over the Review period. Currency hedging policy remains (rightly in our view) under continual review by the Guardians, both in a strategic sense, and in a tactical sense.

The issue of what is an appropriate benchmark currency hedging ratio is likely to continue to receive attention by the Guardians and Reviewer alike. Accordingly, a fresh research effort would provide the Board with an updated set of views to build its own confidence on the appropriate position.

Recommendation 7.1: There is no generally accepted best practice in the marketplace in terms of currency hedging. Mercer's and the Guardians' hedging positions differ in that the Guardians' approach to hedging policy has more currency hedging, although not to an extreme level. A considered review process formed the Guardians' position some time ago. Mercer recommends a fresh research effort to provide the Board with an updated set of views.



8 Governance and decision-making arrangements

This purpose of this section of the review is to assess the governance arrangements of the Guardians.

8.1 Approach

A multitude of standards and guidelines exist for corporate governance generally. However there are no definitive best practice standards or principles that apply to investment governance.[37] In the absence of well defined global best practices surrounding investment governance arrangements, we used certain governance principles displayed by institutional investors that are seen as operating at best practices. The principles are as follows:

- Clear delineation of roles and responsibilities between the Board and management.
- Governance structure and decision-making processes provide for timeliness in decision-making and effective oversight of management.
- Board accountability is clear and appropriately documented.
- The Board operates independently of Government interference.
- The Board adopts an enterprise-wide approach to risk management and processes to deal with operational risk.

[37] The International Working Group of Sovereign Wealth funds (2008) “Generally Accepted Principles and Practices (Santiago Principles) provide some guidance however these relate mainly to the broader legislative framework which is outside the scope of this review. The New Zealand Government and the Guardians has a high level of compliance with the Principles.

- Integration of the governance functions of risk management, compliance and audit.
- The Board and management have transparent conflict of interest handling processes.

In completing our assessment we have placed some reliance on the assessment of governance undertaken by the Office of the Auditor General (OAG) in its 2008 review.

8.2 Governance framework

The Guardians, as an autonomous Crown entity, is subject to the regulatory guidelines relating to Board members under the New Zealand Superannuation and Retirement Income Act 2001 (the Act). Subject to section 56 of the Act, Board appointments are made by the Governor-General through recommendations from the Minister of Finance, who in turn seeks recommendations from an independent nominating committee. The external nominating committee comprises not less than four persons with proven skills or relevant work experience that enables them to identify candidates for appointment to the Board who are suitably qualified.

In keeping with principles of good governance, the Guardians maintain operational independence by operating at arm's length from the Government, whilst remaining accountable to it.

The Guardians has developed a Board Charter that encompasses a corporate governance framework, defining the decision-making structure and the mechanisms used to manage the affairs and activities of the Guardians. The measures adopted in the Charter are incorporated as part of the annual Board performance assessment process.

Clear separation between governance and management is a key principle applied by institutions that aim to establish best practice governance structures and arrangements. Governance in such institutions involves setting objectives and policies (and parameters); reviewing the organisational capacity to deliver on those objectives; and holding management to account for the delivery of them. [38]

The Board Charter separates the roles of the Board and management to ensure appropriate accountability and timeliness of decision-making. The role of the Board includes oversight of the management decision-making process, including decisions of strategic importance to the organisation. One of the Board's functions is to delegate responsibility to the Chief Executive Officer (CEO) and management, through a formal set of policies and procedures. The procedures ensure accountability throughout the organisational chain. . The CEO and other executives are responsible for implementation of the investment policy, day-to-day leadership and management.

The Guardians strengthened its decision-making structure and delegation of roles in accordance with the recommendations of the OAG 2008 review. As per the

[38] One way of implementing this principle is to dictate a clear separation between the objectives of an organisation (the "ends") and the way those objectives are met (the "means").[38] As not all means are acceptable, the Board limits the means until there is no ambiguity as to what those limits are. Within the restrictions of limited means, management is free to operate. This framework provides a useful discipline for the separation of governance and management.

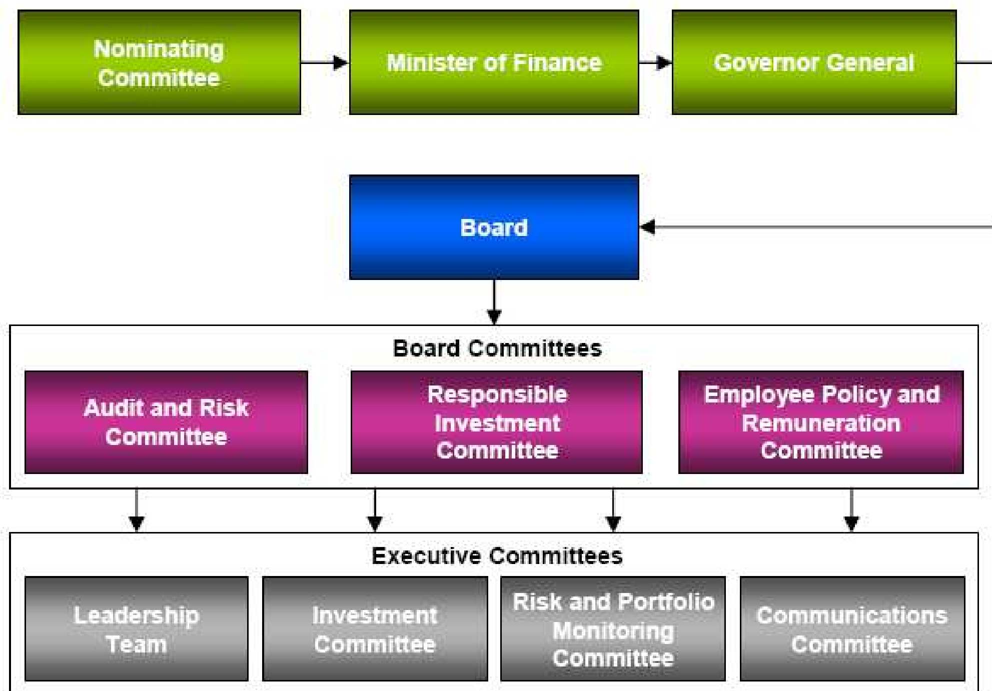
recommendations, the Guardians reviewed its approval process for investment activities to ensure that the responsibilities for investment decisions were appropriately delegated to management.

The Guardians also made substantive changes to the Delegations and Sub-Delegations Policy in 2008, including consolidating the delegations that were recorded in other policy documents into one delegation document, in line with the OAG's recommendations.

8.3 Governance structure

The Guardians has in place a governance structure that includes the oversight of the Guardians' activities through a number of committees as shown in the following diagram.

Figure 8.1: Guardians' Governance Structure



The Board's governance framework for the Guardians includes three Board Committees that oversee the Guardians' operations. These Committees assist the Board deliver on its obligations to the Crown through informing Board debate and decision-making. The Board Committees consist of the following:

- Audit and Risk Committee
- Responsible Investment Committee
- Employee Policy and Remuneration Committee

The Board Charter specifies the Terms of Reference for the Committees and details the objectives, scope and responsibilities of the Committees.

The Board and its Committees are, in turn, supported by four Executive Committees, comprising experienced senior management personnel who provide management capability and oversight. The Executive Committees consist of the following:

- Leadership Team
- Investment Committee
- Risk and Portfolio Monitoring Committee
- Communications Committee

The use of Executive Committees allows the Board's policies and strategies to be executed in a timely manner and within the parameters of delegated authority provided by the Board.

The Guardians adopted a number of improvements to its governance arrangements in response to the OAG Report (2008) recommendations including:

- To update the Terms of Reference documents for its Board and Executive Committees to better reflect corporate governance standards promulgated by global regulators.[39]
- In relation to the Audit and Risk Committee, to document its composition, minimum experience required to be a member of the Committee, the frequency of reviews of the risk management and compliance systems, and the delegations of responsibilities to cover all material risks.
- The Terms of Reference for the Board were updated to include the range of skills and qualifications of the Board members, requirement for a formal induction training program for the Board members, adherence to conflicts of interest policies and compliance with all internal policies and procedures.
- To assess the Board's current and future capabilities by initiating a regular independent assessment of the Board's combined capability relative to its international peer groups. Accordingly, the Guardians established a framework to address the Board's educational requirements, including the Board Education Calendar, Board Strategy Day, Biennial Board Reference Group, Board visits to peer funds and Board attendance at relevant conferences.
- The Communications Committee's Terms of Reference were updated by the Guardians to include responsibilities associated with the approval of external communications and strategy for stakeholder and media relationship management.

8.4 Risk management

The Board exercises its risk oversight function through the Audit and Risk Committee. This Committee is responsible for overseeing the New Zealand Superannuation Fund

[39] Financial Reporting Council of the United Kingdom, *The Combined Code on Corporate Governance*; Monetary Authority of Singapore, *Combined Code of Corporate Governance*; New Zealand Securities Commission, *A Handbook for Directors, Executives and Advisors*.

(the Fund)'s internal and external risk management activities, managing relationships with internal and external auditors, reporting compliance with operational standards and disclosing information on all material risks in the annual report.

The management of the day-to-day reporting of operational and business risks is the responsibility of the General Manager Operations. At the same time, the CEO, the General Manager Finance and the General Manager Operations, work closely with the Audit and Risk Committee to report on the Guardians' activities and the Fund's financial condition.

The Guardians has recently appointed an in-house internal auditor, who reports to the Audit and Risk Committee and oversees the risk management processes and activities of the organisation. While this is a relatively new appointment, and its effectiveness can only be assessed in due course, we consider this appointment positive.

In response to the OAG's recommendations to strengthen the Guardians' risk management process, the Guardians has established the Risk Management Policy and Risk Management Framework (RMF), which was approved by the Audit and Risk Committee (as shown in Figure 8.2.) The RMF was developed as a tool to ensure that risk points and activities are identified and evaluated; that controls and risk management activities are developed; and that appropriate monitoring and re-evaluation is conducted in a timely manner. The RMF is aligned with the Fund's strategic and operational plans, together with expectations of external parties including the Crown's. The Leadership Team formally reviews the RMF on a quarterly basis.

Underpinning any RMF should be an effective risk management plan that clearly identifies, assesses and prioritises risks and identifies the systematic processes that are designed to manage material risks facing the organisation. This involves drilling down to the business unit level, ensuring clear accountability for risk management processes, and demonstrating the links between identified risk points and associated activities, and links between risk management measures and service level requirements, policy development and the performance assessment of staff, including executives.

In line with the OAG's recommendations, the Guardians approved an Internal Audit Charter. The internal audit plan for 2009/10 targets high risk business processes as identified in the RMF. The internal audit plan includes a service level agreement with the internal service provider and a three-yearly peer review of the services provided to them.

Reporting and monitoring of risks is further supported by the Code of Conduct Policy, including the conflict of interest procedures, which incorporate individual and collective accountability processes. The Code of Conduct Policy covers the Board and staff in relation to ethical and professional conduct, including whistle-blowing procedures for reporting breach of law and wrongdoing by the Board or employees. It also incorporates procedures for securities trading and Committees' reporting obligations and compliance with the Guardians' regulatory obligations, internal policies and procedures.

As the Guardians seeks to focus more attention on private market opportunities in New Zealand, the potential for real or perceived conflict of interest to emerge at both the Board and management level will likely increase. This would suggest extra vigilance will be required to ensure that conflict interest registers are maintained up to date and processes are appropriately followed to mitigate reputational risks.

An assessment of compliance by the Guardians with the relevant policies and procedures as well as compliance by external investment managers is discussed in Section 11.

Figure 8.2: Guardians' Risk Management Framework

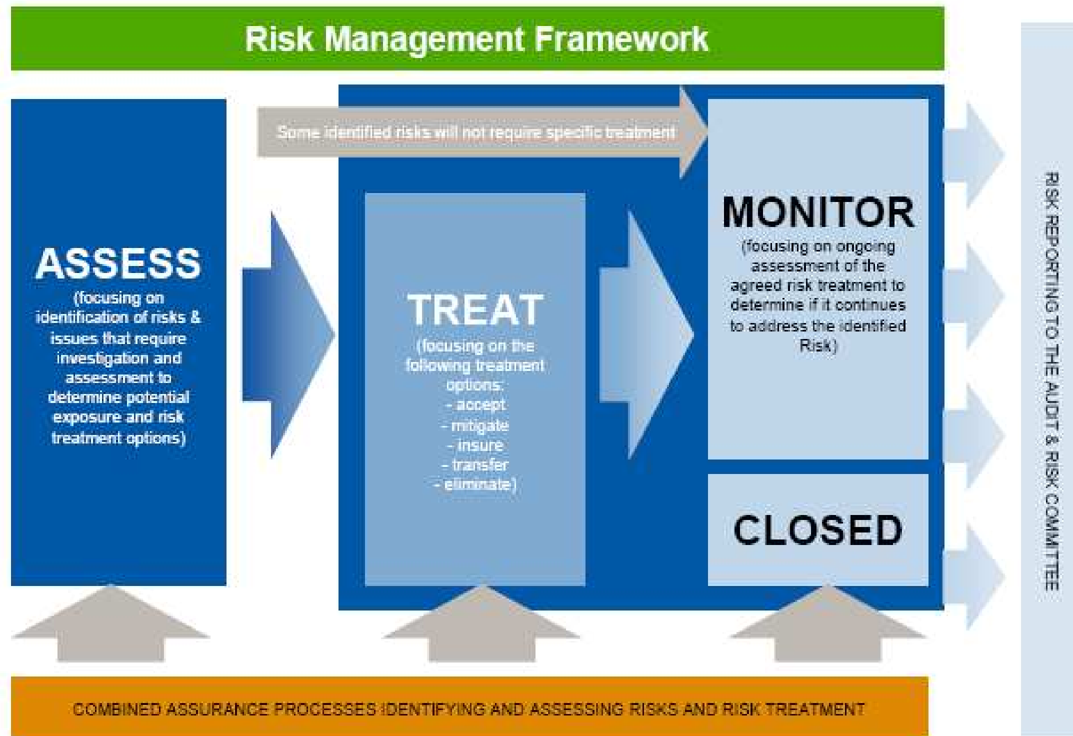


Table 8.3: Guardians' Policy documents

1. Statement of Investment Policies, Standards and Procedures	20. Investment Manager Monitoring Policy
2. Responsible Investment Policy, Standards and Procedures	21. Investment Due Diligence Policy
3. Risk Management Policy	22. Investment Manager Selection Policy
4. Delegations and Sub-Delegations Policy	23. Sensitive Expenditure Policy
5. Human Resources Policy	24. Travel Policy
6. Advisor Selection and Appointment Policy	25. Fraud Policy
7. Direct Management Policy	26. Information Management Policy
8. Investment Manager Monitoring Policy	27. Information technology Policy
9. Investment Due Diligence Policy	28. Business Continuity Management Policy
10. Investment Manager Selection Policy	29. Code of Conduct for Board
11. Sensitive Expenditure Policy	30. Code of Conduct for Employees
12. Travel Policy	31. Communications Policy
13. Statement of Investment Policies, Standards and Procedures	32. Events Policy
14. Responsible Investment Policy, Standards and Procedures	33. Internal Audit Policy
15. Risk Management Policy	34. Internal Incident & Error Policy
16. Delegations and Sub-Delegations Policy	35. Media Policy
17. Human Resources Policy	36. Policy Guideline Policy
18. Advisor Selection and Appointment Policy	37. Procurement Policy
19. Direct Management Policy	38. Project Management Policy
	39. Securities Lending Policy
	40. Sponsorship Policy
	41. Tax Management Policy
	42. Website Content Policy

8.5 Documentation, monitoring and reporting

The Guardians has documented its internal policies and procedures for effective governance of the Fund. Table 8.1 lists these documents.

The reporting received by the Board is critical to its role of maintaining appropriate oversight of the organisation's activities.

The Guardians has developed a Board information tool, referred to as the "Dashboard", to cover performance, compliance, progress on strategic initiatives and development of its people.

The Board receives investment reports from management on a quarterly basis. These detailed reports focus on how the use of the risk budget serves to meet the Board's objectives. The Board has established decision-making risk zones, with each zone carrying a certain level of delegation and required disclosure. By way of example, in the green zone management is free to act at its discretion; in the amber zone it must refer matters to the Board for approval; while the red zone is a 'no go' area. The zones referred to are specific to the Single Asset Limits approved by the Board in 2008.

The quantity and extent of reporting to the Board has grown considerably over time, as the complexity of the Fund's operations has grown. The Board in September 2009 reviewed the dashboard and agreed to changes that have the effect of reducing the frequency of some reporting, reduce the details of some fund reporting and increase focus on progress against investment strategy.

We note that the reporting provided to the Board does not include investment performance data that breaks down and attributes the total Fund performance to its sources although we understand that such reporting is being planned. In addition to market returns, attribution data should be provided in line with the levers that the Guardians uses for creating excess return, namely:

- Investing in private markets
- Active management selection
- Strategic tilting
- Looking for implementation efficiencies

Further refinement of the Board reporting is necessary to ensure that the Board receives better quality material and is not overloaded with information. The test for whether the information should be included in the dashboard is whether it is directly relevant to the Board's requirements and obligations. For that reason the information should focus on outcomes rather than management activities.

8.6 OAG Governance Recommendations

Table 8.2 summarises the recommendations made by the OAG on governance matters and the response by the Guardians.

Table 8.4: Guardians' Implementation of the OAG Governance Recommendations

No.	OAG Recommendation	Guardians action
1	Update the terms of reference documents for their Board committees and executive committees to better reflect governance standards promulgated by global regulators.	**Completed.** The terms of reference for board and management committees have been updated.
2	Adopt a formal Board Charter, make it publicly available, incorporate the measures adopted in the Charter as part of their annual Board performance assessment process, and use the Charter to guide their external reporting. (High priority Recommendation).	**Completed.** Charter approved by Board and is on the website.
3	Update their Risk Management Framework so that relevant risk management activity is identified in important areas of the operations. This update should include preparation of risk plans, incorporating risk management measures into executive performance assessment, and linking risk to service level requirements and policy development. (This is a high priority Recommendation).	**Completed.** The Risk Management Policy and Risk Management Framework (RMF) have been approved by the Audit and Risk Committee (a Board committee). The RMF's scope is organisation-wide covering both the Fund and the Guardians. The RMF is aligned with key Guardians strategic, operational and project plans, together with the expectations of external parties such as the Crown. The RMF is reviewed at least quarterly by the leadership team and the Audit and Risk Committee to ensure the RMF reflects assessment of risks to the Guardians and the Fund.
4	In their 2008/09 internal audit plan, target high-risk processes as identified by their Risk Management Framework for assurance on a set timetable (for example, every two years).	**Completed.** The development of the internal audit plan for 2009/10 will consider the high risk business processes as identified by the RMF.
5	Further develop and refine standard reporting to support the separation of Board and management responsibilities. This should include assessing management decision-making within predefined parameters approved by the Board.	**Completed.** A Board Dashboard has been developed with covers performance, compliance, progress on strategic initiatives and development of our people.
6	Assess the scope of the Board's current and future capability by initiating a regular independent assessment of the Board's combined capability relative to appropriate international peer organisations, and by conducting exit interviews as members retire from the Board. (High priority Recommendation).	**Completed.** A framework for future Board education has been approved, the framework consists of the following elements: a Board education calendar, Board Strategy Day, Biennial Board Reference Group, Invited speakers, Board visits to peer funds and Board member attendance at relevant conferences. An exit interview is being arranged for a recent departure from the Board.
19	Prepare policies in relation to risk management, training and development, external provider management processes, and legal compliance.	**Partially completed.** The Risk Management Policy and RMF have been approved by the Audit and Risk Committee. The development of an out-source policy and legal compliance policy is expected to be completed by December 2009. Policies regarding training and development are part of the Human Resources Policy.
20	Link their governance processes and reporting to the principles of corporate governance promulgated by the New Zealand Securities	**Completed.** This recommendation was adopted in full by the Guardian for the 2008/09 Annual Report. In section 7 of the 2008/09 annual report

No.	OAG Recommendation	Guardians action
	Commission.	(pp 36-44) we reported on how the Guardians observed each of the corporate governance principles from the Securities Commission Corporate Governance in NZ – Principles and Guidelines document.
21	Update their Delegations and Sub-Delegations Authorities Policy, including consolidating delegations currently recorded in other policies and governance documents into one Delegation of Authority Policy.	**Completed.** Substantive changes to the Delegation and Sub Delegations Policy were made in June 2008 which incorporated the changes recommended by the OAG with further changes in June 2009 as part of the development of the Direct Management policy.

8.7 Mercer's assessment

Mercer's assessment is that the Guardians has governance arrangements of a high standard including:

- Operational independence from government;
- A clear delineation of responsibilities between the Board and Management;
- Appropriate structures and processes for monitoring performance;
- Proper conflict management procedures.; and
- Organisation-wide governance of risk management .

Mercer considers monitoring of the internal management practices and controls would be enhanced through continued development of the following:

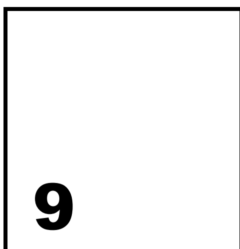
- inclusion of investment performance attribution in regular reporting to the Board. In addition to market returns, attribution data should also be provided in line with the levers that the Guardians adopts for creating excess return, namely: investing in private markets; active management selection; strategic tilting and looking for implementation efficiencies.
- improving the focus of regular reporting to ensure that the Board is receiving better targeted, and not excessive, information, so as to enable the Board to properly monitor the performance and risk management of the Fund.

Rationalisation and centralisation of the Board's policies (30 in total) would assist with gaining organisation-wide understanding and better ensure that Board policies and standards are followed. We understand that the Guardians is currently undertaking such a rationalisation process.

The effectiveness of the implementation of risk management and compliance activities at an operational level by the Guardians is addressed in subsequent Sections of this report.

Recommendation 8.1: Performance attribution data to be included in regular reporting to the Board. In addition to market returns, relevant attribution data should be provided

in line with the levers that the Guardians adopts for creating excess return, namely: investing in private markets; active management selection; strategic tilting; and looking for implementation efficiencies. Further, reporting of projections of year by year private equity forward commitments of capital against the Fund's liquidity situation should be included in Board reporting and would enable better monitoring by the Board.
Recommendation 8.2: Regular reporting to the Board should be rationalised and better focussed on the Board's responsibility to monitor Management's performance against its objectives. It is noted that the Guardians' September 2009 board meeting received recommendations on amending the contents of the Board dashboard report and these are planned to be implemented.



9 Organisation and strategy

The purpose of this section is to assess organisational structure of Guardians against 'best practice'. In particular, the terms of reference required the examination of the following questions:

Is the organisational structure of the Guardians appropriate for the outputs the organisation is trying to achieve?

Does the Guardians have an appropriate balance between its own in-house investment management advice and outsourced advice?

The focus of this Section is on internal management functions. Other sections of this report deal with external investment management, namely Section 6 Portfolio Construction and Manager Selection, and Section 13 Investment Manager and Custodian Monitoring.

9.1 Approach

There is no one organisational design appropriate to all investment funds. One way of characterising different operating models relates to the degree of reliance on internal expertise relative to out-sourcing to external service providers. The appropriate organisational structure should be tailored to particular characteristics of the relevant fund and its operating environment. Considerations include:

- Investment strategy – more sophisticated investment strategies necessitate a higher level of investment governance and require access to deeper investment expertise, whether it is provided internally or externally.
- Competitive market of third party providers – a competitive market of third party service providers may provide the opportunity to secure high quality and cost effective services from external providers who have scarce specialist expertise and the benefit of economies of scale. Unless services are a core competence or integral to the fund's comparative advantage, it may be more efficient to source such services externally (just as most businesses would not seek to develop PC software packages in-house, but opt to source their needs more effectively from Microsoft). For similar reasons, many funds would normally

outsource global investment management to external management firms, rather than building extensive internal capabilities.

- Comparative advantage – comparative advantages of an institutional investor can indirectly influence the organisational design through its implications for the development of the investment strategy, and directly by influencing the in-sourcing/outsourcing decision.

9.2 The Guardians' organisational structure

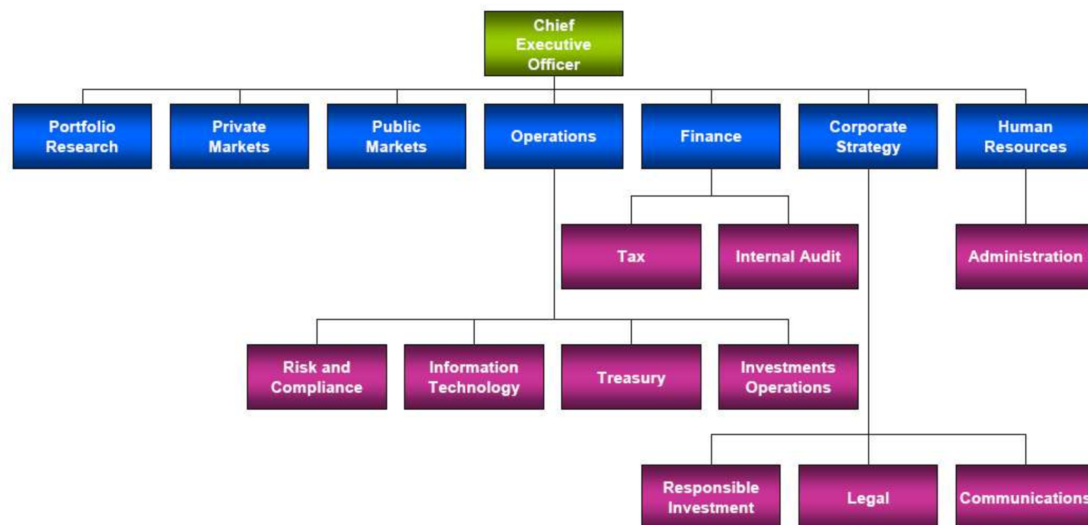
According to the Guardians' Strategic Plan FY 2009 - 2011, the Guardians' core task is

> *"to develop and execute an investment strategy which takes full advantage of the New Zealand Superannuation Fund (the Fund)'s characteristics. This strategy will be implemented largely through relationships with external service providers. This strategy involves us seeking to utilise external expertise and services where they can be delivered to an acceptable standard in a cost-effective manner. To achieve this we need competence in external service provision selection and monitoring. We will invest in internal capacity where we can provide the service to a sufficient quality more cost effectively on a sustainable basis. The availability, quality, and cost of an outsourced service will be a benchmark".*

The Guardians has generally chosen to outsource its investment management given its global investment focus and the existence of highly competitive external market of investment managers to choose from. To assist with managing agency costs associated with outsourcing to external investment managers, the Guardians has sought to build deep internal investment and operational expertise. Apart from investment management which is almost exclusively outsourced, the Guardians has opted for an operating model that errs on the side of sourcing services internally. The primary motivation for this model is to create greater control and organizational alignment with the objectives of the Guardians.

As shown in Figure 9.1, the Guardians has established separate teams with specialised skills and capabilities to meet its investment strategy objectives.

Figure 9.1 Guardians' organisational structure



The Fund's investment in diverse asset classes, including international investments in complex private markets, requires specialist investment expertise, techniques and research. Decisions to outsource investment management to external managers are measured against the cost- effectiveness of in-house management, in light of the complexity of the Fund's investment portfolio.

The Board approves the appointment of external managers within the bounds of approved and agreed investment mandates. The investment activities conducted by external managers on behalf of the Guardians are subject to compliance with the mandate terms agreed with those managers.

Managing external managers requires day-to-day administration, settlement of transactions, ownership registration, valuation and exposure reporting, compliance and monitoring of the managers' investment activities. An independent external custodian is appointed by the Guardians to fulfil this function. The external managers and custodian shoulder the majority of the responsibility for investment management and the day-to-day operations of the Fund; thus, leaving in-house personnel to oversee and monitor the activities and performance of the custodian and investment managers and to assist the Board in the development of investment strategies. The selection of investment managers is discussed in Section 6 and the monitoring of investment managers is discussed in Section 13.

9.3 Internal staff levels

The Guardians has developed a highly complex investment strategy covering asset classes across the risk spectrum. As the complexity of the Fund's investment strategy has grown over time, so too has the number of the internal staff. As can be seen from Table 9.1, the staff levels have grown rapidly, from 6 in the year of inception (2003), to 55 as at 30/6/2009.

Table 9.2: Guardians full time equivalents (FTEs)

	Actual	**Actual**	**Actual**	**Actual**	**Actual**	**Actual**	**Budget**
	30/6/2004	30/6/2005	30/6/2006	30/6/2007	30/6/2008	30/6/2009	30/6/2010
CEO	1	1	1	1	1	1	1
Human resources	1	2	2	3.6	3.6	5.8	7.8
Public markets	1	2	2	4	5	6	6
Portfolio research	1	1	2	3	4	4.8	4.8
Operations	1	3	5	9.5	11.5	20.6	22.6
Finance	1	2	2	4	6	7	7
Private markets	0	0	0	0	3	5	10
Corporate strategy	0	0	1	2	4	5	7
TOTALS	6	11	15	27.1	38.1	55.2	66.2

Source: Data provided by the Guardians

The function with the greatest absolute and relative growth rate in terms of staff numbers has been Operations, which reached a staffing level of 20 in 2009. The increase in staff numbers in Operations is due to the establishment of two new units – a Risk Unit (4 staff) and a Treasury Unit (3 staff). The other notable area of growth was Private Markets, where there was no dedicated staff in 2007, a team of 5 in 2009 and that is planned to double in 2010. This reflects the fact that, generally, investments in private markets require a higher level of governance, per dollar invested, than publically listed securities. The Government directive to increase investment in NZ assets has also contributed to the increase and these additional staff numbers have been accommodated in the 2009/2010 budget numbers. We understand that staff levels are planned to reach 66 in 2010, when they are expected to peak.

The recent cessation of capital contributions (as outlined in Section 2 Background Context) is expected to reduce planned full-time staff numbers for 2010 as indicated in Table 9.2.

Table 9.3: Estimated implications of a capital suspension for FTEs

Business Unit	Impact of Suspension	FTE Numbers Budget June 2010	Capital Suspension Estimate June 2010	
Private	Lower allocation	7	5	No new appointments
Public	More passive	10	8	No new appointments
Portfolio Research	Both	4.8	4.8	No new appointments
Operations	More passive	24.6	22.6	No new appointments
Corporate Strategy	Both	8.0	8.0	No new appointments
Human Resources/ Admin	Both	8.3	7.3	No new appointments
Finance	Both	8	7	No replacement
Total		70.7	62.7	

9.4 Progress on the Office of the Auditor General (OAG) recommendations

The OAG report made a few recommendations in relation to organisational matters. The Guardians response to the recommendations made in OAG Report is outlined in Table 9.3.

Table 9.4: OAG Recommendations and the Guardians Response

No.	OAG Recommendation	Guardians action
11	Review their business operating model periodically to ensure that all aspects of their business (including whether operations are outsourced or done in-house) enable the objectives of the Fund to be met effectively and efficiently.	Completed. As part of the development of our three year Strategic Plan in 2008, we confirmed the business, functional and organisational model necessary to deliver our business strategy. The Strategic Plan will be refreshed every 2 years.
16	Initiate a formal process to allocate the operating and administrative costs of the Fund to the respective individual investment classes for which those costs have been incurred.	Partially completed – Work in Progress (WIP). Administrative and operational cost allocation to various investment classes is under consideration. Individual investment classes already are allocated manager fees and other fees where these are identifiable to that investment mandate.
17	Develop a long-term information technology strategy and align it with an overall operational strategy.	Completed.
18	Prepare a long-term operational strategy detailing how the Fund will be administered in the future. The purpose of the strategy is to set out the long-term operational objectives of the Guardians. This could include external provider management, overseeing of fund administration, alternative asset research, investment strategy development, and responsible investor guidance. (High priority Recommendation).	Completed. In March 2008 the Guardians developed a three year Strategic Plan that detailed the planned activities and output for the period 2009-11 and confirmed the business, functional and organisational model to deliver the plan. The Strategic Plan will be refreshed every [2] years.

9.5 Mercer's assessment

The operating model adopted by the Guardians relies relatively heavily on internal expertise to provide investment advice and develop investment and operational solutions.

The Guardians is a long term investor and its overall performance is judged over a long time frame. It does not operate in a competitive market and is not subject to the same external pressures that many other institutional investors are subjected to, such as the threat of withdrawal of funds. This suggests that the Guardians need to devise other means to ensure that there is a drive for innovation and continuous improvement directed at better meeting its long-term objectives. Such measures should be explicitly included as part of the business planning process. This Report has made a number of recommendations in this regard directed at increasing external scrutiny and review.

For a given complexity of investment strategy, a certain critical mass of people is required to undertake the activities required of an investment fund. These activities include, but are not limited to, internal control and risk management processes to ensure an appropriate segregation of roles and responsibilities exist. Thus, the size of the team may not necessarily correlate directly with the level of funds under management. The Guardians' total number of investment and operational personnel is commensurate with the range of activities that the Fund undertakes internally.

While benchmarking analysis indicated that in 2008 the Guardians' cost structure was below that of a global peer group, this largely reflected lower external management costs. On the other hand, internal oversight, custodian and other costs were above those of its peer group. [40]

The economics of funds management increases the pressure on smaller funds, like the Guardians, to scrutinize their cost structure and review the value and cost-effectiveness of their in-sourcing and outsourcing choices. In-sourcing and internally developed solutions may have the benefit of being better tailored to the particular needs of the fund, giving greater management flexibility and control. However, there are limits to the extent to which it would be appropriate for a fund to rely on internally developed solutions where a competitive external market exists that can effectively meet its needs. Internally developed solutions may suffer from lack of scale economies, exposure to key man risk, lack of sufficient ongoing investment, and an inability to support and meet the ongoing IT and system costs and challenges. There can be a meaningful opportunity cost of the tying up of management time that could be devoted to other areas that can't be outsourced, or the settling for inefficient and manual processes over time due to cost constraints.

Benchmarking analysis by CEM Benchmarking (200*) indicates that the Guardians' cost structure was below that of a global peer group benchmark by 15.3 basis points, reflecting the combination of lower investment manager fees as compared with its peers for similar investment manager mandates and lower cost implementation styles (accounting for -8.5 bp). The latter reflected the fact that external active management tends to be more expensive than passive or internal management and that the Fund made less use of external active managers than its peer group; and lower external management costs (-16 bp). Differenced in oversight, custodian and other costs added 9.3 bps to its costs.

Recommendation 9.1: That the Guardians regularly assesses the economics of managing activities internally relative to outsourcing. A prudent approach would be to undertake a business case assessment to determine the most optimal option for the Fund in respect of sourcing different activities. Ongoing development of the internal cost/capital allocation model would provide greater rigour in allocating staff resources commensurately with the allocation of the risk budget and financial/operating budget.

Overall, the organisational structure of the Fund seems appropriate to meet its investment strategy and operational requirements. Two areas of weakness in the structure relate to the treasury operations and risk management.

- Treasury function - From an operational perspective, operational roles are relatively well defined and duties are adequately segregated within the lower ranks of the organisation, with the exception of the Treasury functions. Whilst Treasury is a distinct business unit, it is situated within the Operations division and reports to the General Manager Operations. Best market practice is to house these functions separately, and to separate treasury functions by asset class. Permitting execution and settlement to be overseen by the same person lacks the controls generally accepted as being required to protect against fraud.

- Risk management - The Audit and Risk Committee provides organisation wide risk management oversight; however, at the management level, the responsibility for risk management processes is shared among several members of the Leadership Team. Consideration should be given to appointing a Chief Risk Officer (CRO) to assume an organisation-wide responsibility for risk management and to establish a regular internal review, assessment and testing process. This is particularly important with an increased investment focus on private equity, hedge funds and commodities as these investments require greater due diligence and coordination of compliance, tax, operations, legal and other matters.

Recommendation 9.2: The Guardians segregates Treasury functions from the operations division to be consistent with best practice risk management models.

Recommendation 9.3: Consideration should be given to appointing a Chief Risk Officer to assume an organisation-wide responsibility for risk management and to establish a regular internal review, assessment and testing process. This is particularly important with an increased investment focus on private equity, hedge funds and commodities as these investments require greater due diligence and coordination of compliance, tax, operations, legal and other matters.

10

10 Information Management

10.1 Principles

Information management covers the receipt, delivery and storage of information and documentation. In addition such information should be easily retrieved whilst adhering to any specific legislative storage requirements. Broadly stated, best practice should encompass the following:

- A secure storage and retrieval protocol, tailored where necessary to legislation;
- Due consideration for disaster recovery planning (DRP') and business contingency planning (BCP);
- A standardised document production methodology, with a defined delivery system; and
- A review and monitoring process for complying with legislative information management obligations.

The OAG report went some way to covering these aspects of information management but concentrate mainly on Information Technology. Where subject matter has been covered in the OAG's report, this is noted in the body of the text.

10.1.1 Storage and retrieval protocol

Regardless of an organisation's business activity the protection of the data it collects, generates and distributes must be a high priority. Access to data must be limited firstly to the organisation itself and secondly only to appropriately authorised personnel within the organisation.

The security of data both physically and virtually must be assured. As most information is stored electronically physical access to servers must be restricted, electronic access must be protected by firewalls, antivirus software and appropriate security (passwords) protocols linked to access rights as determined by organisational authority levels that consider role delineation and segregation of responsibilities. Physical documentation of

a sensitive nature should be afforded the same level of security with the addition of fire retardant and flood resistant housings.

Statutory retention periods are generally stipulated for documentation in order that the original source of information can be accessed and reviewed if required.

10.1.2 DRP and BCP

Data Recovery (DRP) and Business Continuity (BCP) processes take on particular relevance in relation to information; whether data is backed up by batch processing or via a live feed, it is important that organisations have in place effective contingency planning that not only provides for the continuation of its business under difficult circumstances, but also safeguards the organisation's records. Importantly, these plans should be regularly tested, the test results audited and the plans upgraded as necessary.

10.1.3 Reporting and delivery

It is expected that the accumulated data will be used to report on a regular basis to the beneficial owners of the investments and to any statutory or regulatory bodies with an interest. Reporting should include a statement of holdings, valuations, transaction details, performance and attribution and such other details as required, including for example taxation information.

10.1.4 Review and monitoring

As part of the compliance framework, as with any legislative, regulatory or internal policy requirements, compliance with, and relevance of, agreed guidelines should be monitored and reviewed on a regular basis.

10.2 Guardians approach

10.2.1 Storage and retrieval protocol

The Guardians note in its Annual Report (2008) that it has established a document classification system and enhanced processes and controls. A full records management system was proposed for the financial year ending June 30 2009. At this time, the Guardians reported that it is in the process of implementing an electronic records management system, a redesign of the data warehouse and implementing an investment management system. Therefore, we are unable to comment on these systems and have not reviewed Guardians' implementation plans in this regard.

10.2.2 DRP and BCP

The Guardians' DRP and BCP arrangements were reviewed as part of the OAG's review in 2008. The Auditor General concluded that most technology risk was held by Guardians' custodian, and that the technology risk borne by Guardians is well managed (noting the information technology strategy is still being finalised).

10.2.3 Reporting and delivery

The Fund is an investment fund that accumulates and invests Crown contributions, paid from general taxes. The Fund is designed to reduce the tax burden on future taxpayers of the cost of funding future New Zealand superannuation payments. The Fund has no

members of beneficial owners other than the Crown and as such the Guardians has reporting obligations to the New Zealand Treasury, both periodically and via an Annual Report.

The OAG's report concluded that Guardians provide high quality reporting in a timely manner to stakeholders, sourced mainly via their custodian.

10.2.4 Review and monitoring

The Guardians, whilst aware of its obligations under the law and in line with internal policy documents, does not have a review or monitoring plan in place specifically for information management (see Section 11 Compliance with legislation - 1.2.3 Documenting compliance obligations).

10.3 Mercer's Assessment

Mercer recorded no adverse findings in relation to the Guardians' data management. Once the data management, and by inference, system upgrades have been finalised, a further review of the implementation effectiveness ought to be considered.

11

11 Compliance with legislation

Compliance with legislation, regulation and internal policy documents is a multi-faceted discipline which necessitates the establishment of a governance framework suitable to oversee compliance and a structure by which compliance is assessed monitored, confirmed and reported.

11.1 Best Practice Principles

Broadly stated, best practice should encompass the following principles:

- An established governance framework;
- A defined compliance universe;
- Clearly documented compliance obligations;
- A structured assessment methodology;
- A breach management and reporting process; and
- A review process for updating compliance obligations.

11.1.1 Governance framework

The Guardians' governance arrangements are assessed in Section 8: Governance and Investment Decision-making.

11.1.2 Defining the compliance universe

The Guardians is subject to the New Zealand Superannuation Act 2001, applicable general legislative requirements, and their own internal policies, procedures and processes.

Legislation tends to be drafted quite broadly to allow for individual differences within those entities captured by it, which in turn provides scope for interpretation. This interpretation can be made by the captured entity, but in many cases, specifically where

financial services are involved, a regulator will effectively narrow or explicitly identify the implications of the legislation with guidelines and practice statements. Finally, the captured entity should enshrine the legislative and regulatory requirements within its own policy documents which are commensurate with the risk profile of that entity. Invariably this form of self-regulation places further obligations on the entity.

Best practice funds undertake periodic external independent review of the legislative and regulatory environment and identify the applicable compliance requirements.

11.1.3 Documenting compliance obligations

Having identified the compliance obligations, policy documents should be created around those obligations. The creation of an obligations register creates a single source against which the Guardians can measure its compliance.

Market best practice for maintaining an obligations register would require that it not only:

- Identify the obligation and its source (including the internal policy that reflects this obligation);

but also:

- Provide interpretation in relation to why that obligation exists;
- State specifically its effect on the Guardians;
- Identify the implications of non-compliance that should also link into the Guardians' risk management matrices;
- Provide the testing methodology which will be employed to provide assurance that the Guardians has been compliant; and
- Dictate the frequency with which those tests will be applied.

In line with market best practice, the compliance obligation register should be electronic in form (system based) with appropriate protections and security in place to guard against corruption of the data. The system should hold the compliance obligations, the test results and the ability to provide assurance that obligations have been assessed via reports.

11.1.4 Assessing compliance with defined obligations

Clearly different obligations will require different assessment frequencies. These would generally be linked to the level of risk attached to non-compliance and the Guardians' internal and external reporting requirements.

Given the number of obligations contained within most compliance registers, assessments will generally be scheduled on a rolling basis, allowing the assessors to distribute their work load over the entire assessment period, relieving staffing constraints and time pressures. Depending on the obligations and the risk attributable to non-compliance, reviews can be expected to be scheduled monthly, quarterly, bi-annually, annually, semi-annually and triennially. The assessment process should effectively provide monthly test plans of the compliance obligations with each being a sub-set of the compliance register.

Best practice requires the creation of the periodic test plans to be an automated process, as manual manipulation of the register to identify matters to be tested can lead to obligations being missed.

The actual testing process should, where possible, deal with primary evidence of compliance, that is to say, it should not rely unduly on secondary evidence (for example, attestation documentation), where this is practical. Where secondary evidence is accepted, the rationale behind that acceptance should be provided, either in the compliance obligation plan or within the compliance report.

The compliance report should be provided to the Guardians' Board or a sub-committee, but not a management committee, with the aim being to report "around" the business and not through it to avoid any perceived conflict of interest.

11.1.5 Issue and breach management and reporting

Where an issue with, or breach of, a compliance obligation is noted it is important to capture this information, primarily in order to demonstrate and record the investigation and resolution of the breach whilst assessing any systemic issues, but also as a means of escalating reportable breaches up through the organisation and on to the regulator if appropriate (in the case of the Guardians this means through the audit and risk management committee (ARC) to the Board and to the Minister, as appropriate). The protocols for breach management and reporting should be included in a policy document.

A breach register should identify an issue by formally categorising it, note the date it was identified, the date it was reported, the remedial action plan, and it should assign responsibility and a timeframe for resolution. The categorisation, in particular, should be used to regularly review for systemic issues.

A review of the register should form part of a regular management review, as a minuted agenda item. Furthermore, where slippage for resolution is foreseen or noted, this should be addressed at a senior level.

The issues and breaches register should again be provided to the Guardians' Board or a sub-committee, but not a management committee, with the same aim as above of being to report "around" the business and not through it, in order to avoid any perceived conflict of interest.

11.1.6 Reviewing and updating compliance obligations

Amendments to the compliance obligations should be made to the register on an event driven basis, thus if new legislation is passed or updated regulation is issued the change should be reflected in the register immediately. Likewise any relevant policy changes made by the Guardians should also be reflected in the register at the time they are made.

A legal review of changes to any of the legislative or regulatory sources of compliance obligations should be undertaken annually. This can be carried out as part of a wider control sign-off or as a discrete process but should be confirmed by a qualified third party.

The compliance obligations register should be reviewed at a senior level at least annually, the review should consider the relevance of the compliance obligation and each of the attributable factors detailed in the register, with particular emphasis on;

- Test methodology
- Test frequency

Again, the compliance report should be provided to the Guardians' Board or a sub-committee, but not a management committee for the same reasons noted above.

11.2 Guardians' approach

The Guardians has provided significant documentation and information in response to the principles outlined above. However, since the initial creation of the compliance framework, policies and procedures have evolved. These changes have yet to be reflected in the documentation provided to Mercer for review.

11.2.1 Governance framework

The Guardians' Governance is assessed in Section 8: Governance and Decision-making Arrangements. Specifically, the Guardians has documented its legislative compliance framework, however, as stated above, this is currently under review.

11.2.2 Defining the compliance universe

The Guardians has reviewed the New Zealand statutes in which it operates and identified relevant statutes. The compliance obligations within those statutes have been assessed. The scope of coverage includes the New Zealand Superannuation and Retirement Income Act 2001 which established the Guardians, and other less pertinent statutes which may impact the Guardians by virtue of it being a government agency.

In addition, to assist the Guardians to discharge the principal obligation imposed by the New Zealand Superannuation Act 2001 – to invest the New Zealand Superannuation Fund (the Fund) on a prudent, commercial basis consistent with best-practice, balancing return against risk and preserving New Zealand's reputation in the world community, the Guardians has created a number of codes, policies, standards and procedures.

11.2.3 Documenting compliance obligations

The Guardians has compiled a list of Acts with which it must comply (see 1.2.6 below) either wholly or in part. Non-compliance has been identified as a legal risk (Risk 14) within the Guardians Risk Records. Contextually, the Guardians refers only to those Acts with a primary compliance obligation; secondary Acts are considered more generally as "NZ business legislation".

The specific obligations provided for by those Acts are not contained within a compliance obligation register. The Guardians notes that its policies and procedures address the key controls required to ensure legal compliance and that this will be formally addressed through the new compliance framework.

The risk of non-compliance (Risk 14) is identified as having the following risk profile:

Profile	**Inherent**	**Current**
Impact	Major	Moderate
Likelihood	Possible	Rare
Rating	Extreme	Moderate

The rating has moved from its inherent position to its current position by virtue of the Guardians having key controls in place (1.2.4), the assurance process (1.2.4), specific monitoring (1.2.5) and the completion of a number of action items identified in December 2008 (1.2.6). These measures are discussed below.

11.2.4 Assessing compliance with defined obligations

The Guardians lists seven key controls for providing assurance of compliance with legislation. Notably, policies and the attestation process have been identified by the Guardians as potential weaknesses within these key controls. These matters are targeted for resolution in the last quarter of the 2009 calendar year.

The Guardians' assurance process hinges on the attestation process, whereby senior management attest to compliance with organisational policies. Considering that the organisational policies are derived from the legislation governing Guardians and no register of the compliance obligations contained within that legislation is held, the attestation is not based on any formal assessment or testing process.

According to the Guardians' document entitled "Legislative Compliance Framework", the Board has appointed the financial controller as the Guardians' compliance officer, and the financial controller reports directly to the Board in this capacity at each board meeting.

The Guardians notes that changes have been made in relation to the relative responsibility for compliance (and risk) functions and that separate individuals are now responsible for portfolio compliance (head of portfolio risk and compliance), the implementation of the compliance framework (general legal counsel), risk management (general manager operations) and internal audit (head of internal audit).

The audit, risk management and compliance committee ('ARC'), reports into the Board.

Reporting includes a compliance incident report (see 1.2.5 below) and a compliance certificate attesting to the completeness of the reports provided. The certification states that there is "nothing we are aware of" outside of the scope of the attestation that should be brought to the attention of the Board but stops short of providing evidence of the steps taken to "become" aware of such issues.

11.2.5 Issue and breach management and reporting

The Guardians notes training is provided on the New Zealand Superannuation Act 2001 and that management is required to familiarise itself with the Act and internal policies. Additionally, management is required to submit an Internal Incident report in the event of non-compliance. Reports for incidents rated as either "moderate" or "high impact" are provided directly to the Audit and Risk Committee, in line with the Internal Incident and Error policy, by the Head of Internal Audit and recorded on an incident register

A compliance incident report is provided directly to the Board, in line with the incident reporting policy, by the compliance officer (financial controller) and recorded on an incident register.

11.2.6 Reviewing and updating compliance obligations

Risk record 14 (Legal Risk) was last reviewed in May 2009. At that time a number of initiatives were noted as having been completed; notably, the review of both tax and legal requirements and the appointment of external advisors.

The Guardians has engaged legal advisors to provide updates on changes to legislation. A legal firm provided a comprehensive list of the legislative impost upon Guardians in January 2008, the list of applicable legislation considers 9 primary Acts, including the New Zealand Superannuation and Retirement Act 2001 and 47 secondary Acts covering matters including general commercial activities, human resources and building regulations.

The weaknesses identified by the Guardians in relation to assessing compliance with their legal obligations also included weaknesses in the review process. This forms part of the overall compliance review and is also scheduled to be completed by the last quarter of the 2009 calendar year.

11.3 Mercer's Assessment

Mercer's findings can only be based on the current situation as represented by the Guardians. We understand however, that efforts are underway to resolve the issues we have identified and have noted the same in the previous section.

The Guardians currently appears to have a high level view of compliance (legislative and otherwise) which heavily relies on senior management for implementation. Whilst this is an acceptable, even normal, circumstance for a small operation, as organisations grow the formalisation of the compliance regime is not only prudent but necessary.

Currently, the Guardians relies on management attestations of compliance but does not possess a compliance obligation register against which to test compliance, or undertake a formal test methodology to provide sufficient assurance that the Guardians is meeting best practice standards.

Until such time that these improvements are implemented, Mercer would suggest that the current risk profile more closely reflects the inherent risk rating identified as Risk 14.

Recommendation 11.1: The Guardians establishes a compliance obligation register and undertakes a formal test methodology to provide ongoing sufficient assurance of compliance with legislation.

12

12 Investment Management Fees

12.1 Introduction

In terms of market norms, investment management performance is commonly presented gross of fees, which isolates the effects of investment decisions made by the investment manager. Investors may be willing to pay more if they expect superior investment returns – consistent alpha is scarce and worth paying for. By the same token, justifying higher-than-average investment management fees is difficult in the absence of above-average performance. Investors should evaluate fees in an effort to find the most cost-efficient means of generating excess returns.

Equities are riskier than fixed income securities; they also have higher value-adding potential. The relatively lower value-adding potential for fixed income places downward pressure on fees (with the exception of high yield and convertible fixed income securities). Equity fees are markedly higher in both domestic and international asset styles, and private market fees typically higher again.

We have evaluated the investment management costs to the Fund of the services provided by each manager on an individual mandate basis. Using our local knowledge and Mercer's Global Asset Manager Fee Survey 2008, we can then make an assessment as to whether the fees negotiated by the Fund are reasonable, bearing in mind that no level of fee can guarantee achievement of value added. The fee levels involved play an integral part in the Fund's calculation of required hurdle rates and expected excess return for each strategy.

The Fund adopts a mixture of commingled pools and segregated mandates, with an emphasis on the latter where possible. The use of segregated mandates means that the Fund owns, and needs to account for, separate assets such as shares and bonds rather than units in a pool shared by other investors. Pooled funds typically have lower placement minimums than separate accounts, making them an effective means for many funds to gain access to an investment strategy, and custody is maintained within the pool.

A segregated approach increases the administration load as each security needs to be accounted for individually, and requires the use of a separate custodian. However, it allows for greater flexibility within the mandate (and can also be a suitable way for an

investor to access managers from a tax perspective). While minimum size thresholds imposed by managers can negate their use by some investors, in the case of the Fund this commonly does not pose an issue. The Fund has its own appointed custodian and we believe the use of segregated mandates where available is appropriate.

There is generally little difference in fees for separate accounts versus pooled funds in domestic asset classes. At most placement levels, pooled funds tend to be slightly more expensive than separate accounts. This reflects the inclusion of custody costs, which tend to be higher for fixed income when compared to equity. For global products (both equity and fixed income), pooled funds are distinctly more expensive than separate accounts. This reflects the inclusion of custody costs, which tend to be more expensive for international securities when compared to domestic.

12.2 Context for Relative Assessment

Mercer operates in the New Zealand markets and accordingly has knowledge of fund manager services provided specifically to locally based investors. In addition, on a global basis Mercer conducts periodic surveys of fund manager fees, the latest one being 2008. This information is summarised in a document known as the Mercer Asset Manager Fee Survey which provides a means of comparing the fees paid for the overseas strategies. Given the size of the Fund's mandates the fact that the Fund is located in New Zealand, and hence potentially harder to service, should not affect the level of fees paid to a material degree.

The Fee Survey uses published fee schedules on Mercer's Global Investment Manager Database (GIMD), to which more than 3,300 firms regularly provide data on more than 19,000 strategies. The analysis focuses on fees for separately managed and institutional pooled accounts. Tiered or asset-based fee schedules, which offer a discount for larger accounts, are available for the majority of separately managed and institutional pooled accounts. Fees quoted generally decrease as placement size increases.

We note that the Fee Survey reflects only initially quoted fees, whereas in Mercer's experience over 70% of investment managers indicate they will negotiate fees and/or offer performance-based fees. Because investment managers typically publish fees and then negotiate downward, we would expect actual fees paid by clients to be less than the average fee shown in the study in each sector.

12.3 Guardians' Approach

The Fund aims to negotiate terms that are as favourable as possible, as part of cost control and trying to ensure that net performance after fees is maximised. To this end, the principles the Fund works to are as follows:

- Performance fees must not be paid for market returns (i.e. strategies should have appropriate hurdles for performance fees).
- Base fees should be linearly related to the active risk being taken (assuming similar information ratios), i.e. it is not appropriate to "pay up" for a manager taking modest active risk.
- A greater alignment of interest can be achieved through higher performance fees, i.e. fees of 1% + 35% are preferred over 2% + 20% (all else being equal). This also has the effect of lowering fixed costs, although may mean actual fees paid are higher if the strategies deliver returns at or above expectations.

- Longer periods to measure performance fees are preferred. The Fund is open to considering the "lock-up" of assets in return for lower fees, which has happened in at least one case.

In the 2008 Office of the Auditor General (OAG) report, recommendation 14 stated that the Fund establish a policy of fees. This has been included in the Investment Manager Selection Policy, as outlined above.

12.4 Mercer's Assessment

In Table 12.1 the fees are compared by Asset Class.

There is a general bias towards performance fees in the active strategies, with the exception of the more mainstream asset classes. A fee described, for instance, as 1%+ 20% indicates a base fee of 1% and a performance fee of 20%. Note that the performance fees are set up such that negative performance fees are carried forward (i.e. they are subject to a high water mark) which is consistent with best practice in this area. In addition, performance fees are in most instances capped at a multiple of the base fee, thus ensuring that performance fees levels are constrained when performance has been unusually strong. In many cases the Fund seeks to include "most favoured" client status as part of the contractual arrangement. In essence, this is an understanding that the fee arrangement will not be inferior to that secured with the manager by new clients.

Table 12.1: Comparison of Fees by Asset Class

Asset Class	Manager	Fees	Performance fee hurdle	Fee Reference	Comment
Multi-Strategy	Manager A	1% + 33%	3 mth US Libor	2% + 20%	Fees are competitive.
	Manager B	1%[1] + 20%	1 mth US Libor	(market norms from Survey)	
	Manager C	0.85%[1] + 20%	1 mth US Libor		
	Manager D	0.75% + 20%	MSCI World (net)		
Global Tactical Asset Allocation (GTAA)	Manager E	1% + 35%	3 mth US T bill	1.5% + 20% (Survey)	An example of the Guardians preferring a lower base fee/higher performance fee
Global Large Cap Equity	Manager F	~0.52%[2]	n/a	~0.56%	Fees are competitive
	Manager G	~0.51%[2]		(Survey)	
Global Small Cap Equity	Manager H	0.65%	n/a	~0.86%	Fees are competitive, although 1.00% fee for Sterling Johnston is above expected norms. The Guardians was comfortable with this to access a manager perceived to be of good quality and offer a higher information ratio.
	Manager I	0.75%		(Survey)	
	Manager J	~0.63%[2]			
	Manager K	1.00%			
	Manager L	~0.73%[2]			
Emerging Markets Equity	Manager M	1.00%	n/a	~0.88% (Survey)	Fee appears to be on the high side versus median for the sector. The Guardians was comfortable with this to access a manager perceived to be of good quality and offer a higher information ratio.
NZ Equity	Manager N	~0.34%[2]	n/a	<0.40% (Survey)	Fees are competitive
NZ Direct Property	Manager O	0.5%	n/a		Fees are competitive

Asset Class	Manager	Fees	Performance fee hurdle	Fee Reference	Comment
Private Equity	Manager P	2% + 20%	8%		Fees are competitive
	Manager Q	2% + 20%	8%		
	Manager R	1.5%[3] + 20%	8%		
	Manager S	1.5%[3] + 20%	7%		
	Manager T	0.8% + 15%	various		
	Manager U	0.49%[4] + various	6%		
	Manager V	1.5%[3] + 20%	none		
	Manager W	1%[3] + 20%	0%		
	Manager X (FOF)	1%[3] + 10%	none		
Infrastructure	Manager Y	0.5-1.1% + 15%[5]	NZ Govt bond+	1.5-2.0% + 20%	Fees are competitive
	Manager Z	0.5-1.1% + 15%[5]	NZ Govt bond+		Fees are competitive
Commodities	Manager AA	0.17%			These are for exposure through swaps
	Manager AB	0.15%			
Passive exposure	Manager AC	<0.05%		Mercer's own experience	Fees are competitive

[1]Base fee is on a sliding scale, therefore actual base fees paid will be lower than indicated here
[2]Base fee is on a sliding scale, this is an indicative value for base fees paid given current asset values
[3]The base fee declines after an initial commitment/investment period
[4]The base fee steps up to 1.08% after the initial commitment/investment period
[5]The base fee depends on whether listed (0.5%), unlisted (0.8%) or greenfields (1.1%). Performance fee is on first 8.4% of positive return only

12.5 Conclusions

In considering the investment management fees paid by the Fund to their external managers, we have taken into account our own experience with New Zealand clients, Mercer's global experience (particularly in respect of larger mandates) and Mercer's Asset Manager Fee Study. We have also had regard to the performance objectives of each manager and the general quality and substance of those managers.

Overall the investment management fee levels and structures appear competitive for a fund of this size and type, once the particular structure of the fee arrangement is accounted for. Most of the mandates are at or below Mercer's expected median levels for these asset classes. The exceptions to this are two equity mandates which appear to be slightly on the costly side. We have discussed this with the Fund and the Guardians is comfortable with paying these fees to access a manager perceived to be of good quality and offering scope for superior information ratio.

We note that, at the margin, there is often the opportunity for investors of some size (or status) to attempt to drive fees to minimal levels. However, this is not always of mutual benefit given expectations for servicing and the need for the manager to adequately fund resourcing to deliver on their mandate objectives.

We perceive our conclusion that the Fund is paying fees at satisfactory or better levels to be a function of:

- Competitive tension existing in the provision of funds management services in all asset classes covered, particularly for a client seen as "desirable" to managers on a comparative basis (i.e. a large investor by New Zealand standards, associated with government, with a long-term investing horizon).

- Intermittent input from investment advisors with knowledge of fee levels on an international basis.

- Accumulated knowledge within the Fund of fees paid by comparable institutions for comparable mandates.

We enquired as to whether the Fund has a policy with regard to negotiating fees in cases where there are multiple mandates with the same manager. There are no explicit arrangements in place to cover this. However, we are advised that this issue would have been taken into account during the fee negotiations for the applicable mandates. For clarity, it would be appropriate to have a more formalised policy to deal with such events, and adopt as standard.

13

13 Investment Manager and Custodian Monitoring

In this section we address the Guardians' custodial arrangements which, as with all such fund sponsor relationships, should be a longer term partnership; and investment manager arrangements which may involve relationships over short, medium and long-terms. Whilst the consequences may be different the basic tenets of supervision apply equally to all third party service providers.

13.1 Principles

Broadly stated, best practice should encompass the following:

- An established appointment framework, including standard contracts, service level agreements (SLA) and appropriate key performance indicators (KPIs);

- A well defined, transparent and on-going monitoring process, based on the SLA and KPIs, including periodic reporting (normally monthly) and face to face meetings (normally quarterly or semi-annual); and

- An (annual or bi-annual) assessment process, incorporating feed-back to the service provider and dismissal of the same, or renegotiation of terms, if appropriate.

13.1.1 Appointment

The appointment process for third party service providers should be transparent. Whilst it is not necessary or always practical to conduct open market tenders for all service requirements, it is important to document the process that is undertaken to engage with suitable service providers in the market.

Following the selection of the appropriate third party provider for a specific task, it is then essential to capture all the agreed arrangements in a contractual agreement which is both commercial and practical. The contract should be supported by a suitable SLA and associated KPIs that are not only quantitative in nature but also assess the qualitative aspect of the services and relationship.

13.1.2 Custodians

Custodians play a pivotal role in the investment management process. The custodian's key role is to safeguard the Fund's assets, and the timeliness, accuracy and flexibility of the services provided by the custodian have a measurable impact on the overall performance of the custodian's clients' investment portfolios.

13.1.3 Investment Managers

Investment manager appointment activity falls into three broad categories;

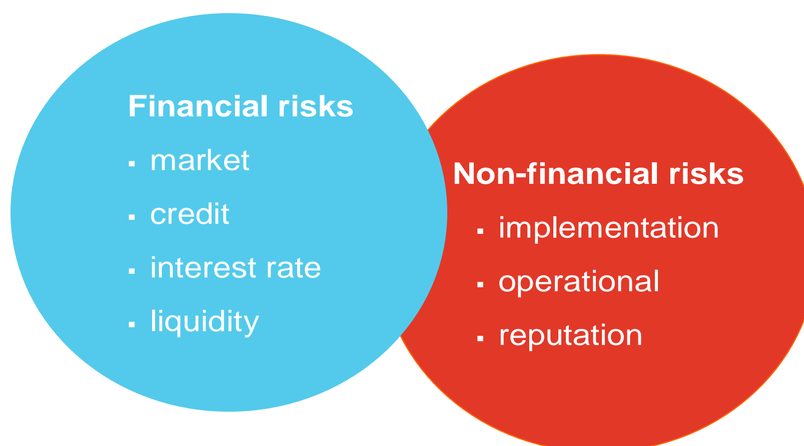
- Legal and business risk assessment;
- Investment assessment; and
- Operational assessment.

The legal assessment takes place up front to establish the financial soundness and stability, organisational capability and strength, and legal risk represented by the target investment manager (e.g. contract counterparty risk; extent to which insurable risks of the activities of the manager are insured).

The investment assessment generally focuses on the manager's investment management capability in respect of the relevant investment strategy and their perceived ability to meet the required performance targets. The assessment is typically based on a range of qualitative and quantitative assessment factors.

Operational assessments provide comfort as to the competence of a manager in effectively and efficiently conducting its business so as to adequately manage risks referable to the outsourced management of significant pools of their clients' assets. Undertaking operational due diligence reviews on hedge fund managers has historically been a common practice. Undertaking such reviews on managers responsible for all mandates, including long-only mandates, is however, increasingly regarded as best practice.

Non-financial risks associated when engaging third parties such as investment managers are as important as financial risks. Traditionally, the attention has been on the latter. The impact of non-financial risk is invariably financial in nature, and is evidenced by a negative effect on returns. If these risks can be understood, isolated and controlled; then those controls can actually add to the overall investment performance.



As stated above, it is increasingly regarded as best practice that all investment managers are assessed against operational standards of practice prior to appointment.

An operational assessment should extend to include an on-site review of the managers' operations. The on-site process should validate and assess the appropriateness of the operating model, compliance culture and structure, operational processes, outsourcing providers, controls, systems and personnel.

13.1.4 Monitoring

Service delivery should be monitored on an on-going basis, specifically in relation to the delivery of the various outputs required of the service provider, such as monthly reports. These should be assessed for timeliness, accuracy and value-add to the recipient in terms of market intelligence, service validity and against alternative available services.

The review of outputs should be supplemented with periodic meetings with the services provider to assess performance, provide feedback and share information around strategic direction and future initiatives. These meetings should be formal in nature including a standing agenda and minute-taking.

13.1.5 Custodians

An effective custodian monitoring program should monitor the accuracy, timeliness, responsiveness and flexibility of the service delivery. Ultimately we consider that a systematic and comprehensive custodian monitoring program, diligently applied, is the best means available of ensuring that an institutional investor is getting the best service possible from its current custodian.

13.1.6 Investment Managers

Investment manager monitoring focuses mainly on investment performance and compliance with the terms of the mandate. However, it is also important to build a due diligence monitoring framework and process that incorporates appropriate operational red flags and priority for review and follow-up analysis during the year.

13.1.7 Evaluation

On a regular basis, normally annually but at least bi-annually depending on the service provided and the level of on-going interaction, all service providers should be assessed

by a wider group within the organisation rather than the group which usually deals directly with them. The purpose of this broad review exercise is to assess the effectiveness over the previous assessment period. The findings of this assessment should be formally recorded to support the ongoing management or cessation of dealings with that service provider. On a less frequent basis, it is prudent to examine the contractual obligation and service capabilities and fee arrangements against those of other providers in the market.

13.2 Guardians' custodian arrangements

Custodians play a pivotal role in the investment management process and the safekeeping of clients' assets. The timeliness, accuracy and flexibility of the services provided by a custodian have a measurable impact on the overall performance of the custodian's clients' investment portfolios.

13.2.1 Appointment

In 2006, the Guardians embarked on a custody review in the form of an open market tender. As part of this process, the Guardians also engaged the services of Thomas Murray, a third party custody consultant. Following a detailed review and selection process including on-site due diligence process, Northern Trust was selected as the preferred custodian by the Guardians. Subsequently, in June 2007, Northern Trust was formally appointed as the master custodian for the Fund. In our view, the Guardians' process and approach including the use of the external consultant in selecting Northern Trust is in line with best practice.

The Guardians has a comprehensive Master Custody Agreement in place with Northern Trust that governs Guardians' and Northern Trust's relationship. The Guardians has also established a SLA with Northern Trust. Whilst the SLA is relatively detailed and clearly outlines the roles and responsibilities of the relevant parties, it does not adequately cover the following matters:

- The main focus of the KPIs is quantitative. KPIs require measurement of the timeliness of the information and reporting provided to the Guardians and its investment managers, but they are largely silent on the qualitative aspects of performance such as the accuracy of information. As best practice, Mercer would expect to see measures of value add, such as trend analysis, extrapolation and efficiency gains or suggestions leading to cost savings.

- The SLA does not have KPIs to effectively measure the custodian's responsiveness and expectations to ensure queries and matters raised by the Guardians and its appointed parties are addressed in a timely and efficient manner. Whilst a measure of turnaround time has been included, this is a quantitative measure and does not assess responsiveness per se. Responsiveness refers to NT's ability to turnaround ad hoc requests.

- In general terms, the KPIs are loosely worded. The use of words such as "promptly" and "timely" lack definition, and timing is used erratically, in some circumstances referring to a "business day", in others the "morning of" and more rarely specifying the "by" time. The Guardians point to the fact that the word "promptly" has been extracted from the Master Custody Agreement (MCA). However, Mercer believes that the definition of a prompt response is relative to the respondent's perspective. As such, it is open to interpretation and therefore not appropriate for a SLA.

- Clause 11.2 Senior management comfort letter: Northern Trust is required to produce the required comfort letter on an annual basis. Under market best practice, however, custodians provide such confirmation and other types of compliance certificates to their clients on a monthly basis.

- Clause 11.9 Material changes in ownership or management structure and Clause 11.6 Force Majeure: the KPI refers to “prompt” notification and advice. Terms such as “prompt” do not provide a clear KPI. The Guardians should be more definitive in its expectation from the custodian.

- Clause 12.3 Monthly delivery – NAV reconciliations: under the current arrangement, the obligation is on the investment managers to reconcile their valuations against the custodian’s record and provide the custodian with their reconciliation reports. This process is not in line with best practice. This function is generally performed by the custodian where custodian’s valuations are reconciled against managers’ valuations and performance returns. Differences outside of the agreed and reasonable tolerances are investigated and resolved by the custodian, to the extent possible. This exercise is typically undertaken prior to release of the valuations and accounting reports to clients. In such cases, custodians notify investment managers of any variances that require the attention of the managers, and they escalate unresolved matters to clients.

- The SLA covers data delivery and system availability in too broad a manner and is silent on technology and systems support provided by the custodian (eg: data feeds to populate the data warehouse, Passport etc) and provides insufficient detail on the Guardians’ expectations and requirements regarding system access, timing and accuracy of the data feeds, system support and help desk, systems training for new staff.

- The SLA should also clearly outline the relationship matrix, escalation process and document the service review process.

We note that, in some instances, the Guardians does have documents that separately address some of the matters raised above such as the relationship matrix and escalation process. However, market best practice is to have these matters covered in the SLA as this document provides the governance framework for monitoring the overall services and support from both a qualitative and a quantitative perspective. The SLA should be a contractually binding agreement, either as a stand alone agreement or as a schedule to the contract. In any event, it is important that the SLA covers all the bases of the services and operational requirements of the Guardians and is regularly reviewed to ensure it accurately reflects the requirements and arrangements.

13.2.2 Monitoring

Unfortunately no custodian, no matter how well trained their staff or how sophisticated their systems, is infallible. Errors can happen and they can have serious consequences for the overall performance of client portfolios. The challenge in custodian monitoring is to assess custodians in terms of their ability in minimizing the incidence of errors, the speed with which they identify errors and their efficacy in ameliorating the impact of errors on their clients’ portfolios. It is also important to consider the degree of protection offered to the client through the contractual terms.

The following are the key elements of best practice custodian monitoring:

1. **Clearly defined and agreed service standards**: Building a best practice custodian monitoring program requires an SLA that clearly defines the timeliness, accuracy and responsiveness standards for each individual service provided by the custodian to the client. Based on our review of the SLA, apart from the matters highlighted above, we consider the Guardians' SLA with Northern Trust to be comprehensive and appropriate.

2. **Clearly defined and agreed performance measures and regular reporting.** KPIs are the measures by which the Guardians can assess and monitor the Northern Trust's performance. The Guardians obtain regular reporting from Northern Trust on its service performance against the agreed KPIs. We have reviewed Northern Trust's service performance reports and believe the process in place is appropriate and provides for the systematic recording of Northern Trust's performance. We also note that the Guardians obtains quarterly reports from Thomas Murray that covers the bank rating of the Northern Trust and the positive and negative rating factors for the quarter as determined by Thomas Murray.

3. **Complete and up to date record of all issues.** Mercer considers it essential to maintain an accurate and up to date log of all outstanding issues between the custodian and the client ("issues log") which typically forms the basis of the regular (weekly, fortnightly, monthly) service meetings between the custodian and the client. In this case, the Guardians maintains a log of all "client services queries and incidents" raised with Northern Trust and identifies those matters that have been repeated in order to highlight any systematic problems and patterns. In our view, the Guardians approach is above market standards.

4. **Regular service review meetings.** Building the protocols to ensure an open dialogue between the Guardians and Northern Trust is crucial to any best practice custodian monitoring program. It is fundamental to ensure a productive and efficient relationship between the two organisations and their respective staff. The frequency, agenda and attendees are key drivers of the efficiency of service meetings. Guardians' service review process as detailed below (and in 12.2.3) is above market standard:

    - Client service and interim relationship management and conviction rating meetings conducted via conference calls on a weekly basis;
    - Queries, claims and incident meetings conducted via conference calls on a fortnightly basis; and
    - Major incidents meeting conducted on a needs basis, generally via conference call within 2 business days of escalation of a major incident.

13.2.3 Evaluation

Over the last few years, there have been significant changes in terms of new services being offered, shorter timeframes for delivery of information, roll out of new technology and a general decline in fee rates for custodial services. Over the same time, the Guardians requirements have also evolved.

The Guardians currently undertake the following assessments:

- Formal service review meetings conducted on a quarterly basis in person in either Singapore or Auckland. We reviewed the sample KPI reports produced by Northern Trust in December 2008, March 2009 and May 2009 and reviewed the action points that were documented following the review meetings. In our view, the process and reporting is in line with market practice.

- Formal service and operational review meetings conducted on an annual basis in person in either in Singapore, Auckland or Chicago. We reviewed the 2009 annual review report including the detailed conviction rates and areas of focus as at Q2 2009 that was prepared by the Guardians and presented to Northern Trust in Chicago on 24 June 2009. In our view, the Guardians process and feedback to Northern Trust is above market practice and promotes a close relationship and communication between the two organisations.

We note that to further enhance the governance structure around the custody arrangements the Guardians receives regular benchmarking reviews in relation to custodial services and fees, provided by Thomas Murray.

13.2.4 Mercer's Assessment

Mercer has formed a positive overall assessment of the custodian appointment and ongoing monitoring process undertaken by Guardians. The Guardians has an appropriate legal agreement in place and an SLA that defines the service standards with a comprehensive and systematic program of monitoring of Northern Trust's service delivery against these standards. The contract and the SLA are supplemented by regular service review meetings to help ensure an open dialogue is maintained between the Guardians and Northern Trust. We note, however, there are some gaps in the SLA that Guardians should give consideration to incorporating in the SLA.

Mercer recommends that the Guardians ensures that the SLA with Northern Trust is amended to incorporate all key information that relates to service standards including information currently documented elsewhere, such as the issue escalation process and the relationship matrix. Whilst we have formed a positive overall assessment of the SLA, we do recommend that consideration be given to renegotiating certain KPIs in the SLA in order to ensure that the set of KPIs reflect a standard more in line with market best practice (refer 13.2.1).

13.3 Guardians' approach

13.3.1 Appointment

Mercer did not review the Guardians' approach to legal and business role assessment of investment managers, as this was beyond the scope of the review.

The assessment of investment manager strategy is covered in Section 6 Portfolio construction and manager selection.

From our discussions and information provided by the Guardians' Head of Portfolio Risk and Compliance, we understand that the Guardians has been developing a framework for operational reviews which is yet to be tested. In the interim, the Guardians has engaged third party service providers including Albourne and Aksia to assist with the operational reviews, if required.

Albourne is used primarily for hedge fund research by the investment team but where operational reviews on the Guardians' other managers become available, the Guardians can obtain these reviews. Aksia also specializes in research and advisory services in relation to hedge funds including reviews of investment managers' operations. Albourne and Aksia were appointed in early 2009. Thus, they are relatively new relationships and the usage and effectiveness of these services is yet to be tested.

13.3.2 Monitoring

The Guardians receives regular reporting to allow continuous Investment, Compliance and Operational monitoring of each manager; thus, enabling the monitoring of investment performance and compliance with the mandate terms.

The monitoring of managers is covered by the draft External Investment Manager Monitoring Policy. This document is still a work in progress, yet to be finalised.

For the purpose of monitoring investment managers, analysts are assigned to each mandate and are responsible for the relationship with the investment managers. Reporting on investment performance is provided independently by the custodian as well as the investment managers themselves. These reports are provided and reviewed by the analysts and the relevant investment teams and provided to the Risk and Portfolio Monitoring Committee.

Investment managers' performance is reviewed on both an absolute basis and relative to their benchmark. This analysis forms part of the "Dashboard Report" which goes to the Board every month. Performance is reported on a net of fees basis allowing evaluation of alpha on a "true cost" basis. The benchmarks used in the reporting are clearly identified and appear to be appropriate for the respective strategies.

Investment managers' standards are monitored to ensure that there has been no material adverse change to the circumstances of the investment manager since appointment. The areas of focus are mainly the quality of investment personnel; integrity of investment process; operational competency and risk management process of the managers.

The Guardians also utilises Northern Trust's mandate compliance monitoring service in ensuring investment managers comply with the mandate requirements and obligations as detailed in their IMA. Investment guidelines and restrictions are translated and converted into rules and tests by Northern Trust. These rules and tests are also reviewed and signed off by the Guardians.

Northern Trust undertakes daily mandate compliance testing and reports by exception any breaches identified to both Guardians and the relevant investment manager who reviews and provides reasons for the breach. Upon receipt of breach details from the investment manager, Northern Trust is required to update its report and advise the Guardians accordingly within 24 hours of receiving the investment manager's response.

Northern Trust also provides the Guardians with a monthly compliance report containing passive, active, open and closed breach items including details such as the date the breach was opened and closed, condition of the breach, custodian action and assessment of the breach. This report is provided within 4 business days of the month end.

Northern Trust also provides the Guardians with regular reports to monitor and review investment managers' performance. Those reports include:

- Daily exposure and cash position of each portfolio
- Portfolio valuation, financial and regulatory reports
- Investment performance measurement and analysis reporting
- Valuations reconciliations
- Daily mandate compliance review and reporting by exception of breaches

Investment managers are subject to requirements to produce information that enable the Guardians to monitor its operational capability. Information and confirmations provided by the investment managers include:

- A monthly Compliance Certificate, affirming their compliance with all mandate requirements, including reconciling accounts with the custodian. Investment managers appointed under an IMA are required to notify the Guardians immediately of any material adverse event.
- Performance and compliance with mandate, strategy/philosophy, ownership, staffing and financial information on the investment manager and any additional information the Guardians considers to be relevant on a regular basis. Immediate notification is required to be given to the Guardians from the investment manager in respect of: a qualified audit opinion within three months after the end of their financial year; and acts or omissions likely to cause a loss.
- Annual Risk Management Certificate and a copy of the external audit report certifying that the financial statements are true and fair, recording of investment management transactions complies with Generally Accepted Accounting Principles (GAAP), and that the investment manager complied with its internal risk management objectives, policies procedures and controls.
- Certified copy of any licence upon its renewal or amendment.
- Letter confirming whether there have been changes to the investment manager's policies and provide copies of the amended policies.
- Investment manager's Anti Money Laundering policy.
- Investment manager's Insurance Certificates.

Management periodically reports to the Board in sufficient detail to enable the Board to make informed judgements about the Fund, asset classes within the Fund and the performance of investment managers, the custodian(s) and external advisors engaged by the Guardians.

In our view, the Guardians process and practices detailed above are in line with market practice.

13.3.3 Evaluation

The draft External Manager Monitoring Policy states that, at a minimum, each investment manager should be visited on-site at least once per calendar year to review and update the conviction assessment. We have viewed a history of the active manager conviction ratings, which shows that since 2007 each manager has been assessed at least once per year (not all have been done for 2009 given that we are only part way through the year) and all were last visited onsite in either 2008 or early 2009. We understand that plans are in place to visit many of these managers during the remainder of 2009. In Mercer's opinion, visiting investment managers is preferable though reasonable ongoing research assessments can be accomplished through a combination of investment managers' visits to NZ and video conferencing (this is most effectively accomplished with investment managers who have been visited on-site previously).

In addition to the scheduled visits and conviction ratings, the lead analyst for each strategy is in communication with the manager about once a month, and any significant developments would lead to updating the conviction score.

The Fund maintains a record, for the public markets, of investment managers details including the last on-site visit, last meeting and when the latest conviction score was last reviewed. In summary, the policy and practice for monitoring external managers, in terms of both performance and conviction, is in Mercer's view consistent with best practice.

Mercer understands that the Guardians intends to utilise the operational due diligence process (see 12.4.1 above) to reassess investment managers' operational capabilities at regular intervals, post appointment.

13.3.4 Mercer's Assessment

The Guardians has taken positive steps to establish an appropriate assessment and review framework for assessing the appointed investment managers from an operational perspective. This process has been advanced for hedge fund mandates by outsourcing these reviews to third party organisations such as Albourne and Aksia. To date, the new approach has been concentrated on the hedge fund investment managers. We understand that the Guardians is in the process of building its in-house capabilities in this area to also cover long only mandates. Extending these reviews to long-only mandates is in line with best practice. However, as this is yet to be finalised, we are unable to assess and comment on the adequacy and effectiveness of the in-house capabilities.

The Guardians has established an appropriate and effective process to monitor investment managers' performance against their mandate and guidelines. This process extends to obtaining independent performance measurement and mandate compliance monitoring reports from the custodian, which increases the efficiency and integrity of the process. We believe that when the contemplated new operational risk assessment capabilities are developed and the new operational review process is fully implemented, the Guardians' processes for monitoring and reviewing investment managers will conform broadly to the notion of global best practice in the industry.

Recommendation 13.1: The Guardians to establish a number of key performance indicators with its custodian to better reflect market best practice. In particular, the SLA should incorporate all key information that relates to service standards including

information currently documented elsewhere, such as the issue escalation process and the relationship matrix. Also, appropriate key performance indicators should be incorporated to measure the accuracy, responsiveness and flexibility of its custodian's overall service.

14

14 Securities Lending Risk

Securities lending revenue can enhance the return from an investment portfolio. Revenues are generated from lending securities and from the investment of collateral provided by the borrower as security for the loan. Depending on the type of collateral lodged, a lender can earn fees on securities loans in two ways. Where a lender receives cash collateral, the lender is expected to invest this cash and to earn at least the “overnight cash” interest rate. From the interest received, the lender deducts his fee or share of interest and "rebates” the balance to the borrower at the end of each month. Alternatively, where non cash collateral is lodged, a fee rate is used to calculate fees payable by the borrower.

The amount of revenue generated depends on several major factors:

- portfolio composition;
- the amount (dollar value) of securities eligible for lending;
- the ability of the securities lending programme (SLP) manager to identify borrowers for these securities;
- the term for which the securities are lent;
- the interest rate at which the collateral is invested;
- the amount of “risk” the lender is prepared to take; and
- collateral restrictions and investment parameters.

The level of the lender’s fee negotiated with the borrower depends on loan size, duration, availability and “special” situations. Each lender determines collateral investment management policy (for example, liberal, conservative). A lender that does not impose any restrictions on the established investment guidelines will be able to maximise revenue potential. Conversely, a lender imposing restrictions to the established investment guidelines (that is, type of investment, issuer, concentration limits, maturity etc) may negatively impact earnings.

As the revenues from the SLP are split between the lender and the SLP manager, it is obviously in the lender's interest to negotiate the highest possible share of total revenue. Industry practice is for 70 to 80 per cent of revenues to accrue to the lender in agency SLPs.

This section reviews the performance of the Guardians' securities lending program in the context of a period of extreme market turbulence, against both best practice and market practice securities lending. Recommendations are made for the program going forward.

14.1 Market context

In 2008, world equity markets had their worst year since the Great Depression. The S&P 500 ended the year down more than 38 per cent, the DJ Stoxx 50 Europe down more than 40 per cent and most Asia Pacific markets down approximately 50 per cent. Deepening of the credit and liquidity problems, and resulting bankruptcies and forced mergers, have driven governments and central banks to implement coordinated initiatives to combat the global financial crisis.

The securities lending industry was not immune to the market challenges. Securities lending which is fundamentally a credit and financing activity was heavily affected by the market events. Market volatility, combined with a lack of balance sheet transparency, makes credit risk management more challenging. This is compounded by the fact that security loans and collateral values can diverge at any given point and timing in a default situation is critical for recovering loans. Thus, it is critical for security lenders to appropriately manage their securities lending risks.

In market conditions where assessment of credit risk is difficult, such as when collateral values are unstable, lending agents are challenged in maintaining adequate security against the loans. Where a counterparty default has resulted in a drop in collateral value, the loan value remains unchanged; hence, the collateral may no longer cover the loan exposure. Therefore, it is critical that lenders ensure the lending program in which they participate is well administered and transparent with the appropriate risk management framework and processes.

During volatile market conditions, the market witnessed multiple write downs in collateral pools and reduced lending volumes. The challenges faced by the SLP providers peaked in the third and fourth quarter of 2008, following the Lehman Brothers default with the confluence of increased costs of funding for borrowers, the introduction of short sale bans by regulators and increased liquidity pressures across the SLPs. These events have increased market awareness and focus on lending programs, with increased emphasis on risk management reviews across both the lending and cash collateral reinvestment portions of SLPs. Whereas cash collateral was historically viewed as the safe option and easily obtained through the liquidation of the short-term collateral investment portfolio, market events over the last two years have brought this view under intense scrutiny.

During 2008 and early 2009, the market has seen a global decline in both lendable securities and securities on-loan balances. Securities lending providers are expecting lending markets to remain steady for the remainder of 2009, with signs of growth towards 2010. Although demand on a macro level remains significantly low compared with a year ago, demand for certain assets remain strong (eg; equities in the financial services, auto, travel and retail sectors). Meanwhile, the demand for fixed income

securities is lower due to heavy new issuance of government debt and lower corporate bond issuance.

14.2 Principles

Best practice risk management for securities lending should encompass the following:

- Appropriate assessment of all aspects of the lending program and program provider before entering into such a program;
- An established monitoring framework to enhance prudent management and governance of the lending program. The monitoring program should include many aspects of the program including:
  - regular due diligence assessment of the lending provider;
  - ensure a good understanding of the processes in the case of a credit event and determine the potential gaps between valuing the loan and perfecting collateral;
  - monitor and review the approved counterparty and borrowers on a regular basis;
  - review loan exposures and concentrated credit risks with counterparties and borrowers; and
  - regular reviews of the security composition of the outstanding loans collateral pools or reinvestment fund to identify illiquid securities and evaluate the impact on the overall position.
  - a red flag system triggered by key events (eg: technical default of counterparties) and requiring notification from the SLP.

14.2.1 Assessing lending programs (principal versus agency)

SLPs can take a wide variety of forms, each with a different legal structure and a different apportionment of risks and returns between the parties. One of the defining characteristics of any SLP is whether its program manager is acting as principal or as agent.

Description	Mercer Sentinel's view
Principal	
If the SLP manager acts as principal, it borrows the securities from the lender itself and arranges to on-lend the securities to underlying borrowers. Therefore, the SLP manager, rather than the lender takes on the risks associated with the loans to the underlying borrowers.	Historically, this has been a way for the asset owners who have low risk tolerances to enter into such arrangements. We generally do not recommend such arrangements as it generates a concentrated credit risk exposure to the SLP manager, as well as limiting the transparency to the SLP and inability to appropriately assess SLP's performance as the lender will not have access to the information on the ultimate borrowers and size of lending margins.
Agent	
If the SLP manager acts as agent, then it lends securities on behalf of the beneficial owner. In such case, the SLP manager does not take on any risk for the transaction, the lender bears all the risks. However, SLP managers often indemnify their clients against losses incurred	In most cases this is the most prudent way to generate quality returns within the risk tolerance of the lender. It clearly allows for a high degree of transparency which is critical particularly considering the market environment in the recent times. This arrangement also provides the lender

Description	Mercer Sentinel's view
through such eventualities as borrower default and operational malfunctions.	with the flexibility to adjust the risk parameters of the SLP in accordance with the lender's risk tolerance level which in turn determines income generation.
Exclusives	
If the SLP manager acts to provide guaranteed lending revenues, the manager can act as principal or agent and is granted the exclusive right to borrow securities from a specific lender's portfolio for a pre-determined rate and period of time. The advantages of this option are that participants skip the queue for the algorithm generated with most agency lending arrangements; income source is guaranteed, provides less reliance on generate revenue off investing cash collateral (if posted) and flexibility to generally re-negotiate the terms if market conditions change.	The advantages of this option should be weighed against the disadvantage of being committed to a single borrower (that is, borrower concentration risk) for a fixed period. This option also requires a meaningful portfolio size for borrowers to find it worthwhile to commit to an exclusive arrangement. It also requires the asset owners to have an extensive knowledge of securities lending market and lending providers and their processes, combined with a close supervision process.

14.2.2 An established monitoring framework

Securities lending is like other forms of investment management in that it involves accepting a certain amount of risk to capital in order to earn a return. A SLP needs to be structured properly; the level of risk involved measured and managed appropriately; whilst generating revenue streams for the participants. Thus an SLP should be treated with the same discipline, approach, monitoring and accountability as any other investment strategy.

We outline below the key risks associated with SLPs and risk mitigation and controls for these risks, by way of an explanation of best market practices in the securities lending field.

Borrower default risk

Risk description	The borrower becomes insolvent and will be unable to return the securities resulting in the lender losing the principal.
Risk mitigation and controls	***Thorough credit assessments of the borrowers*** A thorough credit assessment of all borrowers should be undertaken by SLP agent to determine the borrower's financial status before a loan is made, and at regular intervals to monitor any change in the creditworthiness of the individual borrowers as the status of many potential borrowers can change rapidly. The quality of the borrower's management and financial controls are an example of other factors that should also be taken into account when assessing potential borrowers. ***Collateralisation in securities lending*** Borrower default risk is reduced through collateralisation. Under a robust legal agreement that is in line with industry practice, a lender is only exposed to a loss if the value of the collateral held is insufficient to cover the repurchase of the loaned securities together with any outstanding dividend and corporate action proceeds. When a borrower defaults while the loan is outstanding, the SLP agent, on behalf of the lender, will liquidate the collateral and purchase the loaned securities in the open market. ***Indemnity by SLP agent*** Most SLP agents can provide indemnities against borrower default via either the full return of loaned securities to a lender, or by the payment of cash equivalent to the value of loaned securities at the time of default. In securities lending agreements with the SLP agent, lenders can also place restrictions on type of borrowers, type of collateral and collateralisation levels for different types of collateral and counterparty.

Collateral deficiency risk (securities non-return risk)

Risk description	A fall in value of the securities provided as collateral, or that the issuer of the collateral securities goes into default.
Risk mitigation and controls	***Quality of collateral*** Only cash, good quality and liquid securities should be accepted as collateral and should be determined prior to entering into an SLP and reviewed on a regular basis to ensure securities do not fall outside of the investment guidelines. Lenders may set limits on risk concentrations to ensure diversity of collateral. ***Collateralisation levels*** To manage this risk, the level of collateral provided by borrowers should be supplemented by an additional "margin" to cover market fluctuations. Current market practice is for collateral to be maintained at a minimum level of at least 102 to 105 per cent of the market value of the loaned securities plus accrued interest, depending on the market. ***Ongoing monitoring*** Collateral levels should be monitored on an ongoing basis and timely margin calls should be made by the lender (or its agent) requiring the borrower to provide additional margin to maintain the value of collateral at a specified level relative to the value of the securities on loan to the borrower concerned.

Cash collateral reinvestment risk

Risk description	***Cash collateral reinvestment risk:*** This risk exists if cash is accepted as collateral from borrowers and reinvested. It is industry practice for SLP to reinvest the cash into money market and fixed income instruments to earn a rate of return higher than the interest to be rebated to the borrower who placed the cash collateral. The cash reinvestment may be separately managed through customised mandates with investment guidelines agreed with the lender or invested into the SLP manager's collateral pools, which other clients of SLP managers participate in. There are several dimensions of risks in cash collateral reinvestment: • *Market risk:* risk that the cash reinvested resulting in collateral deficiency when market value declines. • *Credit risk:* when the issuer of a security, into which the collateral is reinvested, defaults resulting in permanent collateral deficiency. • *Liquidity risk*: If the securities that the cash is reinvested is illiquid and could not be sold to return the cash to the borrower, the lender is obliged to return the cash. Under agency arrangement, the lender (not the SLP manager) is responsible for such collateral deficiencies and is required to "top-up" the shortfall. • *Interest rate risk:* risk of loss due to duration mismatch in maturity profiles of cash collateral invested into fixed term investment instruments (ie: the difference between what is earned on the cash reinvestment and what is to be rebated to the borrower for the use of the funds. The latter is usually expressed as an overnight market reference cash rate less a certain margin.
Risk mitigation and controls	Clear investment guidelines must be set to control the different dimensions of investment risk and return. Lenders should obtain regular information of the asset composition of the reinvestment funds and should monitor these risks as they would any other managed fund in which they had invested.

Collateral re-hypothecation risk

Risk description	The pledging of securities in a customer margin accounts as collateral for a bank loan, more commonly associated with margin lending where investors leverage on their security positions as collateral to secure/borrow cash. Prime brokerage principal model is an example of where hedge fund clients pledge their assets as collateral to raise cash for financing and the prime broker has the right to re-hypothecate, sell or on-lend the collateral.
Risk mitigation and controls	Robust legal agreement to ensure there is protection by way of clearly identifiable segregated safe keeping of the re-hypothecated collateral and not pooled with other clients.

Liquidity risk

Risk description	Risk that a borrower will not settle an obligation for full value when due, but on some unspecified date thereafter. It is also the risk that a firm is unable to conclude a transaction at anything near the current market price due to a lack of marketability of a security. The market liquidity risk may be associated with inability for borrowers to obtain securities to meet recalls of securities on open stock loans used to cover short positions.
Risk mitigation and controls	Lenders may restrict their securities lending in liquid markets to alleviate situations where a borrower has sufficient assets overall, but lacks specific assets to meet a margin call or a recall, and diversify their type of collateral to be accepted for loans. Lenders may be exposed to liquidity pressures when faced with a high number of requests for returns of collateral by borrowers. These liquidity pressures will often be mitigated. Legal agreements provide for a margin threshold be reached before firms have to return any excess collateral.

Market risk

Risk description	***Market default risk*** Market risk is the risk of loss from adverse movements in the level or volatility of market prices of assets. Although maintaining margins and collateral levels through “mark to market” procedures alleviates some aspects of market risk, other factors such as price volatility, market liquidity and exchange rate fluctuations cannot be totally eliminated. Strong procedures and control systems are essential in managing this risk. ***Market fee risk*** There is a risk that borrowing demands for stocks owned by the lender may fall. If so, income to Lender will fall accordingly. Market borrowing rates are set by demand and supply and are not guaranteed to remain stable. Changes in the marketability of the existing portfolio, or planned changes to the make-up of the portfolio will affect the level of income that can be derived from the portfolio.
Risk mitigation and controls	Market risk can be meaningfully analysed only on a portfolio basis, taking into account offsetting positions in particular underlying risk factors (eg: interest rates, exchange rates, equity indices or commodity prices) and correlations among those risk factors. Market risk can materialise in counterparty default, inappropriate margining, reinvestment of cash collateral; and market demand.

Operational risk

Risk description	Risk of deficiencies in information systems or internal controls could result in unexpected loss, either a loss of a fraction or the whole value of a transaction or to penalties imposed.
Risk mitigation and controls	Sound management and control procedures are required to monitor daily income, counterparty credit limits, rebate rates, distribution of appropriate substitute payments. To ensure that exposures are identified between the market value of the securities on loan and collateral. Internal control weakness can lead to losses from fraud including unauthorised positions taken by traders, failure to adhere to policies or simply from the assumption of risks in excess of those acceptable to the board of directors. Such weaknesses can be controlled to a great extent through clarity of duties, proper management oversight, escalation procedures for approvals, restricting systems and data access and compliance, oversight and periodic testing of restrictions and controls.

Settlement risk

Risk description	Risk that the completion or settlement of individual transactions will not take place as expected. Settlement risk could arise, for example, when loaned securities were delivered in one settlement system prior to the receipt of collateral securities in another system.
Risk mitigation and controls	In order to avoid this risk, most lenders either require settlement of both legs in a delivery-versus-payment system, or require securities borrowers to pre-deliver collateral at the initial borrow, and pre-deliver the borrowed securities or funds upon return. Pre-delivery does expose the borrower to settlement risk and many borrowers are taking steps to limit these exposures by adopting delivery-versus-payment settlement approach.

Custody risk

Risk description	Loss of securities held with a custodian as a result of insolvency, negligence or fraudulent action by the custodian, particularly in case of collateral arrangements.
Risk mitigation and controls	Since collateral providers are typically subject to the choice of custodian of the collateral taker, they do impose restrictions and obligations with respect to the custody of collateral. Legal agreements may limit or restrict the ability of the custodian in such cases. However, collateral providers relinquish much of the daily management of assigned collateral, including the reinvestment of any cash collateral.

Legal risk

Risk description	Defined as the risk of loss because of the unexpected application of a law or regulation, or because a contract cannot be enforced. Participants should always be aware of any local regulatory constraints. For example, in some countries, a loan of securities outstanding for a term longer than 12 months will be classified as a sale; so the return would be classed as a purchase of the loaned securities. This could have adverse capital gains tax consequences for the lender.
Risk mitigation and controls	Clear legal documentation on key terms and conditions. It is industry practice for SLP agents to use master agreements developed by securities lending bodies to establish terms and conditions of securities lending transactions. One key benefit of using a master agreement is that it reduces the inefficiencies associated with negotiating legal and credit terms transaction by transaction among industry players. The other benefit is that firms can dispose of collateral and/or buy in securities immediately on occurrence of an event of default. An important factor is to ensure enforceability in insolvency of the close-out and default provisions. The lending agent should be kept abreast of all regulatory changes in the countries where securities are being lent out on behalf of the lender.

Transparency risk

Risk description	The unintended or unanticipated accumulation of risks by investors, often through the lack of knowledge or understanding of the risks or lack of available information.
Risk mitigation and controls	Obtain additional information to better understand and evaluate the risk, returns and exposures of the SLP.

14.3 Guardians' Approach

14.3.1 Assessing lending programs (principal versus agency)

Until recently, the Guardians was participating in an SLP managed by eSecLending "eSec", a specialised securities lending agent. eSec was appointed in March 2007 to manage the Guardians' securities lending program through online (web based) auctioning facilities utilising a blind auction process to achieve exclusive arrangements for lenders. The cash collateral was invested in a collective investment fund (CIF) and also managed by eSec.

Outlined below are the key features of eSec's auction lending program as compared with a traditional lending program.

TRADITIONAL CUSTODIAL PROGRAMS	eSecLending's CUSTOMIZED PROGRAMS
Program design based on common denominator of all clients in pool	Individual programs tailored to each client's unique assets, guidelines and risk tolerance
Limited transparency and control for lenders	Transparency and control
Market inefficiencies passed on for the benefit of borrowers	Market inefficiencies captured for the benefit of lenders
Generates average, 'market level' returns	Generates premium returns
Revenue based on "best efforts"	Guaranteed revenue stream for fixed term
Client's assets wait in a queue to be borrowed	No client queue — utilization is optimized for each client
Clients with large, valuable assets subsidize those with less valuable supply	Client portfolios are marketed separately to borrowers and earn their full value
Borrowers may have to borrow general collateral securities in order to gain access to specials	Borrowers bid only on desired assets and borrow only what they want

Source: eSec Lending website

We note that participating in these types of program requires an in-depth knowledge of the securities lending market, service providers' processes and disciplines, close coordination between the provider and its client's operations team and custodian, appropriate technology and system support, effective internal control processes and management oversight.

Prior to appointing eSec, the Guardians undertook a due diligence assessment of eSec's operations, process and systems. This assessment review also included an on-site visit of eSec's operations in US, prior to appointing eSec in 2007. The Guardians also elected to use eSec's cash collateral CIF facilities.

We have not reviewed the Guardians' due diligence process, outcome and reasons for selecting eSec and its auction program. However based on the information provided, in our view, undertaking a comprehensive due diligence process including on-site assessment of the service provider's capabilities, systems, personnel and controls is in line with best practice. We also note that the fee arrangements negotiated with eSec were competitive with 80 per cent of revenues to accrue to Guardians and 20 per cent to eSec. The fee arrangement represents best practice revenue apportionment and a competitive arrangement.

In October 2008, following Moody's decision to change its methodology for rating AAA money market vehicles, the CIF was downgraded from AAA to a "not rated" category. As a result, eSec suspended the CIF. At the time of suspension, the CIF had a value of approximately USD$1.55 billion (NZ$2.3 billion) of which Guardians' share was about USD$457 million (NZ$675 million) or approximately 29.5% of the total size of the collateral pool. Subsequently, the Guardians suspended further lending activities, but did not call back existing loans, and redeemed its portion of the collateral pool from CIF in the form of an in-specie transfer of securities to the Fund's custodian. These assets are held in a portfolio and managed by the Guardians, with the intention of retaining them to maturity.

The mark to market valuation of the collateral assets has been reported by the Guardians as an unrealised loss of approximately NZ$187 million.

Mercer was not engaged to assess the collateral pool profile on an ex ante basis and it is beyond the scope of this review to do so on an ex post basis. As such Mercer cannot comment on the quality of assets held, the issuers, the interest rates payable or the average term to maturity and hence the likelihood of recovering the stated loss. In our discussions with the Guardians, they have indicated that:

"The assets were conservatively valued at 30 June 2009. Our 30 June valuation of the asset-backed securities (ABS) aligns to the pessimistic case valuations of our advisor. For example our advisors best case valuation of the ABS is NZD45m higher than that recorded at 30 June. Non ABS assets in the portfolio such as the structured investment vehicles (SIVs) may have similar upside".

The Guardians reports that the cessation of the securities lending activities is unrelated to the loss recorded and relates to the substantial changes it has witnessed in the lending model over the past 12 to 18 months including regulatory changes to the short selling and changes in the demand dynamics from borrowers. The Guardians states that:

"We choose to suspend lending to give us time to consider how the lending model will eventually develop given these changes and then assess our future participation in lending based on the economics, risks, ways to access etc".

14.3.2 An established monitoring framework

We have assessed the Guardians' process and approach to managing the lending risks detailed above.

Borrower default risk

- The Guardians relied on eSec's credit assessment process of borrowers to determine the borrower's financial status before a loan is made. In line with best practice, such analysis was obtained at regular intervals to monitor any change in the creditworthiness of their borrowers.
- Collateralisation via use of ISDA is in line with best practice.
- The Guardians' SLP was an indemnified SLP. We note that according to paragraph 19.a of the agreement with eSec that eSec would make good any replacement shortfall from a borrower default where no replacement security could be found, which minimised the Fund's risk.

Collateral deficiency and reinvestment risks

- The Guardians had in place a cash collateral investment guideline outlining the type and level of collateral acceptable to the fund including the credit guidelines. However, collateral was invested in CIF which minimised the level of transparency into the collateral pool.
- In line with best practice, the type and duration of collateral were determined by the Guardians. Collateralisation levels were also held at 102 to 105 per cent of the market value of the loaned securities or higher. Collateral levels were monitored on an ongoing basis.
- We note that the Guardians cash collateral arrangements were through CIF and managed by eSec. These types of vehicles reduce transparency and lenders' ability to assess their collateral exposure and place a great reliance on the collateral manager's ability and process to manage such risks. We understand that the Guardians recently withdrew from the program; however, if it decides to re-enter the program, it will contemplate managing the cash collateral itself. This approach is in line with the current market view of many other larger funds who have in-house expertise from both operational and investment perspective, combined with capabilities and systems to manage collateral pools. Some funds have also appointed specialised and experienced investment managers to manage the funds' collateral pool, rather than relying on the SLP managers in this regard.

Market risk

- The Guardians had appropriate processes to monitor margin and collateral levels through daily mark-to-market process. However, due to lack of transparency of CIF investments, monitoring the cash collateral would have been difficult.

Operational risk

14.3.3

- The Operations Team within the Guardians provided management oversight and had reasonable management and control procedures in place to monitor SLA activities including lending income, counterparty credit limits, failed trades etc.
- Responsibility for collateral management resided with eSec.
- Should the Guardians decide to participate in an SLP again, then it should establish a regular review process of the SLP providers and its own operational arrangements, controls and risk management environment to ensure that they remain valid and appropriate for the Fund.

Settlement risk

- The Guardians had appropriate processes and monitoring arrangements to monitor settlement activities. Regular failed trades and information were obtained from the custodian to monitor the impact of lending on transactions.

Custody risk

- This risk will be come more significant should the Guardians decide to re-enter the SLP and manage the collateral pool itself. In such case, it would be important to closely monitor custodian operation and activities to eliminate losses as a result of negligence or fraudulent action by the custodian, particularly in case of collateral arrangements.

Legal risk

- The Guardians had the appropriate ISLA agreement in place with eSec. It is industry practice for clients to use the ISLA agreement developed by securities lending bodies to establish terms and conditions of their securities lending transactions.

- The Agreement with eSec agreement (clause 27) indicates that the Lender acknowledges that there might be conflict of interest with other clients of the Lending Agent. This is not a standard term for other agency programs where the allocation in the lending is determined by a queuing process through algorithm to ensure all participants are fairly treated within the lending system. However, as eSec's program is an exclusive program for the Guardians, at times the Guardians may be competing with other eSec clients for the same borrowers.

Transparency risk

- Recent prevailing market conditions have forced participants such as the Guardians to place increased emphasis on risk management reviews across lending and cash collateral reinvestment portions of their SLP, demanding timely information, full transparency and open dialogue with SLP providers. Investing in pooled investments such as CIF may not offer the required level of transparency for these arrangements. The risks and rewards of CIF vs a discrete arrangement should be carefully assessed against the risk tolerance of the Fund.

- It is critical that if the Guardians decide to re-enter the program, considerations is given to the risk/reward trade-offs while gaining insight into how revenue may be optimised by lending various asset classes at various forms of collateral.

14.4 Mercer's Assessment

Securities lending, like all other areas of investments and investment operations, is appropriately considered within a risk and reward framework. Funds that participate in securities lending programmes need to be in a position to properly assess the risks they are exposed to.

Under the best practice guidelines, it is critical that funds participate in a well managed and controlled securities lending program. At the same time, it is also required that participants in such programs have the appropriate knowledge, experience, systems and internal controls to oversee the SLP and manage the risks associated with the program. Furthermore, funds are also required to establish a formal monitoring framework and review process when participating in an SLP.

Our review of Guardians' securities lending protocols has been a retrospective analysis, as we understand that the Guardians is not currently active in this market. In our view, the Guardians SLP and related arrangements have been in line with market practice. In some cases, the Guardians practices have been above market, particularly in relation to monitoring credit ratings of borrowers, failed activities, income collection and utilisation performance.

In Mercer's view, it is normal and standard practice to invest all collateral in one vehicle which minimises the operational and investment risks for the participants. Best practice would dictate that this be a customised mandate with attendant investment guidelines and transparency through reporting.

Investing in a AAA-rated fund, under normal market conditions, is a reasonable investment decision. To meet a AAA Moody rating, the collateral investment generally should be short duration, short weighted average maturity (WAM), high credit quality and liquid. In the extraordinary time period in question, a number of AAA funds were holding asset-backed commercial paper, other securitised assets and corporate credit that may have met the maturity and duration requirements on a weighted average life basis, but not on a term basis. Consequently, when the fixed income markets fell, Moody's revisited such highly-rated funds and downgraded many of them, as the underlying investments no longer met the requirements - either because they weren't liquid as the credit quality was recognised as being below acceptable levels, or the maturity was extended.

Managing the Fund’s cash collateral through the CIF did reduce transparency and as such the Guardians’ ability to manage its collateral and liquidity risks.

Given the above observations, it would be unjust to be overly critical of the Guardians’ arrangements in respect of its securities lending activity. The collateral and liquidity issues faced by the Guardians in relation to the CIF are not isolated to the Guardians and have been faced by many other large and sophisticated institutions in the global markets, across a multitude of SLPs. The key point for consideration as regards a future securities lending program, is that the recipient of SLP reports must understand the content, be able to draw inferences from that content and be in a position to act upon those inferences, and as such should have sufficient in-house skills and experience to do so.

In relation to the unrealised loss created by the shortfall in the collateral pool, whether or not buying out impaired collateral realises a loss has been interpreted differently by lenders and auditors. Technically, the collateral fund is realising a loss, but it isn't clear that segregating the collateral investment pro-rata causes an accounting event. Theoretically, the Guardians could hold the assets until maturity and if they mature at par, then no loss has been realised. Most lenders have limited the write offs to investments in securities that are permanently impaired, such as those that are affected by a bankruptcy proceeding. The Guardians assessed the mark to market loss soon after the SFT was suspended on 1 October 2008.

Recommendation 14.1: In any future Securities lending Programme (SLP), that the Guardians obtains regular data regarding the activities and position of the collateral pool. Also that it ensures that it has the necessary internal management expertise to assess the content of SLP monitoring reports, be able to draw inferences from that content and be in a position to act upon those inferences.

15

15 Financial Risk and Return Performance

This section examined the financial risk and return performance of the Guardians as compared with its performance expectation.

This performance review of the Guardians is structured as follows:

- First the Guardians' overall performance is compared against that of a comparable peer group of sovereign wealth funds (SWF) and endowments; and
- Second the Guardians' individual asset performance is compared against the relevant benchmark for each asset class as determined by the Guardians.

15.1 Summary

The Fund's overall performance expectation must be interpreted according to the legislation. The following section puts into context the issue of what is the overall return expectation relative to an objective of maximising returns without undue risk.

The Guardians' interpretation has been guided by emphasis on the long run horizon over which the Fund's investment structure was and is expected to perform, and the fact no draw-downs were to be made from the Fund for at least 20 years. Mercer considers that the Guardians' investment structure comprising 70% to 90% growth assets is consistent with its legislative requirements.

The investment structure has been designed with a 20 year plus horizon in mind, and targeting additional premia available largely to long run investors with large available funds. Insufficient time has elapsed for these premia to be harvested.

While the Fund has been invested for 5 years sufficient time has elapsed, in theory, to judge the performance of selected fund managers (refer Section 6). Fund manager value added is expected to be harvested over at least a full economic and market cycle, at least 3 to 5 years. But for 2 out of the most recent 5 years the financial world has been in the grips of the worst crisis since the 1930s, and its aftermath. Mercer believes

that the crisis impacted in such a way as to hinder the performance of active fund managers.

Bearing in mind the foregoing comments, Mercer has the following principal conclusions about the Fund's investment performance. Unless otherwise stated investment performance is calculated before any New Zealand income tax has been deducted and after fund manager fees have been deducted.

Since inception (September 2003) to June 30, 2009 the Fund has returned 24.3%, or at an annualised rate of 3.9% p.a. This rate compares with the New Zealand inflation rate of 2.9% p.a. over the period.

The value lost by the Fund relative to its benchmark amounted to an average annual value of -0.45% p.a. over the period (before tax and after fees). It has underperformed its own expectation of 90 day Treasury bills plus 2.5% p.a. by an average annual value of 5.26%. The bulk of this underperformance occurred during the height of the global crisis.

Mercer views the performance of the Guardians as being broadly consistent with other funds of the same type through the same period. The crisis conditions of 2008 and 2009 saw all major growth assets sell off simultaneously. Traditional sources of diversification, through accessing assets which do not correlate with one another over longer periods, dried up. Many institutions, mainly in the US and Europe, were caught with a desperate need for liquidity. Assets that could be sold were sold down to relieve balance sheet pressures. Selected financial assets could not even find a bid at the height of the US crisis, putting even greater pressure on the prices of 'liquid' assets which could attract bids. Mark to market returns generally disguised the true asset quality of large investment funds, especially those with a long run horizon who did not share the same desperate need for liquidity.

The Guardians has continually stressed its long run focus, in earlier times noting that its investment performance was unduly positive, relative to its long run expectations, and then commenting on the reverse effect during the crisis.

The Guardians has designed an investment structure for the long-term (20 to 30 years ahead). The investment returns' performance over much shorter periods does not provide much information on the quality of the Guardians' investment structure.

The Guardians has performed much as one would expect this type of fund to perform once fully invested. The value lost by the Fund relative to its benchmark amounted to an average annual value of -0.45% p.a. over the period (before tax and after fees), but the bulk of this underperformance occurred during the height of the global crisis (Section 6). The Fund outperformed the benchmark in the 2005, 2006 and 2007 financial years. In the last financial year the Fund under-performed against the benchmark by 3.9%, and in the process lost all of the added value of the preceding years.

	New Zealand Super Fund	**New Zealand Super Fund Benchmark**	**New Zealand Super Fund Excess Return**
Full Period Return	24.28%	27.40%	-3.12%
Annualised Return (If > 1 Year)	3.85%	4.30%	-0.45%
FINANCIAL YEAR ANALYSIS			
9M ENDED 30/06/2004	7.69%	8.07%	-0.38%
FY ENDED 30/06/2005	14.13%	13.88%	0.25%

FY ENDED 30/06/2006	19.21%	17.56%	1.65%
FY ENDED 30/06/2007	14.58%	13.07%	1.51%
FY ENDED 30/06/2008	-4.92%	-4.73%	-0.18%
FY ENDED 30/06/2009	-22.14%	-18.25%	-3.89%

The Guardians remains committed to seeking out value added approaches within the risk tolerance of the Fund, and to strengthen its policies and processes.

15.1.1 Relative Performance at a Portfolio Level

	Annualised since Inception (% pa)				
	Return	**Index Return**	**T-bills + 2.5%**	**Excess Return**	**Inception Date**
New Zealand Superannuation Fund	3.85%	4.30%		-0.45%	30 Sep 2003
New Zealand Superannuation Fund	3.85%		9.11%	-5.26%	30 Sep 2003
Equities	3.58%	3.70%		-0.12%	30 Nov 2003
Property	-1.65%	-2.19%		0.54%	09 Feb 2005
Private Markets (ex Property)	7.36%				30 Apr 2005
Commodities	-8.52%	-8.93%		0.41%	31 Aug 2005
Global Fixed Interest	9.27%				03 Dec 2003
New Zealand Fixed Interest	6.62%	6.63%		-0.01%	20 Nov 2003
Cash	6.88%	6.61%		0.27%	30 Sep 2003

15.1.2 Maximise Returns without Undue Risk

The Guardians accepts its responsibility to interpret the legislative requirements and to plan and manage its affairs within the law.

The Guardians has made it clear from its earliest stages that it views the appropriate risk tolerance for the Fund as being very high. It adopted a growth assets ratio of 80% in 2003 and has remained loyal to that figure.

An 80% growth assets figure is close to a maximum risk tolerance for any SAA. Beyond a figure of 80% the benefits of risk exposure become marginal in relation to the costs.

The long run performance expectation of the Guardians is to outperform the risk free rate[41] by 2.5% p.a. over rolling 20-year periods. It is not sensible to apply this test as a shorter term metric of performance. Over short periods there will be times when the Fund achieves returns well in excess of this metric and other times when the Fund's returns will be well below the figure.

This particular issue was identified very early on in the life of the Fund. The build-up of years will in the future bring this metric into a proper focus. In the meantime other partial indicators such as performance against benchmarks, performance against simulated periods (stress testing against the modelled behaviour of financial markets) and performance against reference peer funds need to be used.

[41] Interpreted as the New Zealand Treasury 90 Day Bill Rate

Mercer has examined all of these shorter term partial indicators of the Fund's overall performance and the performance of each component.

15.1.3 Performance overview

The Fund's underperformance in the latter part of the review period was a significant contributor to the performance figures. The Fund entered the global financial crisis fully invested in its SAA structure with a large focus on active management, and bore the brunt of a global mark down of growth assets.

The table below shows relative performance by sector on a per annum basis since inception.

	Annualised Since inception (% pa)				
Fund / Sector	**Return**	**Index Return**	**T-Bills + 2.5%**	**Excess Return**	**Inception Date**
New Zealand Superannuation Fund	3.85%	4.30%		-0.45%	30 Sep 2003
New Zealand Superannuation Fund	3.85%		9.11%	-5.26%	30 Sep 2003
International Equities Large Caps Unhedged	0.80%	1.10%		-0.30%	30 Nov 2003
Global Small Caps Unhedged	1.25%	1.20%		0.05%	19 May 2004
Emerging Markets Unhedged	13.15%	14.32%		-1.17%	29 Jun 2004
Multi-Strategy	4.04%	6.28%		-2.24%	30 Nov 2005
New Zealand Equities	7.15%	5.07%		2.08%	12 Dec 2003
Equities	3.58%	3.70%		-0.12%	30 Nov 2003
Global Property Unhedged	-4.79%	-5.65%		0.86%	09 Feb 2005
New Zealand Property	6.16%				24 Jun 2005
Property	-1.65%	-2.19%		0.54%	09 Feb 2005
Infrastructure Hedged	0.23%				30 Apr 2005
Private Equity	5.69%				26 Jul 2005
Timber Hedged	11.82%				31 Oct 2005
Other Private Markets	-4.83%				03 Jun 2009
Private Markets (ex Property)	7.36%				30 Apr 2005
Commodities	-8.52%	-8.93%		0.41%	31 Aug 2005
Global Fixed Interest	9.27%				03 Dec 2003
New Zealand Fixed Interest	6.62%	6.63%		-0.01%	20 Nov 2003
Cash	6.88%	6.61%		0.27%	30 Sep 2003

The public market sectors that out-performed their respective benchmarks were global equity small caps, New Zealand equities, global property, commodities and cash. Value was lost through the Global equity large cap, emerging markets, multi-strategy and New Zealand fixed interest sectors.

15.1.4 Definitions

Throughout this section there are several references to SAA and Benchmarks. There are subtle and quite important differences between these two concepts as the following paragraphs illustrate.

SAA

The Guardians has determined a SAA that, in its view, best meets the statutory obligations. The SAA highlights target levels for asset classes. It does not reflect the Fund's current holdings. The difference between the Fund's current and target holdings is made up through the use of:

- Investment proxies, whereby any differences for the private market holdings are made up by offsetting holdings of other, more readily accessible assets such as listed equities and fixed interest. These public market proxies for private market assets are held in proportions that reflect the overall financial characteristics of the targeted private market asset.
- Strategic Tilting from the (proxy adjusted) SAA target weights.

Public Market Proxies for Private Market Exposures

Proxies for Each Private Market Asset Class	Private Equity	Infra-structure	Other Private Markets	Timber	Unlisted Property
Global Equities	125%	30%	25%	20%	0%
Listed Property	0%	0%	0%	40%	100%
Fixed Interest	-25%	70%	75%	40%	0%
Total	100%	100%	100%	100%	100%

Benchmark

For private market asset classes replicable benchmarks that are representative of the exposures of a given manager do not exist, hence the use of public market proxies for private market exposures (as above). To help assess the resulting impact of Fund returns, the Guardians has developed a benchmark made up entirely of listed asset classes that could be invested in a passive (market tracking) fashion. The Guardians refers to this as the "public markets benchmark".

The benchmarks for individual asset classes are as follows:

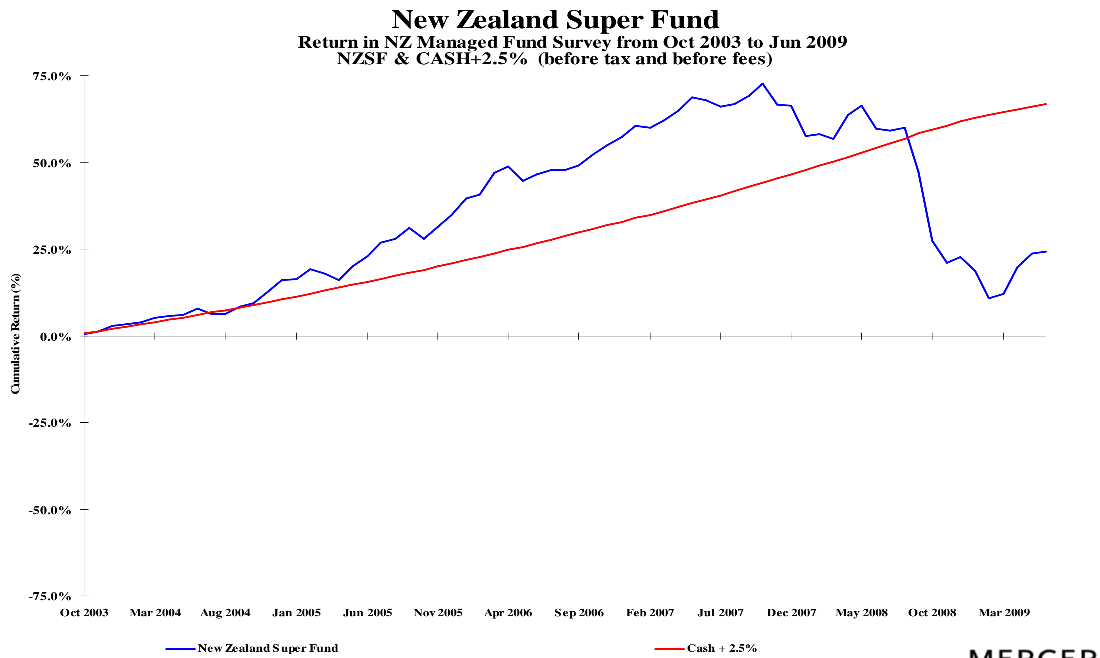
Benchmarks for Individual Asset Classes

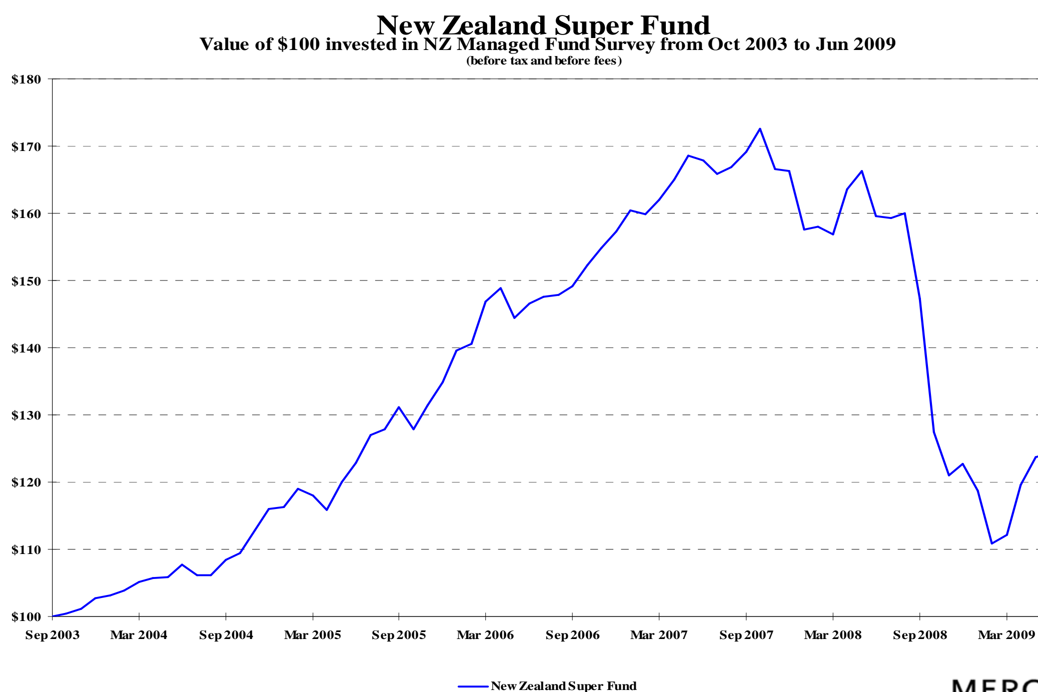
Asset Classes	Sub Sector	Benchmarks
Global Equities	Large Cap	MSCI World Index in NZD
	Small Cap	MSCI Small Cap Index in NZD
	Emerging Markets	MSCI Emerging Market Free Index
NZ Equities		Weighted aggregate of manager benchmark indices
Global Fixed Interest	Sovereign	Citigroup World Government Bond Index
	Credit	Barclays Capital Global Aggregate, Government Related & Corporate Index hedged to NZD
NZ Fixed Interest	Sovereign	ANZ NZ Government Stock Index
	Credit	ANZ 'A Grade' Corporate Bond Index
Property	Global Listed Property	UBS Global Real Estate Index in NZD
	NZ Unlisted Property	See Private Market Assets
Private Market Assets		Usually excess return relative to the return on Treasury Bills. The required hurdle rate of return usually will reflect the assessed risk of each investment

Asset Classes	Sub Sector	Benchmarks
Commodities		Dow Jones - AIG Commodity Index (excess return in USD terms translated to a NZD basis) combined with the ANZ 90 Day Bank Bill Gross Return index

15.2 Guardians' relative performance

Looking purely at returns the Fund grew rapidly after inception peaking in late 2007. The following review of performance looks at the Fund's returns and asset allocations since inception to give an evaluation of performance.





There is an inherent difficulty in sourcing a suitable comparison universe for the Fund. There are other Crown Financial Institutions within New Zealand but these are not as large, and have different time horizons and long-term objectives. Looking outside New Zealand there are similar difficulties, compounded by the fact that many other Funds of a similar nature are already well established and are denominated in the home currency of the Fund. The high volatility of the New Zealand dollar distorts the conversion of foreign denominated returns back into New Zealand dollar returns.

For comparative purposes we have looked at sovereign wealth funds and have compared performance against the Harvard Endowment Fund and the Yale Endowment Fund. Both these Funds have high public profiles and are frequently referred to in media commentary as good examples of best practice institutional investors.

Sovereign Wealth Funds

The first comparative section compares the Fund against selected SWFs. Whilst acknowledging the difficulty in comparing funds with different risk profiles and year ends, there is some value in comparing the Fund's performance against these funds as they have similar mandates and are considered to be peers of the Guardians. The following information has been gleaned from public sources and should be viewed as indicative only.

Fund	Year Ended	Size (billion)*	Growth Assets	2004	2005	2006	2007	2008	2009
AP1 (Sweden)	December	SEK 171.6	60/40	11.40%	17.50%	9.80%	4.80%	-21.70%	
Fond De Reserve Pour Les Retaites*** (France)	December	EUR 27.7	50/50	3.98%	12.40%	11.20%	4.80%	-24.90%	
National Pension Reserve Fund (Ireland)	December	EUR 16.1	67/33	9.30%	19.60%	12.40%	3.30%	-30.40%	

Fund	Year Ended	Size (billion)*	Growth Assets	2004	2005	2006	2007	2008	2009
Canada Pension Plan	March	CAD 105.5	68/32	17.60%	8.50%	15.50%	12.90%	-0.30%	-18.60%
CalPERs (US)	June	USD 181	71/29	16.70%	12.70%	12.30%	19.10%	-4.90%	-23.40%
Future Fund (ex Telstra)** (Australia)	June	AUD 61.0	36/64			5.97%	7.40%	1.50%	-4.20%
New Zealand Superannuation Fund	June	NZD 13.4	83/17	7.70%	14.10%	19.20%	14.60%	-4.90%	-22.10%

**As at Year Ended*
***Inception Date 5th May 2006*
****Returns are net of expenses*

The Fund with 83% in growth assets is definitely at the upper end of the limit when looking at the percentage of growth assets within a fund. It is worth reiterating the point that all these funds have different investment time horizons and objectives. Overall there is a fair dispersion of returns but it is evident that Funds of this nature have seen substantial write-down of assets over the past eighteen month period.

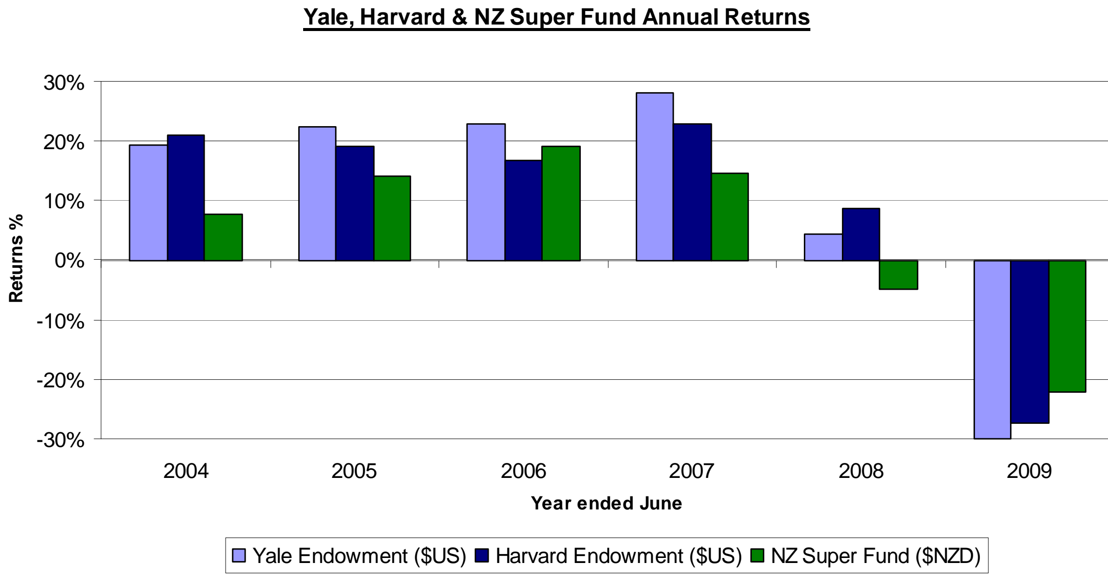
15.2.1 Harvard and Yale Endowment Funds

The following tables and charts provide the latest information on the performance of the Yale and Harvard Endowment Funds relative to the Fund. These two funds have been used for comparison because the Guardians views them as contemporaries, with both funds having long-term time horizons and relatively high allocations to growth assets. Mercer notes that both Harvard and Yale were considered “leader funds” in the early 2000’s in terms of their investments in private markets and alternative assets. Where these foundations differ most from the Fund is in respect of their much larger asset bases, and that drawdowns are made each year typically for at least 5% of the value of assets.

A number of adjustments are required to analyse the comparison on consistent bases. Currency of base investor is one key factor.

One fact stands out, however, and that is that large investment funds with a long run focus must endure the short-term pain to achieve the long-term gain.

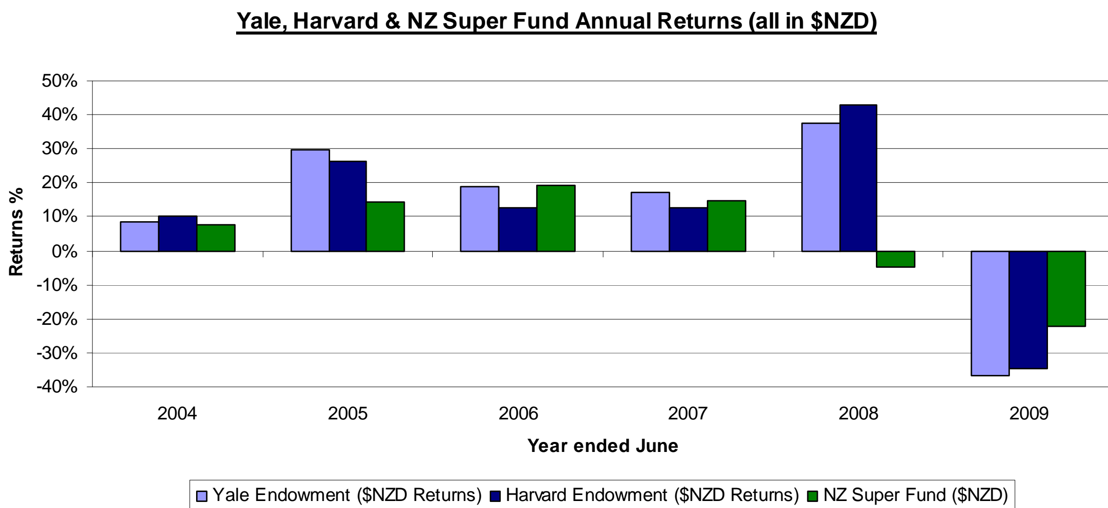
Returns in $US and $NZD



*Please note that 2009 results are provisional and have yet to be confirmed

The Fund had a strong year in 2006, benefitting from a 35% return on listed equities. The two endowment funds benefited to a lesser degree as they had substantial investments in illiquid or real assets. The Harvard and Yale funds were severely punished in the last financial year, with the Harvard Fund and the Yale Fund losing 27.3% and 30.0% respectively. The two endowment funds were hurt by an exposure to an array of illiquid, alternative investments, a strategy that had won praise before the downturn. The Harvard Endowment Fund in particular suffered a 32% decline in its private equity portfolio and an 18% decline in its absolute return (hedge funds) portfolio. Despite these poor 2009 returns both these funds are still achieving and enjoying substantial long run returns. Harvard's 10-year average annualised return is still 8.9%.

Returns in $NZD



*Please note that 2009 results are provisional and have yet to be confirmed

Harvard Endowment Fund Asset Allocation

Harvard Policy Portfolio (as at 31 December)	**2000**	**2002**	**2007**	**2008**	**2009**
Equities	46%	30%	31%	34%	33%
Bonds & Cash	21%	22%	13%	11%	10%
Alternatives (Real Estate, Private Equity, Commodities, Timber)	28%	36%	39%	37%	39%
Absolute Return	5%	12%	17%	18%	18%
TOTAL	100%	100%	100%	100%	100%

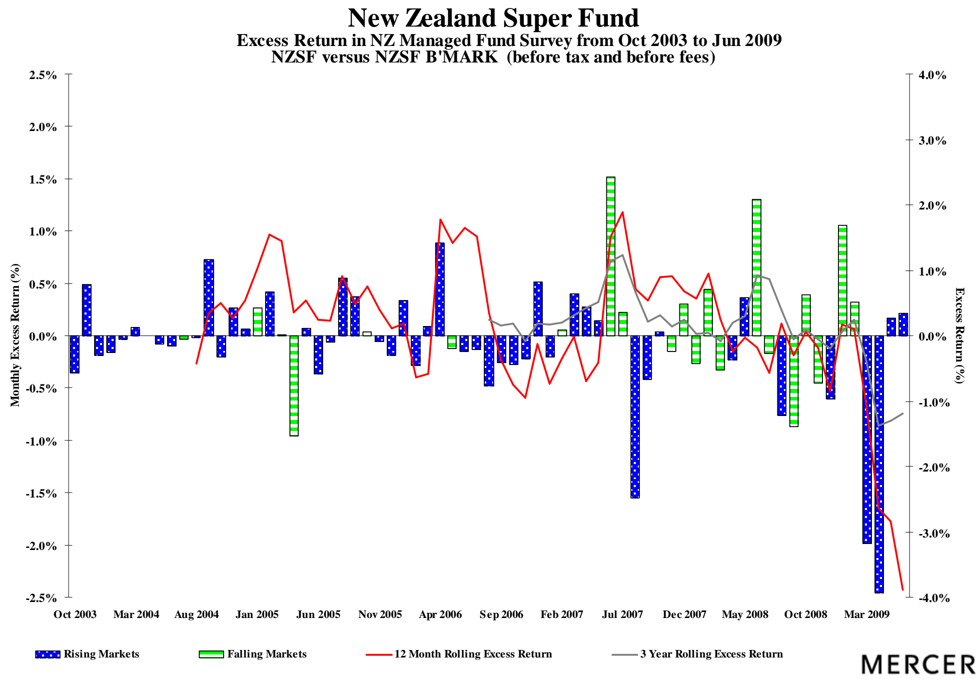
Yale Endowment Fund Asset Allocation

Yale Asset Allocation (as at 30th June)	**2004**	**2005**	**2006**	**2007**	**2008**
Equities	30%	28%	26%	25%	25%
Bonds & Cash	11%	7%	6%	6%	0%
Alternatives (Real Estate, Private Equity, Commodities, Timber)	33%	40%	44%	46%	50%
Absolute Return	26%	26%	23%	23%	25%
TOTAL	100%	100%	100%	100%	100%

15.2.2 Fund Performance versus Benchmark and Objective

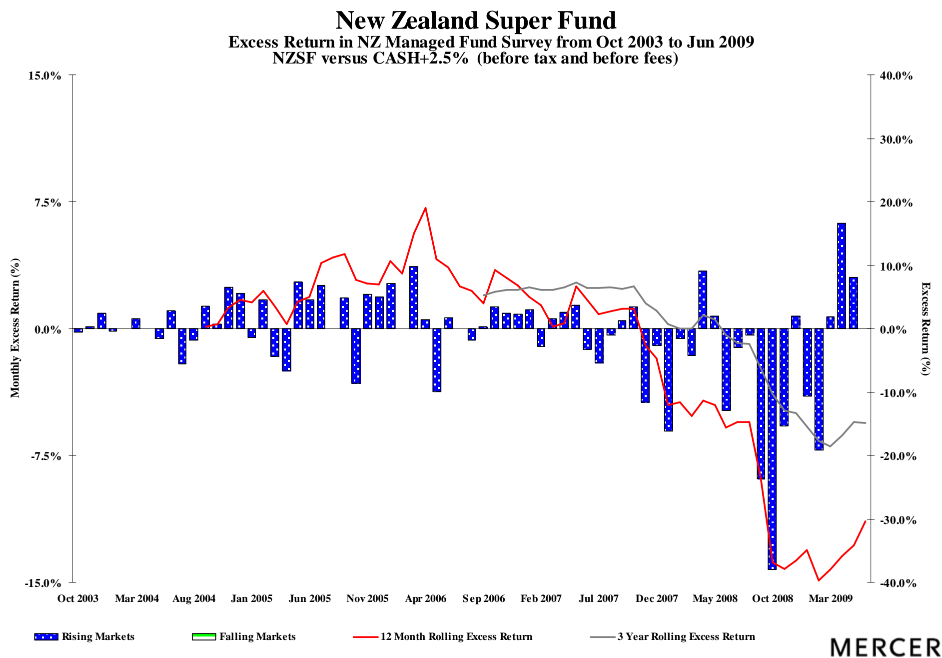
The Fund's benchmark is determined by the strategy and objectives as discussed in prior sections of this report. This analysis compares the total return of the Fund to that of its benchmark to assess the efficacy of its active management arrangements. The measure of 'excess return' captures the performance of the Fund's active managers, as well as any intended or unintended differences between the actual asset allocation and the benchmark allocation of the Fund.

The following chart plots the returns achieved by the Fund in excess of the Benchmark since inception. The bars indicate the monthly excess return or deviations from the performance of the Benchmark. The lines represent the 12 month and 3 year rolling excess returns. The scale on the left applies to monthly excess returns. The scale on the right is for the cumulative and 12 month returns.



As can be seen from the above graph the one year rolling excess return struggled to stay in positive territory before falling dramatically in the first half of this year. The Fund performed better in falling markets, out-performing the benchmark 58% of the time when the market was going down. During rising markets the Fund did not perform as well, only out-performing the benchmark 40% of the time.

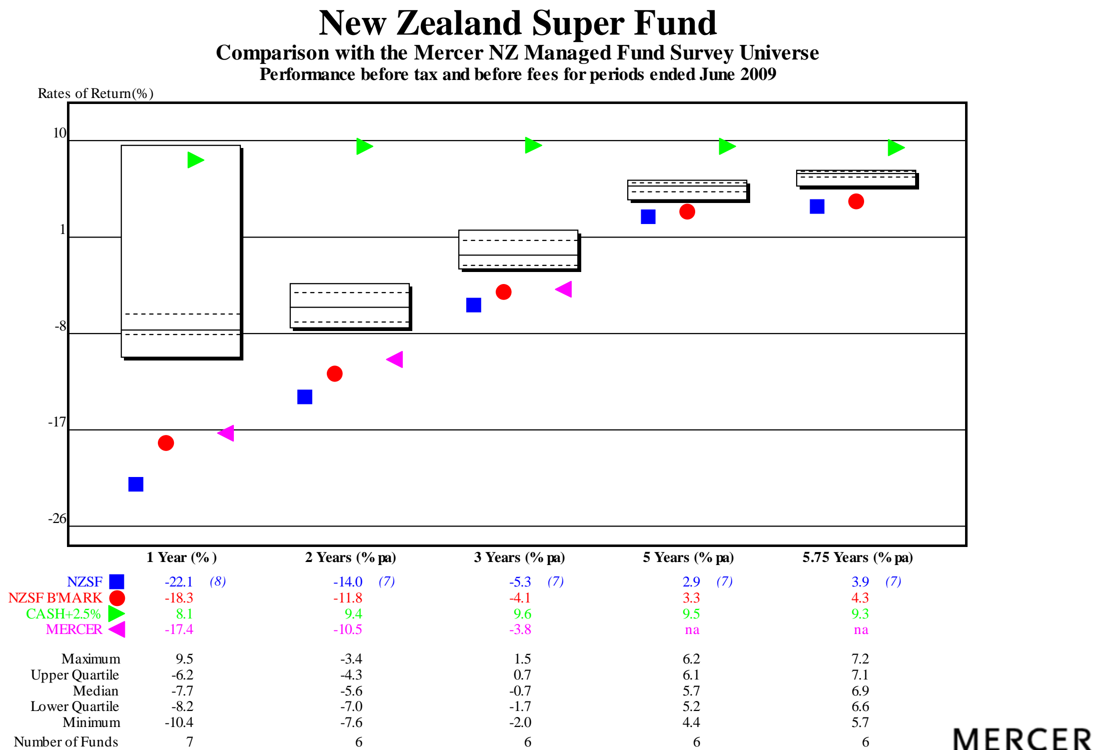
The following graph shows the Fund's performance relative to the Fund's objective of 90 day Treasury bills plus 2.5%.



The graph plots the returns of the Fund against the Fund's objective over the short-term (on a rolling 12 month and 3 year basis). The Fund easily exceeded the objective in the first three years. However in more recent times the Fund has underperformed against

its long-term objective on a 12 month and 3 year rolling basis. It is worth reiterating the point that the objective is to be measured over a 20-year time horizon.

The following chart shows the performance of the Fund against its benchmark, the Fund's objective and the Guardians' Initial (2003) SAA benchmark return.

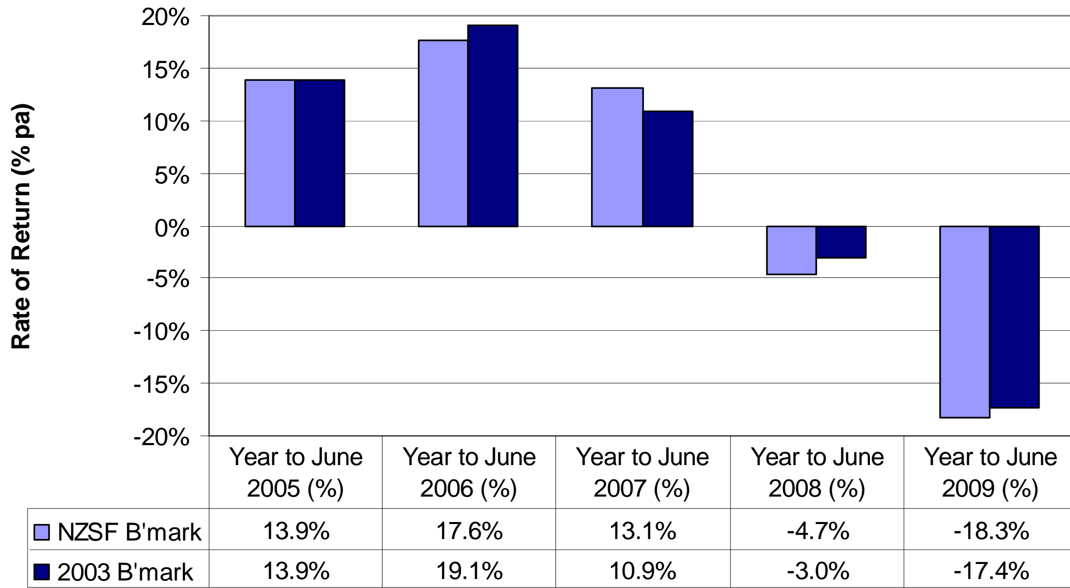


15.2.3 Initial SAA (2003)

The following analysis focuses on the initial 2003 SAA and the likely consequences if the SAA had been fully implemented. The square shows the Fund's benchmark (after proxy adjustments) and the circle represents an estimate of what the Fund's benchmark return would have been if it had implemented initial 2003 SAA recommendations.

Mercer estimated returns have only been calculated from the point where the fund was fully invested in all the assets classes included in the recommendation – the initial investment in commodities was made in September 2005.There were practical difficulties in implementing the SAA and the Fund used public market asset classes to proxy for an exposure to private markets.

The chart represents benchmark returns and indicates what the funds would have returned had they adopted passive mandates (instead of adopting active mandates

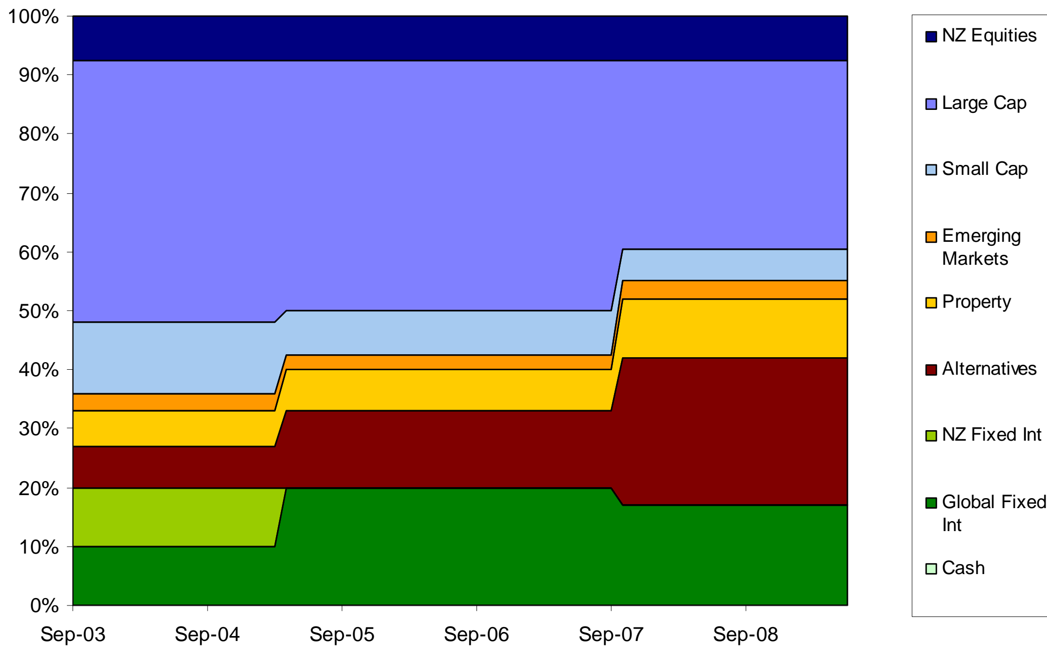


	Year to June 2005 (%)	Year to June 2006 (%)	Year to June 2007 (%)	Year to June 2008 (%)	Year to June 2009 (%)
NZSF B'mark	13.9%	17.6%	13.1%	-4.7%	-18.3%
2003 B'mark	13.9%	19.1%	10.9%	-3.0%	-17.4%

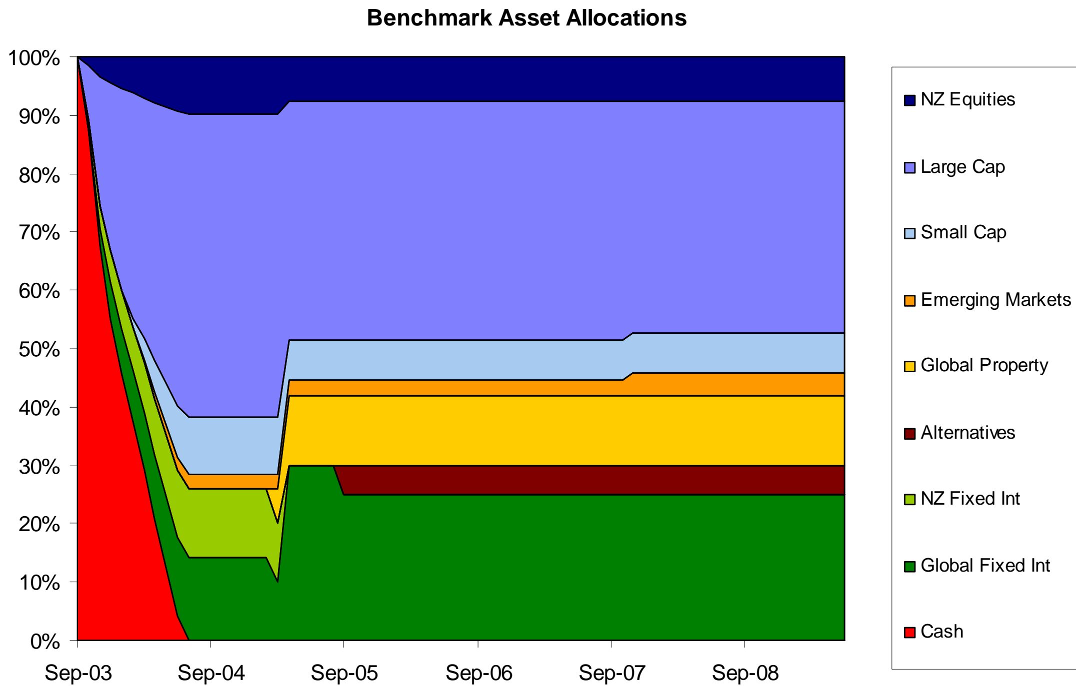
15.3 Asset class performance

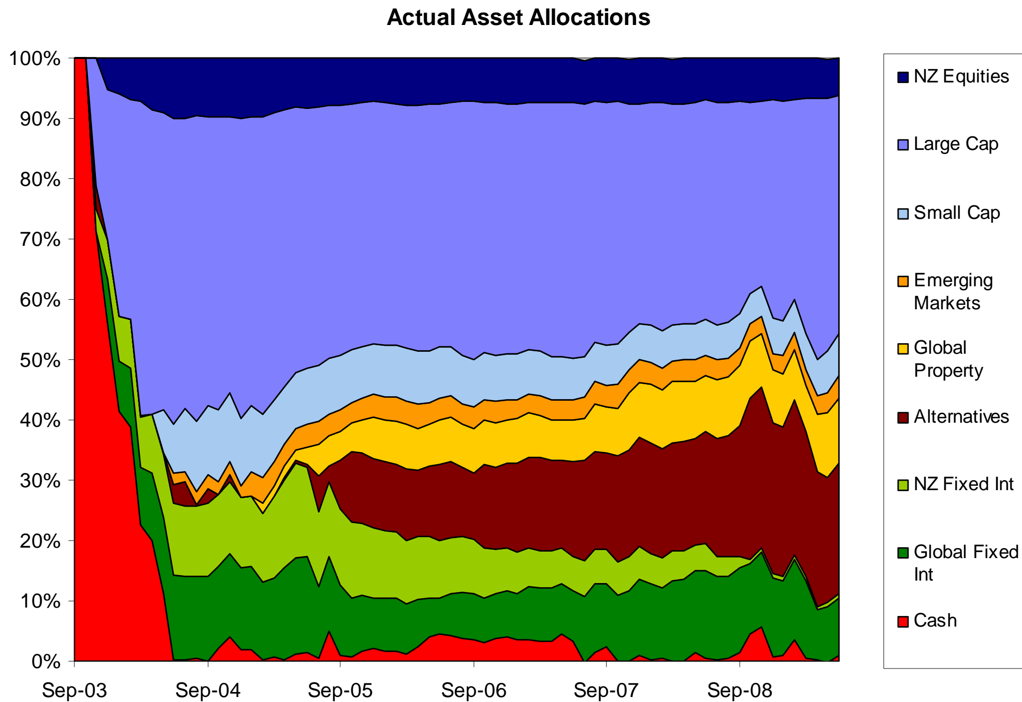
The changes in the Fund's target SAA objectives are shown below. The chart highlights the trend of the Fund to move away from the traditional asset classes in favour of more growth orientated sectors.

Note that the alternatives section includes allocations to commodities, private equity, timber, infrastructure and other private market investments.



The chart below shows the Public Market Benchmark Asset Allocation.





Looking at the SAA allocations relative to the actual asset allocations it is evident that the implementation of the SAA is not a strictly linear exercise. The global financial crisis would undoubtedly have made the allocation of some of the less liquid assets more problematic. The global write down of equities and the freezing up of bond markets no doubt affected allocations across most sectors.

15.3.1 Asset Class Summary

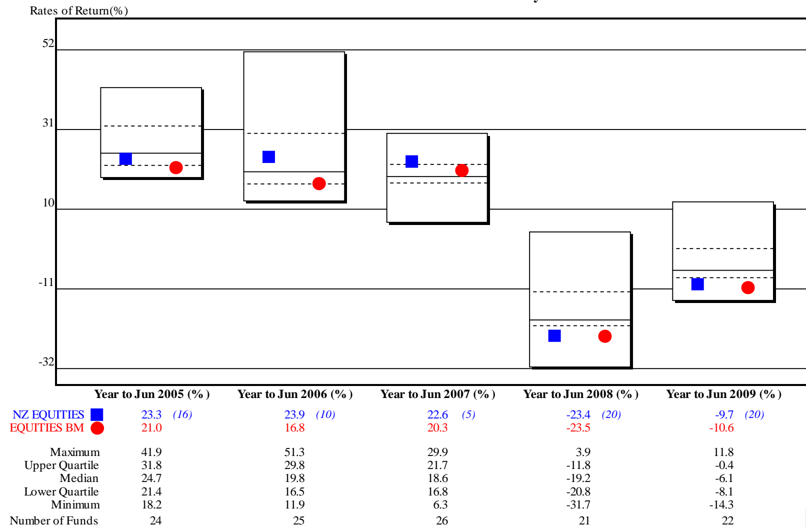
The following charts look at asset class performance on a full return basis, on an annualised basis and on a year by year basis. The global large cap equities sector performed moderately well against their benchmark before the sector capitulated to the global financial crisis. The emerging market sector is a little more interesting, performing below their benchmark in the financial years 2005 and 2006, recovering in 2007 and 2008, before falling back against their benchmark in 2009. The multi-sector strategy started off strongly in the year ended 2006. But it has gone downhill since then with the performance against benchmark getting progressively worse each year. The New Zealand equities, global property and commodity sectors all performed relatively well against their benchmarks since inception.

	Global Large Unhedged Excess Return	Global Small Unhedged Excess Return	Emerging Markets Unhedged Excess Return	Total Multi Strategy Excess Return
Full Period Return	-1.77%	0.26%	-9.80%	-9.13%
Annualised Return (If > 1 Year)	-0.30%	0.05%	-1.17%	-2.24%
FINANCIAL YEAR ANALYSIS				
9M ENDED 30/06/2004	-0.77%	-2.18%	0.65%	
FY ENDED 30/06/2005	2.51%	1.87%	-3.87%	
FY ENDED 30/06/2006	3.55%	2.93%	-5.57%	14.30%
FY ENDED 30/06/2007	-0.13%	3.14%	4.33%	-3.84%
FY ENDED 30/06/2008	-2.20%	3.56%	0.73%	-5.30%
FY ENDED 30/06/2009	-2.82%	-7.29%	-2.75%	-10.42%

	NZ Equities Excess Return	Global Property Unhedged Excess Return	Commodities Excess Return	New Zealand Fixed Interest Excess Return
Full Period Return	15.15%	3.17%	1.22%	-0.12%
Annualised Return (If > 1 Year)	2.08%	0.87%	0.41%	-0.02%
FINANCIAL YEAR ANALYSIS				
9M ENDED 30/06/2004	0.11%			-0.03%
FY ENDED 30/06/2005	2.33%	-0.00%		0.06%
FY ENDED 30/06/2006	7.07%	0.74%	1.97%	0.13%
FY ENDED 30/06/2007	2.30%	0.40%	-0.07%	0.14%
FY ENDED 30/06/2008	0.14%	0.89%	-1.48%	-0.21%
FY ENDED 30/06/2009	0.84%	1.34%	0.48%	-0.19%

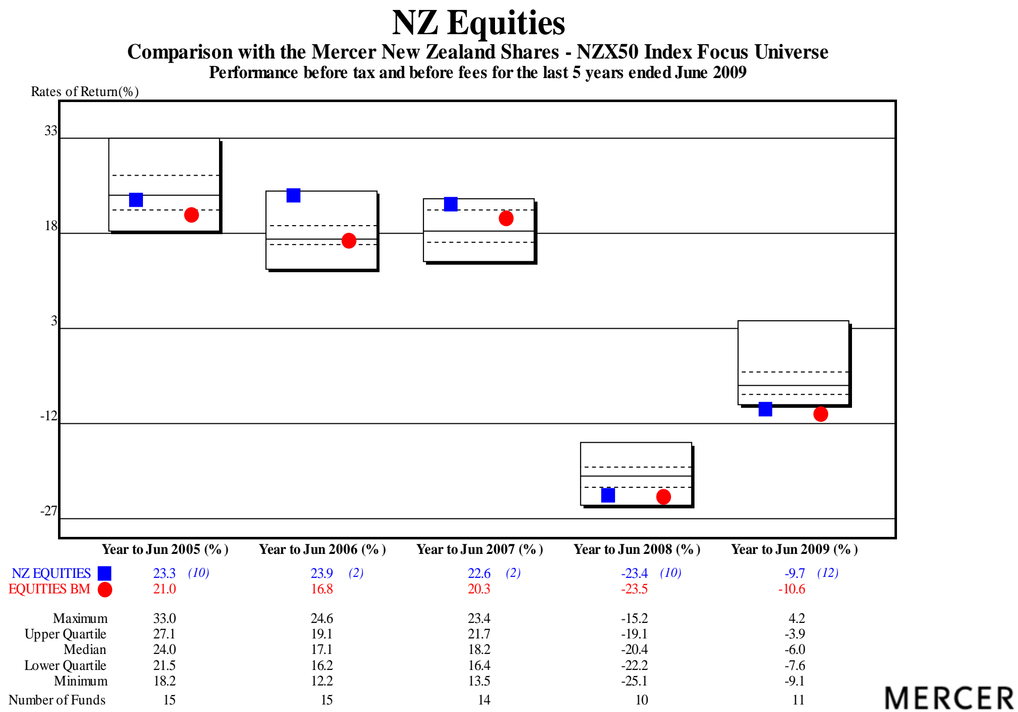
15.3.2 New Zealand Equities

The following charts show the Fund's New Zealand equity performance (NZ EQUITIES) relative to the Fund's benchmark (EQUITIES BM) and the universe of New Zealand equity managers as represented in the sector returns survey.



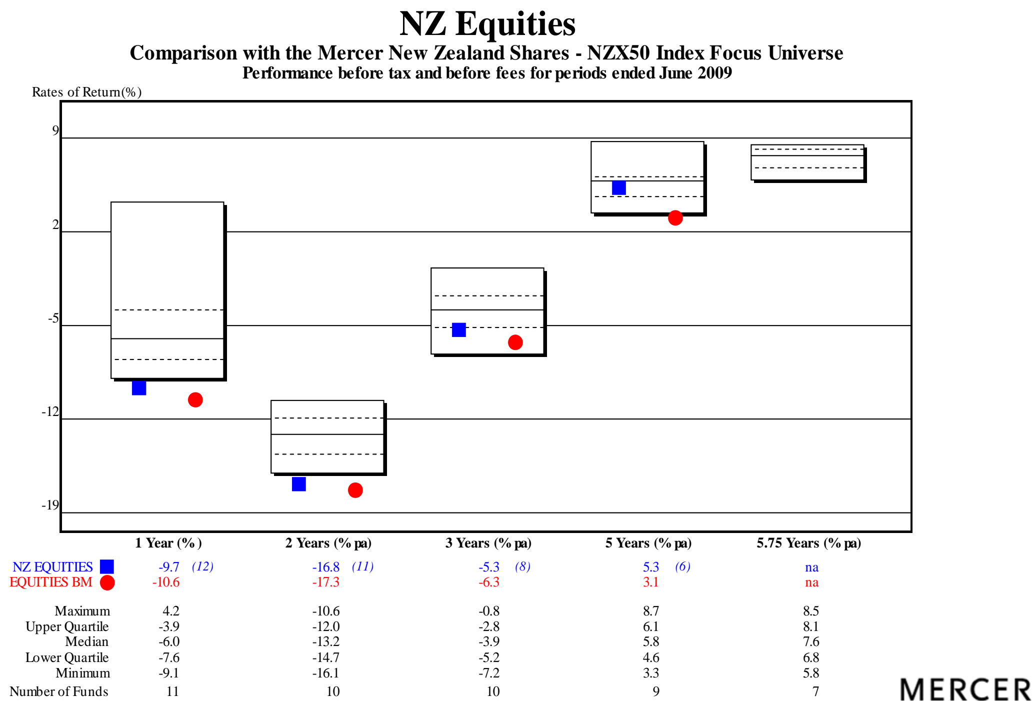
	Year to Jun 2005 (%)	Year to Jun 2006 (%)	Year to Jun 2007 (%)	Year to Jun 2008 (%)	Year to Jun 2009 (%)
NZ EQUITIES	23.3 (16)	23.9 (10)	22.6 (5)	-23.4 (20)	-9.7 (20)
EQUITIES BM	21.0	16.8	20.3	-23.5	-10.6
Maximum	41.9	51.3	29.9	3.9	11.8
Upper Quartile	31.8	29.8	21.7	-11.8	-0.4
Median	24.7	19.8	18.6	-19.2	-6.1
Lower Quartile	21.4	16.5	16.8	-20.8	-8.1
Minimum	18.2	11.9	6.3	-31.7	-14.3
Number of Funds	24	25	26	21	22

The following chart makes comparisons relative to managers that are NZX50 focused only (benchmark aware managers).



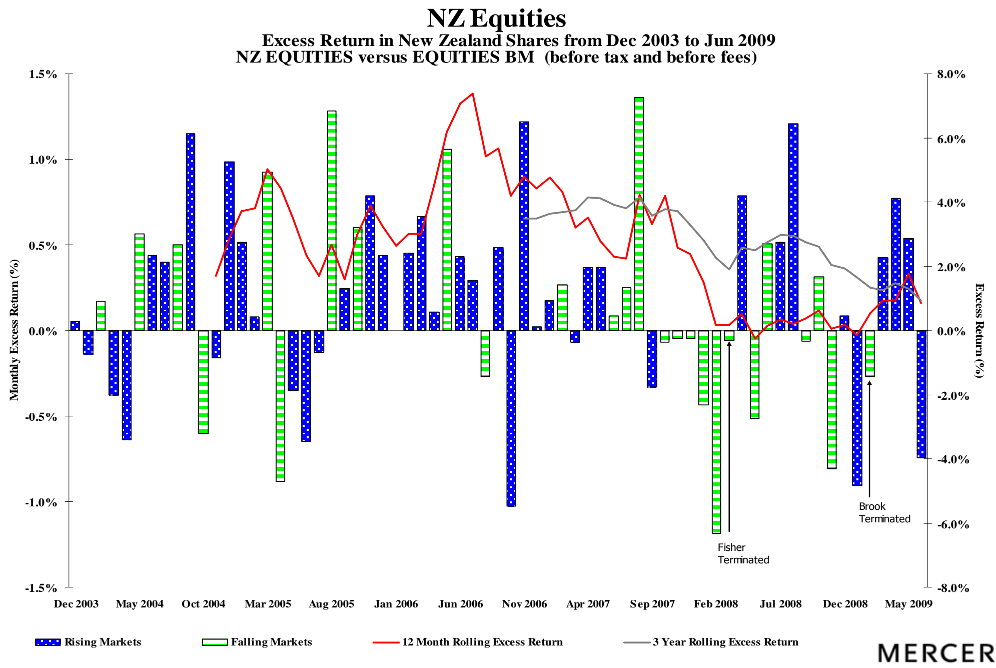
	Year to Jun 2005 (%)	Year to Jun 2006 (%)	Year to Jun 2007 (%)	Year to Jun 2008 (%)	Year to Jun 2009 (%)
NZ EQUITIES	23.3 (10)	23.9 (2)	22.6 (2)	-23.4 (10)	-9.7 (12)
EQUITIES BM	21.0	16.8	20.3	-23.5	-10.6
Maximum	33.0	24.6	23.4	-15.2	4.2
Upper Quartile	27.1	19.1	21.7	-19.1	-3.9
Median	24.0	17.1	18.2	-20.4	-6.0
Lower Quartile	21.5	16.2	16.4	-22.2	-7.6
Minimum	18.2	12.2	13.5	-25.1	-9.1
Number of Funds	15	15	14	10	11

In both charts the Fund's New Zealand equity sector was in the lower quartile of managers surveyed over the year to June 2008 and 2009.



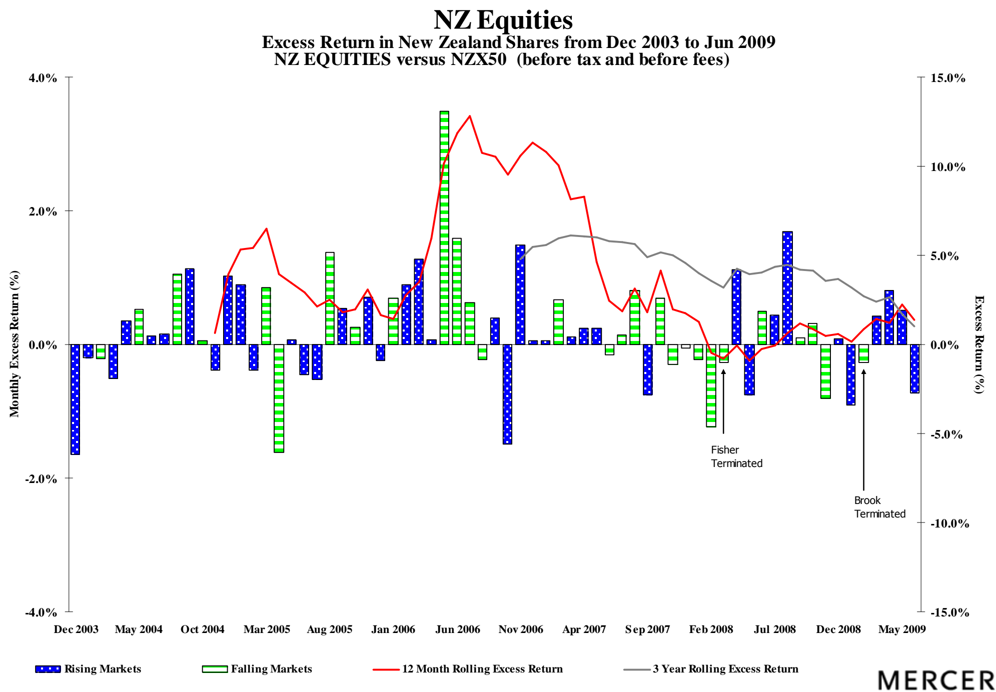
	1 Year (%)	2 Years (% pa)	3 Years (% pa)	5 Years (% pa)	5.75 Years (% pa)
NZ EQUITIES	-9.7 (12)	-16.8 (11)	-5.3 (8)	5.3 (6)	na
EQUITIES BM	-10.6	-17.3	-6.3	3.1	na
Maximum	4.2	-10.6	-0.8	8.7	8.5
Upper Quartile	-3.9	-12.0	-2.8	6.1	8.1
Median	-6.0	-13.2	-3.9	5.8	7.6
Lower Quartile	-7.6	-14.7	-5.2	4.6	6.8
Minimum	-9.1	-16.1	-7.2	3.3	5.8
Number of Funds	11	10	10	9	7

The following chart plots the Fund's New Zealand equity returns (NZ EQUITIES) relative to the Fund's benchmark (EQUITIES BM).



The Fund has produced largely positive excess returns on a rolling 12 month basis.

The following chart plots the Fund's New Zealand equity returns (NZ EQUITIES) relative to New Zealand's listed equity index (the NZX50).



Mercer modelling assumptions suggest that active New Zealand equity managers can typically add on average 3.0% to 4.0% per year over the NZX50 Index. There has been a definitive move away from locally based managers to investing passively in-house.

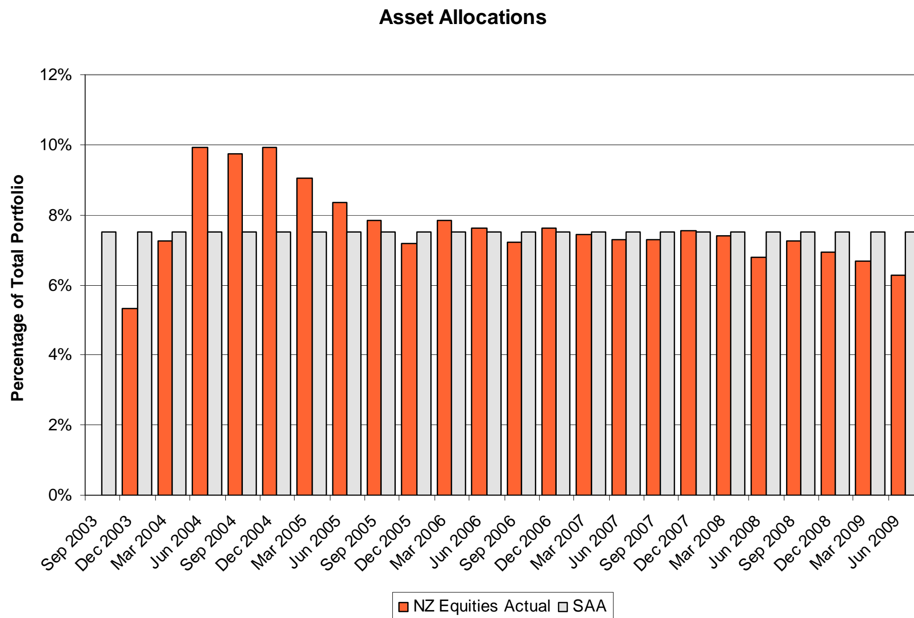
The following table illustrates excess returns at a fund mandate level and at an overall sector level since inception. Investment managers in the New Zealand equities sector have demonstrated that they can add significant value, beating the benchmark return by over 2.0% per annum since inception.

New Zealand Equities[42]

	Manager A Excess Return	**Manager B Excess Return**	**Manager C Excess Return**	**Manager D Excess Return**	**NZ Equities Excess Return**
Full Period Return	14.90%	13.58%	46.48%	-0.66%	15.15%
Annualised Return (If > 1 Year)	2.07%	2.21%	6.90%	-0.19%	2.08%
FINANCIAL YEAR ANALYSIS					
9M ENDED 30/06/2004	-0.47%	-0.20%	3.08%		0.11%
FY ENDED 30/06/2005	-1.57%	4.10%	7.44%		2.33%
FY ENDED 30/06/2006	4.42%	0.80%	30.21%	-0.12%	7.07%
FY ENDED 30/06/2007	2.37%	-1.20%	7.89%	-0.07%	2.30%
FY ENDED 30/06/2008	2.62%	3.19%		-0.12%	0.14%
FY ENDED 30/06/2009	3.24%			-0.37%	0.84%

New Zealand Equity Asset Allocations

The following chart tracks New Zealand equities net market value as a percentage of the total Fund on a quarterly basis relative to the SAA weighting (before proxies).



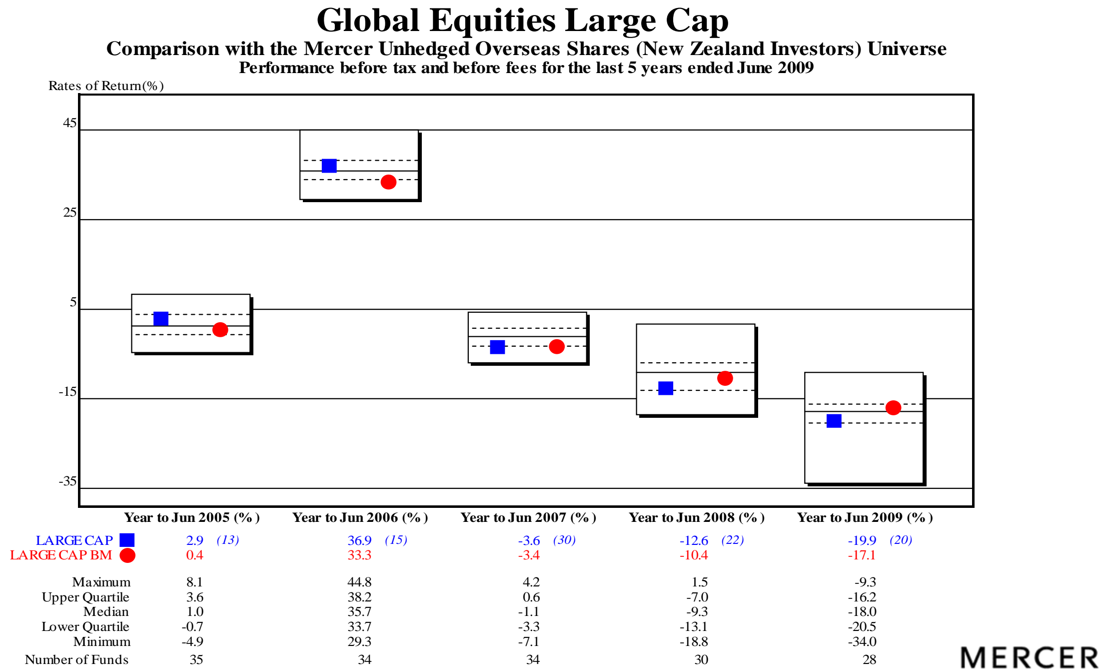
The New Zealand share allocations were initially overweight, but slowly fell into line through much of 2006 and 2007. Share markets dropped markedly in 2008 pulling

[42] It is noted that where there are tables which show both individual managers and asset class performance, that individual manager full period and annualised returns may relate to different time periods.

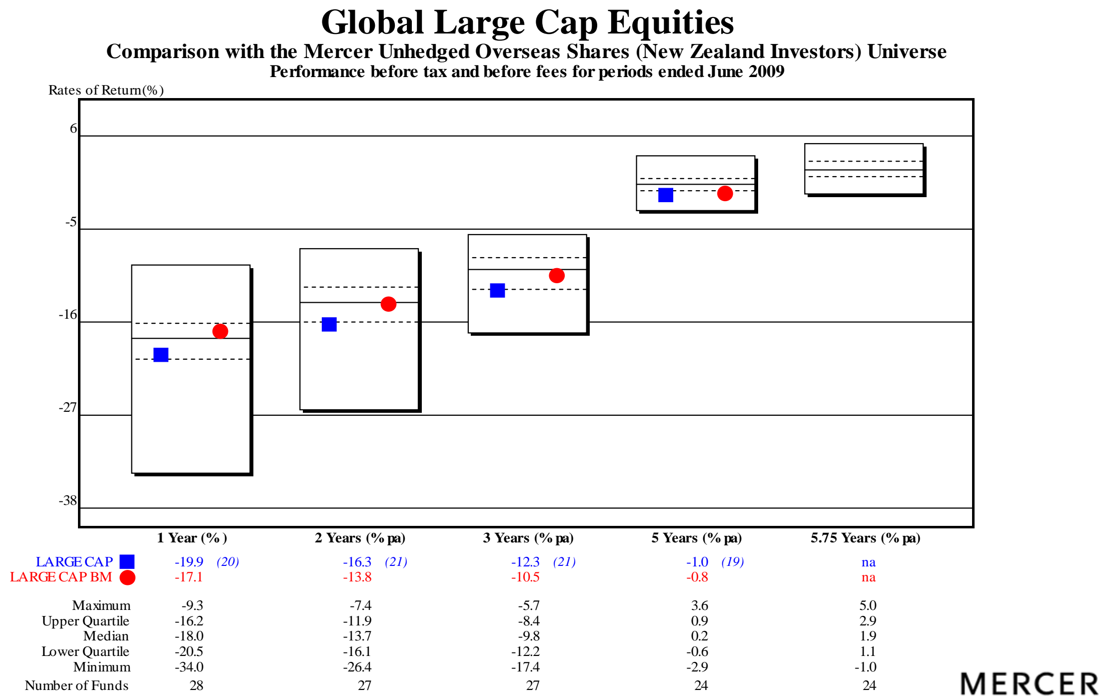
down the value of the sector and it appears the Fund has not reweighted this sector to reflect this decline in asset value.

15.3.3 Global Equities Large Cap (Unhedged)

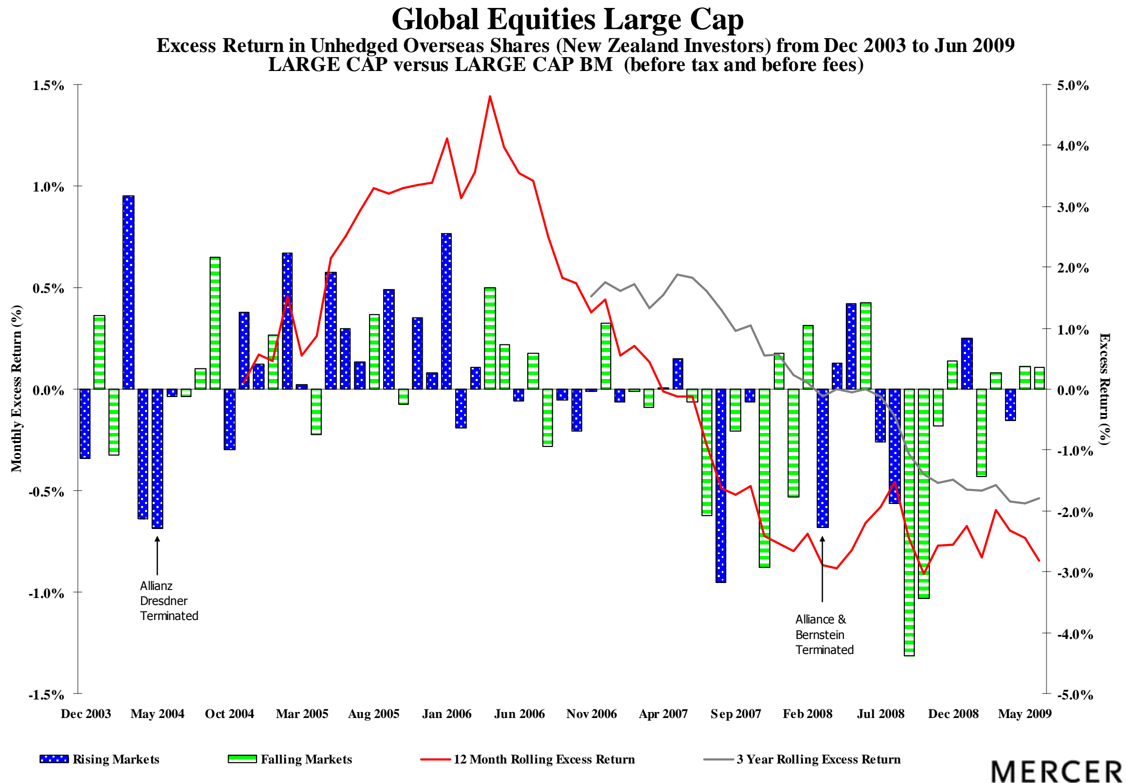
The following chart shows the Fund's global equity large cap returns (LARGE CAP) relative to the Fund's benchmark (LARGECAP BM) and the Global Equities universe (for New Zealand Investors).



While the Fund's global equity large cap managers have performed near the median manager over the earlier years it has come off a little over the last two years.



The following chart plots the Fund's global equities large cap returns (LARGE CAP) against the Fund's benchmark (LARGE CAP BM).

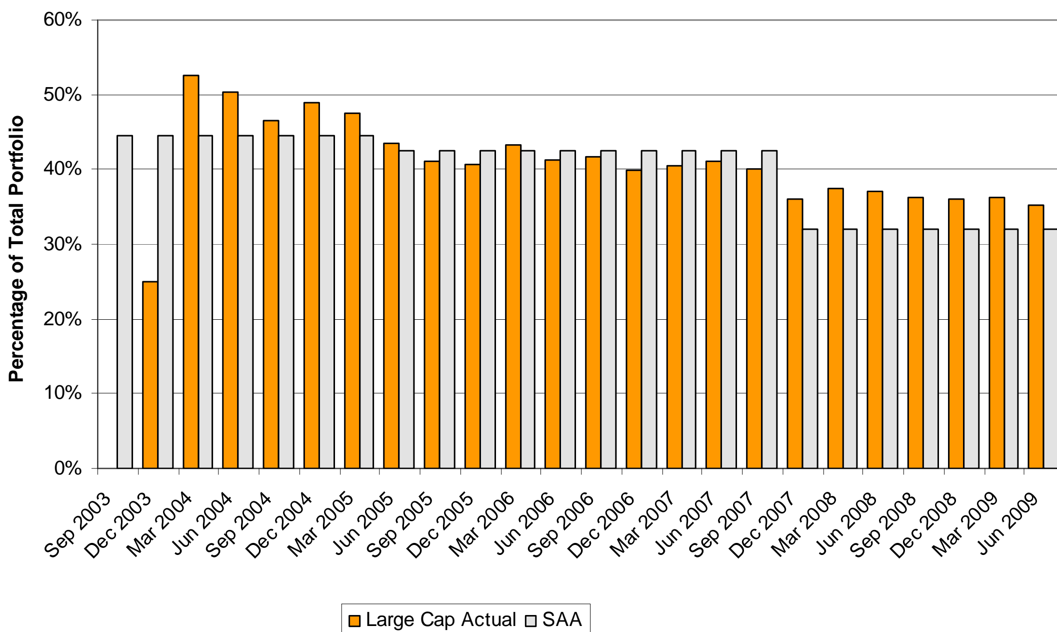


The following chart illustrates excess returns at a fund mandate level and at an overall sector level. Value add from global large cap equity managers has been fairly disappointing, particularly over the past three years.

Global Large Cap (Unhedged)

	Manager E Excess Return	Manager F Excess Return	Manager G Excess Return	Manager H Excess Return	Manager I Excess Return	Manager J Excess Return	Global Large Unhedged Excess Return
Full Period Return	-1.48%	5.96%	6.25%	3.79%	1.96%	-14.64%	-1.77%
Annualised Return (If > 1 Year)	-0.25%	1.03%	1.29%	0.89%	0.43%	-4.63%	-0.30%
FINANCIAL YEAR ANALYSIS							
9M ENDED 30/06/2004	0.19%	0.02%	-0.97%	-0.18%			-0.77%
FY ENDED 30/06/2005	1.73%	3.35%	1.41%	4.28%	1.76%		2.51%
FY ENDED 30/06/2006	1.87%	2.93%	8.07%	6.32%	0.60%	1.80%	3.55%
FY ENDED 30/06/2007	-1.12%	1.92%	2.30%	-1.01%	1.28%	1.22%	-0.13%
FY ENDED 30/06/2008	-1.39%	-2.20%			-1.87%	-3.03%	-2.20%
FY ENDED 30/06/2009	-1.60%	0.70%			0.25%	-12.74%	-2.82%

The following chart tracks large cap net market value as a percentage of the total Fund on a quarterly basis relative to the SAA weighting (before proxies). The actual allocations in the charts below are reported on an "economic exposure" basis as opposed to being reported on a "mandate" basis[43].



The global large cap equities sector has been overweight during various periods throughout the review period. Some of this is due to reporting on an economic exposure basis and also due to rebalance drift.

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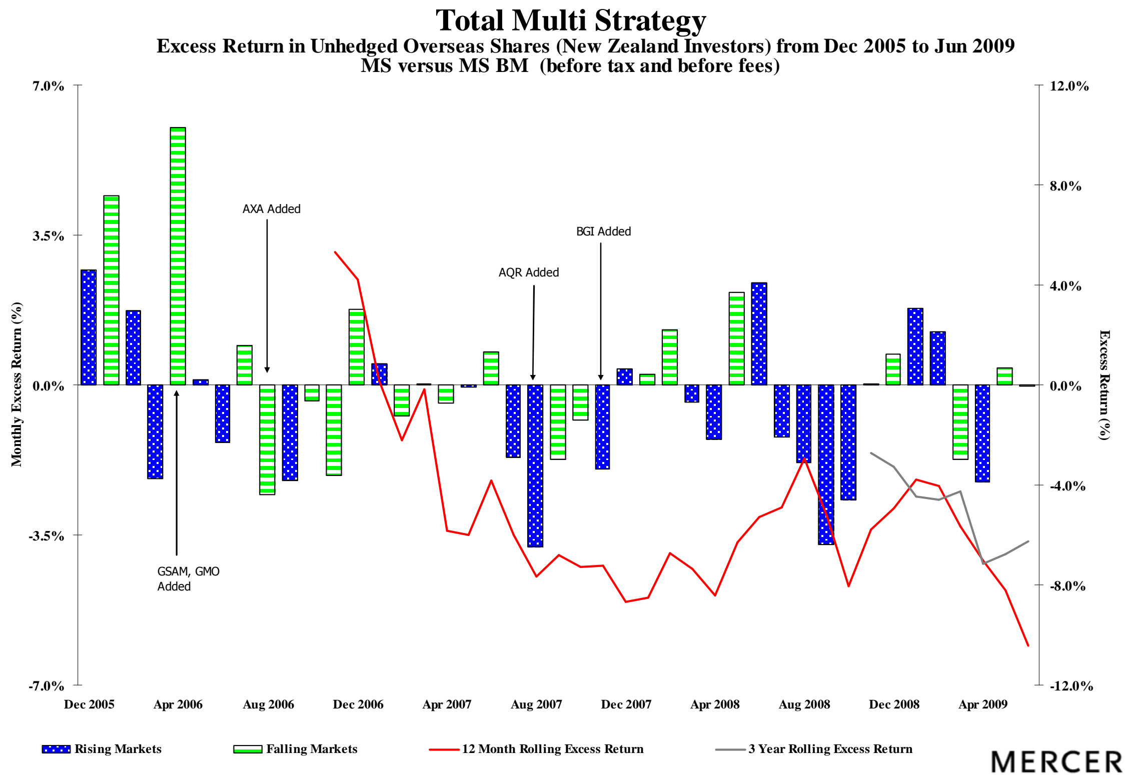
[43] Differences between the Mandate calculation of Net Asset Values (NAV's) and the economic exposure calculation of NAV's are due to:

1) Exposures of derivative positions being captured in the economic exposure NAV's wheras in the original board reports (mandate basis) only the unrealised P&L of derivative positions were included. This effects Global Large Caps, Global Fixed Interest, and Global Property.

2) Unrealised P&L of currency hedges were included in asset classes of the original board report (mandate basis). As a result of removing the hedging performance from the asset classes the NAV of these asset classes have also been restated to remove the unrealised currency P&L. (This effect is a lot less than (1) above – but does explain differences in allocations to Small Caps, Emerging Markets).

15.3.4 Multi-Strategy

The chart below plots the Fund's global equity multi-strategy returns (MS) versus the Fund's benchmark (MS BM).



The 12 month excess rolling return is currently around -10.0% with a three year excess return of -6.0%.

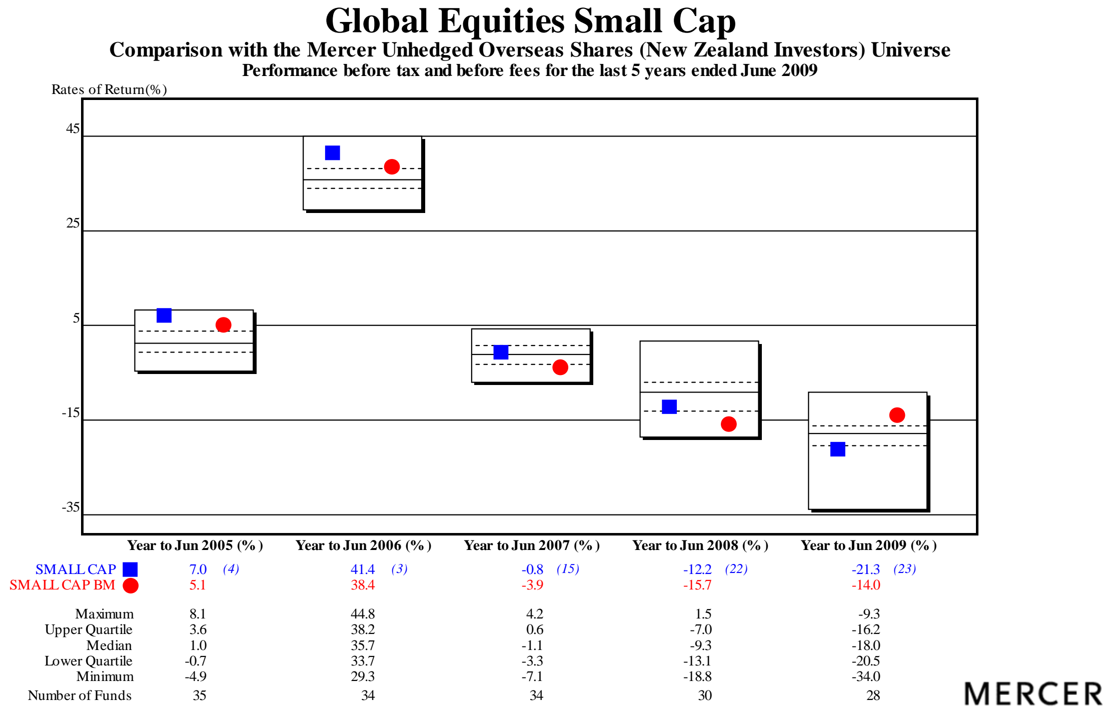
The following chart illustrates excess returns at a fund mandate level and at an overall sector level since inception. The performance of the global equity multi-strategy sector has been a definite area of concern, deteriorating each of the last three years. This performance led to a review of the strategy and its recalibration.

Global Multi-Strategy

	Manager K Excess Return	Manager L Excess Return	Manager M Excess Return	Manager N Excess Return	Manager O Excess Return	Manager P Excess Return	Total Multi Strategy Excess Return
Full Period Return	3.42%	-16.72%	-53.43%	-2.96%	11.34%	-51.75%	-9.13%
Annualised Return (If > 1 Year)	1.03%	-5.81%	-31.20%	-1.75%	2.66%	-19.01%	-2.24%
FINANCIAL YEAR ANALYSIS							
9M ENDED 30/06/2004							
FY ENDED 30/06/2005							
FY ENDED 30/06/2006	1.07%				11.21%	-3.19%	14.30%
FY ENDED 30/06/2007	1.50%	-0.06%			-7.11%	-18.37%	-3.84%
FY ENDED 30/06/2008	4.07%	-2.10%	-30.14%	1.86%	25.52%	-27.15%	-5.30%
FY ENDED 30/06/2009	-4.11%	-16.31%	-26.44%	-5.01%	-14.41%	-7.94%	-10.42%

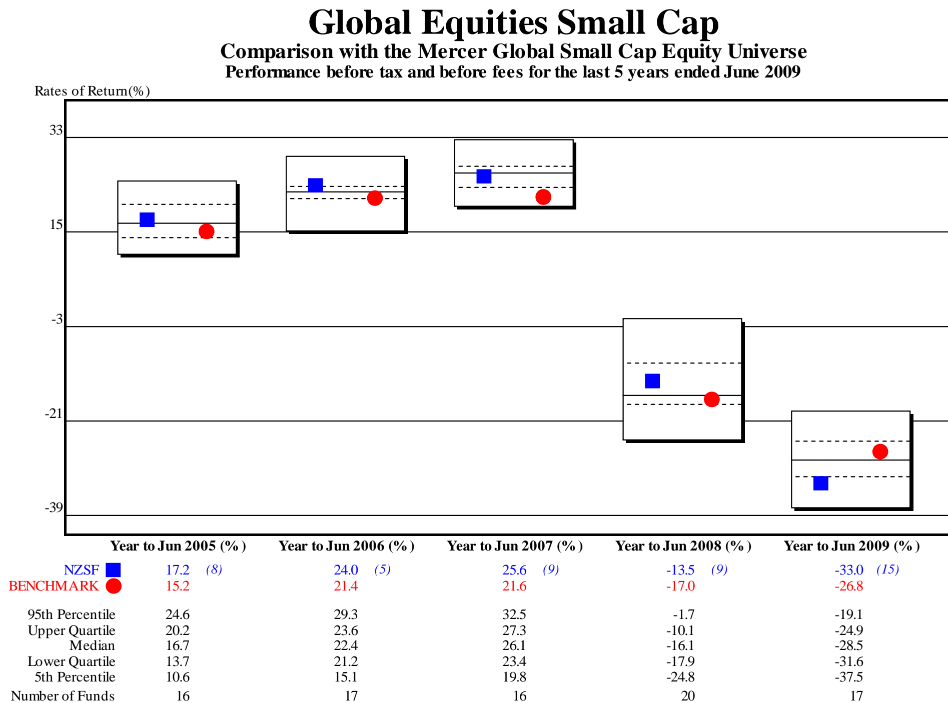
15.3.5 Global Equities Small Cap (Unhedged)

The following chart shows the Funds' global equity small cap returns (SMALL CAP) relative to the Fund's benchmark (SMALL CAP BM) and the Global Equities universe (for New Zealand Investors).



	Year to Jun 2005 (%)	Year to Jun 2006 (%)	Year to Jun 2007 (%)	Year to Jun 2008 (%)	Year to Jun 2009 (%)
SMALL CAP	7.0 (4)	41.4 (3)	-0.8 (15)	-12.2 (22)	-21.3 (23)
SMALL CAP BM	5.1	38.4	-3.9	-15.7	-14.0
Maximum	8.1	44.8	4.2	1.5	-9.3
Upper Quartile	3.6	38.2	0.6	-7.0	-16.2
Median	1.0	35.7	-1.1	-9.3	-18.0
Lower Quartile	-0.7	33.7	-3.3	-13.1	-20.5
Minimum	-4.9	29.3	-7.1	-18.8	-34.0
Number of Funds	35	34	34	30	28

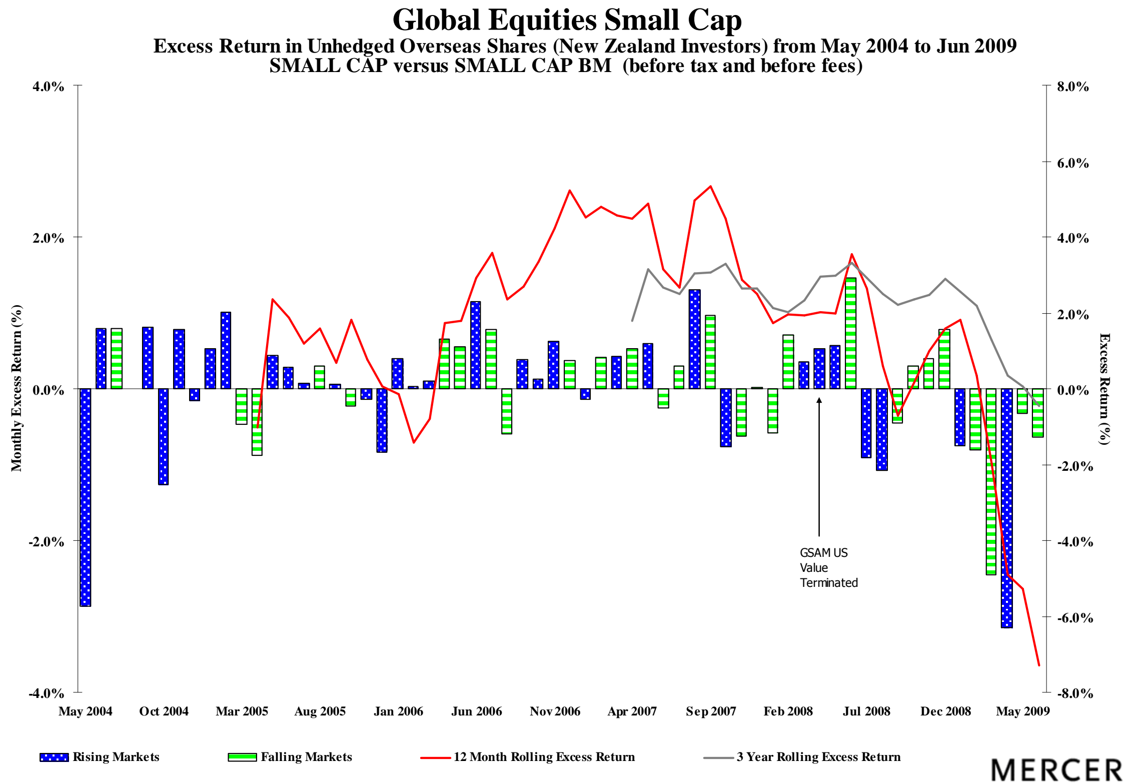
To gain a more meaningful comparison we have charted the Fund's returns in $US and mapped against the global small cap equity universe (in $US).



	Year to Jun 2005 (%)	Year to Jun 2006 (%)	Year to Jun 2007 (%)	Year to Jun 2008 (%)	Year to Jun 2009 (%)
NZSF	17.2 (8)	24.0 (5)	25.6 (9)	-13.5 (9)	-33.0 (15)
BENCHMARK	15.2	21.4	21.6	-17.0	-26.8
95th Percentile	24.6	29.3	32.5	-1.7	-19.1
Upper Quartile	20.2	23.6	27.3	-10.1	-24.9
Median	16.7	22.4	26.1	-16.1	-28.5
Lower Quartile	13.7	21.2	23.4	-17.9	-31.6
5th Percentile	10.6	15.1	19.8	-24.8	-37.5
Number of Funds	16	17	16	20	17

The charts show that the Fund's small cap performance has done relatively well (at or below the median of other fund managers) in the earlier years but has slipped a little below par over the last year.

The chart below plots the Fund's global equity small cap returns (SMALL CAP) versus the Fund's benchmark (SMALL CAP BM).



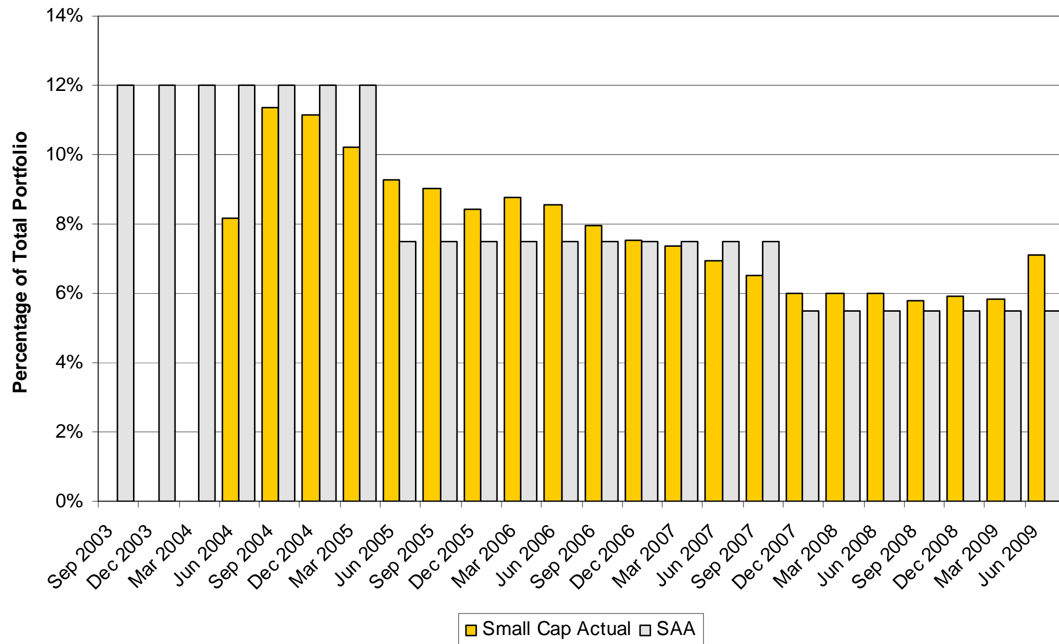
The Fund's12 month excess rolling return for the small cap sector is currently around -7.0% with a three year excess return just dipping below the benchmark.

The following chart illustrates excess returns at a fund mandate level and at a fund sector level since inception. This sector was one that showed some early promise with reasonably positive value add (exempting the year of inception). The last financial year erased these gains however, with all but one of the investment managers losing value add.

Global Small Cap (Unhedged)

	Manager Q Excess Return	Manager R Excess Return	Manager S Excess Return	Manager T Excess Return	Manager U Excess Return	Manager V Excess Return	Manager W Excess Return	Global Small Unhedged Excess Return
Full Period Return	-16.52%	15.68%	-12.09%	3.82%	4.97%	-1.78%	-0.71%	0.26%
Annualised Return (If > 1 Year)	-2.81%	3.14%	-2.60%	0.98%	0.85%	-0.38%	-0.71%	0.05%
FINANCIAL YEAR ANALYSIS								
9M ENDED 30/06/2004	-0.38%	1.34%	1.93%	1.48%	0.16%			-2.18%
FY ENDED 30/06/2005	3.79%	5.99%	-0.09%	-2.37%	-0.29%	-3.11%		1.87%
FY ENDED 30/06/2006	-0.80%	5.14%	-0.80%	-2.74%	-0.81%	11.21%		2.93%
FY ENDED 30/06/2007	-0.19%	-1.31%	3.43%	0.67%	0.89%	0.03%		3.14%
FY ENDED 30/06/2008	-1.04%	12.51%	-5.26%		0.59%	-0.46%		3.56%
FY ENDED 30/06/2009	-11.56%	-6.56%	-10.00%		2.61%	-5.57%	-0.71%	-7.29%

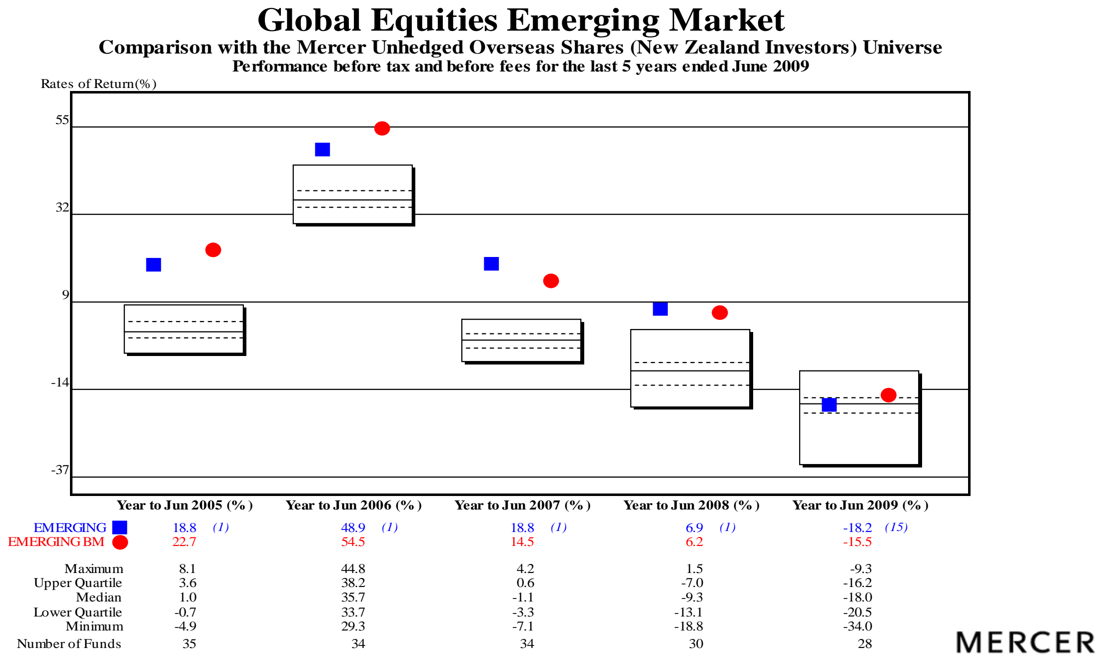
The following chart tracks small cap net market value as a percentage of the total Fund on a quarterly basis relative to the SAA weighting (before proxies). The actual allocations in the charts below are reported on an "economic exposure" basis as opposed to being reported on a "mandate" basis.



Global small cap equities have either been above or below their SAA allocation. It took considerable time for the Fund to fund its allocation to global equity small caps. In the latter period the Fund has been overweight, partly reflecting reporting on an economic exposure basis and partly reflecting rebalance drift

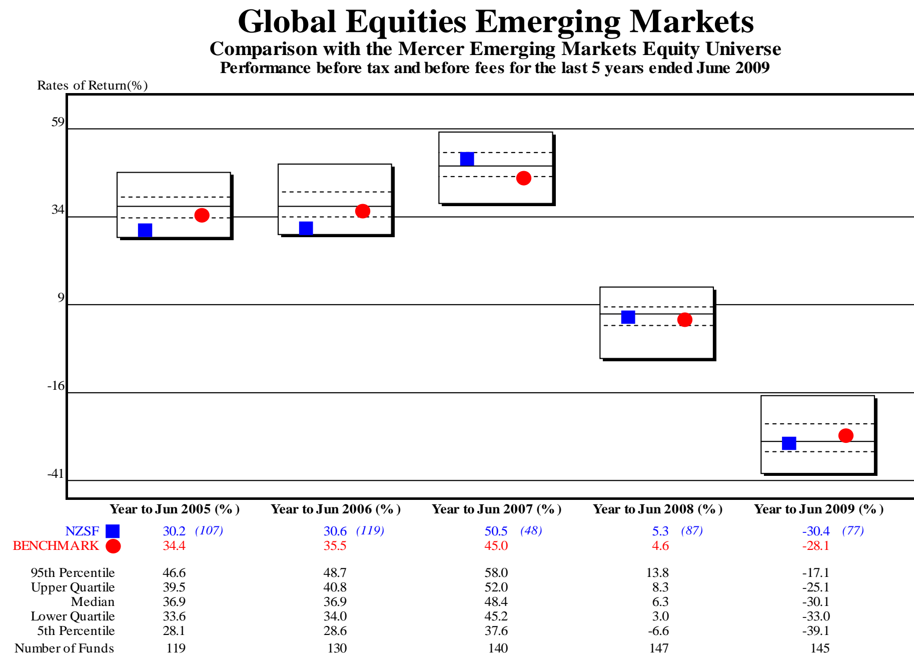
15.3.6 Global Equities Emerging Markets (Unhedged)

The following chart shows the Funds' global equity emerging markets returns (EMERGING) relative to its benchmark (EMERGING BM) and the Global Equities universe (for New Zealand Investors).



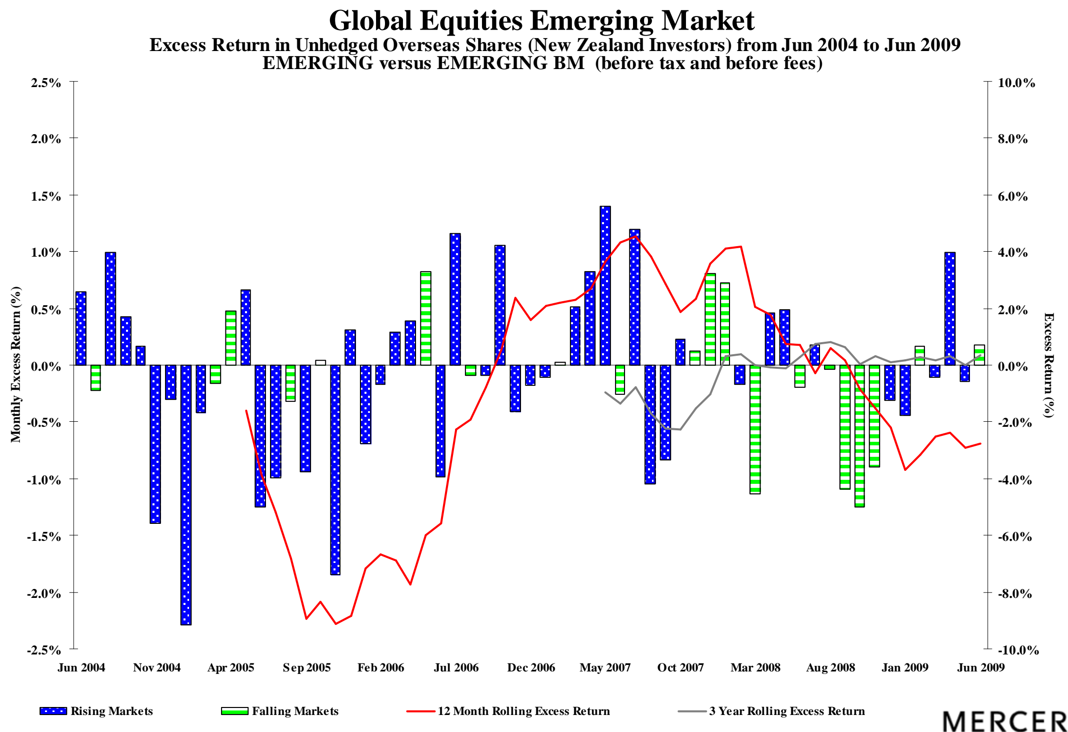
The chart shows the Fund has performed in the upper quartile of managers surveyed over most of the periods shown with the exception of the last 12 months where the Fund has performed near the median.

To gain a more meaningful comparison we have charted the Fund's returns in $US and mapped against the global equity emerging markets global equity universe (in $US).



The above chart shows that when the Fund is compared against the global emerging markets universe performance has been generally below the median of fund managers surveyed.

The chart below plots the Fund's global equity emerging market returns (EMERGING) versus the Fund's benchmark (EMERGING BM).



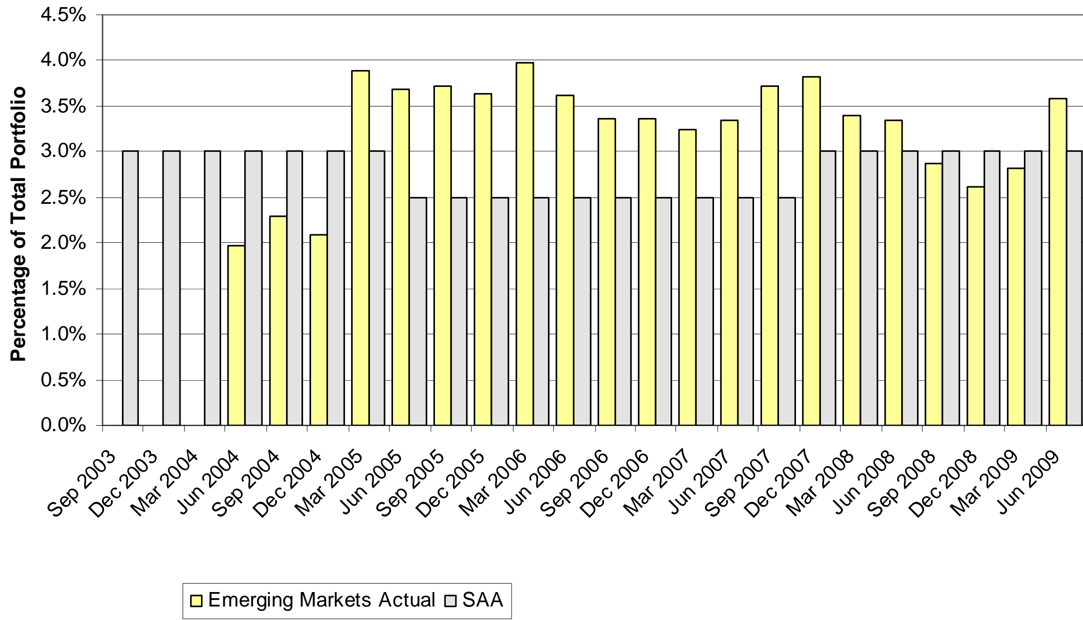
The following chart illustrates excess returns at a fund mandate level and at an overall sector level since inceptions. Global emerging markets has shown mixed results with some significant value add in the 2007 financial year, and fairly average performances in other years. Overall this sector has not seen evidence of positive value add, losing an average of nearly 1.2% per annum.

Global Emerging Markets

	Manager X Excess Return	Manager Y Excess Return	Manager Z Excess Return	Manager AA Excess Return	Emerging Markets Unhedged Excess Return
Full Period Return	2.02%	-23.28%	1.20%	-0.02%	-9.80%
Annualised Return (If > 1 Year)	2.02%	-3.84%	0.20%	-0.02%	-1.17%
FINANCIAL YEAR ANALYSIS					
9M ENDED 30/06/2004	0.65%				0.65%
FY ENDED 30/06/2005		-1.67%			-3.87%
FY ENDED 30/06/2006		-4.75%	-6.47%		-5.57%
FY ENDED 30/06/2007		2.02%	7.02%		4.33%
FY ENDED 30/06/2008		1.04%	-3.34%		0.73%
FY ENDED 30/06/2009			1.85%	-0.02%	-2.75%

The following chart tracks emerging markets net market value as a percentage of the total Fund on a quarterly basis relative to the SAA (before proxies). The actual allocations in the charts below are reported on an "economic exposure" basis as opposed to being reported on a "mandate" basis.

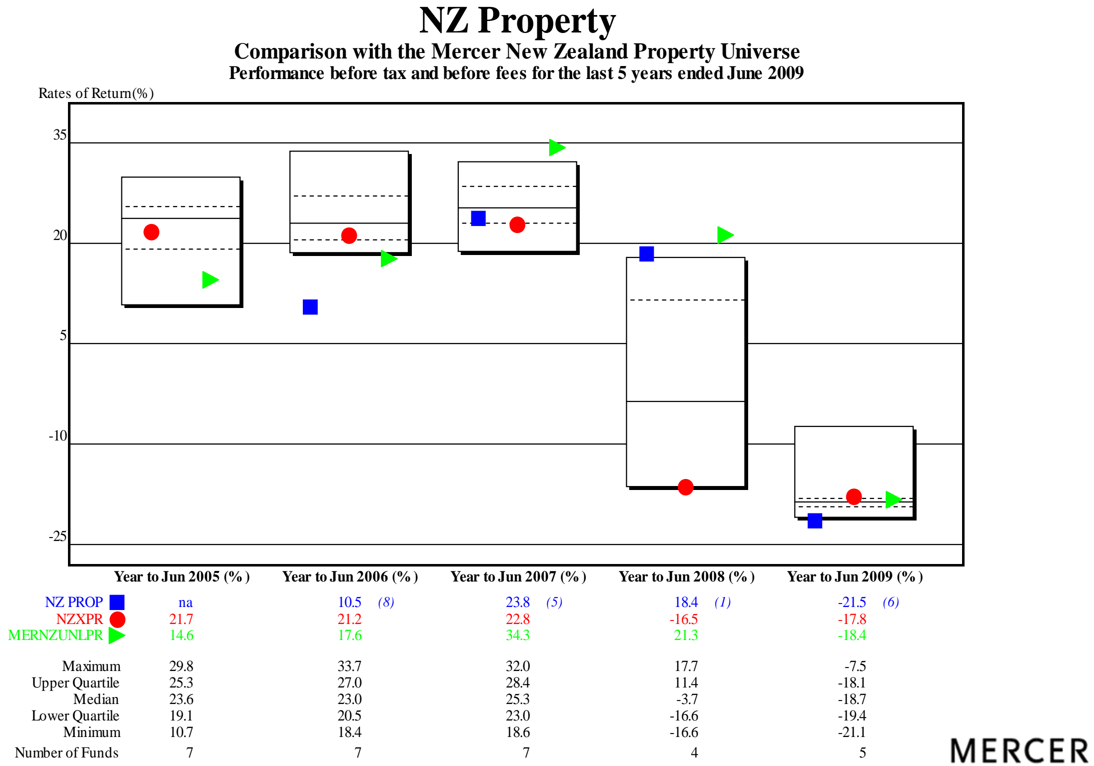
Asset Allocations



The actual allocation of global emerging markets has largely been overweight against the SAA. This over-weighting was still apparent after the Fund had increased their SAA weighting to emerging markets in 2007.

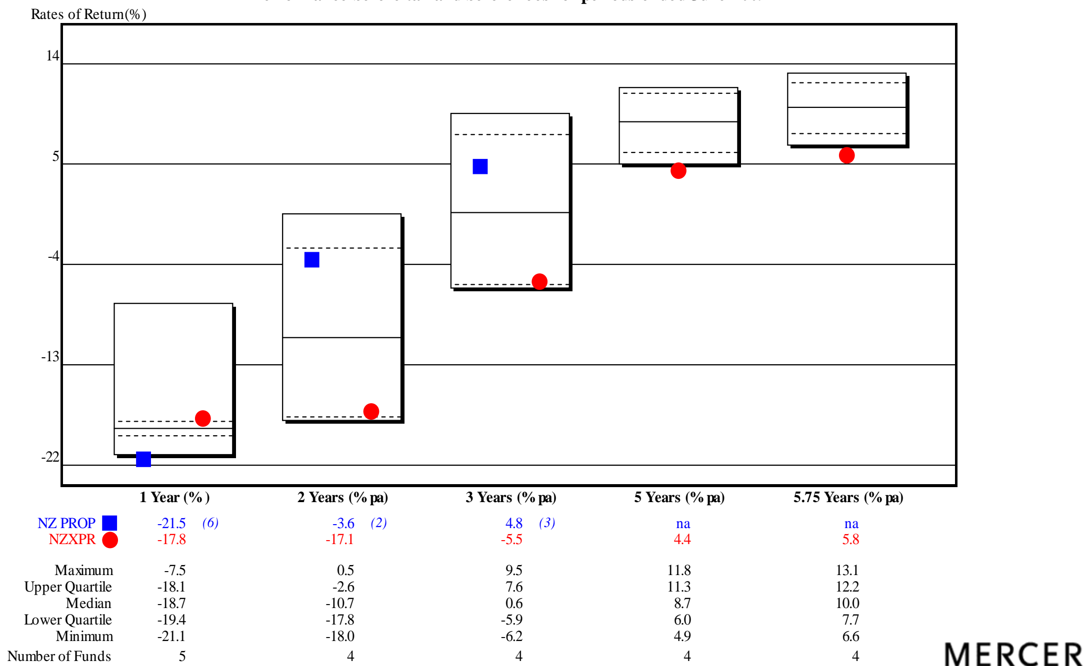
15.3.7 Property

The following chart shows the Fund's New Zealand unlisted property returns (NZ PROP) relative to the NZX Property Index (NZXPR) and the Mercer Unlisted Property Index (MERNZUNLPR). As the New Zealand property allocation is unlisted the Fund uses a public market proxy as a benchmark. The universe used in the following chart is the New Zealand listed property universe.

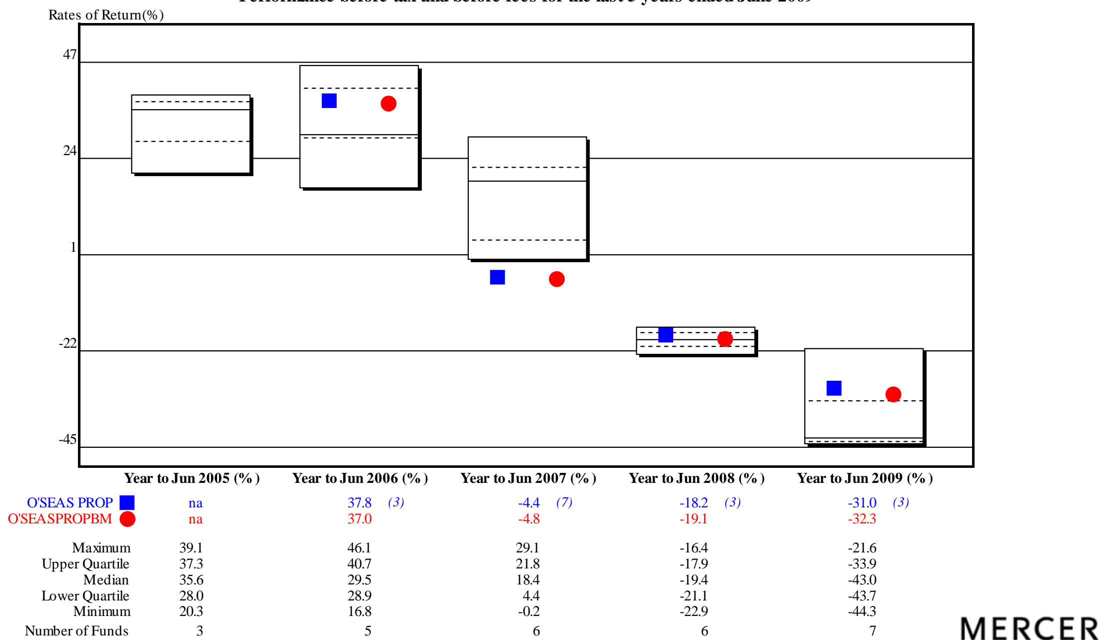


	Year to Jun 2005 (%)	Year to Jun 2006 (%)	Year to Jun 2007 (%)	Year to Jun 2008 (%)	Year to Jun 2009 (%)
NZ PROP	na	10.5 (8)	23.8 (5)	18.4 (1)	-21.5 (6)
NZXPR	21.7	21.2	22.8	-16.5	-17.8
MERNZUNLPR	14.6	17.6	34.3	21.3	-18.4
Maximum	29.8	33.7	32.0	17.7	-7.5
Upper Quartile	25.3	27.0	28.4	11.4	-18.1
Median	23.6	23.0	25.3	-3.7	-18.7
Lower Quartile	19.1	20.5	23.0	-16.6	-19.4
Minimum	10.7	18.4	18.6	-16.6	-21.1
Number of Funds	7	7	7	4	5

The Fund's unlisted property investment has more closely tracked the Mercer Unlisted Property Index than the listed NZX Property Index.



The following chart shows the Funds' global unhedged property returns (O'SEAS PROP) relative to its benchmark (O'SEASPROPBM) and the Global Listed Property universe (for New Zealand Investors). It is worth pointing out that the Global Listed Property universe for New Zealand investors is not strictly uniform and the managers in the survey have a wide range of hedging on their products.

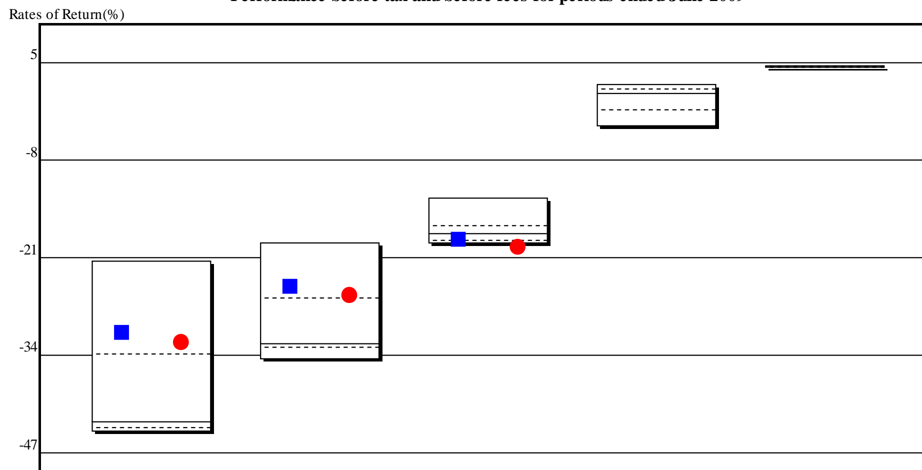


The chart shows that the Fund lay in the lower quartile over the year to 2007 and above the median or in the upper quartile over the remaining periods shown.

Global Property

Comparison with the Mercer Global Listed Property (New Zealand Investors) Universe

Performance before tax and before fees for periods ended June 2009



	1 Year (%)	2 Years (% pa)	3 Years (% pa)	5 Years (% pa)	5.75 Years (% pa)
O'SEAS PROP	-31.0 (3)	-24.8 (3)	-18.6 (5)	na	na
O'SEASPROPBM	-32.3	-26.0	-19.5	na	na
Maximum	-21.6	-19.0	-13.2	2.1	4.5
Upper Quartile	-33.9	-26.5	-16.8	1.4	4.5
Median	-43.0	-32.6	-17.8	0.7	4.4
Lower Quartile	-43.7	-33.1	-18.8	-1.4	4.4
Minimum	-44.3	-34.5	-19.2	-3.6	4.3
Number of Funds	7	6	6	3	2

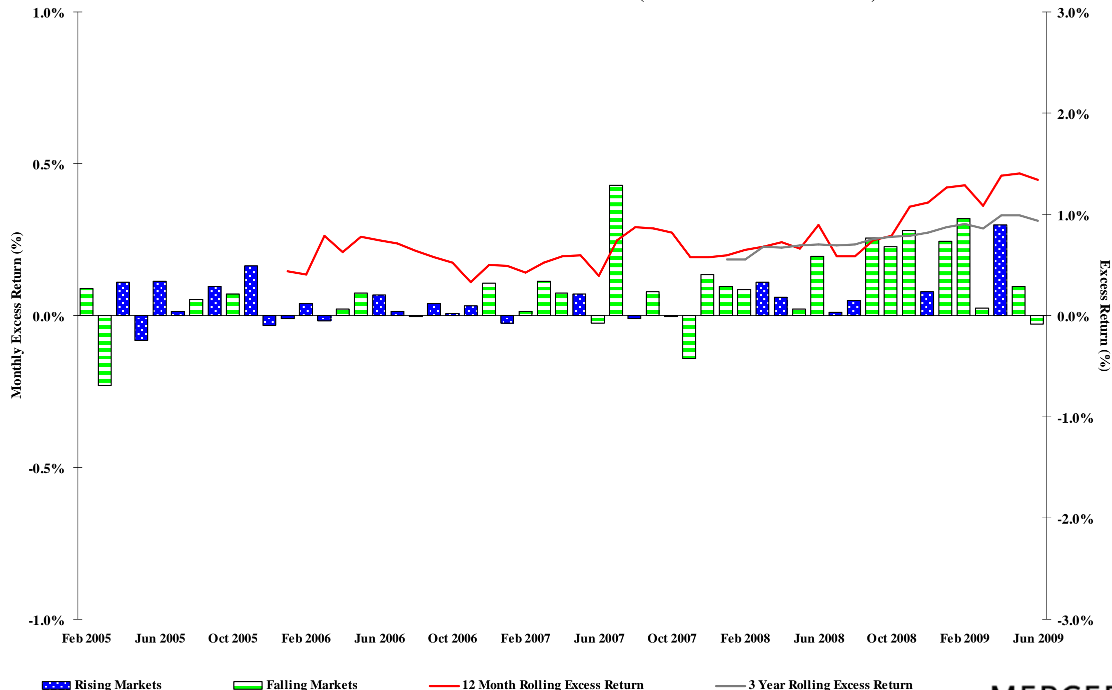
MERCER

The chart below plots the Fund's global listed property returns (O'SEAS PROP) versus the Fund's benchmark (O'SEASPROPBM).

Global Property

Excess Return in Global Listed Property (New Zealand Investors) from Feb 2005 to Jun 2009

O'SEAS PROP versus O'SEASPROPBM (before tax and before fees)



MERCER

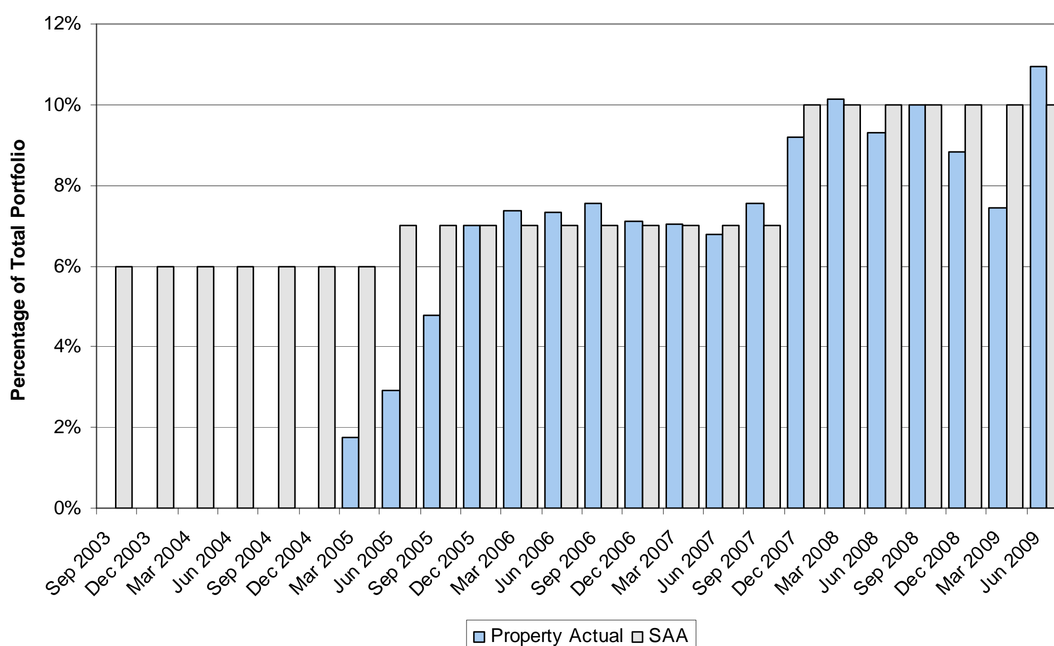
The 12 month and three year excess rolling return for the global listed property sector are currently both around 1.0% per annum.

The following chart illustrates excess returns at a fund mandate level and at an overall sector level since inception. The global property sector has been one of the stand-out added value sectors. The sole investment manager added value in each year with an annualised added value of nearly 0.9% per annum.

Global Property (Unhedged)

	Manager AB Excess Return	**Global Property Unhedged Excess Return**
Full Period Return	3.04%	3.17%
Annualised Return (If > 1 Year)	0.84%	0.87%
FINANCIAL YEAR ANALYSIS		
9M ENDED 30/06/2004		
FY ENDED 30/06/2005	-0.00%	-0.00%
FY ENDED 30/06/2006	0.74%	0.74%
FY ENDED 30/06/2007	0.43%	0.40%
FY ENDED 30/06/2008	0.89%	0.89%
FY ENDED 30/06/2009	1.22%	1.34%

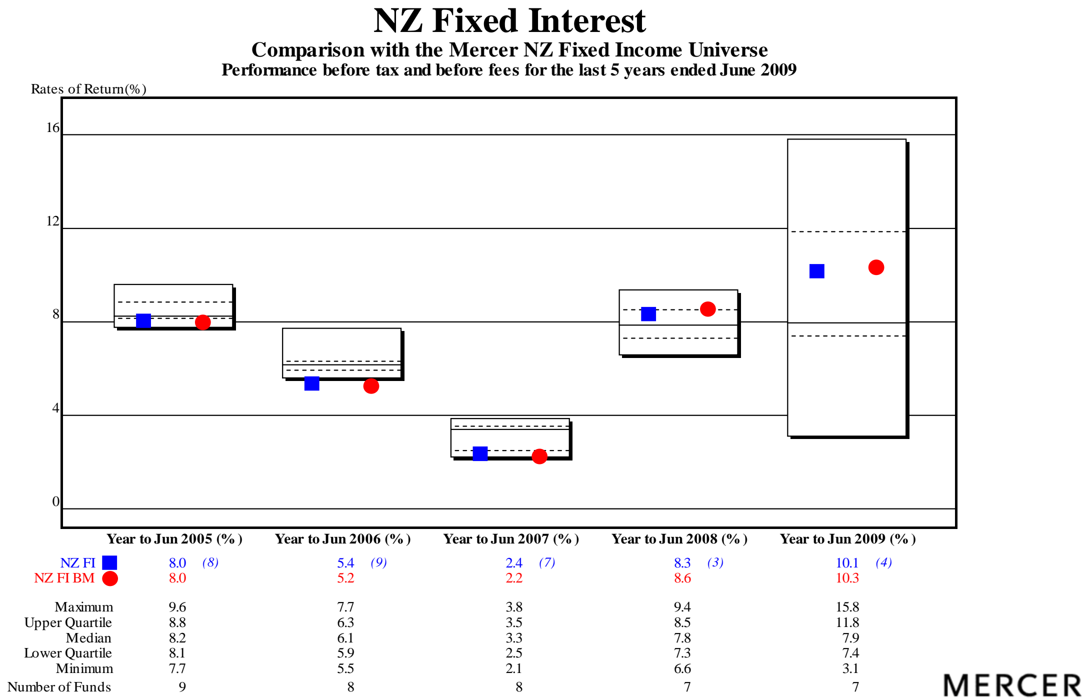
The following chart tracks property net market value as a percentage of the total Fund on a quarterly basis relative to the SAA weighting (before proxies). The actual allocations in the charts below are reported on an “economic exposure” basis as opposed to being reported on a “mandate” basis.



The property allocations have been really close to the SAA allocations at times during the prior six years. Property valuations have been on a bit of a rollercoaster ride at various times and this may explain why the Fund has drifted from the SAA.

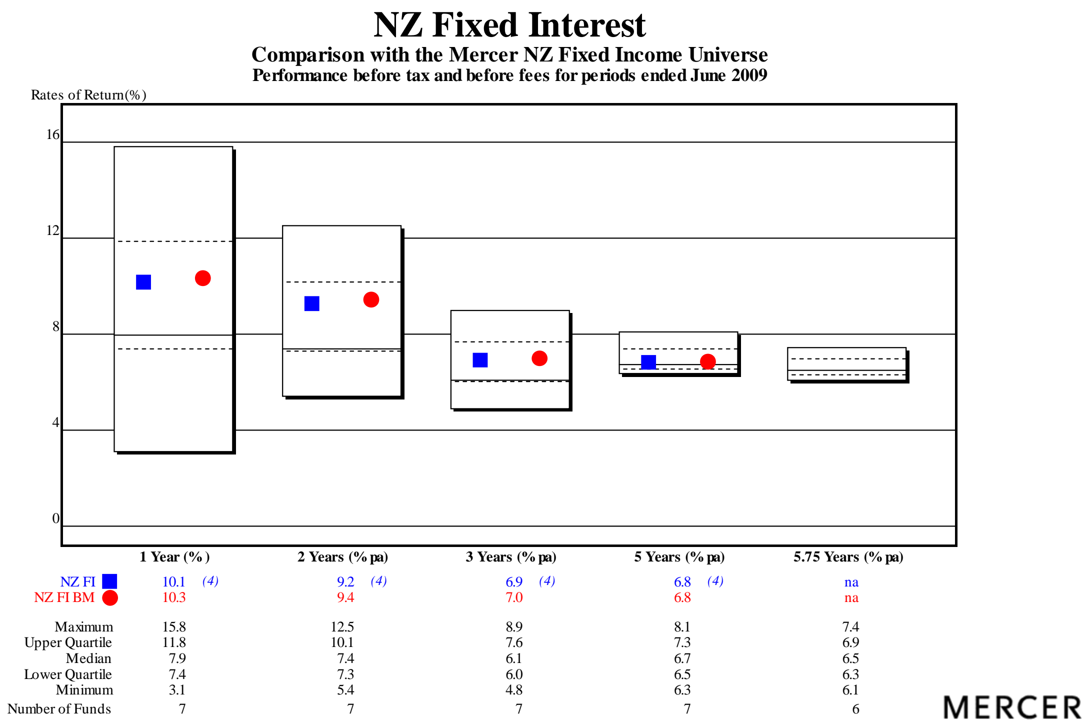
15.3.8 New Zealand Fixed Interest

The following chart shows the Funds' New Zealand fixed interest returns (NZ FI) relative to its benchmark (NZ FI BM) and the New Zealand Fixed Interest universe.



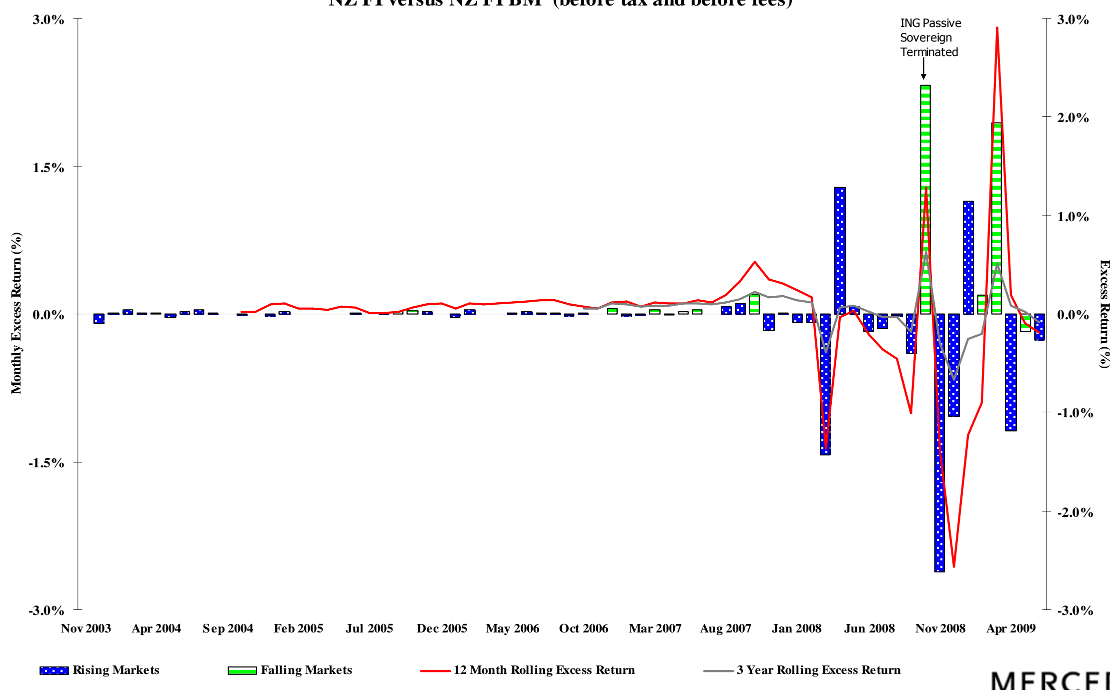
	Year to Jun 2005 (%)	Year to Jun 2006 (%)	Year to Jun 2007 (%)	Year to Jun 2008 (%)	Year to Jun 2009 (%)
NZ FI	8.0 (8)	5.4 (9)	2.4 (7)	8.3 (3)	10.1 (4)
NZ FI BM	8.0	5.2	2.2	8.6	10.3
Maximum	9.6	7.7	3.8	9.4	15.8
Upper Quartile	8.8	6.3	3.5	8.5	11.8
Median	8.2	6.1	3.3	7.8	7.9
Lower Quartile	8.1	5.9	2.5	7.3	7.4
Minimum	7.7	5.5	2.1	6.6	3.1
Number of Funds	9	8	8	7	7

The chart shows that the Fund has performed in the lower quartile of all mangers surveyed through to 2007 before picking up over the last two years.



	1 Year (%)	2 Years (% pa)	3 Years (% pa)	5 Years (% pa)	5.75 Years (% pa)
NZ FI	10.1 (4)	9.2 (4)	6.9 (4)	6.8 (4)	na
NZ FI BM	10.3	9.4	7.0	6.8	na
Maximum	15.8	12.5	8.9	8.1	7.4
Upper Quartile	11.8	10.1	7.6	7.3	6.9
Median	7.9	7.4	6.1	6.7	6.5
Lower Quartile	7.4	7.3	6.0	6.5	6.3
Minimum	3.1	5.4	4.8	6.3	6.1
Number of Funds	7	7	7	7	6

The chart below plots the Fund's New Zealand fixed interest returns (NZ FI) versus the Fund's benchmark (NZ FI BM).



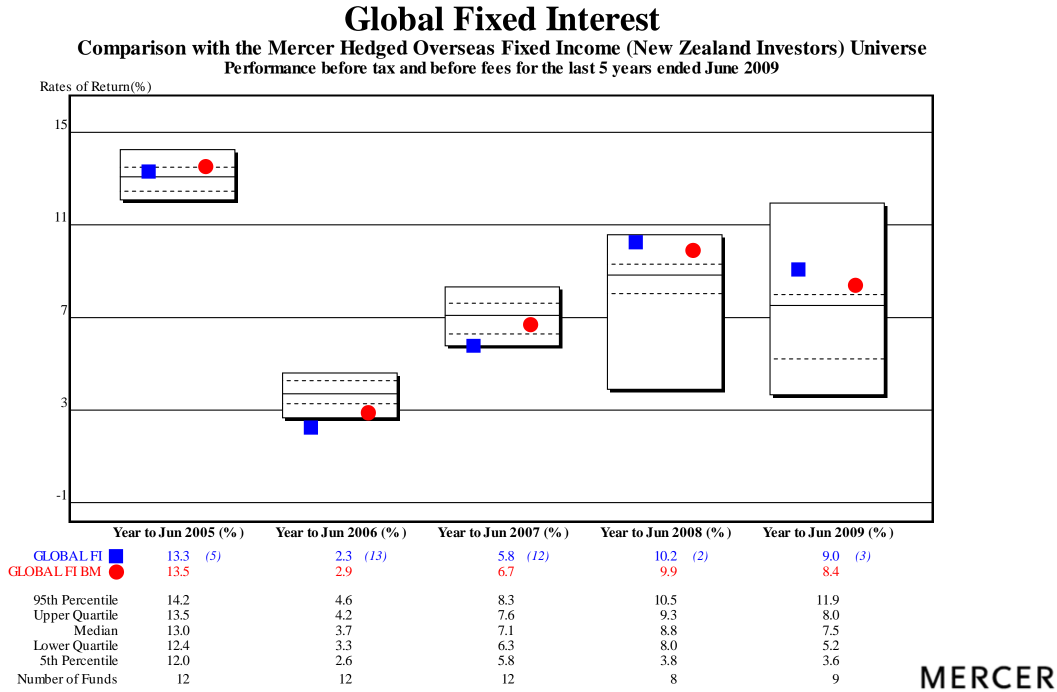
The following chart illustrates excess returns at a fund mandate level and at an overall sector level since inception. The domestic bond sector has been disappointing. The Fund's investment managers have failed to add value in many of the years since inception, with a particularly poor performance in the 2009 financial year wiping out any chance of a positive annualised added value return.

New Zealand Fixed Interest

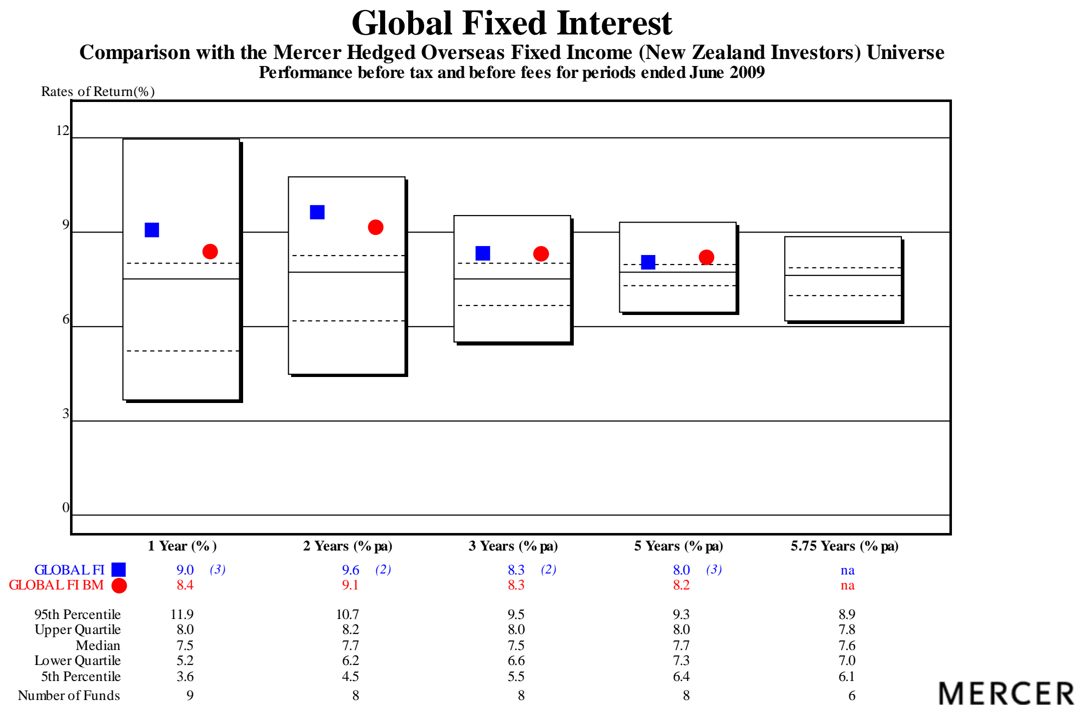
	Manager AC Excess Return	Manager AD Excess Return	New Zealand Fixed Interest Excess Return
Full Period Return	0.22%	-3.87%	-0.12%
Annualised Return (If > 1 Year)	0.04%	-0.52%	-0.02%
FINANCIAL YEAR ANALYSIS			
9M ENDED 30/06/2004	-0.01%	0.21%	-0.03%
FY ENDED 30/06/2005	-0.02%	0.43%	0.06%
FY ENDED 30/06/2006	0.07%	0.53%	0.13%
FY ENDED 30/06/2007	-0.03%	0.88%	0.14%
FY ENDED 30/06/2008	-0.05%	-0.82%	-0.21%
FY ENDED 30/06/2009		-4.24%	-0.19%

15.3.9 Global Fixed Interest (Hedged)

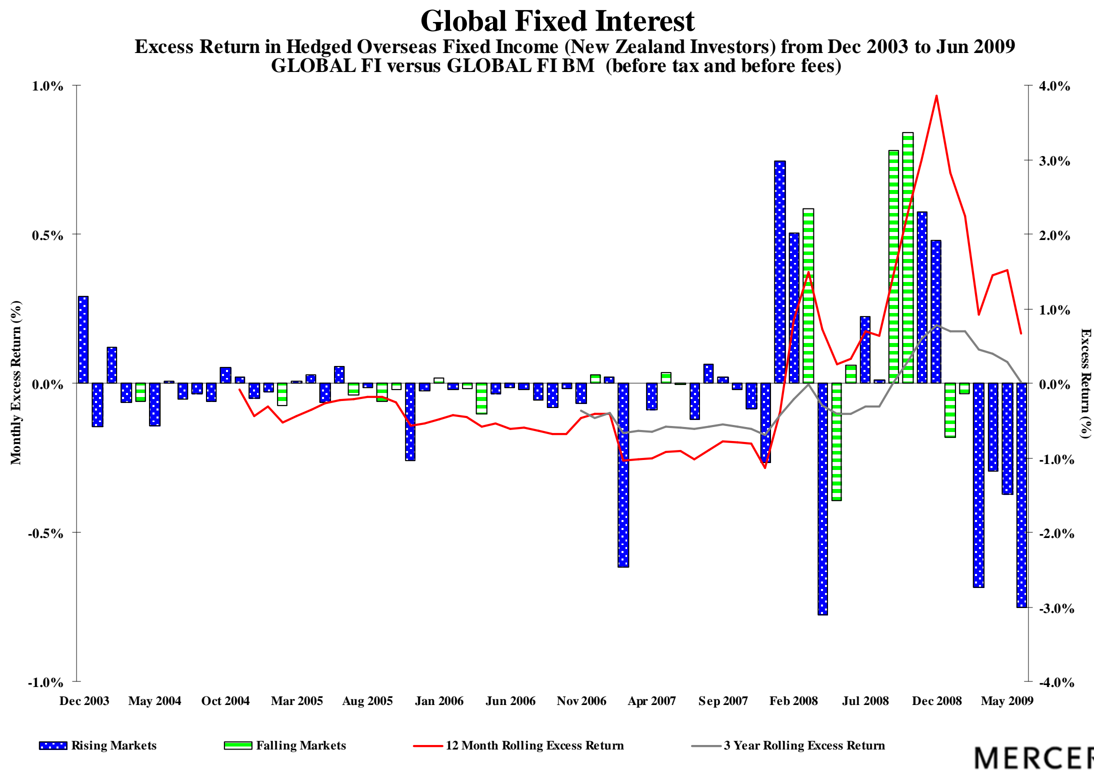
The following chart shows the Funds' overseas fixed interest returns (GLOBAL FI) relative to its benchmark (GLOBAL FI BM) and the Global Fixed Interest universe (for New Zealand investors).



The chart shows that the Fund has performed in the upper quartile of managers surveyed in recent years.



The chart below plots the Fund's global fixed interest returns (GLOBAL FI) versus the Fund's benchmark (GLOBAL FI BM).

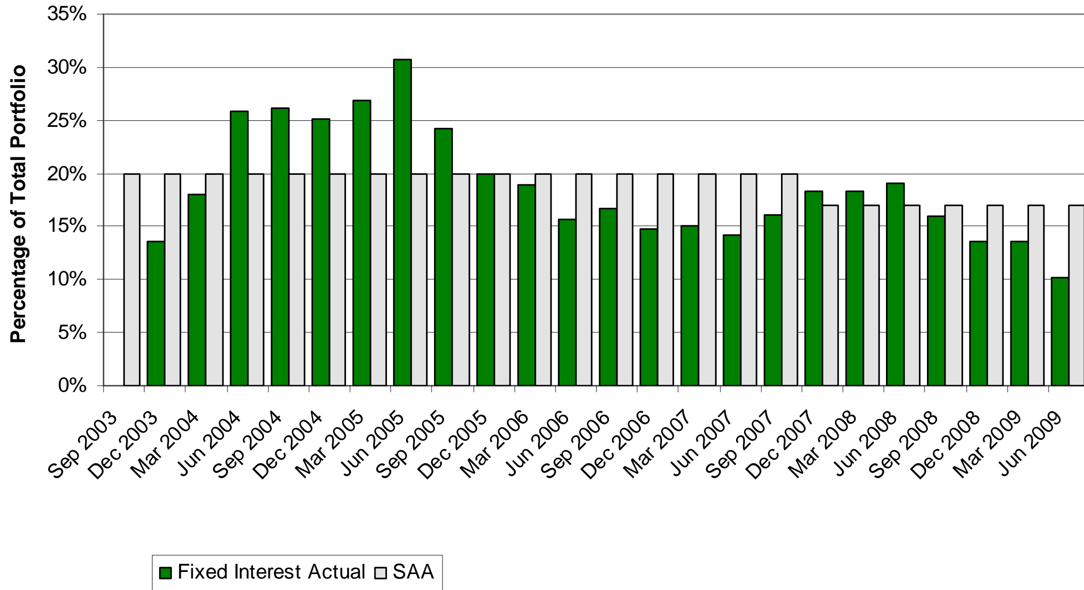


The following chart illustrates excess returns at a fund mandate level and at an overall sector level since inception. The last two years where the investment managers added positive value were not strong enough to carry the overall annualised added value results over the line. Overall a relatively disappointing result for this largely defensive sector.

Global Fixed Interest (Hedged)

	Manager AE Excess Return
Full Period Return	-1.14%
Annualised Return (If > 1 Year)	-0.14%
FINANCIAL YEAR ANALYSIS	
9M ENDED 30/06/2004	0.00%
FY ENDED 30/06/2005	-0.22%
FY ENDED 30/06/2006	-0.61%
FY ENDED 30/06/2007	-0.91%
FY ENDED 30/06/2008	0.33%
FY ENDED 30/06/2009	0.66%

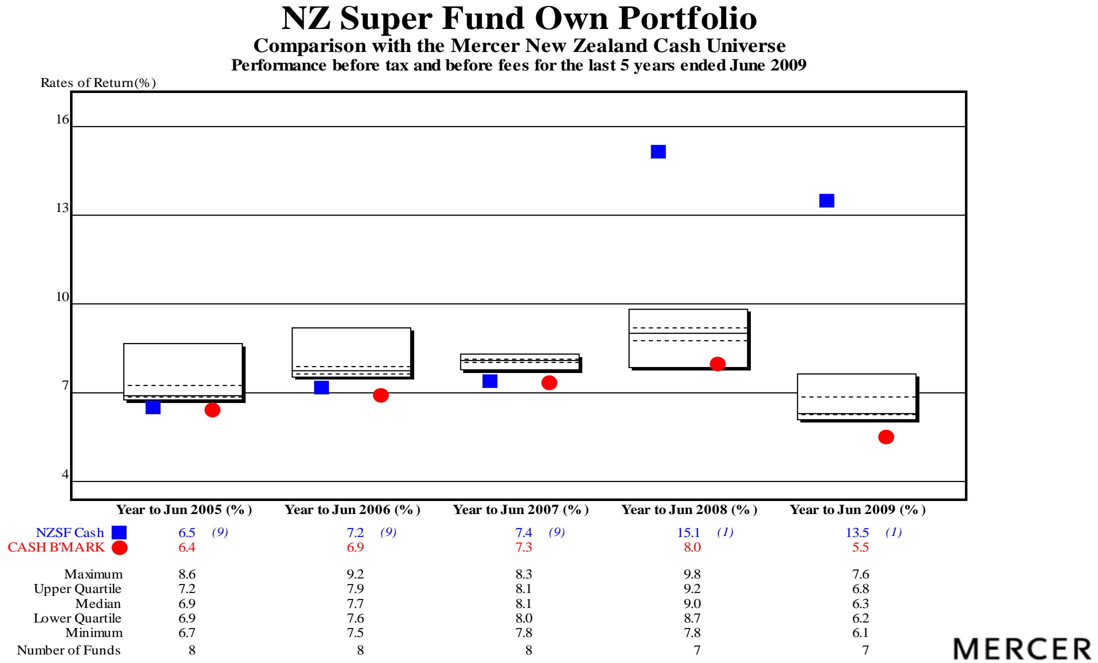
The following chart tracks the **overall** fixed interest net market value as a percentage of the total Fund on a quarterly basis relative to the SAA weighting (before proxies). The actual allocations in the charts below are reported on an "economic exposure" basis as opposed to being reported on a "mandate" basis.



The Fund was largely overweight bonds up to September 2005. After this period the Fund has been largely underweight bonds. Some of this is due to reporting on an economic exposures basis.

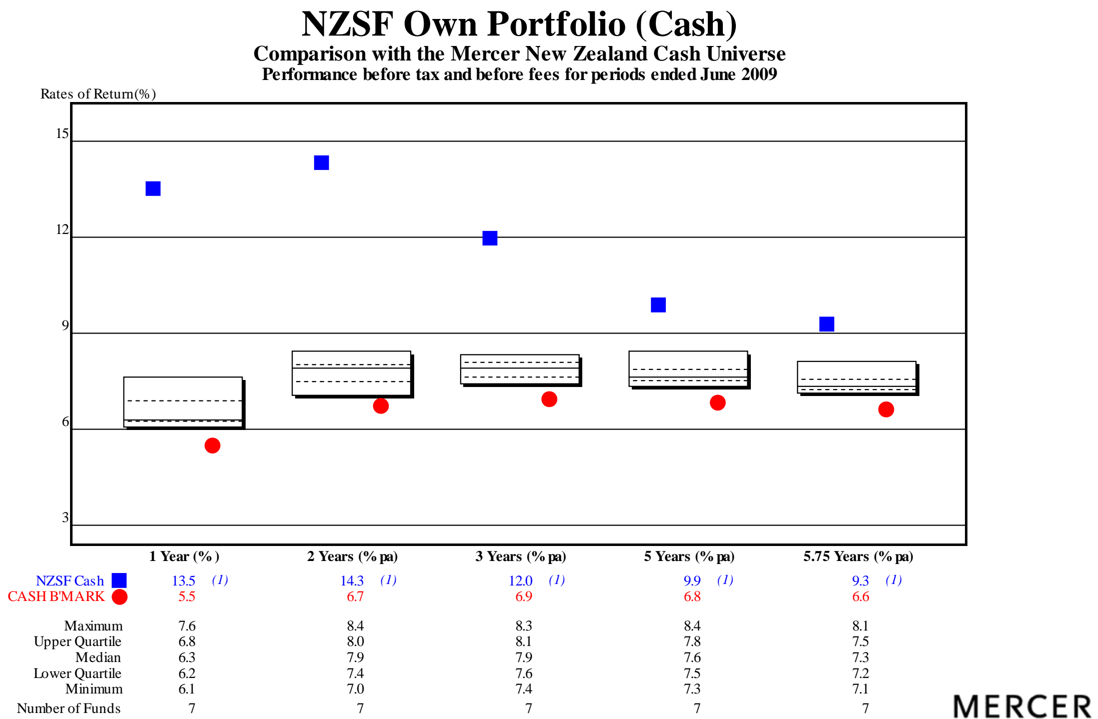
15.3.10 Cash

The following chart shows the Fund's cash returns (NZSF Cash) relative to its benchmark (CASH BMARK) and the New Zealand Cash universe. The Fund's in-house cash portfolio has been used to represent cash returns for the Fund.



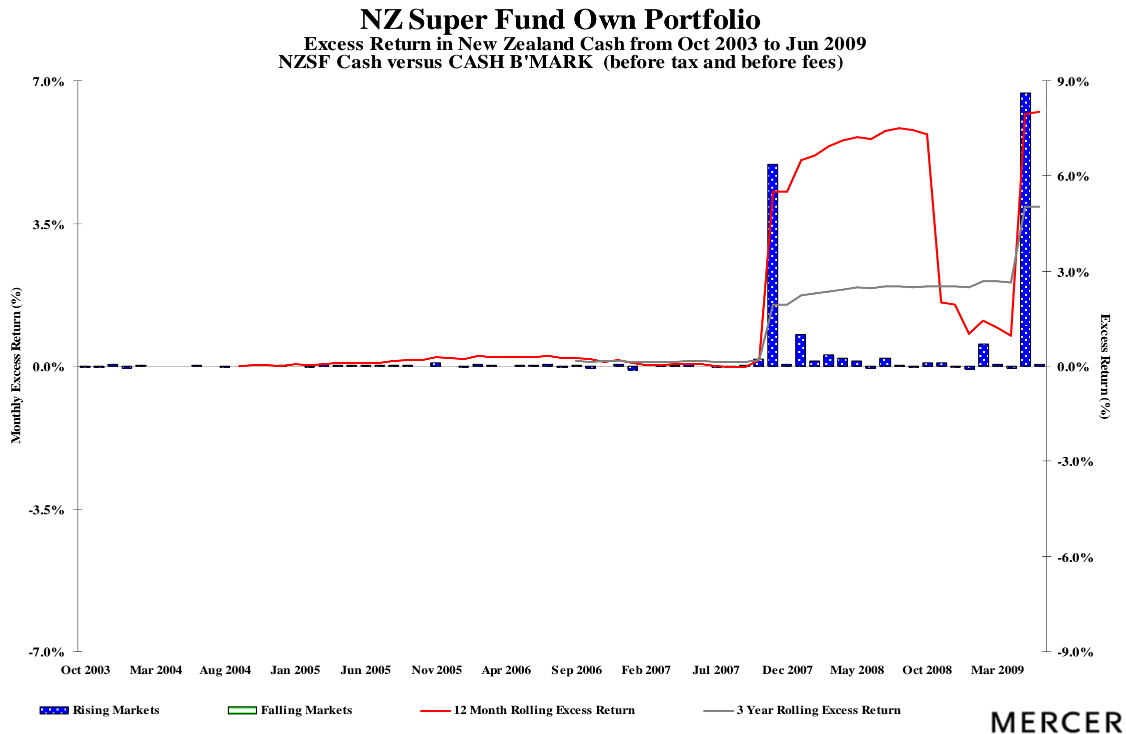
	Year to Jun 2005 (%)	Year to Jun 2006 (%)	Year to Jun 2007 (%)	Year to Jun 2008 (%)	Year to Jun 2009 (%)
NZSF Cash	6.5 (9)	7.2 (9)	7.4 (9)	15.1 (1)	13.5 (1)
CASH B'MARK	6.4	6.9	7.3	8.0	5.5
Maximum	8.6	9.2	8.3	9.8	7.6
Upper Quartile	7.2	7.9	8.1	9.2	6.8
Median	6.9	7.7	8.1	9.0	6.3
Lower Quartile	6.9	7.6	8.0	8.7	6.2
Minimum	6.7	7.5	7.8	7.8	6.1
Number of Funds	8	8	8	7	7

The chart shows that the Fund has performed in the lower quartile of all mangers surveyed earlier on and in the upper quartile more recently.



	1 Year (%)	2 Years (% pa)	3 Years (% pa)	5 Years (% pa)	5.75 Years (% pa)
NZSF Cash	13.5 (1)	14.3 (1)	12.0 (1)	9.9 (1)	9.3 (1)
CASH B'MARK	5.5	6.7	6.9	6.8	6.6
Maximum	7.6	8.4	8.3	8.4	8.1
Upper Quartile	6.8	8.0	8.1	7.8	7.5
Median	6.3	7.9	7.9	7.6	7.3
Lower Quartile	6.2	7.4	7.6	7.5	7.2
Minimum	6.1	7.0	7.4	7.3	7.1
Number of Funds	7	7	7	7	7

The following chart shows the Funds' cash returns (NZSF Cash) relative to its benchmark (CASH B'MARK) and the New Zealand Cash universe.



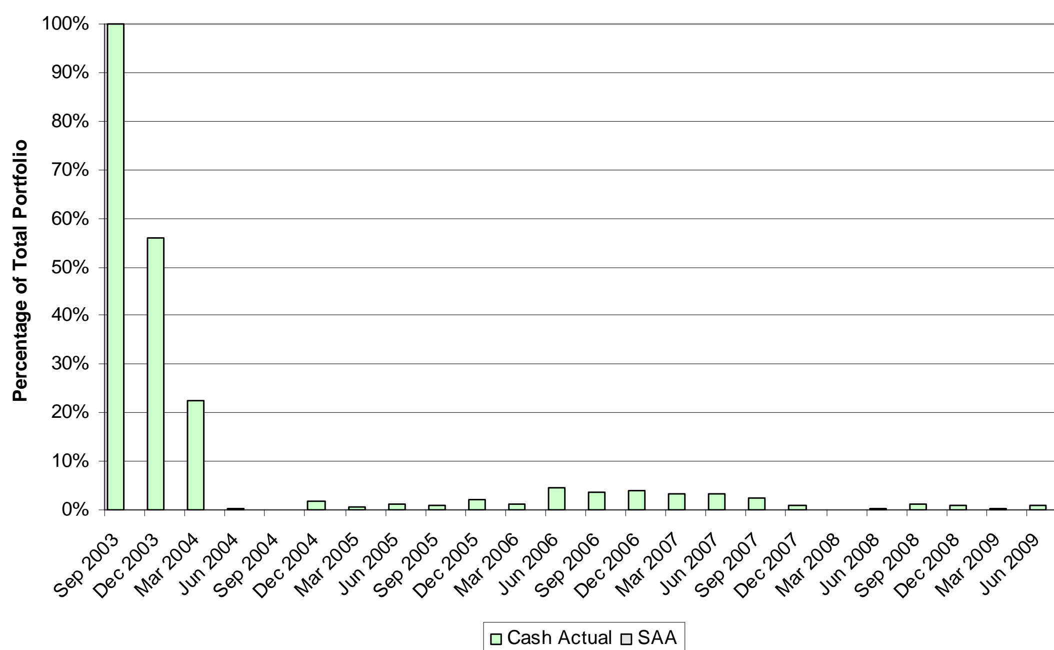
The 12 month excess rolling return for the cash sector is currently around 8.0% with a three year excess return of around 5.0%.

The following chart illustrates excess returns at a fund mandate level since inception. The investment manager in this instance has added significant value over the past two years. However the Fund has no SAA weighting to cash, so this is an area for very limited added value opportunities.

Cash

	Manager AF Excess Return
Full Period Return	22.00%
Annualised Return (If > 1 Year)	2.66%
FINANCIAL YEAR ANALYSIS	
9M ENDED 30/06/2004	0.01%
FY ENDED 30/06/2005	0.09%
FY ENDED 30/06/2006	0.29%
FY ENDED 30/06/2007	0.07%
FY ENDED 30/06/2008	7.16%
FY ENDED 30/06/2009	8.02%

The following chart tracks cash net market value as a percentage of the total Fund on a quarterly basis relative to the SAA weighting (before proxies).



15.3.11 Alternatives

The following charts illustrate returns at a fund mandate level and at an overall sector level since inception. There is more detailed commentary in the Primary Markets section of this report.

Private Equity

	Manager AG	Manager AH	Manager AI	Manager AJ	Manager AK	Manager AL	Manager AM	Manager AN	Private Equity
Full Period Return	96.14%	106.37%	-16.99%	-39.90%	-4.81%	-30.27%	-32.36%	-4.94%	24.31%
Annualised Return (If > 1 Year)	18.69%	21.27%	-6.90%	-18.66%	-2.05%	-17.46%	-17.62%	-3.47%	5.69%
FINANCIAL YEAR ANALYSIS									
9M ENDED 30/06/2004									
FY ENDED 30/06/2005									
FY ENDED 30/06/2006	-11.29%	-15.99%							-13.89%
FY ENDED 30/06/2007	146.77%	12.69%	-10.88%	-18.03%	-4.03%		-0.79%		52.86%
FY ENDED 30/06/2008	-0.13%	60.95%	23.24%	-14.43%	-0.69%	-10.93%	5.41%	-2.64%	9.98%
FY ENDED 30/06/2009	-10.30%	35.44%	-24.42%	-14.30%	-0.12%	-21.71%	-35.32%	-2.36%	-14.12%

Timber

	Manager AO	Manager AP	Manager AQ	Manager AR	Manager AS	Timber Hedged
Full Period Return	-12.37%	15.79%	11.94%	71.39%	7.74%	50.62%
Annualised Return (If > 1 Year)	-3.54%	4.08%	3.13%	22.37%	4.09%	11.82%
FINANCIAL YEAR ANALYSIS						
9M ENDED 30/06/2004						
FY ENDED 30/06/2005						
FY ENDED 30/06/2006	28.47%	-0.20%	3.05%			7.62%
FY ENDED 30/06/2007	-9.76%	13.43%	10.56%	14.88%		9.07%
FY ENDED 30/06/2008	10.41%	-6.73%	-4.53%	17.81%	1.89%	11.37%
FY ENDED 30/06/2009	-31.54%	9.67%	2.91%	26.64%	5.74%	15.22%

Infrastructure

	Manager AT	Manager AU	Infrastructure Hedged
Full Period Return	-1.93%	-7.68%	0.96%
Annualised Return (If > 1 Year)	-0.47%	-2.51%	0.23%
FINANCIAL YEAR ANALYSIS			
9M ENDED 30/06/2004			
FY ENDED 30/06/2005	12.50%		12.59%
FY ENDED 30/06/2006	12.83%	1.46%	13.08%
FY ENDED 30/06/2007	38.05%	57.96%	40.35%
FY ENDED 30/06/2008	-22.35%	-23.57%	-22.97%
FY ENDED 30/06/2009	-27.93%	-24.63%	-26.65%

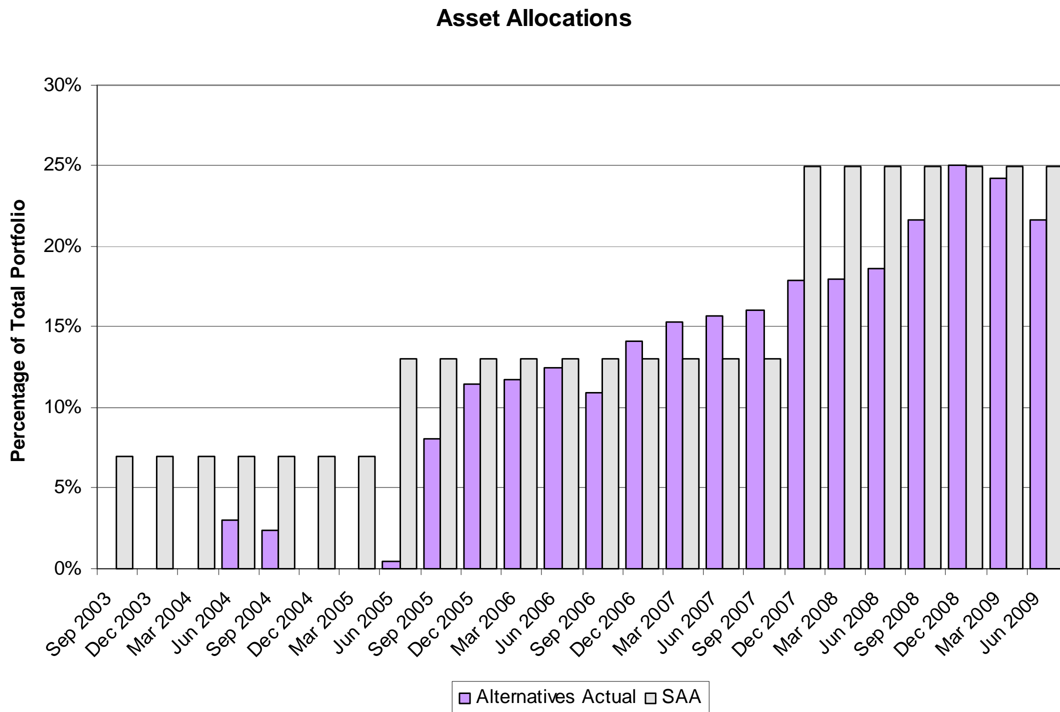
NZ Property

	Manager AV	New Zealand Property
Full Period Return	27.29%	27.16%
Annualised Return (If > 1 Year)	6.19%	6.16%
FINANCIAL YEAR ANALYSIS		
9M ENDED 30/06/2004		
FY ENDED 30/06/2005	0.00%	0.00%
FY ENDED 30/06/2006	10.52%	10.52%
FY ENDED 30/06/2007	23.75%	23.75%
FY ENDED 30/06/2008	18.40%	18.40%
FY ENDED 30/06/2009	-21.40%	-21.48%

Commodities

	Commodities
Full Period Return	-28.91%
Annualised Return (If > 1 Year)	-8.52%
FINANCIAL YEAR ANALYSIS	
9M ENDED 30/06/2004	
FY ENDED 30/06/2005	
FY ENDED 30/06/2006	4.21%
FY ENDED 30/06/2007	-35.43%
FY ENDED 30/06/2008	71.83%
FY ENDED 30/06/2009	-38.51%

The following chart tracks alternatives net market value as a percentage of the total Fund on a quarterly basis relative to the SAA weighting (before proxies).



The actual allocation to alternatives has been running behind the SAA allocation throughout the review period. This is not at all unusual as the alternative allocation to real assets is always the most problematic allocation area for large funds.

16

16 Private Markets

The Guardians' has progressively sought to refine its investment beliefs and develop its investment strategy to reflect its endowments. The Guardians' investment in private markets is driven by the desire to extract an illiquidity premium in view of their longer term horizon and positive net cash flow contributions to fund initial commitments.

In this section we examine the effectiveness of the private markets investment strategy. Because of the nature of investments included here, assessment of effectiveness of strategy is a broader issue than examination of performance against benchmarks. This is partly due to the different (and in most cases longer) timeframes over which performance needs to be assessed and the lack of current maturity of most of the existing investments in this category which makes peer group comparison not very meaningful. It also reflects that performance outcomes from these investments (particularly those which are illiquid and not traded) is heavily influenced by processes supporting valuation and execution at the point of investment and processes in place to monitor ongoing issues with the investments.

There have been some definitional changes in what constitutes "private markets" over the course of the Fund's life. In this section we will cover investments which are listed in the current Investment Policy under the heading "private markets" plus investments under the heading of "property" and "commodities". For ease of drafting in this section we will refer to them collectively as private markets, property and commodities (PPC) investments.

16.1 Private markets strategy

The development of strategic asset allocation (SAA) target weights to PPC investments shows an evolution of approach as the Fund has grown and developed. An initial report on SAA by Mercer in May 2003 recommended strategic allocations of 7% in 'illiquids' (including private equity, infrastructure and commodities) and 6% in property to give a PPC strategic allocation of 13%. This was adopted in August 2003.

In March 2005 an internal review of the SAA recommended increasing the PPC element from 13% to 35% over time. This comprised 10% in property and 25% in alternative assets. The composition for alternative assets to be reached by 30 June

2007 was anticipated to be 13% (comprising 3% infrastructure, 1% private equity, 5% commodities, 2% timber and 2% absolute return strategies).

A further internal review of the SAA occurred in December 2007. This altered the classification of alternative investments by breaking out:

- commodities (strategic weight of 5%)
- private markets (strategic weight of 20%)
- property (strategic weight remaining at 10%)

This review also established sub group targets within private markets for private equity at 5%, infrastructure at 5%, timber at 5% and other private markets 5%.

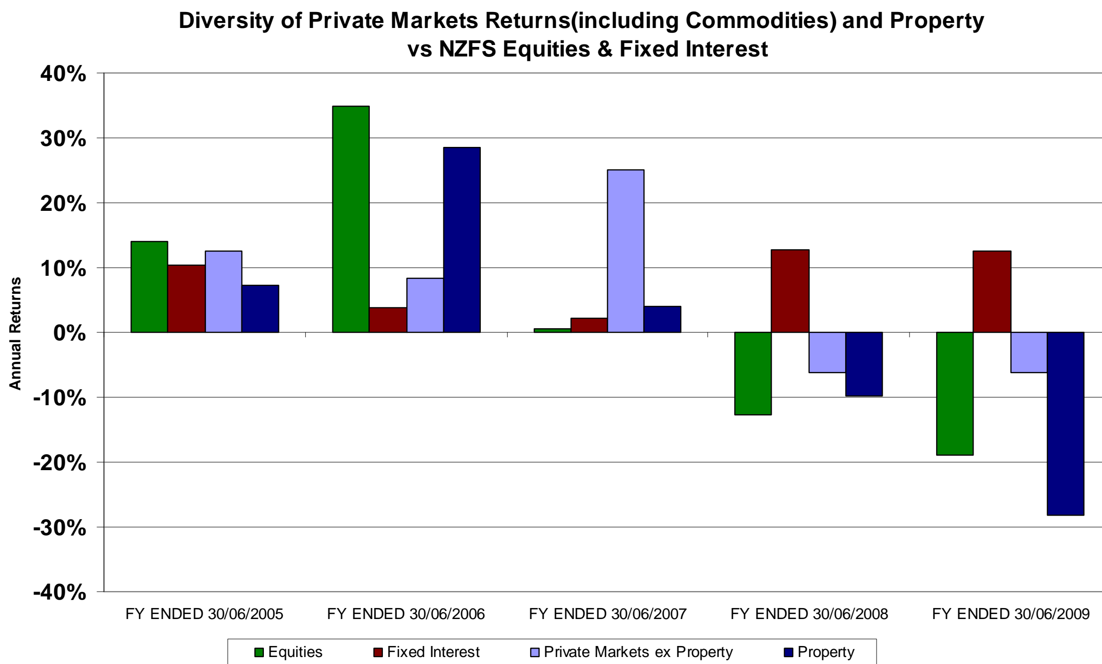
There were some significant changes in expected returns and liquidity premia between the 2005 and 2007 reviews. In particular the expected return and premium for timber was significantly lower in the 2007 review versus the 2005 review.

The December 2007 SAA review also introduced the concept of public (listed) market proxies for private market exposures. The use of proxies recognises that it is generally not practical to achieve an immediate and exact allocation to illiquid investments because suitably priced investment opportunities to fit the strategy may not be available. Thus a proxy allows an under-allocation of exposure to an illiquid investment category relative to SAA, to be offset by an over-allocation to the defined proxy liquid asset class. Similarly, if an opportunity to invest in a preferred illiquid investment category arises ahead of growth of the Fund, it might be offset initially by under-investment in a defined proxy liquid asset class.

16.2 Private markets performance

16.2.1 Aggregate Performance

Looking collectively at private market investments compared to the main listed market comparators of equities and fixed income, the following graph illustrates the pattern of annual returns for the fund.



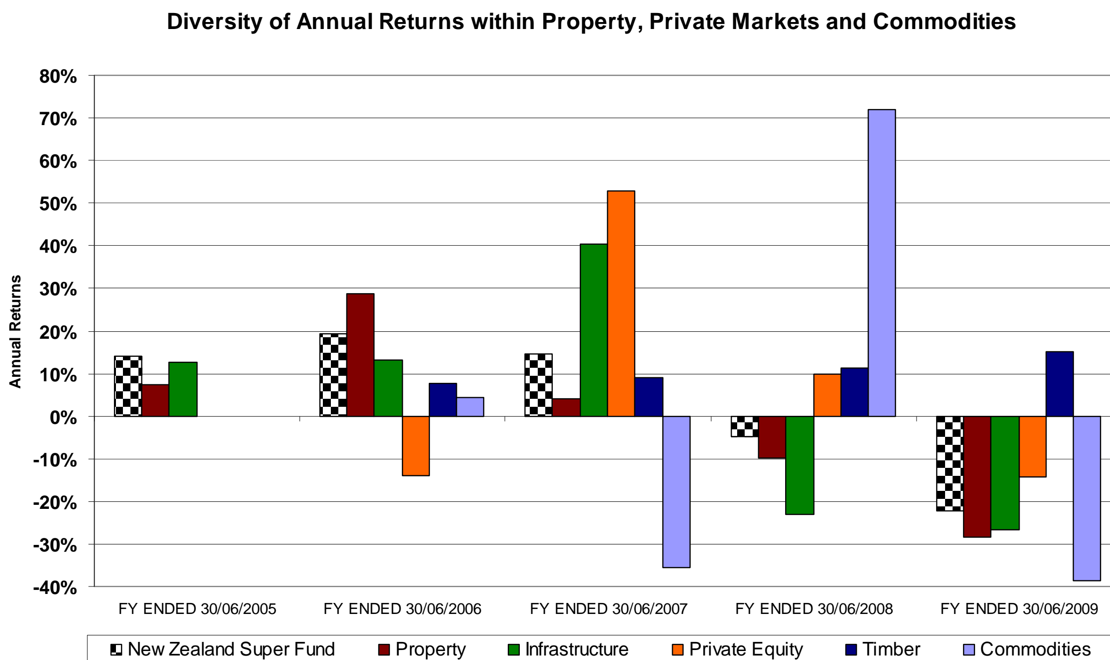
Source: NZSF monthly performance monitoring spreadsheet

The above graph shows the actual PPC investment experience (excluding property) has at certain times provided some diversification benefit although this needs to be assessed against the timing of build up of exposure discussed below. Certainly, in the last two years the investment in private markets (including commodities) has provided some diversification from equity market losses.

The property sector however has performed more poorly than most other listed sectors in the latest year due to the high content of listed property exposure in the Fund's allocation to property. While in past years listed property did have some diversifying benefits, the capital structure of listed property companies has developed towards more emphasis on leverage and operating company risk models making the listed property sector behave more like other listed equity sectors. However, the most recent year provided a very extreme realisation of this risk profile of listed property. We note that the Guardians' property strategy appears to be developing towards a greater bias to unlisted property.

16.2.2 Segment performance

In this section we examine the performance at the sub-asset class (or segment) level. The following graph shows the annual returns within these investments, firstly for each of the distinct sub-categories compared to the fund overall.



Source: The Guardians' 30 June 2009 monthly summary of investment performance.

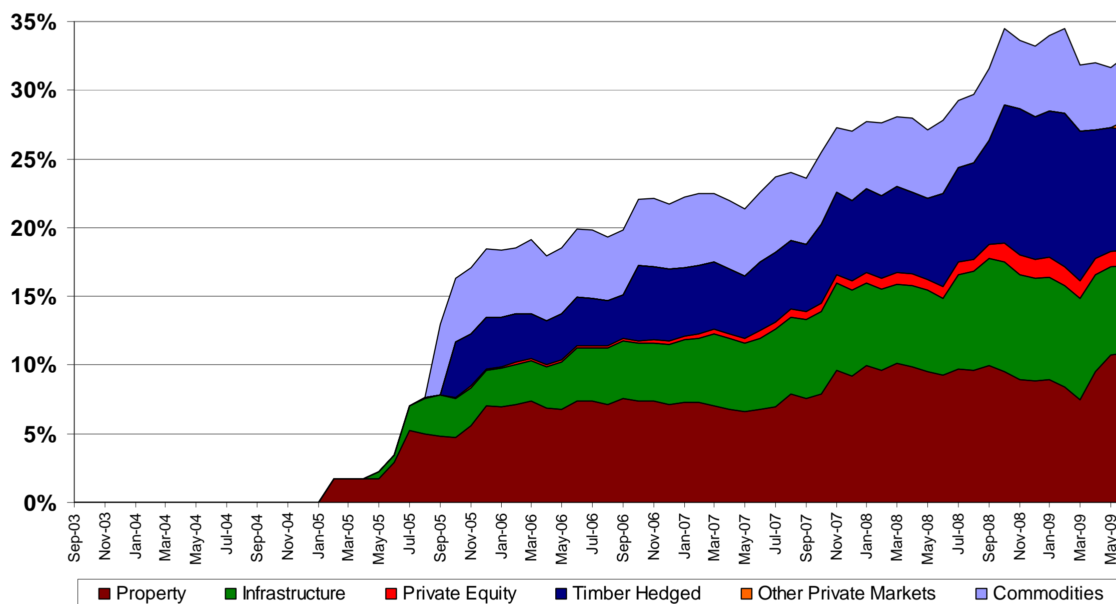
The above graph illustrates some year by year diversity amongst the different PPC investment segments. An exception is for the latest year when all investments were in negative territory except for timber holdings. We note that this year includes substantial losses for most investments due to the global financial crisis.

Of particular note from the above annual returns is the substantial volatility of the commodities investment. We note that this investment is made through traded futures on commodities following market index weight as opposed to physical commodities exposure.

The Guardians' strategy reviews that recommended the current allocation were based on expected commodity returns being less volatile than those of traded futures markets. For instance, the Guardians 2007 strategy review anticipated one year volatility for commodities of 22% p.a. some 1.5 times higher than global equities. However there have been substantial swings in commodity spot prices over this period, at or in excess of +/- 2 standard deviations over each of the last three years. It is questionable whether a 5% allocation to commodities as invested currently in traded futures reflects an appropriate risk weighted exposure given this higher level of volatility.

16.3 Private markets implementation

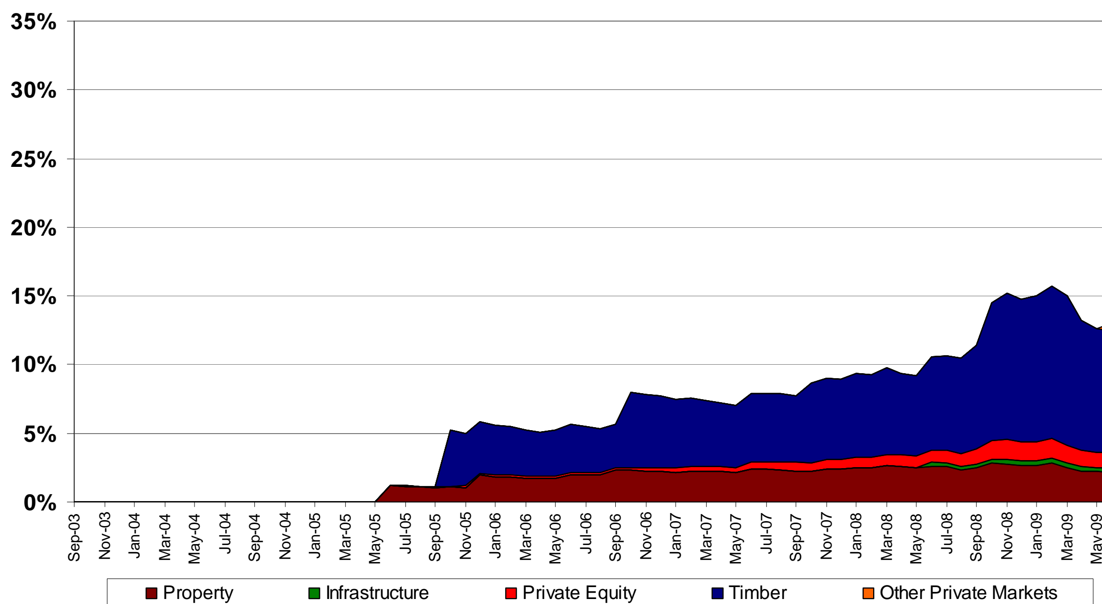
The following graph illustrates the development of actual asset allocation of PPC (including proxies) investments expressed as a percentage of total Fund asset value over the period from commencement of the Fund up to June 2009.



As can be seen from the above graph there was little investment occurring in PPC investments until mid-2005. After mid-2005, investment in property, infrastructure, timber and commodities progressed fairly quickly towards the current strategic targets. Very little investment exposure has emerged in private equity. This limited exposure to private equity relative to infrastructure and commodities, resulted in a more volatile portfolio as compared with a more even build up to the target SAA weights. Whilst of its nature, private equity does take time for exposure to build up as commitments are drawn down, we understand there was some postponement of development of the private equity program a couple of years ago related to changes to advisers and internal decision making processes. A first investment in “other private markets”, namely in insurance linked investments (life settlements and catastrophe bonds), occurred around the end of the period covered by the graph.

We note that in both the internal SAA reviews of March 2005 and 2007 there is significant emphasis on the opportunity to earn an additional return because of the illiquid nature of private market investments. However if we examine the actual investments that have occurred in illiquid asset classes and types (unlisted property, private equity, unlisted infrastructure, timber, insurance linked) compared to investments in the traded markets (commodity futures, listed property, listed infrastructure), the exposure to illiquid assets (and ability to benefit from the liquidity premium) is much less than indicated in the above graph.

The following graph shows the exposure which has developed in PPC investments which are illiquid.



We acknowledge that development of exposure to illiquid investments is a gradual process both from the timing of finding an appropriately priced opportunity and the processes of managers of such investments taking capital in instalments. The Guardians' private markets investment team have recognised the difficulties surrounding placement of funds in these markets. This is being addressed by the appointment of specialist advisors in private equity and property.

The high level of liquid alternatives in the current allocation of PPC investments raises the question of the pace at which strategic asset allocations were escalated in these asset classes given that pursuit of liquidity premia was a foundation of the strategy adopted.

A related observation is that if a more modest staged target for total investment in illiquid categories had been adopted, the investment in timber may not have reached the dominant position it holds within illiquid investments currently. We note that a single investment in timber in New Zealand (Kaingoroa forest) represented 75% of the timber category and 48% of total illiquid investments as at 30 June 2009. Further, difficulties have emerged with a manager of offshore timber investments which has led to the termination of some of these investments. We also understand there are some operational issues (in tax and control) with regard to investment in these assets offshore. Timber is a very long-term asset and such dislocations and uncertainties could be prejudicial to the long-term return expected from such an asset, notwithstanding that the Fund's timber investments have performed relatively well in recent years.

16.4 Mercer's Assessment

16.4.1 Use of public market proxies

Mercer considers that the adoption of proxy listed asset classes to address gaps in asset allocation rebalancing where illiquid investments are included is consistent with best practice. As outlined below, it is evident over recent years that the Guardians has

made extensive use of the proxies in certain sectors with a relatively slow transfer of investment into illiquid investments reflecting its assessment of the investment opportunities during that time.

However, where the target illiquid investment objective is set at a higher level than can realistically be implemented, we suggest that overall portfolio risk might be better managed over the short to medium term by less ambitious short to medium term SAA targets for illiquid investment categories. This could have led to the asset allocation for the remainder of the Fund (non-PPC assets) being constructed differently to the automatic process of adjustment using proxies as defined.

There is some benefit of hindsight of the global financial crisis in making this suggestion because of the dramatically different short-term behaviour of proxies and illiquid investments. As time elapses from the height of this maximum differential in returns we note that illiquid categories of investment are generally experiencing a delayed (but understandable) reduction in valuations which moderates this initial divergence.

However we suggest some better staged planning could be made of achievable illiquid exposures over the near term based on stage of development of internal resources for selecting illiquid investments and the expected pattern of calls of committed capital of investments already committed to. This approach may also work more effectively with the recently introduced asset allocation tilting strategy for the Fund.

Recommendation 16.1: If the Guardians expects proxies to continue to comprise a significant portion of PPC in the short to medium term, then it is recommended that the SAA development and portfolio construction processes should incorporate this expectation.

16.4.2 Commitment based investments & Contribution Reduction

We note that some categories of PPC investments (private equity, infrastructure, timber and opportunistic property) are entered into on the basis of an advance total commitment which is drawn down in instalments. The instalment amount and timing is unpredictable. There is sound investment logic in this as investment managers in these categories assess deal flow of investment opportunities and only invest when they identify an opportunity which offers the required return potential. Rather than all committed funds being paid in advance and sitting in cash awaiting such opportunities, commitments are called on a “just in time” basis. The consequence of this is that if investors who have committed do not respond to a call on commitments, significant penalties apply as the manager must secure the investment on the understanding that funds will be provided as committed.

We note that the Government has decided to pause contributions to the Fund for a substantial period. This has a consequential impact on cash flow to fund commitment based investments. We are comfortable with the understanding which the private markets team of the Fund has with the commitment process. However we suggest some greater transparency of the future implications of this should be included in regular reporting to the Board and strategy reviews.

Recommendation 16.2: In the light of the pause in contributions to the Fund, we recommend a review of the targeted composition of new commitments to illiquid investments, both from an ability to have sufficient cash flow to fund commitments and how best to complement the low level of diversification of the current concentrated mix

of illiquid investment.

16.4.3 Commodities & timber exposures

A final comment relates to the implications of the Guardians' allocation to commodities and timber in the context of the broader fiscal smoothing role of the Fund. We would expect that the dominant position of the Primary industry in the New Zealand export sector would mean that if global trends proved adverse for timber, both Crown revenue and revenue from the timber owned by the Fund could fall. Given this potential correlation between the New Zealand economy and timber returns, we would question the heavy reliance on timber in the portfolio notwithstanding good returns in recent years. On the other hand we would also expect reliance of New Zealand on imported oil might have some linkage to inflation and the (average wage) inflationary effect on pension payments from a rise in oil price might be offset by higher commodity index returns as hydrocarbons comprise large portions of the various commodity indices. As at 30 June 2009 the Fund held 8.8% in Timber and 4.7% in the commodities index.

16.4.4 Investments hurdles

The Statement of Investment Policy Standard and Procedures refers in Section 2.2 to, "Investing in a manner that best exploits a liquidity premium …where we have a competitive advantage and core competencies". Under section 2.3 there is reference under investment objectives to the timeframe over which investments are measured and under-asset allocation to liquidity risk being one such premium. Under the benchmark section 4 in the benchmarks for private market assets there is reference to required hurdle rate of return which reflects the assessed risk of each investment.

Mercer's examination of the Guardians' documents and reports did not uncover a comprehensive summary of the hurdle rates expected from all investments in the PPC categories and their use in investment selection.[44]

We would also expect to see some of these investments with internal rates of return (IRR) progressively tracked against a target return over the timeframe of investments (which could be very long in some cases). We did not identify any IRR comparisons.

More transparency on the hurdle rates expected from different investments would also help deflect any public criticism from not taking up investment opportunities in the home market if they don't measure up to the hurdles required.

Recommendation 16.3: We recommend hurdles be developed for all PPC investment categories for monitoring performance and that all investments involving progressive draw down of committed capital have internal rates of return calculated and monitored against targets.

[44] While the Investment Policy implies hurdle rates exist for all private markets investments, the only reference found to hurdle rates was in connection with a recent investment in insurance linked securities.

16.4.5 Valuation and other resources

The accelerated development of PPC investments in the SAA raises the need to develop more resources for supporting investments in alternative assets.

It is evident there has been significant development of internal staffing with experience in this area and the addition of specialist advisers recently would appear to address most of these resourcing issues in private equity and property.

We note a Valuation Working Group has been established; however this appears to be primarily focussed on valuation of investments after they have been made. In addition to having access to external valuation providers to assist decision making in selection of new investments, as it is now doing, it would be important for the Guardians to also have internal valuation models for different investment categories. It would also be important to have a comprehensive view of valuation of domestic investments in New Zealand (including from the view of different clientele) to be able to track when home market allocation by the Fund may be impacting pricing of investments and to act as a trigger for timing investment in offshore markets. However, we consider that more emphasis should be given to valuation processes to support timing of all of the investments in the PPC category, particularly given plans to extend investment into direct investment, including direct investment in New Zealand.

We did not identify any regular reporting of projection of year by year forward commitments of capital to investments. Whilst the private equity category is still developing it is best practice to have such processes in place, particularly now that some pause in contributions to the Fund is taking place. Similarly we would view it as best practice to have forward projections of liquidity in place even if the relevance of potential negative cash flow might be some way off.

Recommendation 16.4: that management develop, and the Board regularly reviews, operational reporting of Fund exposures and commitments and investment selection resourcing including:

- Valuation methods and assumptions to use at the point of selection of investment in all property, private equity and commodities investment categories in all markets.
- Forward projections of estimated annual drawdowns of commitments (for each investment and total Fund) expected to be called on each year for investments which have already had commitments made but not fully drawn.
- Forward projections of estimated annual cash flow (including net cash flow from private equity) and liquidity (split by different durations of expected minimum redemption period for all investments) of total Fund investments.
- Allocation of responsibility for maintenance of these resources.

17

17 Positioning for the Future

This Chapter addresses the following questions:

- From a broad investment perspective is the Guardians on track to meet its objectives?
- Are the measures of whether the Crown is getting adequate performance and value from the Guardians appropriate?
- Are there other changes that would assist the Guardians to meet their mandate not covered elsewhere?

17.1 Achievement of objectives

The legislation has established an independent entity to manage funds set aside by the Crown for investment. There is provision for annual capital contributions to be made into the Fund by the Crown according to a set formula, but currently these contributions have been suspended until 2020 pending improved fiscal balances.[45] The prime purpose of the Guardians is to maximise returns on the Fund without undue risk thereby smoothing the pace of growth in demands on the public purse to fund the National Superannuation programme. The Guardians has interpreted that a reasonable metric for its performance is an annual rate of return before tax and after fees of 90 day

[45] Excerpt from 2009 NZ Budget "The NZS Fund was established as a way to set aside budget surpluses. Those budget surpluses no longer exist, so the Government would have to borrow to make its full NZS Fund contributions. Next year the Government would have to borrow just under $30 million a week, or $1.5 billion a year, to put into the NZS Fund, to invest mainly in global financial markets. This contribution would have grown to over $2 billion per annum over the next decade, with a corresponding increase in debt."

The Government has therefore decided not to make the required contributions to the NZS Fund until the operating balance is sufficient in terms of cash flow to meet contributions and other capital spending. Future contributions are scheduled to recommence from 2020/21 and will continue for a decade until withdrawals from the Fund begin around 2031. The existing investments will remain in place in the interim."

Treasury bills plus 2.5% p.a. over rolling 20 year periods. This is stated in its statement of corporate intent.

Mercer believes that the Guardians is well positioned to meet its investment objectives and thereby achieve a smoothing in the rate of increase in the general tax burden. The temporary suspension of annual capital contributions by the government into the Fund will slow down the rate of growth in the Fund and alter its timing. However, the Fund continues to be managed according to the 2001 legislation which set up the Guardians.

The Guardians' investment objective is a challenging one but achievable for a Fund with a very long-term focus. In addition, to meet its objectives the Fund has needed to invest the resources at its disposal to try to achieve 'best practice' at each level of its operations. In the six years since starting Fund investments the Guardians has put in place a comprehensive array of policies and processes towards achieving the goals set out in the legislation and has described continuing work programmes which build on the solid platform already in place.

There are some shortcomings regarding policies – either not in place, monitored or centralised. These are noted in other sections of our report and recommendation made to address our concerns.

17.1.1 Size and Expected Growth of the Fund

With the suspension of annual capital contributions the size of the Fund will grow less rapidly than previously envisaged, during the next ten years, then the growth rate will accelerate as contributions resume in 2020 and endure during the 2020s. The legislative provisions are:

44 Lesser amounts of annual capital contribution

(1) If the Government intends to pay less into the Fund in any financial year than the required annual capital contribution, the Minister must include, in the fiscal strategy report prepared under Part 2 of the Public Finance Act 1989,—

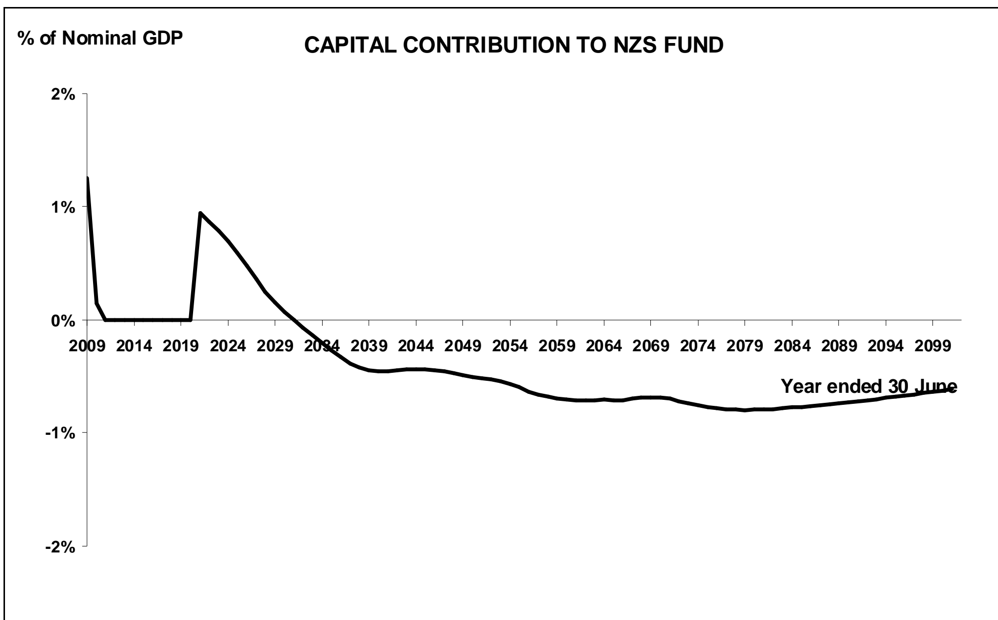
(a) the amount of the required annual capital contribution stated in the economic and fiscal update under section 42 in respect of the financial year; and

(b) a statement of the amount of annual capital contribution actually to be paid into the Fund in that year; and

(c) a statement of the reasons for the Government's departure from the required annual capital contribution; and

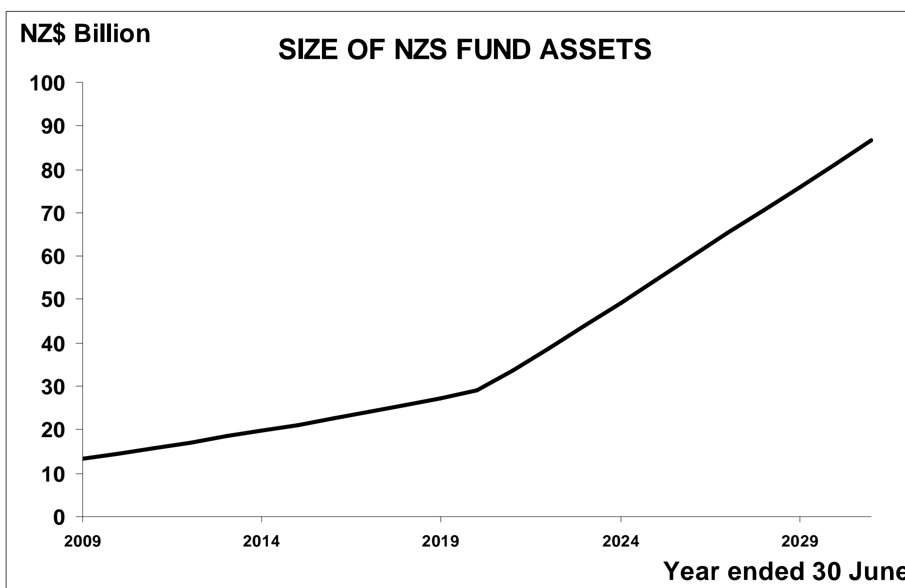
(d) a statement of the Government's intentions regarding future contributions to the Fund; and

(e) a statement of the approach the Government intends to take to ensure that the Fund will be sufficient to meet the payments of New Zealand superannuation entitlements expected to be made over the next 40-year period.



Source: New Zealand Treasury, May, 2009

While market returns are volatile and difficult to predict, the Guardians would ordinarily have expected that annual contributions would have continued, creating an underlying regular inflow to the Fund even as market volatility moved returns on the Fund up and down. The Fund now faces uncertainty on at least two main fronts – its natural one of the volatility of financial markets and the world economy in general, and the expected inflow of annual government contributions and their timing.



Source: New Zealand Treasury, May, 2009

However, Treasury forecasts predict that the Funds under management will reach 81bn by 30 June 2030.

17.2 Measures of performance

Given the long run nature of the Fund, the compensating impact of the funding formula pushing actual draw-down expectations out to 2031, and the sheer size of the existing Fund, Mercer believes that the suspension of capital contributions for 10 to 11 years does not impact on the metrics which the Crown ought to use to measure the value which the Guardians will contribute. The Fund remains very large, its purpose is retained and the legislation governing the Guardians remains unaltered.

The principal measure of the Guardians' performance in the end will be its investment performance over long periods such as 20 years and therefore, after only six years, it is far too early to apply this test. Alternative metrics allow some observation to be made but at this point all evaluations must face the fact that long-term performance cannot be measured over short periods.

The Guardians has addressed and continues to address the issue of providing shorter term metrics which provide partial and/or qualitative evidence that its efforts to add value are justified and are bearing fruit within an appropriate timeframe for each specific strategy.

The Guardians has raised this issue head-on this year to bring together all of its value adding processes into a single framework and Fund 'common language'[46]. The Guardians will monitor all of the target sources of value adding activities and their contribution to the Actual Portfolio. At the total Fund level, performance of the Guardians is to be measured against a Reference (Passive) Portfolio.

The Reference Portfolio has access to four sources of investment risk premia:

- Equity premia
- Duration premia
- Foreign exchange premia
- Credit premia

The Actual Portfolio has access to the same four sources of premia as above and an additional set of four. As of 2009, the Guardians articulated its strategy to add value relative to the passive portfolio in a number of ways:

- By investing in private markets – exploit the Fund's long-term horizon and high tolerance for illiquidity.
- Through active manager selection – in public markets
- Through strategic tilting – a new addition to its value added levers that seeks to exploit its belief that returns from asset classes are partly predictable over the long term. It involves developing a framework for projecting expected returns from certain asset classes and then tilting to or away from strategic asset

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[46] Refer Internal Paper "SAA Review Roadmap and Fund Common Language" 14, September 2009

allocation (SAA) target weights when those expected returns are extraordinarily high or low.

- Through looking for implementation efficiencies.

Introducing a well designed set of metrics to measure the value add by each component over relevant timeframes will provide the Board and the Minister with a framework to enable monitoring short-term performance. It will also enable Management to track and manage their investment strategy.

Recommendation 17.1: The Guardians continues to develop and implement a set of metrics that measure the value add by each of the sources of investment performance, plus the four sources of value add over the passive portfolio.

Over the long-term the Guardians expects to achieve a rate of return on total Fund assets (before tax and after fees) of 2.5% p.a. above 90 day Treasury Bills.

Appendix A – Mercer's Approach to Manager Selection

A well-conducted manager search process is necessary to ensure that the right managers are selected for the right mandate and to assist in forming a realistic view of what to expect from those that are appointed. This is of benefit both to reduce the risk of subsequent dissatisfaction with the investment managers selected and to identify circumstances in which a review of a manager's appointment is warranted.

The process which Mercer considers to be best practice when advising on manager appointments varies depending on an investor's philosophies, constraints, needs and asset size. At the heart of the process are two aspects:

Identifying key specifications of the role(s) to be filled. These include clearly defining the desired strategic beta exposures (if any), alpha objectives and active risk budget. Considerations then are likely to include the approximate account size and likely rate of growth in account size, the investible universe and preferred benchmark index for the mandate, any unusual restrictions likely to be included in the mandate, and the investment management fee budget.

Formulating a list of potential candidates for consideration in the search. In Mercer's case this starts with consideration of the list of previously researched and highly rated products for the most relevant product category, and exclusion of those which appear likely to be unsuitable based on the specific requirements. If the number of candidates remaining is more than required, judgement needs to be exercised to determine which of these are most likely to be best suited to the investor's requirements. If the number of candidates remaining is less than required, additional candidates from the next rating category down are considered for inclusion, and so forth.

Mercer's concept of best practice for determining high quality investment managers is encapsulated in its research process. The primary aim of this programme is to assess, for each investment product we research, its prospects for medium term out-performance relative to its risks. The process combines quantitative and qualitative analysis.

Two main types of quantitative analysis are carried out, often before we embark on the qualitative analysis.

- Past performance data - the simplest part of the process. A software system is used which enables analysis of past performance, of risk measures and of risk-adjusted performance measures in absolute terms and also relative to suitable benchmarks, and to peer groups.
- Analysis of portfolio structures - for analysis of equity portfolios we use an analytical system which drills into specific portfolio style characteristics and risk sources. The aims of this analysis are:
  - first, to quantify how aggressively a portfolio is positioned relative to its benchmark,

- second, to identify what types of individual stock positions the manager is taking in trying to outperform its benchmark and the relative importance of these positions and,
- third, to identify and quantify the different types of risk factors – or style biases - that are embedded in the portfolio (e.g. value, growth, quality, momentum, small cap tilts). Analysis of portfolios over time can help with identifying "style drift".[47]

Qualitative analysis commences with desk research on information previously supplied by the managers followed by (often multiple) on-site meetings with a range of manager personnel. The purpose of these meetings is to focus on identifying the following:

- Evidence of any sustainable competitive advantages that should give a manager above average prospects for future out-performance (e.g. superior research resources, a superior approach to investment analysis, or something superior about the manner in which the research and analytical resources are harnessed in the investment decision-making process); and,
- Evidence of any significant potential weaknesses which may effect the prospects for future out-performance, or give rise to an above average risk of future under-performance (e.g. a weakness in any of the areas mentioned above, poor risk controls, excessive transaction costs due to poor dealing procedures or excessive assets under management, or broader organisational or business management issues that could potentially detract from performance in some way).

In most cases, we identify a combination of both strengths and weaknesses, which we need to weigh up against each other in the final assessment. These are classified using four different factors, which culminate in an overall rating:

- Idea Generation: The key attribute that a manager needs to possess to have potential to outperform over the long-term is the ability to generate value-adding investment ideas.
- Portfolio Construction: The quality of a manager's portfolio construction process will determine how effectively it value-adding investment ideas are converted into consistent outperformance.
- Implementation: For a manager to outperform, the value-added through its investment ideas and portfolio construction process must outweigh the drag on its performance due to transaction costs.
- Business Management: Well managed investment firms are more likely to maintain and enhance the competitiveness of their investment strategies over time than poorly managed firms.

Individual investors may have objectives other than mere out-performance. Examples might be a desire to maintain working relationships which provide knowledge flow into the organisation, to achieve a good balance within manager structures, to appoint managers with which a particular investment philosophy is shared (e.g. a clear and

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[47] Note that this may not necessarily be a bad thing if it is well-timed and repeatable.

defined downside protection bias), or to incorporate a focus on “extra-financial” objectives (such as responsible investment or governance themes).

High-level observations of compliance history are undertaken as part of the desk research that supports our capability rating. Detailed on-site operational risk assessment addressing middle and back-office processes of finalist candidates is conducted prior to appointment.

Glossary

Absolute return The actual return in percentage generated by a portfolio during a specific period.

Absolute risk The variation in absolute returns, often known as volatility and calculated as standard deviation.

Active management Active positions taken in order to achieve higher returns than the benchmark index. Active positions are taken by being overweight or underweight in assets relative to the benchmark index or reference portfolio based on market forecasts.

Active return Difference between the return on a portfolio and its benchmark index.

Active risk The variation in active return. Also known as tracking error.

Alpha is that part of a portfolio's return not explained by market forces. Alpha is the result of manager skill applied through active management.

Alternative assets Non-traditional assets which are less liquid and favoured by investors with a long term investment horizon. Such as real estate, infrastructure, private equity and hedge funds.

Asset classes Categories of assets, such as shares, bonds, real-estate.

Asset mix The proportion of assets held in the portfolio in percentage terms.

Assets Anything owned that has value and is measurable in terms of money.

Beta is a measure of the tendency for a security or portfolio to vary with the market as a whole.

Benchmark index Used to evaluate the return on a portfolio. Usually takes the form of a standardised market index and is also known as the reference index.

Bond A debt investment with which the investor loans money to an entity (company or government) that borrows the funds for a defined period of time at a specified interest rate.

Cleantech Shorthand for clean technology and refers to energy- and environment-related technologies developed to reduce adverse environmental impacts.

Commodities Tangible products, such as metals, crude oil, or grain.

Custodian An independent organisation entrusted with holding investments and settling transactions on behalf of the owner. The custodian maintains the financial records for the investments and may perform other services (such as performance measurement, mandate compliance, etc) for the owner as well.

Derivatives Financial instruments whose price is determined by underlying securities. Options, forwards and swaps are generally classed as derivatives. A derivative's value depends on changes in the value of the underlying asset.

Diversification Investing in a variety of assets or through a number of managers in order to spread risk.

Divestment practices The act of removing stocks from a portfolio based on mainly ethical or non-financial objections to certain business activities of a corporation.

Dynamic asset allocation An asset allocation strategy in which the asset mix is quantitatively shifted in response to changing market conditions.

Equities Securities that signify ownership in a corporation and represent a claim on part of the corporation's assets and earnings.

Equity risk premium The excess return in individual stock or the overall stock market over a risk-free rate of return that an investment is expected to yield. The premium is compensation for investors who tolerate the extra risk, compared to that of a risk-free asset, in a given investment.

Fixed interest securities Fixed interest securities generate a predictable stream of interest, and include bonds, bank bills, floating rate notes and negotiable certificates of deposit.

Fund manager (also asset or investment manager) Invests and manages the assets of others.

Governance issues Issues relating to corporate governance or business ethics relevant to companies and their shareholders, boards, managers and employees.

Hedging Neutralisation of currency risk, i.e. the risk of investing in currencies other than the $NZ.

High yield Bonds with a higher credit risk than government bonds that offer higher returns. They usually have a lower credit rating than investment grade bonds.

Index A measure of performance of a collection of assets typically across a sector, country, region or style (e.g. Dow Jones, MSCI).

Information ratio Efficiency measurement for active management. It indicates how much a fund earns from active risk-taking and from deviating from the strategic portfolio or index. Measured as active return divided by active risk (tracking error).

Internal rate of return The annual rate of return to the investor.

Investment An asset or item that is purchased with the hope it will generate income or appreciate in the future.

Investment horizon The period of time over which money is to be invested (e.g. 1 year, 20 years).

Kurtosis A measure of the relative peakedness or flatness of a distribution compared to the normal distribution. Positive kurtosis indicates a relatively peaked distribution. Negative kurtosis indicates a relatively flat distribution.

Liquidity risk premium The extra return demanded by investors for holding assets that may be difficult to convert to cash.

Management fee A fee that the manager of a fund charges for managing the portfolio and operating the fund.

Mean reversion The theory that asset prices will continue to return to an average value over time, despite fluctuations above and below the average value.

Monte Carlo simulations A Monte Carlo simulation is used to analyze the return that an investment portfolio is capable of producing. It generates thousands of probable investment performance outcomes, called scenarios, that might occur in the future.

Negative screening Excludes certain securities from investment consideration based on financial, social and/or environmental criteria.

Normal portfolio The portfolio a Fund would choose if all assets were correctly valued, ignoring asset price movements of a medium-term nature and those driven by economic factors. It reflects a Fund's long-term asset mix.

Passive management Asset management that aims to achieve an identical return to the benchmark index rather than to beat the index. This is done through investment that mirrors a reference portfolio or index and is also known as index management.

Portfolio A group of investments, such as shares and bonds, held by an investor.

Private equity Collective term for equities that are not listed on an official or public market.

Private market A market where capital is raised by specific agreement between investors. The terms of each transaction are negotiated separately, and usually remain private and are not disclosed to third parties. These markets tend to transact infrequently, so prices are not readily observable. Private markets can encompass collective vehicles, including both open- and closed-end funds, as well as directly owned investments. Almost all private equity falls under this definition, but private markets also includes many investments in other areas, such as real estate, infrastructure, and timber.

Proxy A formal document signed by a shareholder to authorise another shareholder, or commonly the company's management, to vote the holder's shares at the annual meeting.

Public market Any financial market, open to most or all investors, where securities or related derivatives are traded. This would include, for example, any recognised stock exchange, most bond, currency and futures markets. It will also extend to over-the-counter markets where related derivative products are transacted. Public markets usually include a governing body, prescribed rules, regulations and form in which transactions are conducted.

Responsible investment The integration of environmental, social, and governance considerations into investment management processes and ownership practises.

Return The gain or loss on an investment in a particular period, consisting of income (such as interest, dividends or rent), plus capital gains or capital losses. The return is usually expressed as a percentage.

Risk The chance of something happening that will have an impact upon objectives. Risk can have both positive (upside risk) and negative (downside risk) consequences.

For investments it is the chance that an investment's actual return will be different than expected – either higher or lower than expected.

Risk free rate of return Yield on a riskless investment (generally one that has a government backed guarantee).

Risk management The culture, processes and structures that are directed towards realising potential opportunities, whilst managing adverse effects.

Risk tolerance The amount of loss an organisation is willing or able to tolerate should a downside risk materialise.

Scenario analysis Involves computing different reinvestment rates for expected returns that are reinvested during the investment horizon. It commonly focuses on estimating what a portfolio's value would decrease to if an unfavourable event, or the "worst-case scenario", were realized.

Shareholder Any person, company or other institution that owns at least one share in a company. A shareholder may also be referred to as a stockholder.

Sharpe ratio Measurement of a portfolio's risk-adjusted return, i.e. the efficiency of the portfolio. Equates to portfolio return minus risk-free interest divided by the standard deviation of portfolio return.

Standard deviation A measure of the absolute variability of returns. One standard deviation plus/minus measures two-thirds of the dispersion of returns around the average return. In general, the smaller the standard deviation the more the returns vary from the average.

Strategic asset allocation It is the allocation of asset classes based on expected rate of return and risk properties for each asset class, best suited to the Fund's commitments over a timeframe of one to three years.

Strategic tilting A strategic portfolio that responds to shifting expected returns while taking into account the long-term risk properties of each asset class.

Stress testing A method of risk analysis in which simulations are used to estimate the impact of worst-case situations on a portfolio's return.

Swaps Agreements between counterparties to exchange (swap) cash flows of their respective notional obligations so as to manage cash flows more effectively.

Tactical asset allocation Overweights or underweights in different asset categories rather than individual securities in order to generate outperformance.

Tracking error Measures the variation in active return and is measured as the standard deviation of active return.

Value at Risk (VaR) Common measurement of the maximum loss that a portfolio can sustain under a certain period of time and with a certain level of confidence. VaR is calculated daily for a period of one day and a confidence level of 95%. Portfolio management often requires changes to the structure of the portfolio to keep this risk of loss at an acceptable level.

Voting right The right of a shareholder to vote on matters of corporate policy as well as on who is to compose the Board of Directors.

Yield the annual rate of return on an investment expressed as a percentage.

Yield curve Curve showing the relationship between market interest rates and maturities (or duration) of bonds with the same type of issuer and credit

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