Government Superannuation Fund Authority

2016 Statutory Review

June 2016

pwc

Executive summary

Background

The Government Superannuation Fund Authority ("GSFA") was established under the *Government Superannuation Fund Act 1956* ("the Act") to manage and administer the Government Superannuation Fund ("the Fund") and the schemes in accordance to the Act. GSFA became an autonomous Crown entity under the Crown Entities Act 2004 ("Crown Entities Act") in January 2005.

GSFA has approximately $4.1 billion in assets and approximately $12.8 billion in past service liabilities (based on the Statutory Valuation as at 30 June 2015). The Fund has been closed to new entrants since 1992 and the assets are expected to decline over time, which will inevitably alter the nature of underlying investments and the organisational structure.

The Minister of Finance has commissioned a Statutory Review of the GSFA to be undertaken in accordance with the requirements of the Act, including reviewing investment operations and policies undertaken within the GSFA for compliance with Section 19B of the Act and the investment covenants under 15D of the Act.

Scope of Work

The scope of our assessment included a review of all relevant documentation and policies related to the investment governance and operations undertaken within the GSFA. Specifically the review considered the following matters.

	Review Considerations	Our Approach
1	Identify any material changes made to policy and procedures since the 2011 Statutory Review, particularly with respect to the recommendations made in that review.	As part of our review, we have reviewed the historical changes summarised in the annual strategy paper. We have also compared the 2011 Statement of Investment Policies, Standards and Procedures (SIPSP) and the 2015 SIPSP and any changes made to the Investment Operations Manual. The summary of changes is in Section 3 of this report.
2	How effectively and efficiently the GSFA is performing its functions under section 15D of the Act.	We have reviewed the Fund's investment policies, standards and procedures to understand the key roles and delegations of each stakeholder. In addition, we have interviewed the members of the GSF Board, Management and Treasury as part of this review. We believe that GSFA is effectively and efficiently performing its designated functions. Further comments are provided in Section 4.
3	Whether or not the investment policies, standards, and procedures established by the GSFA are appropriate to the Fund and whether or not the policies established by the GSFA have been complied with in all material respects.	We have reviewed the Fund's policies, standards and policies related to investments. We have also considered whether these policies, standards and procedures are fit for purpose for GSFA's investment operations. Overall, we believe that GSFA's policies, standards and procedures are appropriate and fit for purpose. Further comments are provided in Section 5. We have reviewed samples of Board papers, minutes of the Investment Committee, quarterly investment reports, and other documents relevant to investment decisions made since the last review. Based on the samples tested, we confirm that GSFA complied with its investment policies, standards and procedures in all material respects.

	Review Considerations	Our Approach
4	Whether the GSFA's investment governance framework is fit for purpose in the context of GSFA's current investment strategy and how the GSFA's investment governance framework compares to relevant peers.	We have reviewed GSFA's organisational structure and assessed the investment governance framework against key governance criteria. We believe that GSFA's governance framework is appropriate and is fit for purpose given the size of the Fund. Further comments are provided in Section 6.
5	An opinion on the investment performance of the Fund to date and identification of any other factors relevant to the performance of the Fund.	We have assessed the Fund's performance as at 31 December 2015 against the stated investment objectives, including the Reference Portfolio and New Zealand Government Stock return. Overall, we believe that performance has been satisfactory, in a period which has been difficult for active management. Further comments are provided in Section 7.
6	An opinion on the investment manager fees of the Fund compared to relevant peers.	We have assessed the Fund's fee contribution for each asset class compared to the Fund's overall fees. We have noted the conclusion of an independent fee benchmarking report undertaken by CEM. We believe that savings could potentially be made on fees. Further details are provided in Section 8.
7	Whether the GSFA's derivative strategy and the operational procedures in managing derivatives exposure is appropriate.	We have assessed the Fund's derivatives policies and procedures as set out in the SIPSP and the Investment Operations Manual as part of this review. Overall, we believe that the policies documented in the SIPSP are appropriate. Further details are provided in Section 9.
8	Proposal of a legislative bid to use Fund Investment Vehicles (FIVs).	We have reviewed the legislative change made for the New Zealand Superannuation and Retirement Income Act 2001 regarding the use of Fund Investment Vehicles and considered the relevant applications for GSFA. We believe that the use of FIVs may be appropriate if sufficient safeguards are put in place. Further comments are provided in Section 10.
9	Increased reporting to Treasury.	We have reviewed GSFA's quarterly reporting to Treasury. In Section 11, we have made some recommendations on additional reporting which could be provided.
10	Response to Treasury's guidelines and expected outcomes.	Treasury provided us with a set of guidelines and expected outcomes. For ease of reference, in Section 12 we have provided a listing of the guidelines and expected outcomes from Treasury, and the location in our report where the question is addressed.

In our review, we assessed the Investment Governance Framework in terms of strategy, people, conflict of interest management, assessment of risks, reporting, decision making, documentation, compliance and outcomes.

The review also took into consideration the reviews performed in the past, (i.e. the 2011 Statutory Review and the 2015 Independent Review).

Overall observations

Overall, we believe GSFA is a sound operation, run by experienced and capable people with an appropriate investment governance framework. Our views of GSFA's key strengths are documented in the table below. We have also put forward our recommended areas for development in the following section.

Key strengths

Area	Details of Strength
Strategy	The Board and Management are experienced and have an appropriate level of expertise in investments. The Board and Management are clearly aware of the investment strategy and can accurately articulate GSFA's investment principles and beliefs.
Strategy	Manager selection has made a positive contribution to performance within the New Zealand Equities and Global Equities portfolios. This reflects the experience and expertise of the key investment staff. The Management team attends a large number of investment manager meetings and these meetings are documented in the Board papers. In addition, the team supplements their internal research with the Mercer GIMD software and seek the advice of the Asset Consultant on an ad-hoc basis. We believe GSFA is well covered in the manager research space.
People	There are defined delegations, roles and responsibilities between the Board and/or the Investment Committee and Management. The investment team is fully responsible for the day-to-day monitoring of the Fund. Any proposed changes to the Fund are put forward as a recommendation from the investment team. The investment team may use ad-hoc advice from external advisors and/or collaborate with other CFIs. As a result, the investment team is aware that they are fully accountable for the performance outcomes of the Fund.
People	There is evidence of collaboration with other CFIs to gain insights in the development of the Fund's investment approach and operations. There is a regular formal collaboration forum with the investment teams across the Treasury's CFIs. Some of the tangible outcomes include research into Responsible Investments and the sharing of the costs associated with this research.
Conflict of Interest Management	There are defined delegations within Management to sign off on any security transactions or execution of documents considered necessary or expedient in the conduct of the investment arrangements. Specifically, any two of the Chief Executive, General Manager (Investments), General Manager (Schemes) or the Chief Financial Officer is required to approve these instructions.
Assessment of Risk	Comprehensive reporting of risk metrics and the stress testing results are included in the quarterly reports. The level and quality of the risk reporting framework is strong. Regular reporting provided to the Board includes a comprehensive attribution analysis, which clearly articulates the reasons for performance.
Reporting	Performance and compliance reporting is undertaken by JP Morgan (GSF's custodian). In addition, attribution analysis is also undertaken by JP Morgan, which is directly transferred to the Board's investment papers. We believe this is a good approach for an operationally independent organisation to calculate performance returns.

Key findings

Our findings and recommendations are summarised below.

Area for Development	Description
Strategy	Stakeholders are able to clearly articulate GSF's views on active management (i.e. GSF will engage active managers where they believe managers can add value on an after-fee basis); however, this approach is not documented in the Statement of Investment Policies, Standards and Procedures (SIPSP). We recommend that the SIPSP should be updated to reflect the Board and Management's views above.
Strategy	GSFA invests with active managers in New Zealand Equities and Global Equities. Both of these asset classes have outperformed their respective benchmarks over 3 and 5 years (before New Zealand tax and after investment fees) as at 31 December 2015. GSFA also invests with active managers in Global Fixed Interest. This portfolio has underperformed the benchmark (Barclays Global Aggregate Index) over the 1 and 3 years to 31 December 2015 (before New Zealand tax and after investment fees). In the latest CEM report, GSFA identified that the overall higher fees were in part due to the global fixed interest sector, where a number of peers have a higher exposure to global fixed interest, which has a lower cost than most other asset classes. In addition, GSFA has a dedicated Emerging Markets manager which attracted a higher base fee. The Board should therefore seek appropriate information to revisit the business case to determine whether paying active fees for some of these asset classes is justified. Unless there is a well-considered view that GSFA can add value, the asset class should be passively managed or exited.
Strategy	Currency tilting has had a negative impact on the performance of the Fund and we recommend that the Board reviews the business case to engage in currency tilting and forms a view on whether this is an area that the Fund can add value on a consistent basis.
Strategy	Natural catastrophe risk has underperformed its benchmark (before New Zealand tax and after investment fees) over 1, 3 and 5 years to 31 December 2015. Life settlements does not have a benchmark; however, the returns have been negative over 1 and 3 years to 31 December 2015. We are cognisant of that fact that these investments are generally illiquid and may not be able to be redeemed at a reasonable price. However, given both of these asset classes have detracted value at the total fund level over 1 and 3 years to 31 December 2015, we recommend the Board should review the business case to maintain or exit this asset class with consideration of the issues and costs associated with exiting this asset class.
Strategy	The Authority should consider incorporating actuarial asset projections when formulating the investment strategy. This is relevant for a Fund invested in Private Equity, where diversifying across sectors and vintage years is important to capture the illiquidity premium and develop a well balanced portfolio from a risk/return perspective. The Fund's assets are expected to decline over time. This is not an issue right now; however, it will become more of an issue over time, and it is prudent to consider the asset term of maturity over the next five to twenty years. We believe this should be considered prior to any further investment in illiquid assets.

Area for Development	Description
Strategy	We recommend bringing the fee negotiations earlier in the Request For Proposal process, and in renegotiating fees in conjunction with increased mandate size and/or in periods of manager underperformance. In addition, we note the Independent Review recommended that fee negotiations could be undertaken by the CFO or the Chief Executive, whose roles are generally independent of the investment team. Fee negotiations can be difficult and once a decision is made on a preferred provider it becomes harder to pursue negotiations further. We therefore agree that fee negotiations are often better performed by someone outside the investment team, although these individuals need to be familiar with the negotiating protocols and have an awareness of the level of fees available in the marketplace.
Strategy	Stress testing of liquidity events is undertaken on a quarterly basis and stress testing of market events is undertaken on a semi-annual basis. These results are included in the Board papers. However, the outcome of the stress testing is not directly used in formulating the investment strategy. There are no clear 'trigger points' (i.e. warning signals) for interim review or action items documented in the SIPSP and/or the Investments Operations Manual. Stress testing should be used in formulating an appropriate investment strategy. The selected scenarios should be used to determine the total impact to performance and assess how well diversified the strategy is during extreme conditions. The actual trigger points will depend on the Board's risk appetite. For example, if the stress testing results show a 30% decline in the Fund's assets, then the Board may wish to undertake a review of the Reference Portfolio and Target Portfolio.
Strategy	We note there is little documentation on liquidity stress testing in the SIPSP and/or the Investment Operations Manual. We recommend the SIPSP and/or the Investment Operations Manual should be updated to describe the purpose of the Fund Liquidity Test: - Ensure sufficient liquidity is maintained to meet the Fund's liquidity needs; and - Ensure the Fund remains within the strategic asset allocation ranges.
People	The Board is responsible for manager selection and Management is responsible for strategic tilting decisions (i.e. dynamic asset allocation and currency decisions). The potential impact of DAA and currency decisions (i.e. +/- 10% weighting times an asset class return differential of up to 20%) may have a greater influence on performance than the contribution from manager selection (i.e. +/- 3% alpha times a manager weighting of 5-10%). This creates an imbalance of decisions made by the Board and Management. We believe reviewing and testing the rebalancing and dynamic asset allocation ranges should be a key mandate for the Investment Committee. On the basis that the Investment Committee has identified that the rebalancing and strategy tilting ranges may lead to an imbalance of the importance and impact of decisions made by the Board and Management, we recommend that the rebalancing and strategic tilting ranges be reviewed.
People	There is a risk that the investment expertise at the Board and Investment Committee level may change over time. Therefore, while not an issue at the moment, Treasury needs to ensure that there are appropriate skills in the future.

Area for Development	Description
People	The Investment Committee is currently undergoing changes to adopt a more prominent role in filtering and summarising investment decisions before progressing to the Board. As recommended by the Independent Review, we agree the Investment Committee should have a greater mandate under its Terms of Reference and it should meet more regularly as a result. We believe the roles that potentially could be considered for the Investment Committee are: - Reviewing an appropriate investment risk budget; - Reviewing dynamic asset allocation ranges; - Reviewing derivatives exposures and counterparty risks; and - Reviewing the appointment and termination of investment managers. This will enhance GSFA's investment governance framework.
People	Establishing a 'succession plan' for key staff (i.e. documenting a process on how to deal with staff losses), including expanding the use of the Asset Consultant and other external advisors.
People	The Board has access to its own independent advisor. However, we note over the past 5 years, the Board has minimised the reliance on the use of external advisors. For specific issues, we encourage the Board to obtain advice of an independent advisor to help ensure that fully informed decisions are made. This independent advisor may be required to attend Board meetings on an ad-hoc basis.
Conflicts of Interest Management	Management should establish a clear policy in the SIPSP or the Investment Operations Manual, which documents how to deal with service provider conflicts (i.e. external advisors with their own commercial products that may operate contrary to their advice). For example, in connection with the external advisor's input to dynamic asset allocation, there should be a clear statement in these policies stating that Management will outline the advice provided by the advisor, including economic signals as well as the dynamic asset allocation positions implemented for the advisor's commercial product and Management's overall views and recommendations.
Risk Assessment	Risk budgeting is a process for the Board to determine and allocate an acceptable level of risk for individual investment managers and different types of decisions (e.g. currency hedging, dynamic asset allocation etc.). We recommend the Board should adopt a policy on risk budgeting. Specifically, this will assist the Board to: - Identify an appropriate risk appetite; - Determine where to allocate the risk budget (e.g. asset allocation, dynamic asset allocation, manager selection etc.); - Ensure the risk budgets are aligned to the Board, Investment Committee and Management's collective views; and - Document these investment principles and procedures.
Reporting to Board and Investment Committee	Where the Asset Consultant or external advisor has been used, we believe there are circumstances when their reports and recommendations should be included in the Appendix section of the Board papers. This enables the Board and/or Investment Committee to have a greater level of insight into the decision making process, and any difference in views between the advisor and Management. We believe the circumstances where this is appropriate are when: - There are differences in views between Management and the Asset Consultant or external advisor and it is in the Board's best interest to be made aware of these differences in views; and - The Board's expectation is that expert advice is required on a specialised topic.

Area for Development	Description
Compliance	An overarching document should be established to connect all the relevant policies, procedures and operational manuals associated with investments to make the structure and location of documents clearer. This overarching document could be incorporated as part of the 'Corporate Governance Statement' or as a separate document.
Outcomes	The rationale to change from a post-tax benchmark to a pre-tax benchmark was based on the fact that GSFA is a government entity, and therefore any tax position of the Fund would be offset by Crown tax receipts. Pre-tax measurement of the Fund's return is also simpler to calculate. While we largely agree with the reasons given, we note that after-tax management and after-tax return measurement are becoming increasingly common, as it incentivises investment managers to operate in a tax efficient manner. Good investment management should seek to maximise the after-tax return for the investor or sponsor through not incurring higher tax than necessary. Also, foreign withholding taxes on dividends are retained by the source country and not by the New Zealand government. We recommend that the assessment of the Fund's return against the Reference Portfolio is also done on an after-tax basis in order to minimise any tax leakages in relation to overseas investments.
Outcomes	There is no benchmark specified for life settlements on the basis that there is no reliable benchmark. However, we believe that a proxy benchmark should be introduced that reflects the risks and illiquidity associated with this type of investment. As a guide, life settlements generate return from premium received from underlying life insurance contracts, less any money paid out for insurance claims. Life insurance contracts behave similarly to a long maturity bond with an illiquidity premium, longevity premium, and demographic change. Therefore, the starting point for an appropriate benchmark should be the global fixed interest index, plus a risk margin that is commensurate with the risk of the asset.
Outcomes	We recommend Treasury consider benchmarking the asset class returns across CFIs. However, we are cognisant that each CFI has different liability profiles and investment strategies. On this basis, peer comparison should be undertaken where possible and should be used to facilitate discussion across CFIs.
Outcomes	We recommend that the SIPSP is updated to specifically address the requirements that should be included in the Investment Manager Agreement (IMA), and specifically addresses the permitted usage of derivatives. This could include the assessment criteria for the suitability of expected derivative usage. GSFA should look into monitoring derivatives and counter-party exposure at the Fund level to ensure that risks are not aggregating within the Fund. We agree with management that derivative and counter-party risks are expected to be relatively small, but quantifying them as part of the risk budgeting process would be a worthwhile exercise. A more sophisticated approach to derivative risk management would also incorporate the credit rating of the counterparty. Large, sophisticated investors would do this and we recommend that GSFA look into whether it would be worthwhile for the Fund. It is likely that the aggregated counterparty risk exposures are not too high, and the credit quality of counterparties is sufficient, but we recommend that this be quantified as part of the risk budgeting process.

Area for Development	Description
Outcomes	Treasury would benefit from increased reporting from all CFIs in order to aggregate and identify the key risk areas and derivative exposures at the overall portfolio level. As the ultimate stakeholder and beneficiary of the Fund, we believe Treasury should be engaged in setting the Fund's investment objectives and the development of the investment strategy. We recommend that Treasury should: - Receive increased reporting from CFI's on a quarterly basis (a sample list of items is outlined in Section 11); - Be engaged and participate in setting the investment objectives and investment strategy for the CFI's; - Sign off on the investment objectives and investment strategy employed, which can be completed as part of the Annual Letter of Expectations; and - If the need arises, develop a set of prudential guidelines on investments applied to all CFIs.

Contents

1. Definitions

The following table outlines the definitions of the terms used in this report.

Term	Definition
Attribution analysis	An identification of the relative contributions of different investment decisions to the difference between the Fund's performance and that of a designated benchmark. The contributions include asset allocation, sub-sector allocation, stock selection, Management overlay, and currency effects.
Asset Consultant	An advisor that provides professional investment advice to assist investors with their long term investment arrangements.
Benchmark	A comparison portfolio, a point of reference or comparison.
CEM	Independent provider of benchmarking services for pension funds, endowments/foundations and sovereign wealth funds.
Collective Investment Vehicles (CIV)	A pooled investment trust with other investors that collectively owns and holds financial securities.
Crown Financial Institution (CFI)	Entities that have specific responsibilities relating to the management and investment of significant Crown financial assets.
Currency tilting	Temporarily adjusting (tilting) the Fund's net exposures to various currencies in response to changes in expected currency returns.
Custodian	An organisation that provides safe keeping of assets, effects trade settlements and allocate trades to individual custody accounts.
Derivatives	A financial instrument whose value depends on the value of some underlying asset or factor (e.g. a stock price, an interest rate, or an exchange rate).
Dynamic asset allocation	A strategy to exploit market inefficiencies by taking active positions at different points in time.
Environmental, Social and Governance (ESG)	Factors other than purely investment returns that are associated with responsible ownership of assets.
Fund	The Government Superannuation Fund established under the Government Superannuation Fund Act 1956.
Global equity / International equity	Equity securities that are traded on a stock exchange that is not in New Zealand.
Global private equity	An asset class consisting of equity investments that are not publicly traded on a stock exchange.
Government Superannuation Fund Authority (GSFA) or Authority	The organisation responsible for managing the Government Superannuation Fund.
Government Superannuation Fund Authority Board or Board	The governing body of the Authority and is responsible for making all decisions relating to the Government Superannuation Fund.
Global Tactical Asset Allocation (GTAA)	A tactical asset allocation strategy that focuses on exploiting market inefficiencies across different markets.
Investment Committee	The Investment Committee provides advice on matters relating to the Authority's functions and powers and to perform and exercise the functions and powers of the Board delegated to the Committee.
Investment manager or manager	A company appointed to manage part of the investments of the Fund.
Investment objectives	Desired investment outcomes

Term	Definition
Liabilities	Financial obligations of the Fund of every description (whether present or future, actual or contingent, and whether payable or to be observed or performed in New Zealand or elsewhere).
Life settlements (i.e. longevity risk)	Insurance-linked asset with the underlying assets being existing life insurance policies.
Liquidity	The ability of an asset to be realised at a full price in a short period of time, as and when required.
Multi-asset	In the context of this report, 'multi-asset' is defined as an asset class that invests in a range of asset types on an opportunistic basis. These are often alternative assets, but not always, and include global hedge funds, private equity and private real estate.
Natural catastrophe risk	Assets where the return is based on premiums received to provide insurance against natural catastrophe risk.
Reference Portfolio	A notional portfolio of simple, low-cost investments that would be expected to meet the Fund's long-term objectives. The Reference Portfolio becomes a benchmark on which to judge the actions of Management.
Risk objectives	Desired investment risk outcomes.
Statement of Investment Policies, Standards and Procedures (SIPSP)	Outlines the Investment Policies, Standards and Procedures relevant to the Fund.
Stress testing	A set of techniques for estimating the impact on the Fund of a range of extreme events or scenarios, to ensure that the Fund is able to withstand these types of events.
Target Portfolio	A portfolio that incorporates Management's medium term views on asset classes and investment strategies that is expected to be a more efficient portfolio and achieve higher returns than the Reference Portfolio.
Volatility decomposition	Separate the Fund's risk (expected volatility of return) for each underlying asset class and type of investment.

2. Background

The Government Superannuation Fund Authority ("GSFA") was established under the *Government Superannuation Fund Act 1956* ("the Act") to manage and administer the Government Superannuation Fund ("the Fund") and the schemes in accordance with the Act. GSFA became an autonomous Crown entity under the Crown Entities Act 2004 ("Crown Entities Act") in January 2005.

As at 30 June 2015, the Fund has approximately $4.1 billion in assets and $12.8 billion in past service liabilities (based on the Statutory Valuation as at 30 June 2015).

Investment Objective

The Fund's primary objective is to maximise the Fund's excess return relative to the New Zealand Government Stock (before New Zealand tax), with a one in four chance of underperforming New Zealand government Stock by 10% cumulatively measured over rolling ten year periods.

Reference Portfolio

The Reference Portfolio is a simple portfolio that could be managed at low-cost and is expected to meet the Fund's primary return and risk objectives.

Under current assumptions, the expected excess return of the Reference Portfolio is 2.5% p.a. over the next 10 years, compared to the New Zealand Government Stock (before New Zealand tax).

The current Reference Portfolio is shown in the table below:

Asset Class	Reference
International equities	60%
New Zealand equities	10%
Fixed Interest	30%
Total Assets	**100%**
Foreign Currency (after tax)	20%

Target Portfolio

The Target Portfolio seeks to outperform the Reference Portfolio by seeking sources of return, such as:

- Asset classes that are considered to be systematic and are expected to be rewarded for bearing risk of loss that are not represented in the Reference Portfolio. This includes investing in property, private equity, insurance-linked risks etc.;
- Capturing manager 'alpha', which is attributable to manager skill rather than taking systematic market risk.

Based on the December 2015 quarterly report, the Target Portfolio is expected to outperform the Reference Portfolio by 1.0% p.a. (before New Zealand tax, and after investment manager fees) over 10 years.

The current Reference Portfolio and the Target Portfolio is shown in the table below:

Asset Class	Target	Reference
International equities	54.7%	60.0%
New Zealand equities	9.3%	10.0%
Fixed interest	16.3%	30.0%
Global Tactical Asset Allocation	3.0%	-
Multi-asset class	7.0%	-
Natural Catastrophe risk	6.0%	-
Life Settlements (i.e. Longevity risk)	3.7%	-
Total Assets	100%	100.0%
Foreign Currency (after tax)	20%	20%

3. Material changes since the 2011 Statutory Review

Identify any material changes made to policy and procedures since the 2011 Statutory Review, particularly with respect to the recommendations made in that review

As part of our review, we have reviewed the historical changes summarised in the annual strategy paper. We have also compared the 2011 SIPSP and the 2015 SIPSP and any changes made to the Investment Operations Manual. We have highlighted these changes in the table below.

The following table outlines the material changes since the 2011 Statutory Review. We have also provided high level comments in this section. Any identified issues and recommendations are addressed in the Key Findings, Sections 4-12 and Appendix A: Summary of findings and recommendations section of this report.

<table>
<tr><th colspan="5">Material Changes - Observations and comments</th></tr>
<tr><th>Governance Factor and Date</th><th>Type of Change</th><th>Original Provision</th><th>Revised Provision</th><th>PwC Comments</th></tr>
<tr>
<td>Strategy

(2011 to 2015)</td>
<td>Revised Reference Portfolio</td>
<td>Reference Portfolio (2013)
<table>
<tr><th>Asset Class</th><th>Target</th></tr>
<tr><td>International equities</td><td>55%</td></tr>
<tr><td>New Zealand equities</td><td>10%</td></tr>
<tr><td>Commodities</td><td>5%</td></tr>
<tr><td>Fixed Interest</td><td>30%</td></tr>
<tr><td>**Total Assets**</td><td>100%</td></tr>
<tr><td>Foreign Currency</td><td>20%</td></tr>
</table>
</td>
<td>Reference Portfolio (2015)
<table>
<tr><th>Asset Class</th><th>Target</th></tr>
<tr><td>International equities</td><td>60%</td></tr>
<tr><td>New Zealand equities</td><td>10%</td></tr>
<tr><td>Commodities</td><td>Deleted</td></tr>
<tr><td>Fixed Interest</td><td>30%</td></tr>
<tr><td>**Total Assets**</td><td>100%</td></tr>
<tr><td>Foreign Currency</td><td>20%</td></tr>
</table>
</td>
<td>Commodities was removed from the Reference Portfolio on the basis that it no longer met the Reference Portfolio criteria.

We have reviewed the written reports (April 2013 and January 2014), which showed the Board had considered the risk/return implications.

We believe appropriate due diligence was undertaken regarding this decision. Therefore, we do not have any issues regarding this change.</td>
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</table>

Material Changes - Observations and comments

<table>
<tr><th>Governance Factor and Date</th><th>Type of Change</th><th>Original Provision</th><th>Revised Provision</th><th>PwC Comments</th></tr>
<tr><td>Strategy

(2011 to 2014)</td><td>Revised Target Portfolio</td><td>Target Allocation (2011)

<table><tr><th>Asset Class</th><th>Target</th></tr><tr><td>International equities</td><td>43.0%</td></tr><tr><td>New Zealand equities</td><td>9.3%</td></tr><tr><td>Property</td><td>5.0%</td></tr><tr><td>Fixed interest</td><td>24.5%</td></tr><tr><td>Commodities</td><td>4.2%</td></tr><tr><td>GTAA</td><td>3.0%</td></tr><tr><td>Multi-asset class</td><td>7.0%</td></tr><tr><td>Natural catastrophe risk</td><td>4.0%</td></tr><tr><td>Life settlements</td><td>-</td></tr><tr><td>**Total Assets**</td><td>100%</td></tr><tr><td>Foreign Currency</td><td>20%</td></tr></table></td><td>Target Allocation (2015)

<table><tr><th>Asset Class</th><th>Target</th></tr><tr><td>International equities</td><td>54.7%</td></tr><tr><td>New Zealand equities</td><td>9.3%</td></tr><tr><td>Property</td><td>Deleted</td></tr><tr><td>Fixed interest</td><td>16.3%</td></tr><tr><td>Commodities</td><td>Deleted</td></tr><tr><td>GTAA</td><td>3.0%</td></tr><tr><td>Multi-asset class</td><td>7.0%</td></tr><tr><td>Natural catastrophe risk</td><td>6.0%</td></tr><tr><td>Life settlements</td><td>3.7%</td></tr><tr><td>**Total Assets**</td><td>100%</td></tr><tr><td>Foreign Currency</td><td>20%</td></tr></table></td><td>The key changes to the Target Portfolio over the past 5 years are outlined in the table to the left.

We have made specific comments regarding the suitability of the investment strategy, asset allocation and performance. This is addressed in Section 7: Investment Performance and Appendix A.</td></tr>
<tr><td>Strategy

(2011)</td><td>Natural Catastrophe Risk</td><td>Natural catastrophe risk was previously part of the 'insurance-linked assets'.</td><td>Since the addition of life settlements to the Target Portfolio, the 'insurance-linked assets' was separated between 'natural catastrophe risk' and 'life settlements'.</td><td>Natural catastrophe risk was added to the portfolio in 2010 and life settlements was introduced in 2012.

The separation of the 'insurance-linked assets' to 'natural catastrophe risk' and 'life settlements' is a sensible change as it provides clearer definition of the two asset classes and a more robust framework to measure performance.

We do not have any issues regarding this policy change.</td></tr>
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Material Changes - Observations and comments				
Governance Factor and Date	**Type of Change**	**Original Provision**	**Revised Provision**	**PwC Comments**
Strategy *(2012)*	Introduced Life settlements	No exposure to life settlements	Life settlements was introduced to the Target Portfolio in 2012.	The life settlement asset class was formally invested in early 2012; however, the original recommendation was put forward to the Board in late 2010 and early 2011. Based on our review of the 2011 Board minutes, there were substantial discussions made around finding a suitable provider and implementation. Therefore, we are unable to comment on the decision making process for this asset class as these decisions were made prior to our review period. However, we have made specific comments regarding the performance of this asset class, the specification of an appropriate benchmark, and the business case to maintain versus the issues and costs of exiting this asset class. This is addressed in Section 7: Investment Performance of this report.
Strategy *(2012)*	Introduced Global Private Equity	No exposure to global private equity	Added three global private equity funds over 5 years (i.e. in 2012, 2014 and 2015).	We have reviewed the Board papers relating to a recommendation to invest in private equity assets (August 2015). Global private equity is an illiquid investment. The Board acknowledges this fact and illiquidity levels are reported in the Board's quarterly reports. The Fund's asset projection is a secondary consideration when formulating the Board's investment strategy for the Fund. Diversifying across sectors and vintage years in order to achieve sufficient diversification is important to capture illiquidity premium and develop a well balanced portfolio from a risk/return perspective. While is not an issue right now, it will become more of an issue over time, and it is prudent to consider the asset term of maturity over the next five to twenty years. We believe this should be considered prior to any further investment in illiquid assets.

Material Changes - Observations and comments				
Governance Factor and Date	**Type of Change**	**Original Provision**	**Revised Provision**	**PwC Comments**
Strategy *(2012)*	Introduced low volatility global equities	No exposure to low volatility global equities	Introduced low volatility global equities in 2012, and is grouped under the 'Global Equity' asset class.	We have reviewed the Board minutes relating to a recommendation to invest in a low volatility global equity manager (August 2012). The Board discussed and considered the opportunity of the proposed manager to add value and overall risk levels. We believe appropriate due diligence was undertaken regarding this decision. Therefore, we do not have any issues regarding this strategy change.
Strategy *(2013)*	Responsible Investment	Generic policy on Responsible Investments and relevant standards and policies	Rewrite of the Responsible Investments policy to specifically exclude: • Manufacture of cluster munitions • Testing of nuclear explosive devices • Manufacture of anti-personnel mines • Manufacture of tobacco • Processing of whale meat The policy also includes the use of Collective Investment Vehicles (CIVs) and the practicalities of implementing Environmental, Social and Governance (ESG) considerations in these investments.	We do not have any issues regarding this policy change.

Material Changes - Observations and comments

Governance Factor and Date	Type of Change	Original Provision	Revised Provision	PwC Comments
Reporting / People *(2014)*	Fund benchmark	Assessment of the Fund's return against Reference Portfolio and Target Portfolio is based on an investment return that is after New Zealand tax and after investment fees.	Assessment of the Fund's return against the Reference Portfolio and Target Portfolio is based on an investment return that is before New Zealand tax and after investment fees.	The rationale for this change was that GSFA is a government entity, and therefore any tax position of the Fund would be offset by Crown tax receipts. Pre-tax measurement of the Fund's return is also simpler to calculate. While we largely agree with the reasons given, we note that after-tax management and after-tax return measurement are becoming increasingly common, as it incentivises investment managers to operate in a tax efficient manner. Good investment management should seek to maximise the after-tax return for the investor or sponsor through not incurring higher tax than necessary. Also, foreign withholding taxes on dividends are retained by the source country and not by the New Zealand government. We recommend that the assessment of the Fund's return against the Reference Portfolio is also done on an after-tax basis in order to minimise any tax leakages in relation to overseas investments.

Material Changes - Observations and comments				
Governance Factor and Date	**Type of Change**	**Original Provision**	**Revised Provision**	**PwC Comments**
Strategy *(2014)*	Securities lending	No policy	Policy revised to allow the Fund to lend its equities securities with the intention of earning extra return.	In the 2011 Statutory Review, the Authority rejected JANA's recommendation to participate in a securities lending program. We note the Board revisited this decision at the August 2012 Board meeting and decided that there are no significant issues arising from the due diligence review by the custodian to participate in this program. The Board also sought advice from an external advisor regarding this matter. The SIPSP was subsequently updated in 2014 to allow the Fund to lend its equities securities with the intention of earning extra return. The Board sought additional information from providers and external advisors prior to making this decision. As long as the advice sought adequately addressed the risks involved with this arrangement, we do not have any issues regarding this outcome. Subsequent to this, the Fund has commenced lending securities and Management is comfortable with the program.
Strategy / People *(2014)*	Changes to the foreign currency tilting strategy	The foreign currency tilting strategy moves the Fund's foreign exchange exposure according to defined tilting rules that reflect the prevailing valuation of the New Zealand Dollar.	The foreign currency tilting strategy has been combined with the Dynamic Asset Allocation strategy.	The function of the Foreign Currency tilting was combined with the Dynamic Asset Allocation (see below). We believe foreign currency tilting strategy is a natural extension to the Dynamic Asset Allocation strategy, therefore combining the two processes as part of a broader mandate is a logical undertaking. We have made specific comments regarding the appropriateness of the Board and Management delegations and their influence on performance. This is addressed in Section 4: Effective and efficient investment functions and Appendix A of this report.

Material Changes - Observations and comments

<table>
<tr><th>Governance Factor and Date</th><th>Type of Change</th><th>Original Provision</th><th>Revised Provision</th><th>PwC Comments</th></tr>
<tr><td>Strategy / People

(2014)</td><td>Changes to the DAA process</td><td>There are no limits or targets for the dynamic asset allocation strategy under the previous provision.</td><td>The Dynamic Asset Allocation strategy encompasses the Foreign Currency Tilting Strategy. Management may take temporary positions away from the Target Portfolio allocations in response to relative valuation signals.

DAA Limits:

<table><tr><th>Asset Class</th><th>Limit vs Target</th></tr><tr><td>Cash v Equities v Bonds</td><td>+/- 10%</td></tr><tr><td>DM Equities v EM Equities</td><td>+/- 5%</td></tr><tr><td>Global Equities v Low Volatility Equities</td><td>+/- 5%</td></tr><tr><td>DM Bonds v EM Bonds</td><td>+/- 5%</td></tr><tr><td>Currency Hedge Ratio</td><td>+/- 20%</td></tr><tr><td>Currency Majors v NZD</td><td>+/- 10%</td></tr><tr><td>HY Credit vs Govt vs IG Credit</td><td>+/- 5%</td></tr><tr><td>Opportunistic</td><td>+/- 5%</td></tr></table></td><td>The limits set for cash vs equities vs bonds are relatively large at +/-10%. The potential impact of these ranges may outweigh the expected contribution from all of the investment managers.

Risk budgeting is a process for the Board to deduce and allocate an acceptable level of risk for individual investment managers and different types of decisions (e.g. currency hedging, dynamic asset allocation etc.).

We recommend the Board should adopt a policy on risk budgeting. Specifically, this will assist the Board to:
- Identify an appropriate risk appetite;
- Determine where to allocate the risk budget (e.g. asset allocation, dynamic asset allocation, manager selection etc.);
- Ensure the risk budgets are aligned to the Board, Investment Committee and Management's collective views; and
- Document these investment principles and procedures.

We have made specific comments regarding the appropriateness of the Board and Management delegations and their influence on performance. This is addressed in Section 4: Effective and efficient investment functions and Appendix A of this report.</td></tr>
</table>

Material Changes - Observations and comments

<table>
<tr><th>Governance Factor and Date</th><th>Type of Change</th><th>Original Provision</th><th>Revised Provision</th><th>PwC Comments</th></tr>
<tr>
<td>Strategy / People

(2011 to 2015)</td>
<td>Rebalancing ranges changed to limits</td>
<td>Rebalancing Range (2013)
<table>
<tr><th>Asset Class</th><th>Rebalancing Range</th></tr>
<tr><td>International Equities</td><td>38.0% to 48.0%</td></tr>
<tr><td>New Zealand Equities</td><td>7.3% to 11.3%</td></tr>
<tr><td>Property</td><td>4.0% to 6.0%</td></tr>
<tr><td>Fixed Interest</td><td>20.5% to 28.5%</td></tr>
<tr><td>Commodities</td><td>3.2% to 5.2%</td></tr>
</table>
</td>
<td>Rebalancing Range (2015)
<table>
<tr><th>Asset Class</th><th>Rebalancing Range</th></tr>
<tr><td>International Equities</td><td>+/- 5%</td></tr>
<tr><td>New Zealand Equities</td><td>+/- 2%</td></tr>
<tr><td>Property</td><td>Deleted</td></tr>
<tr><td>Fixed Interest</td><td>+/- 4%</td></tr>
<tr><td>Commodities</td><td>Deleted</td></tr>
</table>
</td>
<td>Restating the rebalancing and reset ranges did not have a material change to the overall Fund as the size of the ranges are unchanged. The revised approach is a more robust design as the ranges do not have to be updated every time there is a change to the asset allocation.

We do not have any issues regarding this policy change.</td>
</tr>
<tr>
<td>Strategy

(2015)</td>
<td>Changes to benchmarks</td>
<td>The benchmark for ‘global listed property’ asset class was the FTSE EPRA NAREIT Global Property Index.

The benchmark for the ‘US unlisted property’ asset class was the NCREIF Property Index.

No benchmark was specified for Dynamic Asset Allocation strategy prior to 2014.</td>
<td>The benchmarks for the ‘global listed property’ and the ‘US unlisted property’ asset classes were removed.

A comparison measure was established in order to assess the attribution of the Dynamic Asset Allocation strategy. As part of the 2015 SIPSP review, the policy was updated to explicitly measure the attribution of the Dynamic Asset Allocation strategy to be based on the Actual Portfolio versus the ‘Target Portfolio’.</td>
<td>The removal of the two real estate benchmarks was done on the basis that the Fund did not have any exposure to global listed property or US unlisted property assets.

The policy update to introduce a benchmark for the Dynamic Asset Allocation strategy allows the performance from this strategy to be attributed to the overall Fund return.

We do not have any issues regarding these policy changes.</td>
</tr>
<tr>
<td>People

(2011 to 2015)</td>
<td>Personnel changes</td>
<td></td>
<td>The current Chief Executive was appointed in 2012.</td>
<td>We do not have any issues regarding these personnel changes.

We have made specific comments regarding the quality of the Board and Management in Appendix A.</td>
</tr>
</table>

Material Changes - Observations and comments

Governance Factor and Date	Type of Change	Original Provision	Revised Provision	PwC Comments
Risk Assessment *(2016)*	Risk reporting	Quarterly reporting included reporting of volatility, return/volatility, Sharpe ratio and information ratio, probability of outperforming NZ government stock and VaR metrics.	All risk metrics as previously reported, in addition to beta to global equities ratio and tracking error. Forward looking risk evaluation, absolute returns distribution, volatility decomposition and stress testing outputs from the Asset Consultant are also included.	The new risk reporting framework was adopted on the recommendation of the Independent Review. We believe the additional level of reporting is a positive development.
Compliance	Reporting of substantial shareholder report	Not required to be undertaken	Daily check of GSF's substantial shareholders report to ensure the Fund does not hold more than 5% of any one NZ stock. Managers are required to seek permission if they wish to hold more than 2% of a stock.	This satisfies the condition that the Crown entity does not acquire shares in a company that gives the entity substantial influence in or over that company under the Crown Entities Act 2004 100(1-a).

The following table provides a high level analysis of the Authority's response to JANA's recommendations made in the 2011 Statutory Review. We have only commented on recommendations that are within the scope of this review, are still relevant, and have not been fully implemented by GSFA.

Response to JANA 2011 Statutory Review

Major JANA Recommendation	Authority's Response	PwC Comments
The Board should obtain a recommendation and participation of the Authority's investment adviser in the consideration of key investment proposals.	The Authority disagreed with this recommendation on the basis that the investment team is held accountable for the recommendations put forward on investment proposals. Management is free to seek advice from the preferred investment adviser, other CFIs and peer funds. The Authority noted attendance of the investment adviser at a Board meeting may dilute the responsibility of Management. The Authority also noted that if the preferred investment adviser does not support Management's recommendations, then this must be made clear to the Board with full explanation as to why the adviser's view is not supported. The response of the Board would be to seek reconciliation of these conflicting views.	We agree with the Authority's response to this recommendation. However, our view is that where the Asset Consultant or external advisor has been used, we believe there are circumstances when their reports and recommendations should be included in the Appendix section of the Board papers. This enables the Board and/or Investment Committee to have a greater level of insight into the decision making process, and any difference in views between the advisor and Management. We believe the circumstances where this is appropriate are when: - There are differences in views between Management and the Asset Consultant or external advisor and it is in the Board's best interest to be made aware of these differences in views; and - The Board's expectation is that expert advice is required on a specialised topic. We have made specific comments regarding the quality of the role of the Asset Consultant in Appendix A.
The Authority reconsider its exposure to real estate and consider a core unlisted property exposure.	The Authority disagreed with this recommendation on the basis that it prefers core real estate exposure to be in global REITs (as these provide superior diversification, exposure to higher quality properties and liquidity, and the leverage and equity risks can be offset in a multi-asset portfolio). The Authority also commented on illiquid real estate investments are only considered worthwhile if they offer premium returns through skill-based value adding strategies.	We note that global peer funds with a similar size to GSFA generally have exposure to property (listed or unlisted). However, we are cognisant of the role and responsibility of Management to undertake a thorough analysis of each asset class prior to making a recommendation to invest. In the 2015 Strategy Session papers, we have observed evidence that investment in property was previously rejected on the basis that it has an increased correlation to listed equities, increased volatility, it no longer offers a distinct risk premium and there is little evidence of alpha. We have made specific comments regarding the use of illiquid assets and formulation of the investment strategy in Appendix A.

Response to JANA 2011 Statutory Review		
Major JANA Recommendation	**Authority's Response**	**PwC Comments**
The Authority establish an Investment Manager Selection Policy that: - Sets out the process followed by the Authority to identify, evaluate and select investment managers and products and the circumstances in which an investment manager or product may be terminated; - Documents the manager evaluation template to be used in the evaluation process; - Incorporates a listing of items that will be explicitly considered by the Board prior to the appointment of an investment manager or making new investment into pooled vehicles; - Incorporate the Authority's operational due diligence process; - Incorporates the Authority's manager monitoring process.	The Authority agreed in part that it already has an Investment Manager Selection (IMS) policy and process that must be reviewed annually and is contained in several sections in the SIPSP and the Investment Committee's Terms of Reference.	We have reviewed the SIPSP and the Investment Operations Manual, which provides a list of considerations that needs to be made as part of the investment manager selection process. We acknowledge that since the 2011 Statutory Review, there have not been any significant updates to SIPSP to consolidate the Investment Manager Selection process. In our view, this is not a material issue as there is little benefit to realign different sections of the SIPSP under a different banner. However, we have made specific comments regarding the need for an overarching document to connect all the relevant policies, procedures and operational manuals associated with investments in Appendix A.
The Authority's Board meet with those investment managers recommended by Management for appointment prior to their appointment and directly receive the view of the Authority's investment adviser on managers being considered for appointment or recommended for termination.	The Authority disagreed with this recommendation on the basis that the opinion of the investment adviser is provided to the Board by Management as part of the appointment process. The Board has considered a requirement to meet with investment managers prior to their appointment, in general, does not consider it appropriate, necessary or best practice given the responsibilities of Management. The Investment Committee is charged with ensuring that the Management follows the proper process with Manager appointments and confirming that to the Board.	We agree with the Authority's response that it is the Management's responsibility to undertake due diligence and seek appropriate advice (where appropriate) in manager selection. As a result, the investment team is aware that they are fully accountable for the performance outcomes of the Fund. As outlined previously, the Board has the option to seek ad-hoc advice or request a presentation by the manager. This right was exercised in the Makena appointment. We have made specific comments regarding the quality of the Board and the investment team in Appendix A.

Response to JANA 2011 Statutory Review		
Major JANA Recommendation	**Authority's Response**	**PwC Comments**
The Authority develop a Derivatives Risk Management policy that sets out minimum accepted standards for derivatives risk factors.	The Authority agreed, although this is mostly covered in the SIPSP. The Authority acknowledged JANA identified a gap in the policies governing derivatives held directly by the Fund, notably forward currency exposures to bank counterparties. As a result, the Authority undertook a review and set up a Credit Support Annex with ANZ, which was reported to the Board in March 2012.	We agree with JANA on the need to further develop the Authority's derivatives policy. Our view is that the Authority should look into monitoring derivatives and counter-party exposure at the Fund level to ensure that risks are not aggregating within the Fund. We have put forward a number of recommendations including further updates to the SIPSP to specifically address the requirements that should be included in the Investment Manager Agreement (IMA), and specifically addresses the permitted usage of derivatives. This could include the assessment criteria for the suitability of expected derivative usage. We have also put forward a more sophisticated approach to derivative risk management that would incorporate the credit rating of the counterparty. Large, sophisticated investors typically do this and we recommend that GSFA look into whether it would be worthwhile for the Fund. We have made specific comments regarding the Authority's derivatives strategy in Section 9.
The Authority's Investment Committee programme at least two meetings, one to focus on the review of the investment manager process and one to review the Responsible Investment process.	The Authority accepted this recommendation in 2011.	Since the 2011 Statutory Review, the number of Investment Committee meetings has reduced from two to one in 2015. Our view is that the Investment Committee Terms of Reference did not dictate a compelling function for the Investment Committee. The Investment Committee is currently undergoing changes to adopt a more prominent role in filtering and summarising investment decisions before progressing to the Board. As recommended by the Independent Review, we agree the Investment Committee should have a greater mandate under its Terms of Reference and it should meet more regularly as a result. This will enhance GSFA's investment governance framework

Response to JANA 2011 Statutory Review

Major JANA Recommendation	Authority's Response	PwC Comments
The Authority review the fee arrangements of managers with a view to achieve cost savings and more effective performance fee structures.	The Authority accepted this recommendation in 2011.	We have made specific comments regarding the investment manager fee negotiations process in Appendix A. Overall, we recommend bringing the fee negotiations earlier in the RFP process, and in renegotiating fees in conjunction with increased mandate size and/or in periods of manager underperformance In addition, we note the Independent Review recommended that fee negotiations could be undertaken by the CFO or the Chief Executive, whose roles are generally independent of the investment team. We therefore agree that fee negotiations are often better performed by someone outside the investment team, although these individuals need to be familiar with the negotiating protocols and have an awareness of the level of fees available in the marketplace.
The Authority assesses participation in a securities lending programme.	As reported previously, the Authority initially rejected JANA's recommendation to participate in a securities lending program. We note the Board revisited this decision at the August 2012 Board meeting and decided that there are no significant issues arising from the due diligence review by the custodian to participate in this program. The Board also sought advice from an external advisor regarding this matter The SIPSP was subsequently updated in 2014 to allow the Fund to lend its equities securities with the intention of earning extra return.	As discussed previously, we believe the Board sought appropriate additional information from providers and external advisors prior to making this decision. Therefore, we do not have any issues regarding this outcome.

4. Effective and efficient investment functions

How effectively and efficiently the GSFA is performing its functions under section 15D of the Act

We have reviewed the Fund's investment policies, standards and procedures to understand the key roles and delegations of each stakeholder. In addition, we have interviewed the members of the GSF Board, Management and Treasury as part of this review.

Effective Functions - Observations, comments and recommendations

Observation

The Board approves all policies relating to the Fund's investment arrangements and sets the ranges and limits, which are documented in the SIPSP.

Investment manager appointments and terminations are recommended by Management, and approved by the Board and/or the Investment Committee.

Management regularly undertakes the rebalancing of assets and issues currency forward instructions to a third party provider (ANZ). Provided Management operates within the investment ranges and limits set out in the SIPSP, it has flexibility to recommend and implement these decisions. The Board and/or the Investment Committee will note these transactions at the following Board meeting.

PwC Comments

Overall, we believe GSFA is effectively and efficiently performing its designated functions.

There are defined delegations, roles and responsibilities for the Board and Management. This is outlined in a matrix in Appendix C of this report. In addition, there are clear delegations within Management to sign off on any security transactions or execution of documents considered necessary or expedient in the conduct of the investment arrangements. Specifically, any two of the Chief Executive, General Manager (Investments), General Manager (Schemes) or the Chief Financial Officer is required to approve these instructions.

The Board is responsible for manager selection and Management is responsible for strategic tilting decisions (i.e. DAA and currency decisions). We have observed the potential impact of Dynamic Asset Allocation (DAA) and currency decisions may have a greater influence on performance than the contribution from manager selection. This creates an imbalance of decisions made by the Board and Management. This is evidenced by the attribution analysis in the June 2015 quarterly investment report.

The role of the Investment Committee is currently being broadened to provide additional oversight of the investment decision making process.

Recommendation

We believe reviewing and testing the rebalancing and dynamic asset allocation ranges should be a key mandate for the Investment Committee. On the basis that the Investment Committee has identified that the rebalancing and strategy tilting ranges may lead to an imbalance of the importance and impact of decisions made by the Board and Management, we recommend that the rebalancing and strategic tilting ranges be reviewed.

5. Appropriateness of GSF's investment policies, standards and procedures

Whether or not the investment policies, standards, and procedures established by the GSFA are appropriate to the Fund and whether or not the policies established by the GSFA have been complied with in all material respects.

We have reviewed the Fund's policies, standards and policies related to investments. We have also considered whether these policies, standards and procedures are fit for purpose for GSFA's investment operations.

Appropriateness of Investment Policies - Observations, comments and recommendations

Observation

We have reviewed GSF's policies, standards and procedures related to investments. This includes:

- Government Superannuation Fund Authority Corporate Governance Statement;
- Statement of Investment Policies, Standards and Procedures (SIPSP);
- Management Services Agreement;
- Investment Committee Terms of Reference
- Responsible Investment Policy;
- Privacy Policy;
- ANN1: Acceptable Conduct Policy for Employees and Annuitas Contractors;
- GSF1: Board Member and Management Expenditure;
- GSF2: Acceptable Conduct Policy for Board Members and Management;
- GSF3: Procurement of Services;
- GSF4: Fraud Minimisation; and
- Investment Operations Manual.

PwC Comments

Overall, we believe GSF's policies, standards and procedures related to investments are appropriate and fit for purpose.

The SIPSP provides a comprehensive documentation of the key investment decisions involved with the Fund. We have also reviewed the 'Policy Review Schedule' and believe there is an appropriate frequency of reviews.

Appropriateness of Investment Policies - Observations, comments and recommendations
Recommendation Further to GSF's existing documentation, we recommend establishing an overarching document architecture to connect all the relevant policies, procedures and operational manuals associated with investments to make the structure and location of documents clearer. This overarching document could be incorporated as part of the 'Corporate Governance Statement' or as a separate document.

6. Fit for purpose

Whether the GSFA's investment governance framework is fit for purpose in the context of GSFA's current investment strategy and how the GSFA's investment governance framework compares to relevant peers.

We have reviewed GSFA's organisational structure and assessed the investment governance framework against key governance criteria to determine whether the framework is fit for purpose for GSFA's investment operations.

Fit for Purpose - Observations, comments and recommendations

Observation

As part of this review, we have assessed the GSFA's investment governance framework against the key governance factors to determine whether the framework is fit for purpose for GSFA's investment operations (taking into account both current operations and expected future state following the recommendations of the Independent Review). Appendix A provides a summary of our assessment against the key governance factors, noting the strengths that we observed, as well as the opportunities for improvement.

GSFA's organisational structure can be described as a fully outsourced model (i.e. investments are outsourced to external investment managers). The Board sets the policies, procedures, limits and investment ranges, and it is up to Management to continuously monitor and operate within these ranges.

Given this organisation structure, our expectation for the Fund of this size should demonstrate:

- Clarity on the investment strategy, investment beliefs and philosophy;
- Clarity on delegations, roles and responsibilities; and
- Ability to access relevant expertise.

PwC's Comments

Overall, we believe that GSFA's governance framework is appropriate and is fit for purpose given the size of the Fund.

Based on our comments in Section 4: Effective and Efficient Teams and Appendix A: Summary of Findings and Recommendations, we believe the GSFA's current governance framework is appropriate and is fit for purpose given the size of the Fund.

In addition, we believe GSFA is operating generally in line with our expectations of a Fund this size with a similar organisational structure.

Fit for Purpose - Observations, comments and recommendations
Recommendation The Investment Committee is currently undergoing changes to adopt a more prominent role in filtering and summarising investment decisions before progressing to the Board. As recommended by the Independent Review, we agree the Investment Committee should have a greater mandate under its Terms of Reference and it should meet more regularly as a result. We believe the roles that potentially could be considered for the Investment Committee are: - Reviewing an appropriate investment risk budget; - Reviewing dynamic asset allocation ranges; - Reviewing derivatives exposures and counterparty risks; and - Reviewing the appointment and termination of investment managers. This will enhance GSFA's investment governance framework.

7. Investment Performance

An opinion on the investment performance of the Fund to date and identification of any other factors relevant to the performance of the Fund.

We have assessed the Fund's performance as at 31 December 2015 against the stated investment objectives, including the Reference Portfolio and New Zealand Government Stock return. We have also assessed the Fund's asset class performance as at 31 December 2015.

Investment Performance - Observations, comments and recommendations

Observations

The Fund's performance as at 31 December 2015 (before New Zealand tax and after investment fees) is provided in the table below:

Performance (before New Zealand tax and after investment fees)	**Quarter**	**1 Year**	**3 Years**	**5 Years**	**10 Years**	**Since Inception**
Fund Return	3.7%	5.2%	11.8%	9.1%	6.2%	6.8%
Reference Portfolio	3.9%	4.2%	10.8%	8.9%	6.1%	6.8%
Outperformance	*-0.2%*	*1.0%*	*1.0%*	*0.2%*	*0.1%*	*0.0%*
NZ Government Stock	-0.4%	5.4%	3.7%	5.8%	6.1%	6.2%
Outperformance	*4.1%*	*-0.2%*	*8.1%*	*3.3%*	*0.1%*	*0.6%*

The Fund return of 6.2% (before New Zealand tax and after investment fees) over the past 10 years was slightly above the Reference Portfolio and New Zealand Government Stock return of 6.1%.

We note the Fund's expected excess return of the Reference Portfolio over 10 years is 1.0% per annum, which was not achieved. However, the Fund did not have material active management until 2008, so it was not structured to achieve the 1.0% excess return between 2006 and 2007. The Fund underperformed the Reference Portfolio from 2009 to 2012, but recent performance has been stronger and the Fund has outperformed the Reference Portfolio over the last three years. Over ten years, positive contributions from manager selection have been offset by losses from currency hedging.

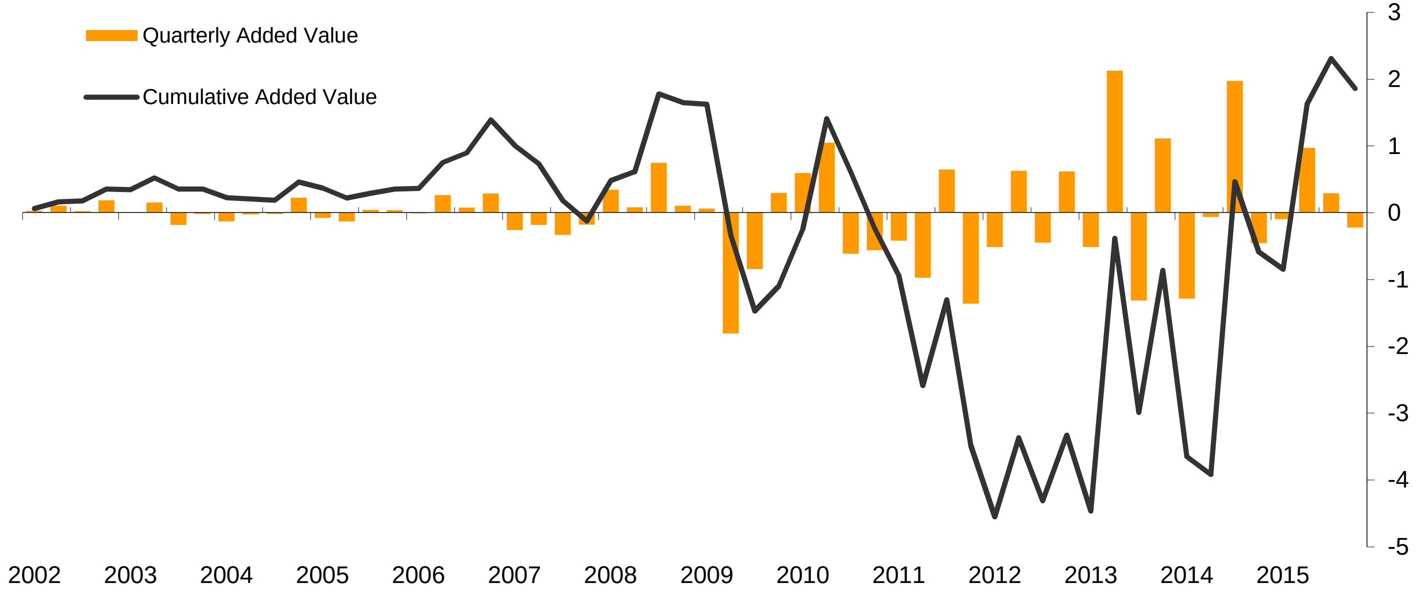
The currency tilting position (which was an underweight to the NZD) was closed out in June 2015. The currency tilt made a positive contribution in the financial year 2014/15, but over the full duration of the currency tilting (June 2010 to June 2015) it made a negative contribution of -0.95%pa.

Performance relative to the New Zealand Government Stock was also hindered by the strategic currency tilting from 2010 to 2014.

Investment Performance - Observations, comments and recommendations

Performance against the reference portfolio on a quarterly and cumulative basis is shown in the following chart:-

Quarterly and Cumulative Added Value since 2002 (%)



Note: Added Value is measured in this chart net of fees and before tax against the Reference Portfolio.

This chart shows the transition from a passive to a more active strategy after 2009, the difficult period from 2009 to 2012, and the better performance since 2013. The longer term picture does not provide much evidence of consistent outperformance of the Reference Portfolio, and even less evidence that a target of 1.0% p.a. over the Reference Portfolio has been achieved. However, we note the substantial negative impact of currency tilting and if this impact was removed, active management has added value.

Investment Performance - Observations, comments and recommendations

The Fund's underlying asset class performance as at 31 December 2015 is provided below.

Value Added Performance over benchmark (before New Zealand tax and after investment fees)	**1 Year**	**3 Years**	**5 Years**	**Since Inception (of asset class)**	**Benchmark**
Global Fixed Interest	-3.1%	-1.4%	+0.2%	+0.2%	Barclays Global Aggregate Index
Global Equities	+2.2%	+2.0%	+1.0%	+1.4%	MSCI All Countries World Index
New Zealand Equities	-0.3%	+2.1%	+1.1%	+1.0%	NZX50 Gross Index including imputation credits
Multi-Asset Class [1]	+3.1%	+1.5%	+1.0%	+1.6%	Reference Portfolio (unhedged)
Global Tactical Asset Allocation (GTAA)	+3.0%	-0.9%	+0.2%	+1.3%	US 3 month T-bill + 6%
Natural Catastrophe Risk	-0.3%	-1.3%	-1.9%	-1.9%	Swiss Reinsurance Catastrophe Bond Total Return Index
Life Settlements (i.e. longevity risk) [2]	*-4.6%*	*-1.2%*	-	*-0.9%*	*n/a*
Commodities	-	-	-	+1.0%	Bloomberg Commodity Index
GSF Total Fund	**+1.0%**	**+0.9%**	**+0.2%**	**+0.1%**	**Reference Portfolio**

1. *Multi-Asset Class includes a range of asset types on an opportunistic basis. These are often alternative assets, but not always, and include global hedge funds, private equity and private real estate.*
2. *Actual Return is provided because there are no appropriate benchmarks available for Life Settlements.*

Manager selection in New Zealand and Global Equities has generated outperformance compared to their respective benchmarks (before New Zealand tax and after investment fees) over 3 and 5 years to 31 December 2015. However, manager selection in Global Fixed Interest has detracted over the 3 years, mainly due to the underlying managers having an overweight tilt toward emerging markets. Natural catastrophe risk has also underperformed its benchmark (before New Zealand tax and after investment fees) over 1, 3 and 5 years to 31 December 2015. Life settlements does not have a benchmark so the returns shown in the table are total returns (not value added); however, the returns have been negative over 1 and 3 years to 31 December 2015, so this asset class has detracted value at the total fund level.

Investment Performance - Observations, comments and recommendations

PwC Comments

Overall, we believe that performance has been satisfactory, in a period which has been difficult for active management.

At 30 September 2015, the Fund was roughly 15.8% underweight global fixed interest and 5.3% underweight global equity compared to the Reference Portfolio. These allocations were instead allocated to asset classes not in the Reference Portfolio; namely, commodities, multi-asset class, GTAA, catastrophe risks and life settlements. These asset classes provide additional risk premia for the Fund and also provide diversification benefits. The returns from these asset classes have been mixed, but in general they have outperformed global fixed interest, but underperformed global equity over the five years to 31 December 2015.

The risk profile of the Fund is less volatile than the Reference Portfolio, but this is largely due to the investments in uncorrelated and illiquid asset classes that are not included in the Reference Portfolio.

Recommendation

There is no benchmark specified for life settlements on the basis that there is no reliable benchmark. However, we believe that a proxy benchmark should be introduced that reflects the risks and illiquidity associated with this type of investment. As a guide, life settlements generate return from premium received from underlying life insurance contracts, less any money paid out for insurance claims. Life insurance contracts behave similarly to a long maturity bond with an illiquidity premium, longevity premium, and demographic change. Therefore, the starting point for an appropriate benchmark should be the global fixed interest index, plus a risk margin that is commensurate with the risk of the asset.

Natural catastrophe risk has underperformed its benchmark over 1, 3 and 5 years to 31 December 2015. Life settlements does not have a benchmark; however, the returns have been negative over 1 and 3 years to 31 December 2015. We are cognisant of that fact that these investments are generally illiquid and may not be able to be redeemed at a reasonable price. However, given both of these asset classes have detracted value at the total fund level over 1 and 3 years to 31 December 2015, we recommend the Board should review the business case to maintain or exit this asset class with consideration of the issues and costs associated with exiting this asset class.

Within New Zealand and Global Equities, GSFA has generally selected active managers which have outperformed their respective benchmarks. GSFA invests with active managers within global fixed interest, and the Fund's Global Fixed Interest portfolio has underperformed the benchmark (Barclays Global Aggregate Index) over the 1 and 3 years to 31 December 2015 (before New Zealand tax and after investment fees). In the latest CEM report, GSFA identified that the overall higher fees were in part due to the global fixed interest sector, where a number of peers have a higher exposure to global fixed interest, which has a lower cost than most other asset classes. In addition, GSFA has a dedicated Emerging Markets manager which attracted a higher base fee.

The Board should therefore seek appropriate information to revisit the business case to determine whether paying active fees for some of these asset classes is justified. PwC's view is that some activities like DAA and currency management have proven to be very difficult areas to consistently add value. Therefore, unless there is a well-considered view that GSFA can add value, the asset class should be passively managed or exited, and activities like DAA and currency tilting should be constrained or not undertaken.

In particular, currency tilting has had a negative impact on the performance of the Fund and we recommend that the Board reviews the business case to engage in currency tilting and forms a view on whether this is an area that the Fund can add value on a consistent basis.

Investment Performance - Observations, comments and recommendations
In addition, given both natural catastrophe risk and life settlement investments have detracted value at the total fund level over 1 and 3 years to 31 December 2015, we recommend the Board should review the business case to maintain or exit this asset class with consideration of the issues and costs associated with exiting this asset class. Finally, we recommend Treasury consider benchmarking the asset class returns across CFIs. However, we are cognisant that each CFI has different liability profiles and investment strategies. On this basis, peer comparison should be undertaken where possible and should be used to facilitate discussion across CFIs. Overall, we believe that performance has been satisfactory, in a period which has been difficult for active management. We recommend that the Board continues to monitor the value added by asset class, with a view to only taking active risk in asset classes and areas where the Board thinks the Fund has a reasonable prospect of adding value.

8. Benchmarking of Fees

An opinion on the investment manager fees of the Fund compared to relevant peers.

We have assessed the Fund's fee contribution for each asset class compared to the Fund's overall fees. In addition, we have noted the conclusion of an independent fee benchmarking report undertaken by CEM.

Fees - Observations, comments and recommendations

Observation

The following table outlines the Fund's base fees for each asset class based on the 31 December 2015 quarterly report:

	Asset Allocation (as at 31 Dec 2015)	**Base Fee** (excl. performance fees)	**Fee Contribution**
Global Fixed Interest	14%	0.34%	0.05%
Global Equities	53%	0.56%	0.30%
New Zealand Equities	11%	0.65%	0.07%
Multi-Asset Class	7%	0.50%	0.03%
GTAA	3%	1.00%	0.03%
Natural Catastrophe Risk	7%	1.45%	0.10%
Life Settlements	3%	0.32%	0.01%
Commodities	2%	0.50%	0.01%
GSF Total Fund	**100%**	**0.61%**	**0.61%**

The fees shown in the table above are base fees only (i.e. it excludes performance fees).

We note that the GSFA participates in the annual CEM benchmarking report, which compares the GSFA to a group of 19 peers with similar assets, in addition to 291 global respondents, comprising 150 in US, 74 in Canada, 59 in Europe, 6 in Asia-Pacific and 2 in the Gulf region funds. The median size of peers is $3.8 billion. CEM's fee comparison across peers is based on total fees (i.e. it includes performance fees).

In the 2014 CEM report, GSF's total fees were 0.757%, which was higher than the peer fees of 0.516%, mainly due to differences in benchmark (i.e. peer group had a higher exposure to fixed interest). If the impact of asset allocation was removed, GSF's fees were still higher than the benchmark fee of 0.733%.

Fees - Observations, comments and recommendations

The following table shows GSF's estimated performance fees over the past 5 years by asset class and in aggregate:

Estimated Performance Fees (%)	2011/12	2012/13	2013/14	2014/15	2015/16 FYTD
Global Fixed Interest	-	0.02%	-	-	-
Global Equities	0.08%	0.22%	0.08%	-	-
New Zealand Equities[3]	-	-	-	-	2.15%
Multi-Asset Class	-	0.08%	-0.08%	-	-
GTAA	0.11%	1.10%	0.70%	-	-
Natural Catastrophe Risk[4]	-	0.28%	0.74%	0.46%	0.14%
Life Settlements	-	-	-	-	-
Commodities	0.58%	0.35%	-	-	-
Total Fund	**0.06%**	**0.17%**	**0.10%**	**0.03%**	**0.22%**

1. *Estimated performance fees based on performance fees paid over the financial year (30 June YY) divided by the start of period asset balance.*
2. *Performance fees are paid over multi-year averages so the negative numbers reflect weaker performance after good years.*
3. *The fee for New Zealand Equities relates to Direct Capital investment in Private Equity. The fee is based on the cumulative performance of the investment over a number of years. The investment return was very high, which led to the high performance fee.*
4. *The underlying managers in this asset class uses a different benchmark for performance fee calculations compared to the benchmark stated in Section 7 of this report.*

PwC Comments

Overall, we believe that savings could potentially be made on fees.

As outlined previously, manager selection in New Zealand and Global Equities has generated manager outperformance. In contrast, natural catastrophe risk has a reasonably high fee contribution but has underperformed the benchmark (Swiss Reinsurance Catastrophe Bond Total Return Index) over 1, 3 and 5 years to 31 December 2015 (before New Zealand tax and after investment fees).

Based on our discussions with key stakeholders, Management noted there have been some instances where investment manager fee negotiations were unsuccessful when undertaken at the completion of the manager search process. This is mainly due to the fact that investment managers are unlikely to negotiate on fees if they already they know the outcome of the RFP search.

Fees - Observations, comments and recommendations
Recommendations We recommend that the Board continues to monitor the value added by asset class, with a view to only taking active manager risk in asset classes where the Board thinks the Fund has a reasonable prospect of adding value after taxes and fees. We recommend bringing the fee negotiations earlier in the RFP process, and in renegotiating fees in conjunction with increased mandate size and/or periods of manager underperformance. In addition, we note the Independent Review recommended that fee negotiations could be undertaken by the CFO or the Chief Executive, whose roles are generally independent of the investment team. Fee negotiations can be difficult and once a decision is made on a preferred provider it becomes harder to pursue negotiations further. We therefore agree that fee negotiations are often better performed by someone outside the investment team, although these individuals need to be familiar with the negotiating protocols and have an awareness of the level of fees available in the marketplace.

9. Appropriateness of the Derivatives strategy

Whether the GSFA's derivative strategy and the operational procedures in managing derivatives exposure is appropriate

We have assessed the Fund's derivatives policies and procedures as set out in the SIPSP and the Investment Operations Manual as part of this review.

Derivatives - Observations, comments and recommendations

Observation

GSFA's policies, standards and procedures for the use of derivatives are set out in the SIPSP, and its operational procedures are further outlined in the Investment Operations Manual. Further requirements with respect to counterparties, credit ratings and concentration are specified in the Investment Management Agreements. GSFA does not use derivatives extensively in the day-to-day management of the Fund. The only derivatives currently managed are a life insurance swap with Credit Suisse and forward currency contracts for hedging purposes. This is managed through ANZ Bank for global bonds and State Street Global Advisors (SSgA) for global equities.

The custodian, JP Morgan, manages the Credit Support Annex and calls collateral on behalf of GSFA for the life insurance swap with Credit Suisse. There is a one way Credit Support Annex with ANZ, whereby ANZ provides cash collateral to GSF if profits exceed a certain limit. The currency swaps for global bonds are managed on a formulaic basis, with JPM (custodian) sending ANZ portfolio valuations on a monthly basis. The hedge ratio on the global equity portfolio is set so that the foreign currency exposure of the whole fund is 20%. SSgA use a proxy basket of currencies based on the MSCI AC World index to hedge back to the New Zealand dollar. GSFA informs SSgA each month end of the balance so they remain within the pre-determined range. As part of the mandate, SSgA holds cash equal to 3-10% of the assets to meet margin calls. The level of cash is reviewed monthly by GSFA.

Therefore, the execution of derivatives is effectively outsourced to external investment managers and banks and the involvement by GSFA in operational matters is limited.

PwC Comments

Overall, we believe the policies documented in the SIPSP are appropriate.

We note however that the SIPSP is very general in terms of the usage of derivatives. Further requirements with respect to counterparties and other limits are specified in the Investment Management Agreements with SSgA; however, those requirements are not specified in the SIPSP. The use of multiple counterparties to reduce risk is appropriate.

Is the derivatives strategy appropriate for the Authority?

For a fund with assets and an internal investment team the size of GSFA, we believe that an outsourced model is appropriate. The Annual Health Check by the Asset Consultant also reviews policies and procedures in regard to derivatives.

Derivatives - Observations, comments and recommendations

We note that the largest component of the hedging is global equities and that the tilting is based on a proxy basket of 11 currencies with weightings based on the MSCI AC World Index. This allows the benchmark exposures to be hedged back to New Zealand dollars but any currency positions taken by the investment managers to remain.

Are the operational procedures for managing derivatives exposure appropriate?

GSFA has outsourced most of the operational matters for derivatives to its service providers. The mandate with SSgA is self-contained in that as long as the cash stays within certain limits GSFA is not involved, and the hedging of the fixed interest portfolio is a formula-driven process managed by JPM (custodian) and ANZ (provider of the currency forward contract). 100% of the fixed interest portfolio is hedged, so GSFA is not involved operationally. If the ANZ hedging or the Credit Suisse life settlements swap move in GSFA's favour, cash collateral is paid to GSFA. If the reverse is true, GSFA has to provide cash collateral.

How is the Authority measuring derivative exposure and is it being done in an appropriate manner?

GSFA receives reporting from ANZ, Credit Suisse, and SSgA regarding valuations and transactions, including any calls for collateral. GSFA is not itself measuring derivative exposure. We believe that this approach is appropriate for GSFA.

GSFA also invests with a number of external managers and some of them may use derivatives, subject to limits in each investment mandate. We note that there is no reporting at the total fund level for aggregate exposure to derivatives and counterparties.

What methodologies are used to calculate the market risk related to derivatives and is it appropriate for the Authority?

The derivatives used by GSFA are swaps and forward contracts. The level of market risk with these types of derivatives is the face value of the contract. Given the nature of the derivatives being used, we believe that the approach is appropriate.

How are other non-market derivative risks (e.g. counterparty risks) calculated and are the methodologies appropriate for the Authority?

The counterparty risk is the value of the contract minus any cash collateral. GSFA has a unilateral 'Credit Support Annex' in place with ANZ and Credit Suisse where if the profit on the contract exceeds a certain amount, cash collateral is provided back to GSFA.

Does the Authority calculate non-market risk limits related to derivative exposure and is the methodology prudent for GSFA?

GSFA has non-market risk limits at the mandate level, which is a prudent approach. The risk measurement could be improved by monitoring counterparty exposures at the Fund level, as long as this can be done in a cost-effective manner. We agree with Management that derivative and counter-party risks are expected to be relatively small, but quantifying them as part of the risk budgeting process would be a worthwhile exercise.

Derivatives - Observations, comments and recommendations

Is cash collateral and the resulting credit risk exposure to the Fund appropriately managed?

GSFA provides and receives cash collateral on derivative contracts. The 'Credit Support Annex' limits the extent of credit exposure to the counterparty, and the risk limits on counterparty risk spread the risk. We believe that the credit risk exposure is appropriately managed, but as stated previously, we believe it could be improved by greater monitoring at the total fund level.

How is concentration of counterparty risk managed and how is the Fund exposed to this?

GSFA is exposed to counterparty risk when a derivative contract is in a profit position creating an asset for GSFA and a liability for the counterparty. These risks are managed by cash collateral paid to GSFA through the 'Credit Support Annex' agreements, and the spreading of the risk amongst multiple counterparties.

Recommendation

We recommend that the SIPSP is updated to specifically address the requirements that should be included in the Investment Manager Agreement (IMA), and specifically addresses the permitted usage of derivatives. This could include the assessment criteria for the suitability of expected derivative usage.

GSFA should look into monitoring derivatives and counter-party exposure at the Fund level to ensure that risks are not aggregating within the Fund.

A more sophisticated approach to derivative risk management would also incorporate the credit rating of the counterparty. Large, sophisticated investors typically do this and we recommend that GSFA look into whether it would be worthwhile for the Fund. It is likely that the aggregated counterparty risk exposures are not too high, and the credit quality of counterparties is sufficient, but we recommend that this be quantified as part of the risk budgeting process.

10. Use of Fund Investment Vehicles

Proposal of a legislative bid to use Fund Investment Vehicles

We have reviewed the legislative change made for the New Zealand Superannuation and Retirement Income Act 2001 regarding the use of Fund Investment Vehicles and considered the relevant applications for GSFA.

Fund Investment Vehicles - Observations, comments and recommendations

Observation

GSFA is proposing a legislative bid that, if successful, would allow them to use Fund Investment Vehicles ("FIV") as part of their investment operations. A similar bid in 2015 by Guardians of New Zealand Superannuation has enabled them to use FIVs and the GSFA is seeking the same outcome. FIVs are similar to Special Purpose Vehicles and are entities formed or controlled by a fund for the purpose of holding, facilitating or managing investments in the Fund. They are used to structure and access investments more efficiently and help minimise the liability and risk.

The current legislation also prohibits GSFA from owning more than 50% of an entity. Therefore, GSFA is currently required to find a 50% joint venture partner in order to invest in these types of vehicles.

PwC Comments

Overall, we believe that the use of FIVs may be appropriate if sufficient safeguards are in place.

The use of FIVs is reasonably common practice for large investors. They are legal structures that often provide tax benefits (when set up in other jurisdictions), isolate investment risk, and provide some privacy for the underlying investments and investors.

The key risks are the reputational risk owing to increased media scrutiny and criticism on the use of FIVs. FIVs can be vulnerable to misuse (e.g. mismanagement of underlying assets) with potentially devastating consequences (e.g. resulting in fraud or loss of control) if the use and purpose are not appropriately considered.

The requirement that GSFA does not control an entity should be viewed on a look-through basis – that is, the underlying investments should be required to comply with section 15K of the Government Superannuation Fund Act 1956, but a holding company that is only used to manage investments should be exempt.

Fund Investment Vehicles - Observations, comments and recommendations
Recommendation We believe the use of FIVs may be appropriate provided that the GSFA develops policies and procedures to manage any risks arising from the incorporation of FIVs. In addition, the Treasury will need to satisfy itself that the Fund's use of FIVs is appropriate. This includes: • The purpose of the FIVs should be reconsidered throughout the life of the vehicle to ensure they continue to be maintained for allowable investment purposes; • There should be regular oversight and ongoing monitoring of the use of FIVs; • GSFA will need to develop reporting capabilities to assess and report on a continual basis and report on the overall Fund-level risks; and • There should be a clear governance process to ensure the use of the FIV is commensurate with the complexity of the structure and allow for active intervention to reduce risk to the overall Fund. Provided the appropriate safeguards are in place, we do not see any reason why GSFA should not have access to these vehicles. The Government Superannuation Fund Act 1956 will need to be amended so that the restrictions on control in section 15K do not apply to Fund Investment Vehicles.

11. Increased reporting to Treasury

Reporting to Treasury - Observations, comments and recommendations

Observation

In the latest Annual Letter of Expectations, the Minister of Finance noted that the aggregate funds managed within the CFI portfolio continues to grow as a percentage of the overall Crown's balance sheet. As a result, there is an increased focus from Treasury to ensure the Crown's investments are prudently and responsibly managed.

PwC Comments

Overall, as the key stakeholder of the CFI portfolio, we believe Treasury should develop comparative reporting capabilities across CFIs.

We have reviewed GSFA's quarterly reporting to Treasury. The information contains the market values for each asset class, investment returns and benchmark returns for the quarter and financial year to date, and a light commentary on the Fund's performance over the quarter.

We have observed that the information currently exchanged with Treasury could be expanded. We believe this additional reporting would enable Treasury to better assess the collective risk across all CFIs. We have put forward a recommendation on an appropriate framework for the Treasury to consider.

In addition, as the ultimate stakeholder and beneficiary of the Fund, we believe Treasury should be engaged in setting the Fund's investment objectives and the development of the investment strategy.

At a minimum, we believe the Treasury should receive reporting on the following items on a quarterly basis:

- Commentary on investment markets;
- Reporting and commentary of the Fund's performance against agreed benchmarks and objectives for the quarter, financial year to date, medium and long term;
- Reporting of the Fund's standard risk metrics for the overall portfolio, include volatility, VaR, CVaR and volatility decomposition;
- Reporting of the average credit ratings where applicable (e.g. the Fund's fixed interest portfolio);
- Reporting of the Fund's investments, including market values of each asset class, summary of derivative positions, market values of each asset class on an effective basis (i.e. outline of total and net exposure including the impact of derivatives);
- Reporting of the liquidity position of the Fund;
- Reporting of asset allocation relative to benchmark and strategic asset allocation ranges for the Fund; and
- Confirmation of compliance with all aspects of the investment governance

We believe there is merit for the Treasury to request the above information across all CFIs, which can then be aggregated to identify the key risks for Treasury's balance sheet.

Reporting to Treasury - Observations, comments and recommendations

The initial step should be focused on reporting and monitoring. However, if Treasury has identified and is concerned about a consistent trend across all CFIs, Treasury should have the authority to impose certain investment restrictions. In our experience working with other government Treasury operations with similar oversight responsibilities, we have observed that the Treasury could impose a number of restrictions, including:

- Maximum exposure to sub-investment grade bonds;
- Minimum credit rating for organisations engaged in providing over-the-counter derivative contracts;
- Maximum exposure to any one investment manager;
- Asset allocation ranges;
- Maximum exposure to foreign currency;
- Liquidity requirements; and
- Allowable investments.

Recommendation

We recommend that Treasury should:

- Request increased reporting from GSFA (and other CFI's) on a quarterly basis (as outlined above);
- Be engaged and participate in setting the Fund's investment objectives and investment strategy;
- Sign off on the investment objectives and investment strategy employed, which can be completed as part of the Annual Letter of Expectations; and
- If the need arises, develop a set of prudential guidelines on investments applied to all CFIs.

12. Response to Treasury's guidelines and expected outcomes

In addition to the major outcomes sought from the Review, Treasury has provided additional guidelines and expected outcomes from the review. The following table references the appropriate sections which covers these guidelines:

Legend:		
Rating		
Definition	Framework/Approach is fit for purpose	Areas for development identified

Section	Treasury Guideline and Expected Outcome	Assessment	Report Reference
1	***Material Changes since the 2011 Review***		
1 (a)	Identify any material changes made to policy and procedures since the 2011 review, particularly with respect to the recommendations made in that review.		Section 3: Material changes since the 2011 Statutory Review
2	***Asset Allocation and Investment Objectives Process***		
2 (a)	Has the Authority set clear and suitable investment objectives?		Appendix A: 1.1 – Overall Entity Strategy
2 (b)	Does the Authority follow an appropriately thorough process in determining its asset allocation and investment objectives?		Appendix A: 1.2 – Investment Principles 1.3 – Formulating investment strategy
2 (c)	Does the process include contestable advice from a range of internal and external sources?		Appendix A: 2.4 – In-house investment team 2.7 – Asset consultant
2 (d)	Is the process documented sufficiently?		Appendix A: 7.2 – Policy documentation
2 (e)	Are processes in place within the Authority to ensure that the investment strategy and asset allocation remain appropriate in changing market conditions?		Appendix A: 1.3 – Formulating investment strategy 1.5 – Stress testing

Section	Treasury Guideline and Expected Outcome	Assessment	Report Reference
2 (f)	Is the asset allocation for the Reference Portfolio appropriate?		Appendix A: 1.3 – Formulating investment strategy
2 (g)	Is the "Risk budgeting process" established by the Authority fit for purpose?		Appendix A: 4.1 – Risk assessment 4.2 – Risk reporting
2 (h)	Is the Authority's policy around Ethical and Responsible Investment appropriate and fit for purpose?		Appendix A: 1.2 – Investment Principles
2 (i)	Is there an adequate reporting framework overseeing Ethical and Responsible Investment?		Appendix A: 1.2 – Investment Principles
3	***Governance***		
3 (a)	Are the governance arrangements practiced at the Authority fit for purpose?		Section 6: Fit for purpose
3 (b)	Is there a clear separation of responsibilities between the Board and management?		Appendix A: 2.1 – Roles and responsibilities Appendix C: Delegations matrix
3 (c)	Is the Board kept informed of all matters that require its attention?		Section 4: Effective and Efficient Investment Function Appendix A: 5.0 – Reporting to Board/Committees
3 (d)	Are the decision-making processes within the Authority's management and Board prudent?		Appendix A: 2.1 – Roles and Responsibilities 6.0 – Decision making
3 (e)	Are the decisions made by the Board and management appropriately documented, given their accountability as a Crown entity?		Section 7: Performance Appendix A: 5.0 – Reporting to Board/Committee
3 (f)	Are there sufficient registers to record conflicts of interest? Are they up-to-date?		Appendix A: 3.1 – Individual conflicts of interest
3 (g)	Are there exposures to stakeholders that would warrant monitoring of the Board's personal investments?		Appendix A: 3.1 – Individual conflicts of interest

Section	Treasury Guideline and Expected Outcome	Assessment	Report Reference
3 (h)	Are the Board and Management delegations appropriate?		Appendix A: 2.1 – Roles and responsibilities Appendix C: Delegations matrix
3 (i)	Is the Authority employing consultants for advice that could be adequately provided in-house?		Appendix A 2.4 – In-house investment team 2.7 – Asset consultant
3 (j)	Are there adequate processes to ensure the Board has, and will continue to have, the balance of skills and experience required for its tasks?		Appendix A: 2.2 – Board 2.3 – Investment Committee
4	***Organisational Structure***		
4 (a)	Is the organisational structure of the Authority appropriate for the outputs the organisation is trying to achieve?		Section 6: Fit for purpose
4 (b)	Are the knowledge and skills of staff appropriate for their responsibilities?		Appendix A: 2.5 – Quality of investment team
4 (c)	Are the remuneration policies adopted by the Authority appropriate?		Appendix A: 2.6 – Remuneration of investment team
4 (d)	Do staff contracts contain appropriate performance objectives commensurate with each role?		Appendix A: 2.6 – Remuneration of investment team
4 (e)	Is the remuneration structure for the Investment Management team appropriate at the Authority		Appendix A: 2.6 – Remuneration of investment team
4 (f)	Is the key man risk at the Authority managed appropriately?		Appendix A: 2.5 – Quality of investment team
4 (g)	Does the Authority have appropriate processes in place to ensure that all their requirements under other relevant legislation (for example, tax legislation) are complied with?		Appendix A: 7.0 – Compliance
5	***Investment Manager Fees***		

Section	Treasury Guideline and Expected Outcome	Assessment	Report Reference
5 (a)	Are the investment manager fees paid by the Authority reasonable and in line with those paid by comparable institutions?		Section 6: Benchmarking of fees
6	***Investment Manager and Custodian Monitoring***		
6 (a)	Are the processes put in place to monitor the investment managers and the custodian thorough and consistent with best practice? Have appropriate benchmarks been identified?		Section 7: Investment Performance Appendix A: 5.3 – Performance and compliance reporting
6 (b)	What compliance functions does the Authority have in place to ensure adherence to investment manager mandates?		Appendix A: 5.3 – Performance and compliance reporting
6 (c)	Is the investment manager selection process adopted by the Authority rigorous and consistent with best practice?		Appendix A: 1.4 – Portfolio construction
6 (d)	Is the investment manager selection process appropriately contestable?		Appendix A: 1.4 – Portfolio construction
6 (e)	Does the Authority aim to select an appropriate number of investment managers?		Appendix A: 1.4 – Portfolio construction
6 (f)	Does the Authority screen an appropriate number and range of fund managers?		Appendix A: 1.4 – Portfolio construction
7	***Investment Performance and Benchmarking***		
7 (a)	Do performance attribution analytics/outputs generated by the Authority's performance reporting system adequately explain performance? Is calculation methodology of performance attribution in line with best practice?		Section 7: Investment Performance Appendix A: 5.1 – Regular reporting
7 (b)	Does the Authority use benchmarking internally as a means to assess internal costs and pinpoint outliers?		Section 8: Fee Benchmarking
7 (c)	Is the reporting provided to the Board of appropriate quality, scope and relevance?		Appendix A: 5.0 – Reporting to Board/Committees
8	***Investment Risk Management***		
8 (a)	Is the nature of risk taken on by the Fund appropriate for its liabilities?		Appendix A: 1.3 – Portfolio construction
8 (b)	Does the Authority have a thorough process for identifying and responding to investment risks?		Appendix A: 4.2 – Risk reporting

Section	Treasury Guideline and Expected Outcome	Assessment	Report Reference
8 (c)	Has the Authority identified the significant investment risks they are exposed to?		Appendix A: 4.1 – Risk assessment
8 (d)	Are there any investment risks that appear to be unmanaged by the Authority?		Appendix A: 4.1 – Risk assessment
8 (e)	How well is the Authority placed to deal with any future tail risk event (e.g. a repeat of the Global Financial Crisis, a severe liquidity crunch resulting in counterparty failure) on the Fund?		Appendix A: 4.1 – Risk assessment
8 (f)	How does the Authority consider the impact of their investment positions on total risk and expected return distribution?		Appendix A: 4.2 – Risk reporting 5.3 – Performance and compliance reporting
8 (g)	How are risks not captured by volatility measures (e.g. credit risk, counterparty risk) captured in their risk management models and have they been captured appropriately?		Appendix A: 4.1 – Risk assessment
8 (h)	Is cash collateral and the resulting credit risk exposure to the Fund appropriately managed?		Section 9: Derivative strategy
8 (i)	How is concentration of counterparty risk managed and how is the Fund exposed to this?		Section 9: Derivative strategy
8 (j)	Is there an adequate stress testing programme?		Appendix A: 1.5 – Stress testing
9	***Derivatives***		
9 (a)	Is the derivatives strategy appropriate for the Authority?		Section 9: Derivative strategy
9 (b)	Are the operational procedures for managing derivatives exposure appropriate?		Section 9: Derivative strategy
9 (c)	How is the Authority measuring derivative exposure and is it being done in an appropriate manner?		Section 9: Derivative strategy
9 (d)	What methodologies are used to calculate the market risk related to derivatives and is it appropriate for the Authority?		Section 9: Derivative strategy
9 (e)	How are other non-market derivative risks (e.g. counterparty risks) calculated and are the methodologies appropriate for the Authority?		Section 9: Derivative strategy

Section	Treasury Guideline and Expected Outcome	Assessment	Report Reference
9 (f)	Does the Authority calculate non-market risk limits related to derivative exposure and is the methodology prudent for GSFA?		Section 9: Derivative strategy
10	***Emerging Trends***		
10 (a)	Use of Fund Investment Vehicles1 (FIVs): The Authority are proposing a legislative bid that, if successful, would allow them to use FIVs are part of their investment operations. A similar bid in 2015 by Guardians of New Zealand Superannuation Fund has enabled them to use FIVs and the Authority is seeking the same outcome. Is this a worldwide practice and is it appropriate for the Authority?		Section 10: Use of Fund Investment Vehicles

[1] FIVs are similar to SPVs and are entities formed or controlled by a fund for the purpose of holding, facilitating or managing investments in the fund. They are used to structure and access investments more efficiently and help minimise liability and risk.

Appendix A – Summary of findings and recommendations

This section provides a summary of our assessment of the Statutory Review for the Fund against the key governance factors, noting the strengths that we observed, as well as the opportunities for improvement. Appendix B outlines our compliance assessment of the Fund against the Section 19B of the Government Superannuation Fund Act 1956 and the investment covenants under section 15D of the Act.

Legend:		
Rating	Green	Amber
Definition	Framework/Approach is fit for purpose	Areas for development identified

Governance Factor	Factors considered	Assessment	Strengths	Development opportunities
1.0 Strategy	1.1 Overall Entity Strategy	Green	GSF's overall strategy is to maximise the Fund's return and to reduce the government's funding requirements, which is funded out of the budget. Both the Board and Management is clearly aware of the investment strategy and it is documented in the Statement of Investment Policies, Standards and Procedures (SIPSP).	

Governance Factor	Factors considered	Assessment	Strengths	Development opportunities
	1.2 Investment principles		Investment principles and beliefs are clearly documented in the SIPSP and the Statement of Intent. Based on our conversations with the Board and Management, both stakeholders are able to accurately articulate the key investment principles and beliefs. The Responsible Investments policy was rewritten in 2012 to specifically exclude: • Manufacture of cluster munitions • Testing of nuclear explosive devices • Manufacture of anti-personnel mines • Manufacture of tobacco • Processing of whale meat The policy also includes the use of Collective Investment Vehicles (CIVs) and the practicalities of implementing Environmental, Social and Governance (ESG) considerations in these investments. We believe this was a positive development.	Based on our conversations with the Board and Management, both stakeholders are able to clearly articulate GSF's views on active management (i.e. GSF will engage active managers where they believe managers can add value on an after-fee basis). We note that active versus passive management is an important investment strategy that is not currently well documented in the SIPSP. We recommend that the SIPSP should be updated to reflect the Board and Management's views above. GSFA invests with active managers for global fixed interest. The Fund's Global Fixed Interest portfolio underperformed the benchmark (Barclays Global Aggregate Index) over the 1 and 3 years to 31 December 2015 (before New Zealand tax and after investment fees). In the latest CEM report, GSFA identified that the overall higher fees were due to the global fixed interest sector, where a number of peers are passively managing global fixed interest. In addition, GSFA has a dedicated Emerging Markets manager which attracted a higher base fee. At some point, the Board should revisit these decisions, determine which asset classes should continue to be actively managed to add value and whether GSFA can capture manager alpha if it exists. The Board should therefore seek appropriate information to revisit the business case to determine whether paying active fees for some of these asset classes is justified.

Governance Factor	Factors considered	Assessment	Strengths	Development opportunities
	1.3 Formulate appropriate investment strategy		The establishment of the investment objectives are clear and well documented in the SIPSP. The use of a Reference Portfolio and Target Portfolio are clearly defined and well documented. A brief overview of the Reference Portfolio and the Target Portfolio is outlined in Section 1: Background. In our view, the assets are appropriate for the liabilities. The annual health check is undertaken by an external provider.	The Authority is aware that the Fund is significantly underfunded (i.e. liabilities exceed assets). As a result, asset/liability modelling is not considered in formulating the investment strategy. Our view is that whilst asset projections are not considered at this stage, the Fund's assets are expected to decline over time. As a result, the asset classes appropriate for the current Fund may not be appropriate for a smaller or declining Fund. For example, the Fund is currently invested in Private Equity, where diversifying across sectors and vintage years is important to capture illiquidity premium and develop a well balanced portfolio from a risk/return perspective. The Fund's assets are expected to decline over time, which is not an issue right now. However, it will become more of an issue over time, and it is prudent to consider the asset term of maturity over the next five to twenty years. We believe this needs to be considered prior to any further investment in illiquid assets. On this basis, the Authority should consider incorporating actuarial asset projections when formulating the investment strategy.

Governance Factor	Factors considered	Assessment	Strengths	Development opportunities
	1.4 Portfolio construction		The Management team attends a large number of investment manager meetings and these meetings are documented in the Board papers. In addition, the team supplements their internal research with the Mercer GIMD software and seek the advice of the Asset Consultant on an ad-hoc basis. We believe GSFA is well covered in the manager research space. In addition, we believe the Fund's range of investment managers is appropriate for a fund with $4 billion in assets.	Based on our discussions with key stakeholders, Management noted there have been some instances where investment manager fee negotiations were unsuccessful when undertaken at the completion of the manager search process. This is mainly due to the fact that investment managers are unlikely to negotiate on fees if they already they know the outcome of the RFP search. We recommend bringing the fee negotiations earlier in the RFP process, and in renegotiating fees in conjunction with increased mandate size and/or in periods of manager underperformance In addition, we note the Independent Review recommended that fee negotiations could be undertaken by the CFO or the Chief Executive, whose roles are generally independent of the investment team. We therefore agree that fee negotiations are often better performed by someone outside the investment team. Although these individuals need to be familiar with the negotiating protocols and have an awareness of the level of fees available in the marketplace.
	1.5 Stress testing		The Asset Consultant undertakes the stress testing of market events on a semi-annual basis. These results are included in the Board papers. We have reviewed the outputs in the September 2015 quarterly investment report and believe the scenarios used are appropriate and in line with industry practice.	We note, however, that there is little usage for the market stress testing. There are no clear 'trigger points' (i.e. warning signals) for interim reviews or action points documented in the SIPSP and/or the Investments Operations Manual. Stress testing should be used in formulating an appropriate investment strategy. The selected scenarios should be used to determine the total impact to performance and assess how well diversified the strategy is during extreme conditions. The actual trigger points will depend on the Board's risk appetite. For example, if the stress testing results show a 30% decline in the Fund's assets, then the Board may wish to undertake a review of the Reference Portfolio and Target Portfolio.

Governance Factor	Factors considered	Assessment	Strengths	Development opportunities
	1.6 Liquidity testing		Fund liquidity profile is now reported to the Board on a quarterly basis, following a recommendation from the 2011 Statutory Review. The liquidity test assesses the required liquidity in Global Bonds for 30% depreciation in the NZD/USD and the available liquidity. We have noted the Fund liquidity test in the September 2015 quarterly investment report. We do not have any issues regarding the liquidity testing process.	We note there is little documentation on liquidity stress testing in the SIPSP and/or the Investment Operations Manual. We recommend the SIPSP and/or the Investment Operations Manual should be updated to describe the purpose of the Fund Liquidity Test: - Ensure sufficient liquidity is maintained to meet the Fund's liquidity needs; and - Ensure the Fund remains within the strategic asset allocation ranges.
2.0 People	2.1 Roles and responsibilities		There are clear roles and responsibilities between the Board, Investment Committee and Management. The Board approves all investment manager selection and termination decisions. In terms of DAA and currency tilting decisions, the Board set limits and ranges and Management works within the confines of these ranges.	The Board is responsible for manager selection and Management is responsible for strategic tilting decisions (i.e. DAA and currency decisions). The potential impact of DAA and currency decisions (i.e. +/- 10% weighting times an asset class return differential of up to 20%) may have a greater influence on performance than the contribution from manager selection (i.e. +/- 3% alpha times a manager weighting of 5-10%). This creates an imbalance of decisions made by the Board and Management. As a result, there may be a disconnection between Board and Management's decisions and delegations. The rebalancing and strategic tilting ranges could potentially be reviewed (if necessary); however, the role of the Investment Committee is currently being broadened in order to address these issues.
	2.2 Board		We note the investment skill on the Board is appropriate for the size of the Fund.	We note there is a risk that the investment expertise at the Board and Investment Committee level may change over time. Therefore, Treasury needs to ensure that there are appropriate skills in the future.

Governance Factor	Factors considered	Assessment	Strengths	Development opportunities
	2.3 Investment Committee			Under the current Terms of Reference, the Investment Committee is only required to meet once a year to approve proposed changes to the SIPSP and other relevant policies. All other investment related decisions are brought directly to the Board. The Investment Committee is currently undergoing changes to adopt a more prominent role in filtering and summarising investment decisions before progressing to the Board for approval. As recommended by the Independent Review, we agree there is merit in the Investment Committee meeting more often and having a greater mandate under its Terms of Reference. We believe the roles that potentially could be considered for the Investment Committee are: - Reviewing an appropriate investment risk budget; - Reviewing dynamic asset allocation ranges; - Reviewing derivatives exposures and counterparty risks; and - Reviewing the appointment and termination of investment managers. This will enhance GSFA's governance framework.
	2.4 GSF's in house investment team		The investment team is fully responsible for the day-to-day monitoring of the Fund. Any proposed changes to the Fund are put forward as a recommendation from the investment team. The investment team may use ad-hoc advice from external advisors and/or collaborate with other CFIs. As a result, the investment team is aware that they are fully accountable for the performance outcomes of the Fund.	

Governance Factor	Factors considered	Assessment	Strengths	Development opportunities
	2.5 Quality and sufficiency of resources of in-house investment team		The investment team is well resourced and has an appropriate level of knowledge and skill to perform the day-to-day functions of managing GSF's investments. The General Manager of Investments is experienced and capable.	Based on our conversations with key stakeholders, there is some recognition that there is a key man risk in the investments team. We recognise that GSF is a relatively small Fund compared to other sovereign wealth funds, therefore it is unrealistic to hire an additional resource with the intention to succeed key staff members. However, we believe having a succession plan for key staff (i.e. a documented process on how to deal with short term staff losses) would be beneficial. An example of a succession plan would be to give the Asset Consultant a greater involvement in the investment process until a suitable candidate has been appointed and adequately trained.

Governance Factor	Factors considered	Assessment	Strengths	Development opportunities
	2.6 Compensation practices		As outlined in 2.4 above, the investment team is held fully accountable for the performance outcomes of the Fund. There is an adequate level of performance-based incentives for the investment team based on the Fund's performance against the Target Portfolio and the Reference Portfolio. The incentive program is based on a combination of qualitative contribution to individual objectives (e.g. staff culture, project priorities and individual contribution), and fund performance. These two conditions are equally weighted. The Fund performance component considers three different performance metrics relevant to the GSF: - Reference Portfolio performance against New Zealand Government Stock + 2.5% over 10 years; - Target Portfolio performance against Reference Portfolio + 2.0% over 3 years; and - Actual Portfolio performance against Target Portfolio + 1.0% over 3 years. All three performance measures are based on average performances over a minimum of 3 years. We have reviewed the conditions of this performance based incentives and believe they are fair and appropriate.	
	2.7 Asset Consultant		The Asset Consultant and other advisors are used by Management on an ad-hoc basis. There is little interaction between the Board and the advisors. All recommendations brought to the Board and/or Investment Committee are formulated by Management. As a result, Management has full accountability on all recommendations put forward.	The Board has access to its own independent advisor. However, we note over the past 5 years, the Board has minimised the reliance on the use of external advisors. For specific issues, we encourage the Board to obtain advice of an independent advisor to help ensure that fully informed decisions are made. This independent advisor may be required to attend Board meetings on an ad-hoc basis. The role of the advisor should be clearly documented.

Governance Factor	Factors considered	Assessment	Strengths	Development opportunities
	2.6 Collaboration		There is evidence of collaboration with other CFIs to gain insights in the development of the Fund's investment approach and operations. There is a regular formal collaboration forum with the investment teams across the Treasury's CFIs. Previous outcomes include research into Responsible Investments and the sharing of the costs associated with this research.	
3.0 Conflict of Interest Management	3.1 Individual conflicts of interest		The Board is required to report on declared interests (i.e. directorships on other organisations) on a monthly basis. This is reported in the Board papers for each meeting. Management is required to declare financial interests in companies on a six monthly basis. This is documented in the Management's Acceptable Conduct Policy.	The Board is not required to report on any financial interests that may be considered a conflict of interest, other than directorships on other organisations. Given the Fund has a fully outsourced investment model (i.e. investments are outsourced to external investment managers and GSFA do not engage in any direct investments), then this arrangement is appropriate. If the Fund's circumstances change (e.g. making direct investments), then this policy should be revisited.
	3.2 Entity conflicts for both related parties and/or internal teams		GSFA's main purpose is to maximise the Fund's return and to reduce the government's funding requirement. The investment function is outsourced to external investment managers and GSFA do not offer competing investment products. As a result, GSFA do not have internal entity conflicts which may hinder their ability to operate independently.	

Governance Factor	Factors considered	Assessment	Strengths	Development opportunities
	3.3 Responsible person conflicts of interest		Management regularly undertakes the rebalancing of assets and issue currency forward instructions to a third party provider. The Board sets the ranges and limits, as documented in the SIPSP, and Management operates within these ranges. There are defined delegations within Management to sign off on any security transactions or execution of documents considered necessary or expedient in the conduct of the investment arrangements. Specifically, any two of the Chief Executive, General Manager (Investments), General Manager (Schemes) or the Chief Financial Officer is required to approve these instructions.	
	3.5 Service provider conflicts of interest			We have observed that an external advisor provides dynamic asset allocation advice and economic signals for GSF's internal team. This external advisor also offers a commercial product which incorporates this advice. Based on conversations with Management and the Board, there have been instances where the external advisor did not implement their own investment signals. When this occurs, Management will provide a full report to the Board documenting the reasons behind these decisions. We believe this is evidence of good governance; however, we believe this is not currently documented in the SIPSP or the Investments Operation Manual. We recommend these policies should be updated to reflect Management's approach to managing these conflicts. For example, in connection the external advisor's input to dynamic asset allocation, there should be a clear statement in these policies stating that Management will outline the advice provided by the advisor, including economic signals as well as the dynamic asset allocation positions implemented for the advisor's commercial product and Management's overall views and recommendations.

Governance Factor	Factors considered	Assessment	Strengths	Development opportunities
4.0 Assessment of risks	4.1 Risk assessment appetite		There are defined delegations for reporting GSFA's operational risk and investment risk. Operational risk, and other risks impacting financial statements, is reported to the Audit & Risk Committee. Investment risk is reported directly to the Board in the quarterly reports. Management is responsible for calculating a number of risk metrics (e.g. volatility, return/volatility, Sharpe ratio, beta to global equities, tracking error and information ratio). The Asset Consultant is responsible for forward looking risk assessments, which includes analysis using the RiskMetrics software, return distributions, volatility decomposition CVaR and stress testing. We have reviewed the quarterly reports containing this information. We do not have any issues regarding the metrics shown in these reports.	As reported previously, the asset projections are not significant inputs in formulating the investment strategy. In some circumstances, such as the investment in private equity, this may expose the Fund to illiquidity risk in the future. Within private equity, diversifying across sectors and vintage years is important to capture illiquidity premium and develop a well balanced portfolio from a risk/return perspective. Without considering the Fund's asset projections, the Fund may be exposed to illiquidity risk in the future. The Fund's assets are expected to decline over time, which is not an issue right now. However, it will become more of an issue over time, and it is prudent to consider the asset term of maturity over the next five to twenty years. We believe this should be considered prior to any further investment in illiquid assets. On this basis, the Authority should consider incorporating actuarial asset projections as part of the risk assessment for individual asset class reviews. Risk budgeting is a process for the Board to deduce and allocate an acceptable level of risk for individual investment managers and different types of decisions (e.g. currency hedging, dynamic asset allocation etc.). We recommend the Board should adopt a policy on risk budgeting. Specifically, this will assist the Board to: - Identify an appropriate risk appetite; - Determine where to allocate the risk budget (e.g. asset allocation, dynamic asset allocation, manager selection etc.); - Ensure the risk budgets are aligned to the Board, Investment Committee and Management's collective views; and - Document these investment principles and procedures.

Governance Factor	Factors considered	Assessment	Strengths	Development opportunities
	4.2 Reporting of risks		The Board receives comprehensive reporting of risk metrics and the stress testing results are included in the quarterly reports. The level and quality of the risk reporting framework is strong.	
	4.3 Derivatives risk		We have outlined the appropriateness of the Fund's derivative strategy in Section 9 of this report.	
5.0 Reporting to Board/ Committee	5.1 Regular reports		Regular reporting provided to the Board has a clear and concise market update, Fund performance and attribution analysis, risk analysis, stress testing and liquidity testing, asset allocation and manager developments.	
	5.2 One off reports		One-off reports to the Board have a consistent format with clear recommendations to the Board. All papers, with the exception of the Annual Health Check, are prepared by Management for the Board. This is to ensure that the investment team is held fully accountable for any recommendations and the performance outcomes of the Fund. Management may request input from the Asset Consultant, external advisor or other CFIs on an ad-hoc basis.	Where the Asset Consultant or external advisor has been used, we believe there are circumstances when their reports and recommendations should be included in the Appendix section of the Board papers. This enables the Board and/or Investment Committee to have a greater level of insight into the decision making process, and any difference in views and any difference in views. We believe the circumstances where this is appropriate are: - There are differences in views between Management and the Asset Consultant or external advisor and it is in the Board's best interest to be made aware of these differences in views; and - The Board's expectation that expert advice is required on specialised topics.
	5.3 Performance and compliance reporting		Performance and compliance reporting is undertaken by JP Morgan (GSF's custodian). In addition, attribution analysis is also undertaken by JP Morgan, which is directly transferred to the Board's investment papers. We believe this is a good approach for an operationally independent organisation to calculate performance returns.	

Governance Factor	Factors considered	Assessment	Strengths	Development opportunities
6.0 Decision making	6.1 Quality of information provided for decision making		Due diligence checklist used for manager recommendations is clearly documented in the Investment Operations Manual.	As reported previously, we recommend bringing the fee requests earlier in the RFP process.
	6.2 Timeliness of actions		The GSFA has a work schedule that clearly documents the planned investment related projects from previous Board meetings and an outline of the current situation and planned deadline. This work schedule is included in the Board papers.	
7.0 Compliance	7.1 GSF Act 1956 requirements		Assessment of the Fund's operations against the GSF Act 1956 is documented in Appendix B.	
	7.2 Policy documentation		Overall, we believe GSF's policies, standards and procedures are appropriate and fit for purpose.	We believe an overarching document should be established to connect all the relevant policies, procedures and operational manuals associated with investments to make the structure and location of documents clearer. This overarching document could be incorporated as part of the 'Corporate Governance Statement' or as a separate document.
8.0 Outcomes	8.1 Material Changes since the 2011 Review		An assessment of the material changes since the 2011 Statutory Review is summarised in Section 3 of this report. In our view, the changes made over the past 5 years were based on well-considered views and the Board followed the appropriate processes in making these decisions. Our key findings and development opportunities are based on the execution of the Board's investment governance framework.	
	8.2 Performance assessment		An assessment of the Fund's performance is summarised in Section 7. The Fund outperformed the Reference Portfolio (before New Zealand tax and after investment fees) over the past 1, 3, 5 and 10 years as at 31 December 2015.	

Governance Factor	Factors considered	Assessment	Strengths	Development opportunities
	8.3 Reporting to Treasury			As the key stakeholder and the ultimate beneficiary of the CFI portfolio, we believe Treasury should develop comparative reporting capabilities across CFIs to adequately assess the collective risk across all CFIs. Further details are provided in Section 11.

Appendix B – Compliance with section 19B and 15D of GSFA Act 1956

LEGEND	
G	We have identified policies or frameworks which broadly address the requirements and evidence to support it
A	Indicates areas identified where policies could be improved
R	Indicates areas where we have identified gaps in compliance

	Fund	Government Superannuation Fund Authority
GSFA Act 1956	**Fund documents reviewed**	1. Statement of Investment Policies, Standards and Procedures (SIPSP) 2. Investment Operations Manual 3. Corporate Governance Statement 4. Management Service Agreement (MSA)

Section Ref	Para.	Requirement	Government Superannuation Fund Authority
Functions	15D (1)	The functions of the Authority are to manage and administer the Fund and the schemes in accordance with this Act.	SIPSP, Section 1.1 states the Authority was established to administer the fund in accordance with the GSFA Act 1956
	15D (2)	The Authority is not a trustee, or a constructive trustee, in relation to the exerciseof its functions or to any other matter (except as otherwise provided insection HR 4 of the Income Tax Act 2007 for tax purposes).	SIPSP, Section 2.1 states the Authority has outsourced key activities of scheme administration and investment management (including custodian of the Fund's assets).
	15D (3)	The functions of the Authority include, if the Minister so directs in accordance with section 112 of the Crown Entities Act 2004, the provision of services in respect of any fund or superannuation scheme that is— (a) managed by the Crown or a Crown entity or an entity whose board is appointed by the Crown; and (b) approved by the Minister for that purpose.	SIPSP, Section 1.1 the Authority is an autonomous Crown entity under the Crown Entities Act 2004
	15D (4)	Those services may be provided on any terms and conditions that the Authority's board thinks fit, but must not place or have the potential to place a liability or a contingent liability on the Fund.	SIPSP, Section 2.1 (page 4) the board is the governing body of the authority and responsible for making all decisions relating to the fund MSA, Page 39 (part 10) Personnel will exercise reasonable care when employing entities' resources, and will not use them for other than authorised purposes and will incur no liability on behalf of the employing entities without proper authorisation,

		Fund	Government Superannuation Fund Authority
Performance reviews	19B (1)	From time to time, there must be conducted a review of how effectively and efficiently the Authority is performing its functions under section 15D.	We have assessed how effectively and efficiently the Authority is performing its functions under section 15D in Section 4 of this report.
	19B (2)	The first performance review must be conducted no later than 5 years after the operative date.	The first review was undertaken by Mercer in 2006.
		Subsequent performance reviews must be conducted at intervals that are no more than 5 years apart (to be set by the Minister).	The second review was undertaken by JANA in 2011. This report satisfies the legislation that the performance reviews must be conducted at intervals that are no more than 5 years apart.
		The Minister must set the terms of reference for the review, which must include (without limitation) requirements that the reviewer form an opinion about— (a) whether or not the investment policies, standards, and procedures established by the Authority are appropriate to the Fund; and (b) whether or not the investment policies, standards, and procedures established by the Authority have been complied with in all material respects; and (c) the investment performance of the Fund.	The terms of reference for this review is set out in Section 12 of this report. We have provided responses to each of these guidelines and expected outcomes. The assessment of whether or not the investment policies, standards and procedures established by the Authority are appropriate to the Fund and whether or not the policies established by the GSFA have been complied in all material respects are set out in Section 5 of this report. The assessment of the investment performance of the Fund is set out in Section 7 of this report.
		Every performance review must be conducted by an independent person appointed by the Minister.	At the time of writing this report, we are not aware of any conflict of interest, which would impact our ability to undertake this review as an 'independent person'.
		Every person who conducts a performance review must, as soon as practicable after conducting it,— (a) prepare a written report on the conclusions reached and recommendations formulated as a result of conducting it; and (b) give copies of the report to the Minister and the Authority.	We confirm this written report satisfies this requirement
		The Minister must present a copy of the report to the House of Representatives as soon as practicable after receiving it.	Confirmed
		The costs of conducting a performance review must be met out of money appropriated by Parliament for the purpose.	Confirmed

Appendix C – Matrix of Responsibility

	Impact on Performance			Board	Investment Committee (current)	Management	Primary Asset Consultant	Other Adviser(s)	Custodian
		Strategic Tilting							
	High	-	Formulate tilting positions	Note	Note	Recommend / Approve	n/a	Input	n/a
	High	-	Currency tilting positions	Note	Note	Recommend / Approve	n/a	Input	n/a
	High	-	Security transactions	Note	Note	Approve	n/a	n/a	Generate
	High	-	Peer review of transactions	n/a	n/a	Approve	n/a	n/a	n/a
	High	-	Sign off on transactions	Note	Note	Approve	n/a	n/a	Note
	High	-	Monitoring of positions	Note	Note	Approve	n/a	n/a	Generate
	Policy	-	Formulation of ranges	Approve	Note	Recommend	Input	n/a	n/a
		Manager Selection							
	Low	-	Manager Research	n/a	n/a	Generate / Approve	Input	Input	n/a
	Medium	-	Manager Appointment	Approve	Note	Recommend	Input	n/a	n/a
	Medium	-	Manager Terminations	Approve	Note	Recommend	Input	n/a	n/a
	Medium	-	Monitoring of compliance	Note	Note	Approve	n/a	n/a	Generate
		Monitoring							
	Medium	-	Rebalancing decisions	Note	Note	Recommend / Approve	n/a	n/a	n/a
	High	-	Risk monitoring	Approve	Note	Review	n/a	n/a	Generate
	High	-	Compliance monitoring	Approve	Note	Review	n/a	n/a	Generate
	Medium	-	Annual Health Check	Approve	Note	Input	Generate	n/a	n/a
		Policy							
	Policy	-	Review of SIPSP	Note	Approve	Recommend	Input	Input	n/a
	Policy	-	Review of investment objectives	Approve	Note	Recommend	Input	Input	n/a
	Policy	-	Review of investment strategy	Approve	Note	Recommend	Input	Input	n/a

Appendix D – Disclaimer

Our work has been conducted for the sole use and benefit of the *Treasury (New Zealand)* in the *Statutory Review of the Government Superannuation Fund Authority* and for no other purpose. No third party may use or rely on our work for any purpose.

Our responsibilities and liabilities are to *Treasury (New Zealand)* in the context of the use of our report for the purpose set out above. We do not accept any liability or responsibility in relation to the use of our report for any other purpose.

This report must be read in its entirety. Individual sections of this report could be misleading if considered in isolation from each other.

All reasonable care has been taken to provide performance and investment data that are accurate. However, we have relied on a range of external sources for data. As a result, we are unable to guarantee the accuracy of the data contained in this report.

The advice contained in this report is based on the circumstances of the *Treasury (New Zealand)* as a whole. It does not take into account the specific circumstances of any individual.

Past performance is no guarantee of future performance and investment markets are volatile. PricewaterhouseCoopers Securities Limited does not guarantee that any specific level of returns will be achieved.

Catherine Nance, FIAA
Retirement Incomes and Asset Consulting

Authorised Representative (#265248) of
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