

## **Your Future, Your Super Review**

This Submission is prepared in response to the Australian Government Treasury Consultation Paper ‘Your Future, Your Super Review’, dated 7 September 2022. I thank you for the opportunity to submit a response.

This submission is made in a personal capacity.

### **About the Author**

I have been an active member of the Australian investment and superannuation industry for over 40 years, with extensive experience across regulation, investment management, investment consulting and superannuation.

I have held positions with AFSL, or equivalent, holders ranging from graduate recruit to Board Chairman.

I am currently a Responsible Manager for Active Super.

### **Disclaimer**

The views and opinions expressed in this submission are those of the author and do not reflect the views of any organisation to which I am associated.

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## **Your Future, Your Super Review**

This Submission is prepared in response to the Australian Government Treasury Consultation Paper ‘Your Future, Your Super Review’, dated 7 September 2022, the purpose of which, “is to seek feedback on any unintended consequences and implementation issues from the YFYS measures”.

This Submission will principally focus on the consequences (unintended or otherwise) arising from both the structure of, and interaction between, the Performance Test, the Consequences of Failure of the Test (CoF), and the Best Financial Interests Duty (BFID).

Some passing comments will be made on implementation issues as they relate to these consequences.

### **Overview**

The Performance Test is a deeply flawed measure for assessing the performance of superannuation fund investment options as it is based on a theoretical and regulatory structure that does not align with the reality of investment markets and is not supported by objective analysis.

As a result, the unintended consequences on superannuation funds’ investment decisions are both large, and significantly adverse for members’ outcomes.

### **Economic Efficiency**

The foundational approach to modern financial regulation in Australia was set out in the Final Report of the Committee of Inquiry into the Australian Financial System (the Campbell Committee) in September 1981.

In its Final Report the Committee noted that:

“The Committee starts from the view that **the most efficient** way to organise economic activity is through a competitive market system which is subject to **a minimum of regulation and government intervention.**” (Section 1.1: Emphasis added)

When discussing intervention into markets the Campbell Committee Report stated that:

“As a general proposition **market-oriented intervention** is most desirable on efficiency grounds because it influences the broad spectrum of supply, demand and cost of credit across the entire financial system. Also, it can be designed so as not to distort the relative competitive standing of different lenders and borrowers. By contrast **direct regulation not only interferes with the allocation of funds** but reduces the ability of the financial system to respond flexibly to changes in the operating environment.” (Section 1.56: Emphasis added)

The current regulatory structure around investment decisions in the Australian Superannuation System – which principally dates back to the introduction of ‘MySuper’ regulations - is distinctly at odds with the core beliefs put forward by the Campbell Committee.

Indeed, the effects of the current regulatory structure on investment decisions and economic outcomes appear likely to be materially the same as those arising from the regulatory structure established after World war II, the deleterious effects of which the Campbell Committee sought to address.

The combined structure of regulation, incorporating Stronger Super / MySuper, RG97, and the APRA Heatmap is deeply flawed. The YFYS Performance Test is merely the putrefied cherry on top of this rotting regulatory cake.

## **Heatmap Strategic Asset Allocation Benchmark Portfolio Test and the Performance Test**

The immediate antecedent to the Performance Test is the APRA Heatmap, which is applicable to MySuper and some Choice investment options. (There are many flaws in the Heatmap - far too numerous to catalogue here.)

The APRA Heatmap contains 3 Investment Performance measures. The ‘Net Investment Return (NIR) vs Strategic Asset Allocation (SAA) Benchmark Portfolio’ is one of these measures. It is notable that, except for a relatively minor adjustment for administration fees (the RAFE), **the Strategic Asset Allocation Benchmark Portfolio Test in the Heatmap is identical to the Performance Test.**

Give this, it is notable that APRA did not classify the ‘Net Investment Return’ versus the ‘Strategic Asset Allocation Benchmark Portfolio’ test in the original Heatmap in 2019 as **being a tool that was “most informative and useful to consider when assessing investment performance”**.

In its Information Paper released with the original Heatmap in November 2019, (Heatmap – MySuper products. Australian Prudential Regulation Authority. November 2019), APRA stated in that:

“The default view for the Heatmap is a concise view, **which highlights a subset of metrics that APRA considers most informative and useful** to consider in assessing the outcomes being delivered by RSE licensees.”

The Strategic Asset Allocation Benchmark Portfolio test (i.e. the YFYS Performance Test) measure is **not included** in the concise view of metrics in the Heatmap. This indicates that APRA did not consider the YFYS Performance

Test to be among the “most informative and useful to consider in assessing the outcomes being delivered by SRE licensees”.

The elevation, a mere 2 years later, of this measure, in the guise of the YSYF Performance Test, to being the be-all and end-all for determining whether superannuation fund options had performed ‘well’ or ‘poorly’ should be clearly explained and justified by APRA and/or the Treasury.

At a minimum, members of Australian superannuation funds have a right to see and be able to comment on, the detailed analysis which underpinned this radical change in the superannuation industry’s regulators’ stance on this measure.

### **Scope**

Under the heading ‘Purpose’ in the Consultation Paper Treasury notes that:

“The purpose of this review is to assess any unintended consequences and implementation issues of the YFYS legislation. The review will cover all four elements of the YFYS measures. **It will not address other issues unless they are directly related to the implementation or associated outcomes of the YFYS legislation.** The focus of this review is on ensuring that Australian superannuation funds **perform better**, delivering dignity in retirement, and **avoiding perverse outcomes for members.**” (Consultation paper, p4)

Influences on the investment decisions made by the Trustees of Registrable Superannuation Entities (RSE’s) involves a complex interaction between the Performance Test, the APRA Heatmap, ASIC’s Regulatory Guide 97 (RG 97), MySuper legislation requirements (Dashboard and Disclosure), and Financial Planning Regulations (RG 175).

In particular, the Performance Test compounds the effects that the focus on fees has for investment decisions – with a particular impact on alternative investment classes. (‘Costs and Fees’ is discussed in Annexure A.)

As a result, to assess sources of, and to avoid, ‘perverse outcomes for members’, it is necessary to consider the wider regulatory framework within which superannuation funds operate. To restrict this Review only to the specifics of the YSYF legislation and implementation means that the underlying structural causes of perverse outcomes will be excluded.

Note: This was a mistake made in the ASIC Review of RG97<sup>1</sup> (McShane) in 2018, which constrained the Review to not considering issues outside the structure that ASIC had adopted. McShane noted the constraint imposed in his Review and that:

“To the extent that the regulatory direction is constrained by the need to deliver the interpretation of the Stronger Super Reforms that ASIC has applied, then it is difficult to depart from the current approach or suggest any material changes to it.” (McShane p8)

The net result has been that neither the McShane Review, nor any other review conducted post the Cooper Review<sup>2</sup> over a decade ago, has sought to address the overall regulatory framework effecting superannuation investment.

Therefore, while it is APRA’s desire to restrict this Review only to “any unintended consequences and implementation issues of the YFYS legislation”, doing so would effectively render the Review incapable of addressing the underlying factors that are the principle causes of those unintended consequences and implementation issues.

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<sup>1</sup> Report 581: Review of ASIC Regulatory Guide 97: Disclosing fees and costs in PDSs and periodic statements (McShane: July 2018);

<sup>2</sup> Super System Review 2010)

## **Measurement Framework**

The Consultation Paper notes that the Performance Test was introduced “to protect Australians’ retirement savings by holding trustees to account for the investment performance they deliver and the fees they charge to members”.

A central premise of this objective is that the Performance Benchmark selected is in fact ‘good’, and hence a failure to outperform the benchmark constitutes a poor outcome.

Unfortunately, there are **no objective measures that establish that the SAA Benchmark used in the Performance Test is ‘good’**.

### ***Clear and Objective Criteria***

The Productivity Commission Review, “recommended a clear and objective test for the ‘right to remain’ in the super system”, while Treasury asserts in the Review Consultation Paper that:

“A clear and objective performance test would improve performance and accountability of funds by using clear and objective benchmarks and consequences of not meeting those benchmarks.”

There is however no evidence available to support this contention in the context of the Australian Superannuation system. Indeed, there is clear evidence that the Performance Test is neither ‘Clear’ nor ‘Objective’ or that the SAA performance benchmark on which it is based is ‘good’.

It is almost self-evident that the Performance Test does not meet the requirement of being ‘Clear’. The uncertainties and errors in the mapping of actual asset allocations to the Performance Test asset classes has been widely

discussed. While I would expect that others will provide submissions detailing these deficiencies, I would note that the most egregious include:

- Lack of granularity due to the use of high level / aggregate indexes that fail to reflect the reality that Funds' SAA decisions commonly extend to sub-categories such as small capitalisation stock in Australian equities, or emerging market equities and bonds.
- Significant duration mismatches between fixed interest indexes and a wide range of SAA asset classes that fall under that categorisation (including short-dated / floating credits, collateralised obligations, High Yield bonds, and very long dated infrastructure debts).
- Management Fees on unlisted assets. There is a fundamental flaw with how the Performance Test treats asset classes which only exist with the application of manager skill (and hence investment managers' fees).

For those asset classes such as listed equities or actively traded bond / debt securities, there is a real option of investing in an index, as these asset classes exist without the application of manager skill. (Although there is ample scope for discussion around the selection of appropriate indexes for various asset classes.)

For other, typically unlisted, asset classes such as private equity, distressed and special situations debt, hedge funds, and private credit, the current approach to index selection creates significant distortions stemming from the use of listed, or otherwise actively traded, indices. In each of these cases the asset class only exists if manager skill is applied. As a result, they cannot be invested in without also incurring investment management fees.



That is, the fee paid to managers (both base and performance) is a price that is paid for the creation of the asset class (not a fee or cost that reduces returns). Therefore, that price should be allowed for in the index return against which the performance of these asset classes is measured in the Performance Test (and Heatmap).

For Unlisted Property and Unlisted Infrastructure, this approach is applied, with managers' fees being embedded in – and therefore deducted from – the performance of the unlisted indexes selected.

For those asset classes whose returns are proxied by listed equity and / or bond indexes however, the manager fees inherent in creating the asset class are not being deducted from the proxy indexes. This creates a significant distortion in relative returns, and hence creates a significant bias against these unlisted asset classes. This distortion will mean that allocations to these asset classes will be less than in the optimal allocation that would otherwise have been the case if the Performance Test did not apply. **This distortion can be expected to lead to a reduction in the expected return of the superannuation fund option.**

The solution to this distortion is to be consistent with the approach applied to unlisted property and infrastructure, and deduct the asset class fee from the listed benchmark against which they are being compared.

For example, the average investment fee paid for private equity investments (i.e. the price of creating the asset class) is probably of the order of 150 BP per annum (More precise figures could be obtained from an unlisted benchmark provider such as Cambridge Associates). This fee should be deducted from the listed equity market return against which the Private Equity asset class is

benchmarked. The same should apply to the other unlisted asset classes that are benchmarked against listed indexes.

- **Lack of Risk Adjustment.** A basic premise of investing is that returns greater than the risk-free cash rate are achieved by taking investment risks. To be ‘Clear’ it is therefore necessary that the comparison between the SAA benchmark and a fund’s actual performance are comparable on a risk-adjusted basis. As the Performance Test does not contain any adjustment for investment risks actually taken, the results of the Test will therefore be inaccurate and misleading.
- **Monopoly pricing.** A hopefully inadvertent result of the introduction of the Heatmap and Performance Test has been to:
  - a. Create a high level of demand for the indexes selected by APRA. This has been the result of a combination of demand widening (with all superannuation funds, as well as their consultants, managers and advisors now effectively being required to have access to the index data), as well as increased focus on the selected indices. (i.e., If you are being measured in the Performance Test against an MSCI Equity Index, then you are likely to switch from a FTSE index that you may have previously been using to that MSCI Index.);
  - b. Place the index providers in the position of monopoly suppliers. Unsurprisingly the favoured index providers have responded predictably, with the price of index data paid by Funds and the broader industry) increasing significantly over the last few years.

To correct for this significant increase in costs, APRA should seek to balance monopoly supply with monopoly demand by negotiating an

industry wide supply contract with the supplier of each index used in the Performance Test. This would produce an immediate and significant reduction in the costs of superannuation fund operations.

In the event that an index provider refused to enter into an industry wide agreement, then the regulator should either change the index used, or sponsor the establishment of an new index provider to develop alternative indexes.

## **Objective**

While it is clear that the Performance Test does not measure up to the criteria of being ‘Clear’, it is less clear exactly what the Productivity Commission, APRA and the Treasury mean by the Performance Test being ‘Objective’.

One definition of ‘Objective’ is that a judgement is not influenced by personal feelings or opinions in considering and representing facts. We may believe that this is the case with ‘modern’ finance, which is widely accepted and therefore easily assumed to be non-judgemental in its analysis.

Unfortunately, this cannot be assumed to be the case. ‘Modern’ finance theory – which is now some 70 years old – is based on a branch of Neo-Classical Economics which makes a series of unrealistic assumptions about markets. In particular these include assumptions about market efficiency and information which, in the context of ‘Modern’ finance theory, imply that:

- a. Markets are a zero-sum game and therefore the only effect of active management is to reduce investor returns by the amount of any fees paid;
- b. Manager skill does not exist as markets are either random (i.e. efficient) or static (in equilibrium);
- c. Even if some managers add value they do not do so consistently; and therefore

- d. It is not possible for superannuation funds to select managers that will add value.

These concepts were initially introduced into the regulatory discussion by the Cooper Review and were imbedded in various forms from the introduction of the Stronger Super regime with its focus on 'low-cost' MySuper products and have been further extended as underlying premises in RG97, the Heatmap and the Performance Test.

Because of this underlying belief, investment management fees, which are actually the price paid to access manager skill and have a positive expected return, have been treated as a cost which reduces fund returns.

This conclusion is consistent with another aspect of neoclassical economics, namely that the economy is in some form of equilibrium. It is basic economics that there are four factors of production, land, labour, capital and enterprise. In modern finance theory however only three (land which gives rent, and labour + capital which give profits) exist. This is because if the economy is in equilibrium, there is no scope for learning or innovation. This is reflected in investment theory, which ignores the role of enterprise (i.e. manager skill) by assuming that it does not exist.

### **Manager Skill as an Asst Class**

In reality, we do not exist in a random economy (regulations would have no effect in a random world so it appears that APRA and the Treasury share this view), and neither is the economy in long-run static equilibrium (the fact that we are discussing the impact of new regulations implies that we are not). The economy and financial markets are in fact complex, in which case it is possible to create valuable insights through research and analysis and therefore generate a return from enterprise. Equivalently, manager skill should be treated as an

asset class which is just as impactful on investor returns as land, labour and capital.

It is still clearly the belief embedded in the superannuation regulatory structure that **investment management fees are a cost** which reduces fund returns. This belief is therefore presumably also held by regulators. However, **these beliefs do not line up with the actual experience of the Australian superannuation industry.**

For extended discussions and proofs see:

- Annexure B: ‘Consistency’
- Annexure C: ‘Australian Super – Hostplus Experiment’
- Annexure D: ‘Future Fund’
- Annexure E: ‘Investment Risk’

Put simply, the evidence shows that, in the real-world Australian investment industry:

- a. Markets are not a zero-sum game
- b. Markets are complex (not static or random) and therefore manager skill can exist
- c. Managers available to Australian Superannuation Funds do consistently add value; and
- d. Australian Superannuation Funds have successfully selected managers who add value.

Give these findings, it is clear that the regulatory structure around superannuation fund investments, is deeply flawed, and the Performance Test merely serves to exacerbate the extensive distortions to investment decisions already created by the structure.

Given the above, it cannot be said that the basis of the Performance Test is objective. Moreover, it is not valid to use a measure – the Performance Test – as a point of comparison, unless that measure can be demonstrated to be ‘good’. This is not the case with the Performance Test, as explained in Annexure F: ‘The Performance of SAA Benchmarks’.

Before considering implications of the above in more detail it is worthwhile considering one additional aspects of the impact of the Performance Test, on superannuation fund investment decisions – The Ratchet Effect.

As explained in Annexure G: ‘Ratchet Effect’, the combination of the design of the Performance Test and Superannuation Fund Trustees’ responses to the severe consequences of failure, will ensure that Superannuation Funds increasingly move to an indexed approach to investment, with corresponding reductions in returns to Fund members.

## **Implications**

There are many implications arising from the distortions to superannuation funds’ investment decisions already arising from the structure of regulations, which are being exacerbated by the Performance Test. Among those that appear most relevant:

1. As noted in Annexure C, the actual SAA’s of actively managed portfolios are significantly different to the SAA’s of their equivalent indexed portfolios.

Thus, the underlying assumption of the Performance Test that the SAA Benchmark is consistent with Funds’ actual SAAs invested in indexes is clearly and significantly incorrect. The result is that the Performance Test is assessing the actual performance of fund options against an

imaginary ‘straw man’, which does not exist and would never have existed.

2. The assumptions in the regulatory structure and the Performance Test that index investment is ‘good’ and therefore active management is ‘bad’ – with investment management fees paid by Superannuation Funds therefore expected to reduce returns – is not supported by objective analysis. The actual facts of investment performance in the Australian financial system over the last 10 years is that active management adds value.
3. The Performance Test, by imposing additional ‘risk costs’ on unlisted investments, as a result of their higher levels of relative volatility around benchmarks, will serve to significantly exacerbate the shift from direct / unlisted investments created by the extreme (and unwarranted) focus on investment fees to listed and indexed investments.

This will have significant effects of reducing portfolio diversification and resilience as well as altering the composition of unlisted investments,

For example, in the unlisted infrastructure and property asset classes, there will be an increasing bias towards riskier and higher returning investments which are expected to outperform the index. This will mean more investments in say emerging market infrastructure, which may previously have been considered too risky for the infrastructure asset class, and less in core or defensive infrastructure in Australia.

4. The Performance Test will also create a bias towards more certain, typically shorter time horizon investing. This is likely to impact the provision of equity to long-term ‘Nation Building’ investments, with Superannuation Funds less likely to risk providing equity capital which

may have extended 'J-curve' or pay-off periods, in favour of less risky debt investments. It can be expected that more of the equity component of these investments will be required to be provided by governments or offshore investors.

5. Multiple factors - Treating investment fees as a cost which should be reduced, the dynamics of Performance Test risk management ratchet, and the shortening of Fund investment horizons are all creating a bias towards indexed investing and reduced active management in Superannuation Fund investment portfolios.

The active/index experiment conducted by Australian Super and Hostplus clearly demonstrate the cost of indexing when compared to active management.

Similarly, the performance of the Future Fund demonstrates that manager skill is rewarded by consistently higher returns.

In addition, the reality is that the focus on 'low fees, RG97 and requirements such as the 'Consumer Advisory Warning' have already had the effect of reducing Funds' investments in actively managed assets. This can be seen in the significant increase in indexed investments across the industry over the last 10 years.

These existing and likely future changes to Funds' SAAs and investments are having, and will have, very significant costs in terms of lower returns to members.

To provide a concept of scale, if the impact of the Performance Test combined with existing structural distortions is to reduce returns on MySuper product (ignoring Choice products) by a conservative 1.5% per annum, the cost in lost returns to Superannuation Fund members would



be approximately \$13 Billion per year. This dwarfs any benefit that is expected to flow from the Performance Test.

6. To the extent that investment decisions motivated by the Performance Test alter Trustees investment decisions, and thereby reduce Funds' investment returns, then the Performance Test would appear to be inconsistent with the Best Financial Interests Duty.

## **Fees and Costs**

Fees and Costs as they relate to superannuation products are defined in ASIC Regulatory Guide 97 (RG97).

### **Disclosure in Product Disclosure Statements (PDSs)**

Disclosure of Fees and Costs in PDSs is required under RG97.33 items (b) – (e)

Moreover RG97.33 (a) requires the inclusion in PDS's of a 'Consumer Advisory Warning' which states that (emphasis added):

#### **“DID YOU KNOW**

**Small differences in both investment performance and fees and costs can have a substantial impact on your long-term returns.**

For example, total annual fees and costs of 2% of your account balance rather than 1% could reduce your final return by up to 20% over a 30-year period (for example, reduce it from \$100,000 to \$80,000).

You should consider whether features such as superior investment performance or the provision of better member services justify higher fees and costs.

You or your employer, as applicable, may be able to negotiate to pay lower fees. Ask the fund or your financial adviser.

#### **TO FIND OUT MORE**

If you would like to find out more, or **see the impact of the fees based on your own circumstances**, the Australian Securities and Investments Commission (ASIC) Moneysmart website ([www.moneysmart.gov.au](http://www.moneysmart.gov.au)) **has a superannuation calculator to help you check out different fee options.”**

While the Consumer Advisory Warning does reference the potential for “superior investment performance ...to justify higher fees and costs”, it is clear from the prominence given, that the primary emphasis and message is that all fees and costs will be more likely than not to reduce long-term returns.

The Consumer Advisory Warning includes a link to the Retirement Planner Calculator at [Moneysmart.gov.au](http://Moneysmart.gov.au).

Several cases were modelled on the Retirement Planning Calculator using the following assumptions:

Current Age: 55  
Income: \$100,000 p.a.  
Super Balance: \$500,000  
Retirement age: 65  
Single and no additional contributions.

Three cases were modelled:

1. Default: Indirect Cost Ratio (0%) and Investment Fees (0.85%)
2. Zero Fees: Indirect Cost Ratio (0%) and Investment Fees (0%)
3. Active Fee: Indirect Cost Ratio (1%) and Investment Fees (1%)

## Results

Case	Balance at 65	Balance at 75	Balance at 85	Age Pension from age
Default	\$740k	\$374k	\$137k	71
Zero Fees	\$796k	\$436k	\$158k	73
Active	\$671k	\$311k	\$115k	68

These results clearly show that the meaning in the ‘Consumer Advisory Warning’ concerning the impact of investment fees is that these fees are a cost which reduce the investment return of the portfolio. Neither the Warning, nor the Calculator assume that investment fees are a price that is paid in order to earn higher returns (i.e. that the gross return from paying investment fees is greater than the price paid for the manager skill purchased).

Note that this implies that ASIC (via revealed preference) believes that superannuation trustees who pay for active management are reducing the returns to members – and therefore not acting in the best financial interests of members.

## **Disclosure of Fees and Costs on Product Dashboard**

Australian Prudential Regulation Authority's (APRA) Reporting Standard SRS 700.0 Product Dashboard requires that Fees and Costs of each MySuper option (as defined under RG97) are to be publicly available and prominently disclosed on a superannuation funds website in accordance with Corporations Act 2001 - Section 1017BA.

While Corporation Regulations 2001 - Reg 7.9.20 sets out specific requirements for certain periodic statements, including those by superannuation funds, to include the latest product dashboard for the investment options (Sections 1017D(5)(g) and 1017BA of the Act).

### **Financial Planners to take fees and cost into consideration.**

Regulatory Guide 175 (Licensing: Financial product advisers—Conduct and disclosure) requires in Section 319 that for advice that relates to financial product(s) with an investment component, the client's relevant circumstances may include the client's, "desire to minimise fees and costs".

### **Conclusion**

The legislation, regulations and Regulatory Guides related to superannuation products – and MySuper products in particular – clearly show that investment fees are considered as more than likely to reduce investment returns. Moreover, the regulations require that superannuation fund members are explicitly 'warned' of this outcome through the 'Consumer Advisory Warning', that fees and costs (including investment fees) are to be prominently reported, and that costs and fees are required to be considered by Financial product advisers.

## **Assumptions about Manager Performance Implications for Superannuation Policy**

Assumptions about the ability of Investment Managers to add value in investment portfolios have considerable significance in finance and investment. In particular, they have an **important bearing on decisions relating to portfolio construction** and the relative attractiveness of active and indexed approaches to investing.

There are three requirements for active investment management to add value in superannuation fund investment portfolios, specifically:

1. That some investment manager's perform consistently;
2. That superannuation funds have strategies and procedures which allow them to identify and select those investment managers; and
3. That the additional returns earned by those investment managers exceed the fees charged.

The principal underlying requirement for active investment managers to be able to 'add value', over 'index' or 'passive' investment approaches in superannuation fund investment portfolios relates to the consistency (or persistence) of manager performance. Figure 1, sets out the logical arguments related to portfolio construction and manager selection which follow from managers exhibiting, or not exhibiting, consistent investment performance.

**Figure 1**

<b>If Investment Managers do not perform consistently, then:</b>
⇒ It is not possible for Investors to select Managers that will consistently add value.
⇒ Investors will get random Manager performance
⇒ Investors will get Average Manager returns
The Average Manager underperforms the Market, therefore:
⇒ Invest primarily in market beta asset classes.
⇒ Invest in Index funds
⇒ Avoid costs from manager fees and transaction costs

The assumptions made by the Cooper and Murray Committees of Inquiry about the ability, or otherwise, of investment managers to contribute positively to superannuation investment

returns, are not explicitly stated. However, the recommendations of both Committees, and their implementation in Legislation and the Policies of both ASIC and AHPRA, effectively demonstrate that active investment management is viewed primarily as a cost. For example:

- RG 97.42 notes that issuers of a PDS must, “take into account **the costs** of making direct investments, as well as the costs of investing in entities that fall within the definition of ‘interposed vehicles’ .... These costs include, but are not limited to, **management fees based on the value of assets and fees based on the return paid from the interposed vehicle**”.
- RG 97.43 defines ‘indirect costs’ for superannuation products and managed investment products, to include, “**amounts that reduce the amount or value of income or property attributable to an investor’s investment**”.
- SIS Act 1993 s 29V(3) addresses Investment Fees as they relate to reporting in product dashboards for MySuper and qualifying choice investment options.

**This implicit treatment of active investment management as a cost** – and hence something to be minimized – rather than a source of investment risk and return, **is having a very significant influence on the portfolio construction and manager selection policies adopted by many Australian superannuation funds**. That this assertion reflects reality is supported by a number of senior superannuation and investment industry practitioners, including:

- a) David Hartley (Retired Chief Investment Officer of Sunsuper: Hartley, 2016), who notes that, “Current fee disclosure in the Australian superannuation industry is not transparent”, which thereby creates, “**compromised fiduciary duty**” (emphasis added), on the part of RSE’s.

Furthermore, Mr Hartley notes that the current fee disclosure regime, “is **also encouraging investment strategies that will become increasingly concentrated in a narrow range of strategies**, such as passive investment in a narrow range of publicly traded securities. The **concentration of strategies** introduces systemic risks to the economy. At the same time, **other investment opportunities that could enhance the broader economy will remain starved of capital**”, (emphasis added).

- b) Russell Clarke (Chair of the global investment committee for Mercer’s US\$130 billion implemented investment portfolio: Clarke 2016) states that the, “**pressure to lower management fees** across all asset classes in Australia had become extreme in the past three years and was **threatening to negatively impact net-of-fee returns because [superannuation] funds were altering asset mixes** away from more expensive, potentially higher returning, asset classes” (emphasis added).
- c) Greg Bright (Managing Director and Publisher, Investor Strategy News: Bright 2016) notes that, “A major looming problem for super funds is that **the very best managers in the world are not going to bother offering their services to Australian funds**. Anecdotally, some have already started to ignore Australia in their asset-gathering activities. They are reserving precious capacity for other investors” (emphasis added).
- d) Personally, I have observed a significant increase in allocations by superannuation funds to more passive investment strategies in traditional investment markets such as domestic and international equities – including indexed and enhanced index, and factor/beta strategies. I have also received considerable anecdotal evidence that investment decisions driven by fee pressures are common in the alternative asset classes, including observations by industry colleagues that they are only permitted to make new investments that reduce the superannuation fund’s Management Expense Ratio. I have also observed a significant increase in allocations to co-investments in alternative assets, which by their nature leave superannuation funds with more concentrated exposures to larger transactions in private equity, infrastructure, etc., than would be the case if investments were made in the more ‘optimally’ constructed funds offered by managers.

This is not to imply that investment management fee negotiations that reflect the scale and bargaining power of superannuation fund investors is not completely appropriate. This aspect of fee negotiation is also noted in the press (Gordon 2016; Patrick 2016). I fully support, and have personally conducted, such negotiations which, in a competitive and transparent investment industry, should clearly benefit investors.

However, **there is considerable evidence that investment decisions are being influenced by a desire to minimise reported Management Expense Ratios** – in order to meet the requirements of regulators and gatekeepers - **rather than to meet an objective of maximising net returns to investors**. This represents a potentially considerable **misallocation of investment resources – and hence allocation inefficiency - to the ultimate detriment of superannuation investors and the functioning of the wider economy**.

### **Prescriptive Regulation**

To a significant degree the Cooper Committee’s recommendation for the establishment of the MySuper product, with its explicit focus on fees and costs rather than net investment returns, represents a significant backwards step towards the prescriptive regime of superannuation regulation that existed prior to the Campbell Committee of Inquiry in 1981.

(Note: The Treasury’s public position on MySuper on its website begins with the statement that, “MySuper is a new, simple and **cost-effective** superannuation product” (emphasis added). At no point is explicit reference made to MySuper products having a high(er) return objective, however there does appear to be an implicit assumption that lower cost and fees (including investment management fees), directly corresponds to higher fund returns. This cost-effective / low-cost philosophy has been perpetuated, with the inclusion of investment management fees in fee and cost ratios in both legislation and regulation.)

Thus, while the MySuper regime does not explicitly call for a reduced allocation to active management investments – and hence lower levels of manager skill in superannuation fund portfolios – the affect of the regime, as currently implemented, has **this prescriptive outcome**.

A major concern with prescriptive regulation, particularly on the area of investments, is **the high likelihood of unanticipated and undesirable outcomes being produced**.

**It is my contention that the current regulatory regime under which superannuation funds operate is producing considerable inefficiencies in investment strategy and allocation, with large negative outcomes for investors and the broader community**. This contention is based on two premises:

1. The significant difference between the revealed preference of investors – in particular the trustee directors of superannuation funds – and the actual investment decisions made under the current regulatory regime; and



2. The basing of current prescriptive legislation and regulation on ‘analysis’ of markets and manager performance that is fundamentally flawed.

### **Revealed Preference**

First, it can be readily observed that, prior to the introduction of the Cooper/MySuper regulatory regime, those superannuation funds with fewer investment constraints – notably industry and government funds – displayed a markedly greater tendency to allocate to assets with higher manager fee structures. These investments include Infrastructure, Private Equity and Hedge Funds, among others.

It would be difficult to argue that these investment decisions by the Trustee/Directors of these superannuation funds reflected compromised fiduciary duty. Instead, I would argue that the revealed preference of the least constrained superannuation investors expressed a preference for investment strategies with higher investment manager fees because they believed that higher net investment returns would be achieved for fund members. It is also notable that this preference evolved over, and was sustained for, many years.

That the effect of current superannuation regulation is to prescribe an approach to superannuation investment that is diametrically opposed to this revealed preference should, at a minimum, raise significant questions as to whether an optimal and efficient outcome will be achieved.

It is also worth noting that the only Australian investment fund with comparable size, investment objectives and time horizon to institutional superannuation funds – the Future Fund – has adopted an investment strategy with a relatively high emphasis on manager skill in its portfolio. (The investment approach of the Future Fund was analysed in the research paper titled ‘Investment Risk and Portfolio Risk’ (PRI, 2013: Attached). While there are obvious differences in the clientele of the Future Fund and large Superannuation funds, from an investment perspective the objectives and strategies should be broadly similar. The differences in investment strategy reflect, and I believe can be significantly attributed to, the effects of the regulatory stance regarding investment management fees and cost applied to superannuation funds.

### **Analysis of Investment Performance**

Second, it should be noted that the current regulatory structure did not simply appear as the result of a whim by the members of the Cooper and Murray Committees. Their recommendations, and the subsequent formulation of legislation and policies to give them

effect, were based on judgements concerning the best ‘evidence’ available to them.

**Unfortunately, the vast majority of the ‘evidence’ concerning superannuation fund investments, and hence the conclusions based on it, are incorrect.**

I will ask the Commission’s forbearance as I explain. Unfortunately, the journey involves a number of steps, and for those trained in ‘classical’ finance, a certain degree of recasting of accepted wisdom.

Recall from the initial pages of this submission, that the foundation of any consideration of the attractiveness, or otherwise, of active investment management (i.e., Manager Skill) in superannuation investment portfolios is the **consistency of manager performance**. If manager performance is not consistent, then it is difficult to select managers who will add value in the future, and active management is unlikely to increase investment returns. The corollary is that if manager performance is consistent, then the use of active management may lead to increased returns after fees, and hence would be worthwhile.

### **Modern Portfolio Theory and the Source of Investment Returns**

The starting point in any discussion on manager performance must be to develop a common understanding around the sources of returns in investment portfolios.

First, there are three fundamental principles that underlie the theoretical edifice that we know as Modern Portfolio Theory (MPT).

1. Investors are **rewarded for taking Investment Risks**;
2. **Returns are additive**; and
3. **Risks diversify in portfolios** (and therefore Portfolio Risk is less than the weighted summation of individual Investment Risks).

All other components that we associate with the ‘Classical Implementation’ of MPT, such as the CAPM, Efficient Frontiers, Sharpe ratios, etc. are based on these underlying principles.

(Note that this implies that Investment Risks, which are related to individual investments, and Portfolio Risks are distinctly different. It is easy to, but important not to, confuse them).

Second, there are **only three sources of investment returns** in a superannuation investment portfolio:

1. Placing the money into superannuation in the first place (which at a minimum will earn the cash rate of return with no Investment Risk);

2. Allocating some (up to 100%) to assets that have Market Risk (or volatility), and should earn Market Risk Premia; and
3. Allocating some (up to 100%) to assets with Manager Risk (or volatility), and which should earn a Manager Skill Premia (commonly described as Alpha).

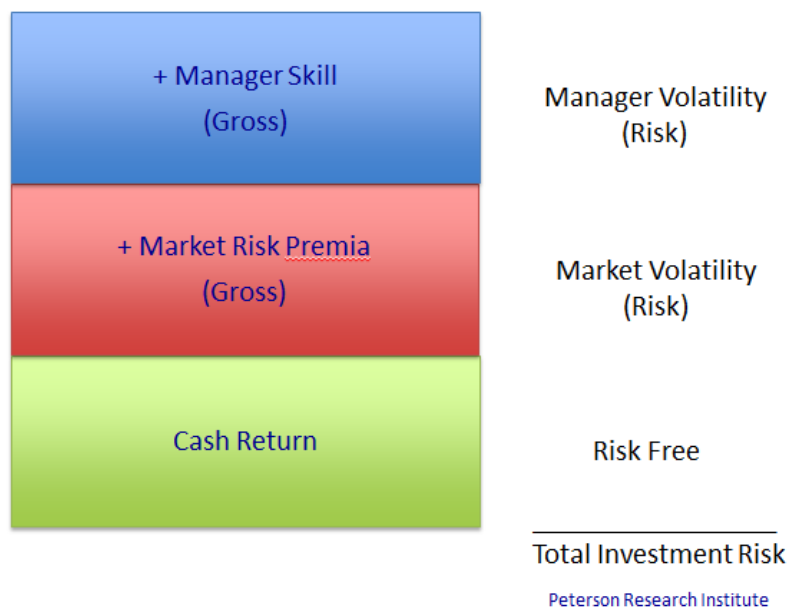
**Market and Manager Risks are Investment Risks. Superannuation funds should be rewarded – by earning additional returns – for taking Market and Manger Risks.**

In a portfolio of investments, **Market and Manager Risks should diversify**, leaving an overall Portfolio Risk. **Superannuation funds do not earn returns for taking Portfolio Risks.**

These sources of Investment Risk are illustrated in Figure 2. Note that it is possible to sum the Investment Risks associated with each investment – whether Market or Manager – to give the Total Investment Risk in a portfolio.

**Figure 2**

## Sources of Fund Returns (Investment Risks)



## Consistency

It is generally accepted that consistent and persistent performance is a necessary condition for investment returns to be repeatable and predictable.

### Assessment of Consistency

The typical approach to the analysis of the consistency of manager performance is to assess whether investment managers who perform well in one period – as instanced by top-quartile or some other measure of investment returns - repeat that performance in a subsequent period (Carhart (1997); Fortin & Michelson (2010); Juru & Johnson (2015); Pfeiffer & Evensky (2012); Soe (2016)). This is also an implicit assumption underlying statistical measures such as the Sharpe Ratio (returns over cash divided by volatility), as only managers who achieve high returns in both periods will have a high Sharpe Ratio over the full period.

Assessment of the relative rankings of manager performance over two periods involves the managers or funds being grouped into categories of relative performance in a contingency table.

If there is no consistency of performance (i.e. if performance is random across the two periods), then it would be expected that an equal number of investment funds / managers would be found in each cell of the contingency table. Where performance is ranked in quartiles the resulting 4 x 4 contingency table for 160 managers without consistent performance would look like this:

**Figure 3**

		Period 2			
		Q1	Q2	Q3	Q4
Period 1	Quartile 1	10	10	10	10
	Quartile 2	10	10	10	10
	Quartile 3	10	10	10	10
	Quartile 4	10	10	10	10

## Consistency in Market Behaviour

It is proposed that the variability of market returns is greater than the variability of manager returns. Correspondingly, it is to be expected that market returns will exhibit less consistency, than manager returns.

This is demonstrated in the following tables of market and manager investment returns and volatilities. Market Neutral Hedge Funds provide the best available estimates of the volatility of manager risks that arise from the application of manager skill, as ideally, market risks are hedged out. These are relatively low, and stable.

Market volatilities also tend to be relatively stable, as seen for US and Australian Equities, and also for the ‘Size Factor’ (calculated from the differences in monthly returns between the ASX/S&P 300 and Small Caps Indexes). The market volatilities are substantially greater than the volatility of manager returns.

**Table 1**

Investment Period to:	5 Year Return (% p.a.)	5 year Annualized Volatility (%)
<b>Barclay Equity Neutral Index</b>		
December 2005	5.0	<b>2.38</b>
December 2010	2.3	<b>3.29</b>
December 2015	4.1	<b>1.94</b>
<b>EuroHedge Equity Market Neutral &amp; Quantitative Strategies</b>		
December 2015	4.6	<b>1.70</b>
<b>S&amp;P 500 Total Return Index</b>		
December 1994	8.7	<b>12.5</b>
December 1999	28.6	<b>14.0</b>
December 2004	-2.3	<b>16.3</b>
December 2009	0.4	<b>16.0</b>
December 2014	15.5	<b>13.0</b>

**Table 2**

Investment Period to:	ASX/S&P 300 Volatility (%)	ASX/S&P Small Caps Volatility (%)	Size Factor Volatility (%)
5 Yrs to June 2011	16.3	22.8	10.8
5 Yrs to June 2016	12.7	15.5	9.5
10 Yrs to June 2016	14.1	19.0	10.0

It can also be expected that among investment managers in a particular market or sector there will be a continuum from those managers with a greater proportion of the investment risk in their portfolios derived from exposures to market factors – as a result, for example, of larger and/or more consistently held factor/style tilts - through to those with a higher proportion of investment risks derived from manager risks.

### **Patterns of Performance**

There is a general consensus that the behaviour of investments and markets in the actual economy does not conform to some of the underlying assumption of modern finance and portfolio theories. Specifically, the return pattern of investments, and hence of investment managers, is neither Static/Repeating (Static) nor Random/Efficient (Random).

Unfortunately, virtually all economic and finance theory, and hence research into market and manager behaviour, is based on the assumption that the economy and markets conform to one or both of these definitions – and sometimes to both simultaneously.

In the remainder of this paper the expected return pattern of manager returns under conditions of uncertainty (Complex markets) are described. The ‘real world’ – including economies that exhibit characteristics described in Behavioural Finance – fall into this broad category. (Note, that in both Static and Random markets, it is not possible to influence market behaviours or outcomes. Thus, creating regulations, conducting Inquiries and establishing Productivity Commissions are implicitly recognising that the actual financial system is Complex.)

**Each of the three market types implies a unique and significantly different pattern of performance from active investment management when assessed across multiple investment periods.**

**Static Markets**

In Static Markets the absolute and relative performance of an investment manager in one period (Period 1) must simply be repeated in the subsequent period (Period 2), as the investment conditions experienced are the same in both periods.

Thus a manager who is first (top) quartile in Period 1 would be expected to also be first quartile in Period 2. Similarly a manager with second quartile performance in Period 1 would be expected to also be second quartile in Period 2, and so on. We could represent this expected Pattern of Performance for investment managers under Static Market conditions diagrammatically in the 4x4 contingency table in Figure 4.

**Figure 4**

		Period 2 Performance Quartile			
		1	2	3	4
Period 1 Performance Quartile	1				
	2				
	3				
	4				

Where, Dark / Green represents a more frequent outcome (greater than random probability, > 6.25%), and Light / Pink a less frequent outcome (< 6.25%). An outcome of exactly 6.25% would be represented by a white cell.

**Random Markets**

In Random Markets the performance of an investment manager in one period will be completely unrelated to its performance in the next period, as there is no opportunity for the manager to predict or respond to changes in investment conditions. A market that is ‘efficient’ also provides no opportunity for a manager to develop and apply insights about the performance of the market or its constituent securities, and so may also be classified as

random. In Random Markets the relative performance of a manager in both periods is determined solely by luck.

A manager who is top quartile in Period 1 would be expected to randomly fall into any quartile in Period 2. We could represent this diagrammatically as in Figure 5.

**Figure 5**

		Period 2 Performance Quartile			
		1	2	3	4
Period 1 Performance Quartile	1				
	2				
	3				
	4				

### **Complex Markets**

Complex Markets encompass all other forms of market behaviour - including those corresponding to real world conditions. Complex Markets are characterized by real uncertainty and are represented in economic and financial theories and models that incorporate uncertainty, time and market inefficiencies.

In Complex Markets it is possible for investment managers to acquire insight into the future behaviour of the economy and markets – although because of the complexity, perfect knowledge, and thus complete certainty, can never exist.

The performance of an investment manager in Complex Markets will be determined by a combination of Investment Skills and Market Factors - including those arising from value, growth or other persistent style or factor tilts.

(Note that the reality is far more ‘grey’ than the usual ‘black and white’ differentiation assumed to exist between ‘style’ and ‘skill’. For example, an active investment position



(Manager Risk), if held for long enough, becomes indistinguishable from a market factor ‘style’ tilt (Market Risk).)

It can be expected that, for investment managers with a relatively greater proportion of exposure to Market Risks than Manager Risks, market related factors would be relatively more important than manager skill in determining investment performance. As Market Risks are typically larger (i.e., more volatile), and also less consistent, than Manager Risks, these managers’ funds are more likely to have extremes of performance. Their funds’ will therefore be found more frequently in either the first (lucky) or fourth (unlucky) quartiles of performance in any given period, depending on how markets behave.

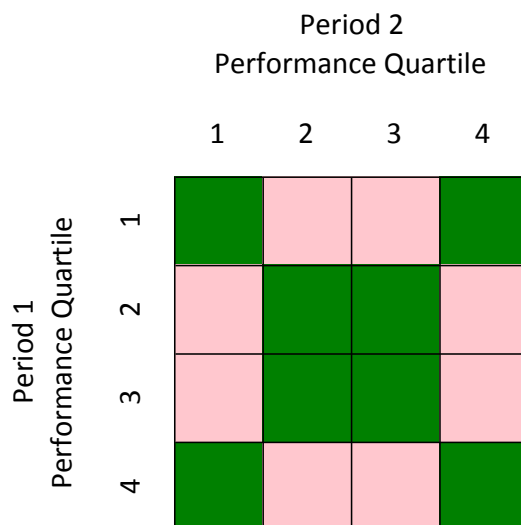
Also, due to effects such as mean reversal, these managers’ funds are more likely to have extreme results - either first or fourth quartile – in subsequent periods. Thus, managers who’s Market Risks is relatively greater than Manager Skill can be expected to have less consistent relative performance. These can therefore be described as ‘Inconsistent Managers’.

Alternatively, for other managers, Manager Skill will be proportionately greater than exposure to market factors. These managers’ funds will be less likely to experience extreme investment outcomes and will therefore be found more frequently in the second or third quartiles of performance. Moreover, these less extreme managers’ funds are likely to have less extreme results (second or third quartile) in subsequent periods. The pattern of their investment returns can be expected to be more consistent relative to a market reference or to manager peers. For this reason we can appropriately call these ‘Consistent Managers’.

If active managers are not consistently exhibiting skill, then the distribution of their relative performance will be random. Therefore, when active investment managers perform consistently, this will be represented in an analysis by the occurrence of a higher than random frequency of second and third quartile returns in both periods.

Combining the expected two period outcome patterns for Inconsistent and Consistent Managers, the overall Consistent Pattern of Performance (CPP) expected when active investment managers are performing consistently is given in Figure 6.

**Figure 6**



It follows therefore that in Complex Markets, such as occur in real financial markets, **it is necessary to take into account and analyse the full pattern of investment returns**, rather than the performance of individual managers, or of a sub-set (e.g., top quartile) of managers. (This is a basic characteristic of complex systems in general, where the overall pattern of outcomes can be difficult, or impossible, to identify from the analysis of only a small part of the whole.)

### **TESTING THE CONSISTENCY OF MANAGER PERFORMANCE**

To test for the existence of consistency of manager performance two aspects of the sample Pattern of Performance need to be assessed:

- First, whether the pattern of performance of the sample conforms to the Consistent Pattern of Performance; and
- Second, whether the sample's pattern of performance is significantly different from a random allocation.

**Each of these aspects can be assessed statistically.**

A comparison of the actual pattern of performance of managers in the sample to the Consistent Pattern of Performance can be made on a cell by cell basis, with each cell either matching – i.e. both having more or less managers than expected from a random allocation - or not matching.

This comparison can be analysed as a binomial distribution where  $n=16$ . If there were no constraints on the distribution of outcomes making up the pattern of performance there would be  $2^{16} = 65,536$  possible combinations of matches. However, not all combinations are allowed, as in each row it is not possible for all cells to be greater or less than the expected values. That is, at least one cell must be greater than the expected value if another cell(s) is less than the expected value. Allowing for this restriction, there are 38,416 possible combinations of matches between the sample pattern of performance and the Consistent Pattern of Performance.

For example, the probability of all 16 cells in the sample exactly matching the Consistent Pattern of Performance is 1 in 38,416, or 0.000026, whereas the cumulative probability of only 8 cells matching – which would be expected from a random allocation in the sample set, would be 0.5909.

The cumulative probability is the probability ( $p$ ) in a statistical test of accepting the hypothesis that the sample pattern of performance is the same as the Consistent Pattern of Performance when it is not (i.e., of making a Type-1 error). (Note, our hypothesis test ( $H_0$ ) is therefore that the sample pattern of performance is not the same as the Consistent Pattern of Performance, not that the sample pattern of performance is random.)

While the sample pattern of performance may be found to be not significantly different from (i.e., statistically the same as) the Consistent Pattern of Performance, this finding would not be meaningful if the sample pattern itself was essentially a random allocation. This can be assessed using the non-parametric Chi-squared statistic, which measures the probability that the allocation is random.

For example, while the pattern of performance of the 160 funds presented in Figure 7, exactly matches the Consistent Pattern of Performance, the values (number of funds) are not sufficiently different from the mean of 10 per cell to be statistically different from a random allocation ( $\chi^2 = 0.996$ ).

**Figure 7**

		Period 2			
		Q1	Q2	Q3	A4
Period 1	Q1	11	9	9	11
	Q2	9	11	11	9
	Q3	9	11	11	9
	Q4	11	9	9	11

Therefore we can now:

- **Identify** the overall ‘**Consistent Pattern of Performance**’ that will occur in the ‘**real world**’ if **Investment Managers are performing consistently**.
- **Measure** the likelihood that a particular sample Pattern of Performance is random, or is a pattern that indicates the existence of Consistent Performance.
- **Assess** whether a sample Pattern of Performance is significantly different from a random (or expected value) pattern.

### **ANALYSIS OF THE CONSISTENCY OF MANAGER PERFORMANCE**

The virtually universal ‘test’ of the ‘consistency of manager performance’ that we see in industry and academic research is based on analysing whether ‘top quartile’ performance in Period 1 is repeated in Period 2 (Bender, Hammond & Mok, 2014; Carhart [1997]; Fortin & Michelson [2010]; Juru & Johnson [2015]; Soe, [2016]; Vidal-Garcia [2013]).

However, the only market condition under which managers can be expected to be consistently in the top quartile across multiple periods is Static Markets (as seen in Figure 3).

**Therefore, testing for repeated top quartile performance across periods is actually testing whether markets are Static.**

The failure to find repeated top quartile performance in these ‘tests of manager consistency’ simply reflects the reality that markets are not Static, and **says nothing about the existence, or otherwise, of manager consistency.**

This observation applies to every piece of analysis of investment manager performance considered by the Cooper and Murray Committees.

## **Evidence from Investment Funds available to Australian Investors**

### **1. The Vanguard Study**

Juru and Johnson (2015) of Vanguard Investments Australia published a study of Australian Investment Manager performance titled ‘The difficulties picking fund manager winners’, (the ‘Vanguard Study’). (I note that a 2015 paper by Vanguard titled “The Case for Index Fund Investing in Australia”, referred to in the Commission’s Draft Report is also authored by Johnson and Juru.)

In the Vanguard Study the performance of 663 actively managed funds, across multiple asset classes, was analysed. Funds were initially ranked, ‘in terms of excess return versus their stated benchmarks over the five years ended 2009’. The funds were then divided ‘into quintiles, separating out the top 20% of funds, the next-best-performing 20% of funds, and so on’. The Study then tracked the funds’, ‘excess returns over the following five years (through December 2014) **to check their performance consistency**’ (Emphasis added).

Consistent with other studies, the Vanguard Study focused on the performance of the highest quintile performing funds in Period 1, and their subsequent performance in Period 2. The Study proposed as its research question that, ‘**a significant majority**’ of funds with top quintile performance in Period 1 **should** repeat that performance in Period 2.

The conclusion of the Vanguard Study was that, ‘**the results for Australian funds do not appear to be significantly different from random**’. Consistent with the argument set out in Figure 1, the implication drawn was that, as managers did not exhibit performance consistency, then it is not possible to identify in advance those managers who will outperform in the future.

As noted above, the analysis used in **the Vanguard Study was actually testing for the existence of Static Markets** and, like most comparable studies, found that, in the real world, markets are not Static. **Unfortunately, it is not possible to draw any conclusions about manager consistency** from the narrow subset of components of the study actually assessed (Period 2 relative performance given first quintile Period 1 performance).

To be consistent with the analysis in this submission, the results of the Vanguard Study have been recast into quartiles. (There are certain statistical reasons why quartiles are to be

preferred to quintiles, and no identifiable theoretical reasons for preferring quintiles.) These recast results are presented in Figure 8.

**Figure 8. Quartile Ranking of Actively Managed Australian Funds**

		Quartile Ranking in Period 2 (5 years to June 2014)			
		Q1	Q2	Q3	Q4
Quartile Ranking in Period 1 (5 years to June 2009)	Q1	8.7%	6.1%	5.9%	5.2%
	Q2	3.5%	9.0%	9.4%	3.5%
	Q3	3.4%	7.4%	9.2%	6.5%
	Q4	6.3%	3.7%	4.7%	7.4%

As can be seen, the Pattern of Performance of excess manager returns in the Vanguard Study is, with the exception of the Q1/Q4 and Q3/Q4 outcomes, identical to the pattern expected when active Managers, operating in Complex Markets are performing consistently over time. Fourteen of the sixteen cells in the sample pattern of performance match the Consistent Pattern of Performance.

The results of applying the statistical analysis developed previously, found that the distribution of manager outcomes in the sample pattern of performance is not random ( $\chi^2 = .0000$ ), and is not statistically different from the Consistent Pattern of Performance ( $p = .0004$ ).

I would also note that in the 2016 version of Vanguard’s publication, “The Case for Low-Cost Index-Fund Investing”, (Harbron, Roberts & Johnson, 2106), the same analysis is reported for funds available to Australian investors for periods ending 31 December 2010 (first period) and 2015 (second period) with similar conclusions reached.

*“we concluded that consistent outperformance is very difficult to achieve. This is not to say that there are not periods when active management outperforms, or that no active managers do so regularly. Only that, on average and over time, active managers as a group fail to outperform; and even though some individual managers may be able to generate consistent outperformance, those active managers are extremely rare”.*

In reality, **the actual finding in this study by Vanguard is, again, that markets are not Static.** When analysed correctly it was found that 14 of 16 cells in the sample pattern of performance matched the Consistent Pattern of Performance. This finding means that **there is a 99.96% probability that the actual performance of managers was consistent over these periods.** (The statistical analysis also found that the sample pattern of performance had only a 0.04% probability of being random.)

*Thus, the Vanguard Studies actually provide **very strong evidence** (virtually proof) that **Managers available to Australian Investors do have consistent performance.***

## 2. Australian and Global Equities

Data was obtained from Morningstar Australia on the performance of actively managed investment funds available to Australian Investors. The funds were analysed in the two groupings of Australian Equity investments and Global Equity investments. Australian based investment managers managed the majority of Australian Equity investments, while managers based in Europe and the United States managed the majority of the Global Equity Investments.

The consistency of returns were analysed in two studies. Each study covered the two, 5-year periods ending June 2009 and June 2014. (For consistency, these are the same time periods as used in the Vanguard Study.)

The pattern of performance for each group of funds are presented in Figure 9:

**Figure 9**

Fund Group	Sample Pattern of Performance					
Australian Equity Funds	First Period	Second Period				
			Q1	Q2	Q3	Q4
		Q1	4.5%	7.9%	5.1%	7.3%
		Q2	5.1%	6.8%	8.5%	5.1%
		Q3	2.3%	8.5%	8.5%	5.6%
		Q4	13.0%	2.3%	2.8%	6.8%

Global Equity Funds	First Period	Second Period				
		Q1	Q2	Q3	Q4	
		Q1	7.3%	5.2%	2.1%	10.4%
		Q2	8.3%	7.3%	8.3%	2.1%
		Q3	6.3%	5.2%	10.4%	3.1%
Q4	3.1%	8.3%	4.2%	8.3%		

The statistical results are presented in Figure 10.

**Figure 10**

	Australian Equity Funds	Global Equity Funds
Number of Funds	177	96
Number of cells matching the Consistent Pattern of Performance	14	11
Hypothesis Test H <sub>1</sub> : The sample pattern of performance is the same as the Consistent Pattern of Performance.  H <sub>0</sub> : The sample pattern of performance is not the same as the Consistent Pattern of Performance.	$p=.0004$	$p=.0497$
Significance Test H <sub>1</sub> : The sample distribution of managers is not random. H <sub>0</sub> : The sample distribution of managers is random.	$\chi^2 = .0001$	$\chi^2 = .0378$

For both Australian and Global Equity Funds the analysis rejects the Null Hypotheses (H<sub>0</sub>) that the sample pattern of performance is not the same as the Consistent Pattern of Performance and that the sample distribution of managers is random, at the 5% level of significance.

These results also strongly support the existence of consistency in manager performance.

### Implications

Across the studies analysed, it was found that there is very strong evidence that investment managers available to Australian superannuation funds do perform consistently.



This finding has profound implications for the question of the most efficient and productive way in which to investing superannuation fund assets. These implications – which are the corollary to the logic in Figure 1 – are set out in Figure 11:

**Figure 11**

<b>If Investment Managers do perform consistently, then:</b>
⇒ It is possible to select Managers that will consistently add value.
⇒ Investors will not invest with the Average Manager.
⇒ Investors will not get Average Manager returns.
It does not matter whether the Average Manager underperforms the Market, as Investors do not invest with the Average Manager, therefore: ⇒ Invest in ‘skill rich’ strategies and asset classes. ⇒ Invest with Active Managers
⇒ There are cost, due to lower returns and higher risks, from investing in Index funds

It follows therefore that as active investment managers do perform consistently then **there is scope for Australian Superannuation Funds to select active investment managers who will add value after fees**. This finding is of itself sufficient to show that **the measurement and reporting of investment management fees**, as opposed to allowing them to be ‘reported’ in net investment returns, **will generate signals from regulators and other gatekeepers to superannuation fund trustee/directors that will have the effect of distorting investment allocations away from optimal**. As noted previously, this is clearly the case in the Australian superannuation system, with many investment decisions being significantly influenced or constrained by concerns around gross management fee levels, rather than being focused on net investment returns.

Evidence of the likely and actual effects of this distortion can be identified in actual superannuation fund returns.

## **The Zero Sum Game**

While not directly applicable to the considerations of the Commission's Draft Report, it is worthwhile also discussing the concept of the "Zero Sum Game" which is commonly put forward as a further reason why investment managers 'must' underperform, for example by Harbron, Roberts & Johnson, (2106).

The essence of the Zero Sum Game Theory is the argument, as for example stated by Harbron, Roberts & Johnson, (2106) that, "for each position that outperforms the market, there must be a position that underperforms the market by the same amount, such that, in aggregate, the **excess return of all invested assets equals zero**" (emphasis added). It follows therefore that any fees charged for active investment must reduce returns to investors in aggregate by that amount.

The **fallacy in this argument again lies in the assumptions made about markets** (in my experience these assumptions are never spelled out). Most importantly, **the Zero Sum Game argument assumes that Markets are Static** – something which Vanguard's own analysis proves is not the case.

If markets are Static, then, the excess return of all invested assets will in fact equal zero.

**There is no growth, and no opportunity for the financial system to reallocate assets to improve the efficiency of production and outputs.** (There would also be no need for a Productivity Commission as nothing could be done to improve productivity and efficiency.)

In reality, most people accept that markets are not Static. It follows therefore that the actions of active investment managers in, for example, moving asset prices closer towards fair value, can improve allocative efficiency and create value. This implies therefore that markets and investment are not a zero sum game, and nullifies the Zero Sum Game argument that investment managers 'must' underperform

14 October 2022

## **The Australian Super / Hostplus Experiment Super Funds' Indexed vs Active Options**

My original Research Note on the 'investment experiment' being conducted by Australian Super between active and passive (indexed) investment options covered returns for periods to June 2017. This Note updates that analysis to June 2022 and includes the results for Hostplus Super's equivalent experiment.

### **Background**

A key issue in assessing the performance of actively managed versus passively managed (or indexed) superannuation products, is the difficulty in knowing what the asset allocation of the indexed alternative would actually have been.

Actively managed sector portfolios will have different risk and return characteristics than indexed assets (assuming that an investible index actually exists). It is therefore certain that the asset allocation of an actively managed diversified portfolio will be different to the asset allocation of a portfolio invested in indexed asset classes, even where 'all other things' – such as the investment objectives and the investment management teams - are the same.

It is therefore **impossible to accurately compare an actively managed diversified superannuation option to its passive or indexed 'equivalent'**, as there is no way of knowing, in hindsight, what the asset allocation of that indexed portfolio would have been.

A common fallback position is to assume that the asset allocations are the same, however, this does not reflect actual decision-making processes, and ignores the significance of the asset allocation decision as a major determinant of fund returns.

### **What Indexed Management Means**

An indexed investment approach means that the investment portfolio is constructed in a way that minimises investment related fees and costs (i.e., management fees).

In superannuation funds, investment management fees are minimised by investing in investment strategies that do not involve active management of assets, and correspondingly do not incur active management fees. Therefore, indexed options:

- a) Do not invest with active managers in liquid investment strategies such as equities, fixed interest and cash; and
- b) Do not invest in investment strategies that incorporate, and only exist as a result of the application of, manager skill - such as Private Equity, Infrastructure, Credit, Hedge Funds, and Direct Property

Low-cost superannuation fund management means more than just the selection of indexed investments in liquid markets. It also means the omission of investment strategies that do not exist without manager skill.

## Australian Super / Hostplus Active vs Indexed Experiment

We are in the unique position in Australia of having had two large superannuation funds effectively conducting a scientific experiment of active vs passive outcomes over the last 10 years.

In this experiment, actively and passively managed (indexed) investment options have been offered to actual fund members, with all other variables such as Investment Objectives, Risk Levels, Option Liquidity, and Management Team (advisors, Investment Committee, compliance framework, etc.) being the same. In scientific terms, all of these other characteristics have been ‘controlled for’ and should not be contributors to differences in investment returns.

### AUSTRALIAN SUPER

Australian Super offers both its actively managed Balanced, and passively managed Indexed Diversified options to members. These options are equivalent, with the characteristics of the two products being virtually identical when expressed in terms of the descriptors prescribed in legislation and regulation:

- both have 10-year recommended investment horizons;
- both have the same Expected Frequency of Negative Return (5 years in 20); and
- while different now, both started out with essentially the same Return Objectives:

Return Objective over 20 Years (% p.a.)			
Option	2012	2017	2021
Balanced	CPI + 4	CPI + 4	CPI + 4
Indexed Diversified	CPI + 4	CPI + 3.5	CPI + 3

The investment related fee of Australian Super’s Balanced option (0.63%) is higher than that of the Indexed Diversified option (0.11%)<sup>1</sup>.

### HOSTPLUS

Similarly, Hostplus offers both an actively managed Balanced option, and passively managed Indexed Balanced investment option, also with equivalent characteristics:

- both have 10-year recommended investment horizons;
- both have the same Expected Frequency of Negative Return (5 years in 20); and
- until recently both have had essentially the same Return Objective:

Return Objective over 20 Years (% p.a.)			
Option	2015 <sup>2</sup>	2017	2021
Balanced Option	CPI + 4	CPI + 4	CPI + 3
Indexed Diversified Option	CPI + 4	CPI + 3.5	CPI + 2.5

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<sup>1</sup> 2021 Fees and Costs

<sup>2</sup> First published in 2015 Hostplus Annual Report

The investment related fee of Hostplus Super's Balanced option (0.99%) is higher than that of the Indexed Balanced option (0.06%)<sup>1</sup>.

It is notable that both Australian Super and Hostplus have an **expectation that their Indexed options will produce lower returns** for their members over time than their actively managed Balanced options, even though the investment risks (an expectation of 5 negative returns over 20 years) is the same in each case.

It is also noteworthy that the actual volatility of returns of the Indexed options has been greater than that of the Actively Managed options.

**Thus, both superannuation funds are expressing a belief that active investment management of their portfolios adds value by increasing investment returns after fees for the same level of investment risk!**

### **Experiment Design**

Both Australian Super and Hostplus Super have created 'true experimental designs' which test the effect of an active vs indexed investment approach on members' investment return outcomes.

### *Costs & Fees*

Given that in each case both the active and indexed options are offered by the same super fund (Australian Super or Hostplus), then all costs, other than those associated with the investment approach, should be the same.

As a result, the principal difference in overall costs and fees reflects the differences in investment management fees between active and indexed management.

### *Returns*

The difference in returns to investors between the active and indexed investment options will similarly primarily reflect the **difference in net (after fee) investment returns** between active and indexed management.

### *Asset Allocations*

As noted above, one reason why it is difficult to compare actively managed to indexed investment options is that it is impossible to know what asset allocation the indexed option would have had.

As a result of the experiment, we do know what the equivalent indexed options are for Australian Super and Hostplus's Balanced investment options. Moreover, the actual asset allocations between the actively managed and indexed options are significantly different. This can be seen in the Strategic Asset Allocations for the options at various points in time.

### **The Experiment**

It is widely argued in academic circles, and by certain purveyors of indexed products that active management produces 'below market returns' as a result of active management fees - due to the zero-sum game, and the impossibility of selecting managers who will add value consistently.

Given this, Australian superannuation funds' indexed options, such as Australian Super's Indexed Diversified and Hostplus's Indexed Balanced options, should, in theory, **outperform** their Balanced options by a significant margin, primarily reflecting the differences in investment fees and costs.

i.e., Australian Super's Indexed Diversified option should outperform its Balanced option by around 50 basis points per annum, while Hostplus's Indexed Balanced option should outperform its' Balanced option by an even greater amount.

Given these arguments for the superiority of indexing, *it would be expected that the actual indexed products available to superannuation fund members, and hence the returns actually received, would show **clear outperformance** of active options by indexed equivalents.*

*This is the implicit assumption underlying the use of the SAA Benchmark in the Performance Test.*

### Results of the Experiment

The real-world results of the experiments are exactly the opposite of what theory (and index promoters) predict. **In reality, the active managed options offered by both Australian Super and Hostplus have consistently and substantially outperformed their indexed alternatives over the last 10 years.**

#### Australian Super Investment Option Returns to June 2022 (p.a.)

Option	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
Balanced (Active)	-2.73%	8.23%	5.59%	7.28%	7.60%	9.32%
Indexed Diversified	-5.70%	5.44%	4.05%	6.03%	5.91%	7.37%
Active Outperformance	2.97%	2.79%	1.54%	1.25%	1.69%	1.95%

In the year to June 2022, the additional 'cost' in investment management fees for Australian Super's Balanced option, produced a net increase in members' returns of 2.97%. Moreover, **the actively managed Balanced option has consistently produced significant outperformance after fees of some 150-200 basis points per annum.**

#### Hostplus Super Investment Option Returns to June 2022 (p.a.)

Option	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
Balanced (Active)	1.57%	11.01%	6.54%	7.76%	8.12%	9.74%
Indexed Balanced	-5.67%	5.90%	3.95%	5.96%	6.02%	8.52%
Active Outperformance	7.24%	5.11%	2.59%	1.80%	2.10%	1.22%

While Hostplus's actively managed Balanced option has underperformed the Indexed Balanced option in some periods, for every time period to June 2022, it also exhibits substantial outperformance of the Indexed Balanced alternative. In the year to June

2022, the additional ‘cost’ in investment management fees for Hostplus’s Balanced option, produced a net increase in members’ returns of 7.24%

### **Implications**

How can Australian Super and Hostplus’s actively managed options outperform their indexed equivalent given everything that we read about the supposed ‘superiority’ of index funds?

The outperformance of the actively managed Balanced options is not actually surprising. It simply reflects the reality that institutional investors are able to select managers who add value after fees, because:

- The world is not static, and therefore markets are not a zero-sum game;
- Institutional investors employ research and advice to select managers who will outperform in the future; and
- Super Funds pay Institutional rather than retail fees to access manager skill.

9 December 2021

## Future Fund Performance vs Australian Super Funds 2021

### Background

This is a follow-up to a Research Note that I wrote in March 2013, titled Investment Risk and Portfolio Risk.

In that Note it was explained why the Future Fund had, “an Expected Return approximately 1.5% p.a. greater over time” than the average superannuation fund.

It was also predicted that the Future Fund would earn these higher net investment returns with lower levels of volatility.

These outcomes were predicted because:

- the, “total of the Investment Risks (market + manager)” being taken by the Future Fund were greater than those taken by the average super fund, leading to higher levels of expected returns; and
- the higher proportion of Investment Risk derived from manager skill would be diversifying, resulting in lower levels of Portfolio Risk (and hence volatility of returns).

This note considers the performance of the Future Fund relative to that of the median superannuation option in the Balanced category of the SuperRatings performance survey. This category contains the majority of MySuper and default options offered by Australian Superannuation Funds and is therefore most representative of the industry.

### Returns

As predicted, the Future Fund had net investment returns 1.8% p.a. higher than that of the median superannuation fund in the SuperRatings Balanced Fund category over the 10 year period to June 2021. This outperformance is consistent over time.

#### Investment Returns to June 2021

	1 year	3 years	5 years	7 years	10 years
<b>Future Fund</b>	22.2	10.5	9.9	9.9	10.1
<b>Balanced Super Fund Median Return</b>	17.9	7.9	8.7	8.0	8.3
<b>Difference</b>	<b>4.3</b>	<b>2.6</b>	<b>1.2</b>	<b>1.9</b>	<b>1.8</b>



## Volatility

Also, as predicted, the Future Fund has had lower volatility of investment returns than the median superannuation fund in the SuperRatings Balanced Fund category over the 10 year period to June 2021. This lower volatility of returns has also been consistent over time.

### Volatility of Returns to June 2021

	1 year	3 years	5 years	7 years	10 years
<b>Future Fund</b>	5.6	5.7	4.8	4.6	4.3
<b>Balanced Super Fund Median Volatility</b>	4.8	8.2	6.6	6.4	5.9
<b>Difference</b>	<b>0.8</b>	<b>-2.5</b>	<b>-1.8</b>	<b>-1.8</b>	<b>-1.6</b>

## The Future

Given that the Future Fund does not appear to have altered its investment approach, it can be expected that it will continue to produce strong risk-adjusted returns by utilizing a high level of manager skill in its portfolio.

Superannuation funds, on the other hand, face significant barriers to the use of optimal levels of manager skill. These include the effects of:

- Regulation enforcing a ‘low cost’ approach in all aspects of superannuation, rather than just administration and operating costs (e.g., RG 97 and the wording required to be included in Product Disclosure Statements that does not differentiate between administration costs and investment fees); and
- The introduction of the Your Future Your Super Performance test, which significantly increases the risk of moving away from market indices.

Given these regulatory directives, it is virtually certain that superannuation funds will continue to reduce the proportion of investment risk obtained through active manager skill, and will therefore produce lower returns with higher levels of portfolio volatility relative to the Future Fund than has been the case over the last 10 years.

John Peterson  
December 2021

**Addendum October 2022: The Future Fund returned 9.7% p.a. for the 10 years to June 2022, while the Median Superannuation Fund in the ‘Balanced’ category of the SuperRatings Survey returned 8.0% p.a. for the same period. The predicted 1.5% p.a. outperformance by the Future Fund was maintained.**

## Investment Risk and Portfolio Risk for Superannuation Directors and Trustees

This note follows on from my earlier “Portfolio Theory in the Real World” paper for the Directors and Trustees of superannuation and other investment funds. The purpose of this note is to provide an understandable outline of issues around risk in investing.

### Principle

The basic principle that is almost **universally not understood** when speaking about risk and investments is that **Investment Risk and Portfolio Risk are very different things**. To demonstrate, consider the idea of the “Risk / Return Trade-off”, which we have all heard of, and generally think that we understand.

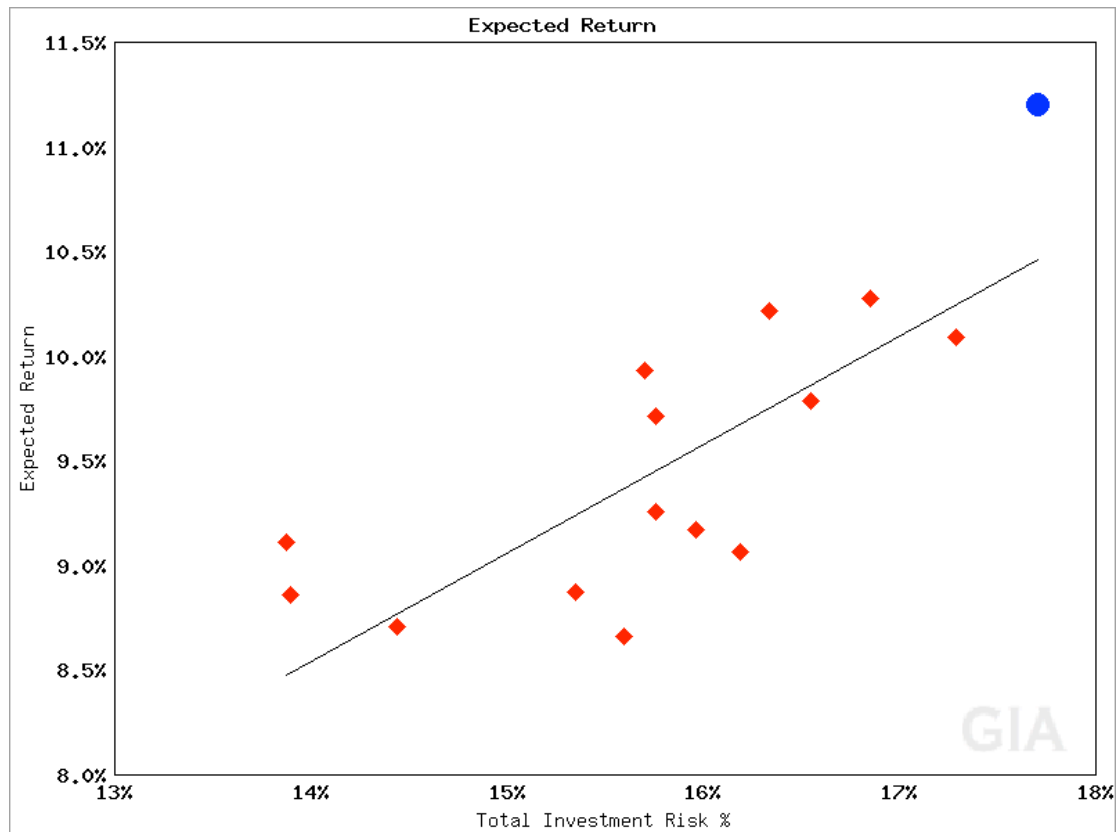
The essence of the Risk / Return Trade-off is the idea that in order to earn higher rates of return it is necessary to take higher levels of “risk”. We typically associate this higher “risk” with an increased likelihood (i.e. probability or frequency) of “loss” on an investment portfolio (increased Portfolio Risk). Hence we create portfolios of increasing “risk”, that we describe with terms such as ‘conservative’, ‘balanced’, ‘growth’, ‘high growth’, etc., that we expect will have higher levels of return over time.

This, quite standard, description **is incorrect**. It is generally correct that **higher levels of Investment Risk are associated with higher Expected Returns**. However **Investment Risk has little relationship to the level of Portfolio Risk**.

To understand this difference, consider the GIA analysis of the Future Fund’s investment portfolio as at June 2013. First, recall that the two sources of Investment Risk that a portfolio may earn returns from are Market Risk and Manager Risk (or Manager Skill). As returns earned from taking investment risk are additive, then the sum of these two risks is Total Investment Risk.

The Expected Return of the Future Fund versus Total Investment Risk is plotted as the blue circle in Chart 1. The Expected Returns versus Total Investment Risk of 14 of Australia's major balanced / growth style super funds are also plotted in red.

**Chart 1**



The total of the Investment Risks (market + manager), expressed as volatility (% p.a.), being taken by the Future Fund is ~17.5%, (this is 2% higher than the average super fund), with an Expected Return approximately 1.5% p.a. greater over time. This relationship is in line with the Risk / Return Trade-off.

The Future Fund's Total Investment Risk (17.5%) is roughly in line with investing 100% of its assets in Australian Equities. Based on the Fund's Investment Risk **it may therefore be tempting to classify the Future Fund as a "High Growth" style portfolio** with a high risk of negative returns in the short term. **In reality, nothing could be further from the truth.**

Now consider Chart 2, which plots the Future Fund's **Expected Return against a measure of Portfolio Risk** - the Probability of a Negative 1 Year Return. (Using any other measure of Portfolio Risk, such as volatility or expected number of negative 1 year returns over a 20 year period, would give exactly the same result.)

**Chart 2**

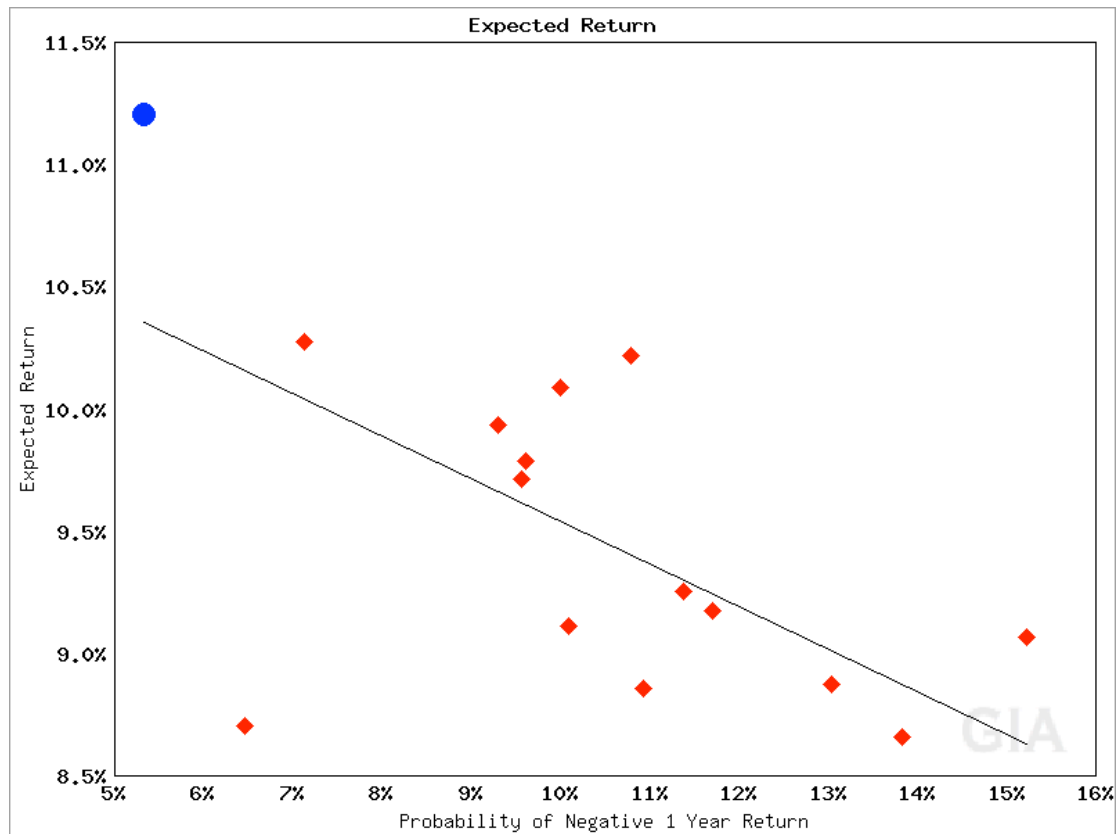


Chart 2 represents the more commonly presented return versus risk diagram in the investment industry, with Portfolio Risk on the horizontal axis, and Expected Return on the vertical axis. We would **typically expect to see the “Risk / Return Trade-off” sloping upwards to the right, as in Chart 1, but this is not the case!!! This is because Portfolio Risk is not the same as Investment Risk.**

What the GIA analysis in Chart 2 shows is that the Future Fund’s investment portfolio actually has a **much lower level of Portfolio Risk** than Australian superannuation funds’ growth investment portfolios, with approximately ½ the likelihood of loss than the average superannuation fund, even though the Expected Return (which is based on Investment Risk) **is higher.**

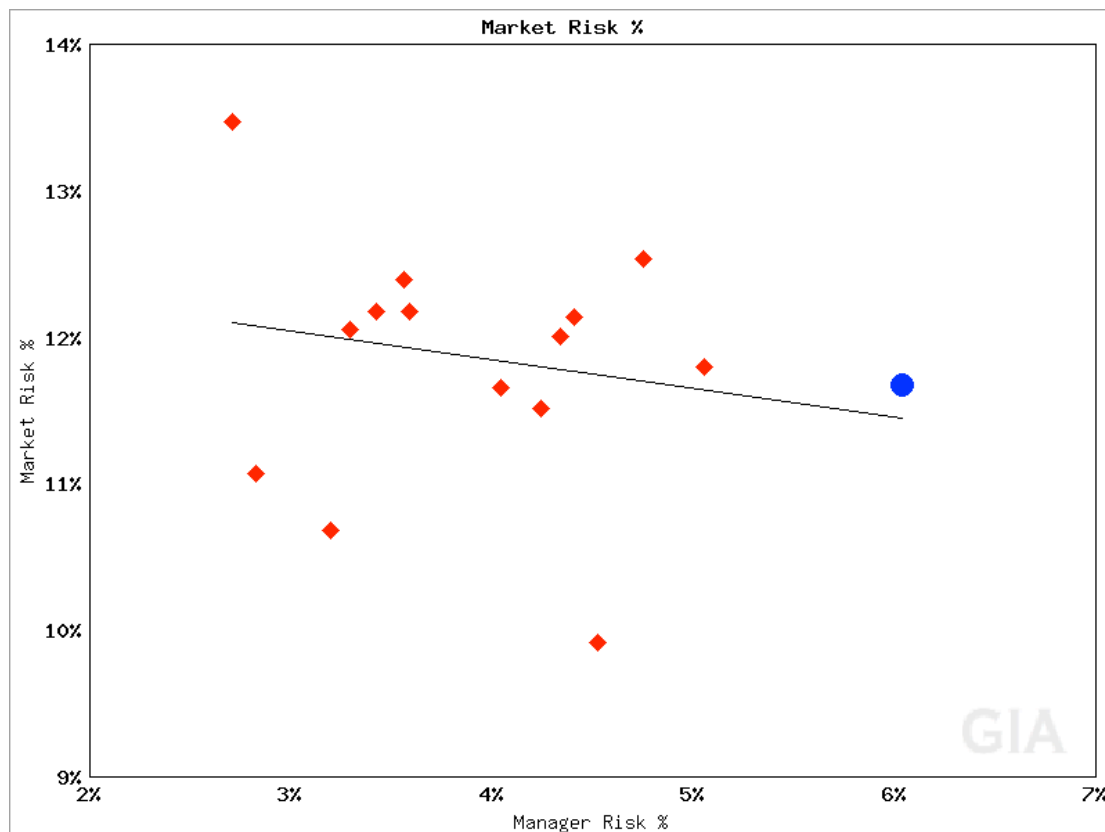
### The Apparent Inconsistency

For virtually everyone with even a passing exposure to the current investment orthodoxy (Modern Portfolio Theory and its associated ideas) the outcome for the Future Fund’s portfolio presented above will appear counter intuitive, and inconsistent with ‘reality’.

In fact, both the Future Fund's outcome, and investment theory, are correct. The apparent inconsistency arises from the widespread **incorrect implementation of Portfolio Theory**. The universal mistake that is made is **to ignore the existence of manager skill**.

Consider Chart 3, which plots the levels of Market Risk (vertical axis) and Manager Risk (horizontal axis) in funds' portfolios.

**Chart 3**



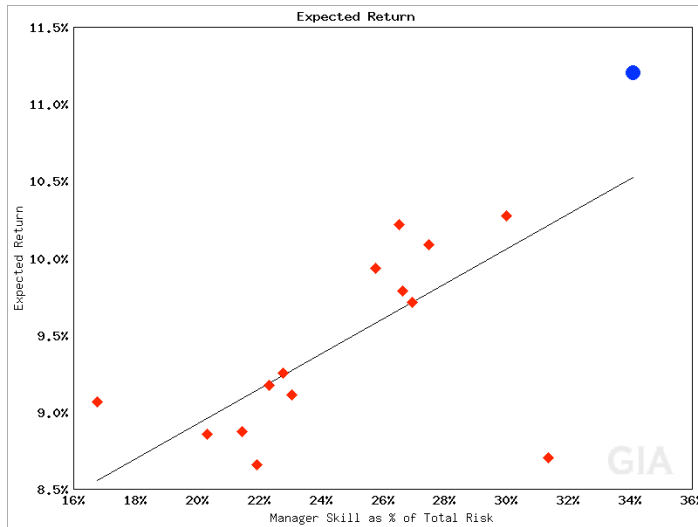
What is apparent is that while the Future Fund has largely the same level of Market Risk as Australian Superannuation Funds, it has made a higher allocation to Manager Skill than those funds. Thus the Future Fund has a higher overall level of Total Investment Risk, with corresponding higher Expected Return.

While the level of return is directly related to the level of Total Investment Risk (as returns are additive), because of the diversification effects of the higher proportion of Manager Skill the Future Fund's portfolio it actually has a relatively low level of Portfolio Risk. Correspondingly it has a lower likelihood of loss.

This linkage can be seen in Charts 4 and 5, which plot Expected Return and Probability of Negative 1 Year Return respectively,

against the proportion of Manager Skill in fund's Total Investment Risk.

Chart 4

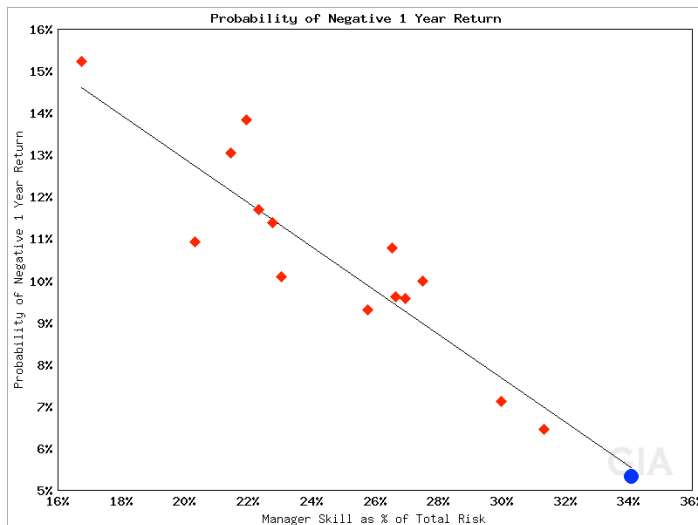


In the case of the Future Fund, Manager Skill represents ~1/3<sup>rd</sup> of Total Investment Risk. This is higher than for Australian superannuation funds.

Thus, while expected returns are higher, the greater level of Manager Risk, that is less correlated to Market Risks, leads to the Future Fund having a lower level of Portfolio Risk.

Thus, we have the relationship that higher levels of Investment Return are associated with lower levels of Portfolio Risk.

Chart 5



It should be noted that this relationship follows directly from the inclusion of Manager Skill in Portfolio Theory.

John Peterson  
March 2013

**Investment Returns are earned by taking Investment Risk**

**Investment Risk and Portfolio Risk are very different things**

GIA is provided free to Institutional Investors at [www.prigia.com](http://www.prigia.com)

## **Assessing the Performance of Strategic Asset Allocation Benchmarks**

The Performance Test uses benchmarks based on Funds' Strategic Asset Allocations as the Test's reference Benchmarks.

As underperformance of the Performance Test Benchmark by more than 0.50% incurs significant consequences, it can be assumed that Treasury is basing its assessment on the premise that the SAA Benchmark is 'good'.

The assumption that a particular investment index, or combination of index returns is 'good' is a common fallacy in the investment industry. In particular, when applied to the SAA Benchmark in the Performance Test, this presumption is **not supported by objective analysis or evidence**.

Most people assume that a Fund's SAA is selected on the basis on a risk / return analysis. This is generally correct, however the risk factors taken into account, and what constitutes acceptable returns, can be very diverse.

For an SAA Benchmark to be good the SAA adopted should be reasonably 'efficient' – i.e., lying on or close to the 'Efficient Frontier' of optimal risk / return portfolio allocations. In Modern Portfolio Theory this is the set of portfolios in Return / Volatility that has the highest return (expected or actual) for any given level of volatility of returns. In other cases, risk may be represented by an alternative measure.

However, it should be borne in mind that the selection of the SAA is based on expected (ex-ante) risks, returns and interactions between asset classes. In reality none of these expectations will be met exactly in the future, with the result that the **SAA Benchmarks will not lie on the actual (ex-post) Efficient Frontier**. In the example below, the Efficient Frontier consists of less than

0.05% of historic SAA portfolios. (i.e., fewer than 1 in 2000 possible portfolios lie on the Efficient Frontier.)

Therefore, before using an SAA Benchmark in the Performance Test it is necessary to assess whether the Benchmark itself has performed well or poorly. Clearly, out-performing a poorly performing SAA Benchmark, can produce a much worse Outcome for Members than underperforming a Benchmark that happens to have performed well.

Assessing the relative performance of an SAA Benchmark can be done by seeing where the benchmark sits within the Outcome Region of possible Strategic Asset Allocations over the relevant historical period. (The ex-post Outcome Region corresponds to the ex-ante ‘Attainable E, V Combinations’ described in Markowitz’s original 1952 Portfolio Selection Article.)

### **Outcome Region Construction**

An outcome region is constructed using the investment ranges and constraints that apply when conducting an Efficient Frontier optimisation, except that actual historical return values are used. For the following example I have constructed Outcome Region for the 8 years to June 2022, using actual index returns (tax adjusted) and a subset of the asset classes used in the Heatmap and Performance Test. The following asset classes and investment ranges were used.

Asset Class	Minimum SAA	Maximum SAA
Australian Equity	15%	45%
International Equity (Hedged)	5%	15%
International Equity (Unhedged)	5%	25%
Australian Listed Property	0%	10%
Australian Unlisted Property	0%	20%
Australian Unlisted Infrastructure	0%	20%
Australian Fixed Interest	0%	40%
International Fixed Interest	0%	10%
Australian Cash	0%	10%
Growth Alternatives / Other	0%	10%

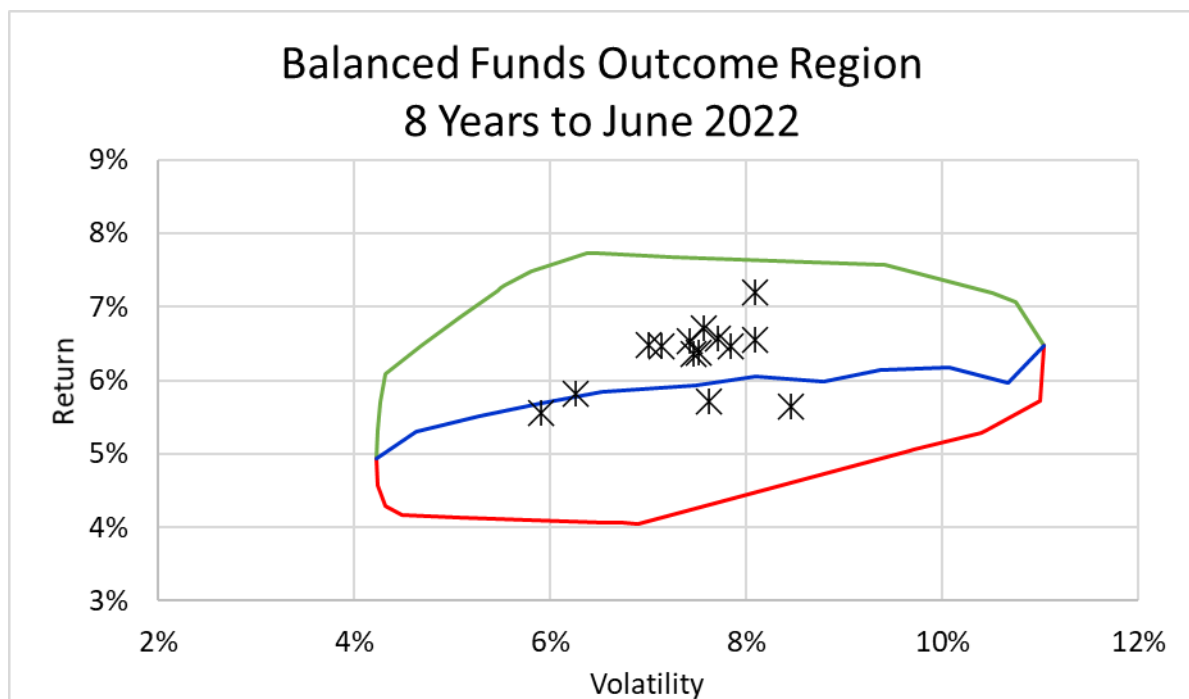


(A restricted set was adopted due to restricted data availability and computational issues. The returns and volatilities for over 50,000 attainable SAA Benchmarks that met these investment ranges were calculated.)

The actual SAAs for a selection of superannuation funds' MySuper or 'Balanced' options<sup>1</sup> were also calculated. (The SAAs were estimated from public material from the Funds. These SAAs may not align exactly with weightings provided to APRA, however do provide a reasonable example case set.)

The results of this analysis are presented in Figure 1.

**Figure 1**



In Figure 1, the historical Efficient Frontier, which represents those portfolios with the highest return for any given level of volatility of returns, is plotted in green. The Inefficient Frontier – lowest return for each level of volatility - is plotted in red.

<sup>1</sup> Active Super / LGS, ART - Q Super, ART – Sunsuper, Australian Super, Aware / First State, Care Super, Cbus, HESTA, HostPlus, NGS Super, REST, Spirit / MTAA, Unisuper , Vision Super

Note, that any SAA Portfolio selected without foresight (i.e., randomly selected) is as likely to lie on the Inefficient as the Efficient Frontier.

The blue line represents the average, or 'Expected' Volatility / Return combination if SAA portfolios were randomly selected.

The actual SAA portfolios of the superannuation fund options are plotted in black.

As can be seen:

- None of the SAA portfolios sit on the Efficient Frontier, and therefore none are unequivocally 'good' in return / volatility space.
- Equally, none of the SAA portfolios sit on the Inefficient Frontier, and therefore none are 'bad'.
- Most lie above the Expected Outcomes (blue line), indicating some insight about future market conditions in their selection.

A key weakness of the Performance Test is that it compares Fund Options' actual returns to those of the SAA portfolio (Benchmark) without making any assessment as to whether the Benchmark itself has performed well or poorly.

Unfortunately, in the real world, 'benchmarks' or 'indices' are not necessarily 'good', and therefore a failure to outperform, or underperforming by a particular amount, is not a valid measure of whether that performance is 'good' or 'bad'.

The Performance Test therefore fails as it is not suitable for the basic purpose to which it is being applied, and failing the Test does not imply anything about whether the Option has performed well or poorly.

**As a result of these failings, the Performance Test is neither Clear nor Objective.**

## **YFYS Performance Test – Ratchet Effects**

Among the many concerns and failings of the Performance Test is the impact that it will inevitably have of causing Funds to adopt a more indexed approach to investment management.

This increase in indexed investment, is likely to have the effect of reducing returns to members, while simultaneously reducing the time horizon and flexibility of the investment process.

### **Ratchet Effect**

The design of the Performance Test is flawed in that it creates a one-way bias towards indexed investing.

The following factors contribute to this outcome – whether intended or inadvertent – occurring:

1. As superannuation funds believe that they are acting in the best interests of members and, as failing the Performance Test would stop them doing this by putting the Fund out of business, then managing the risk of failing the Performance Test has become is one of the most, if not the most, important objective of Fund Trustees.
2. As a result of (1) virtually all trustees and their advisors have developed Performance Test risk management strategies which involve modifying the amount by which the investment portfolio is allowed to deviate from the Fund's SAA.

In general, the greater the 'headroom' that a Fund has over the Performance Test Benchmark, the greater the willingness to take on active investment risk. The dynamics of the risk management is that active risk is reduced (i.e., investments move closer to listed asset classes and the Performance Test indexes selected by APRA), as the margin of 'headroom' decreases.

The specific measures used vary and will generally cover multiple levels and time periods across the 8 year Performance Test window.

For example, if an option had a net relative return to the Performance Test Benchmark over the latest 4 year period of almost -2%, then moving to a fully indexed position – with zero possibility of further underperformance – for the next 4 years would ensure that the Option did not fail the Performance Test (-0.5% p.a.) at the end of the 8 year period.

Similar adjustments would apply over other time periods and levels of out or under performance.

3. The Performance Test risk management process creates a ratchet effect, in that once a fund moves to an indexed, or less-active, position, then it is highly unlikely that it will never have the headroom or be able to re-acquire the skill set required, to reinstitute active management.

I conducted Monte Carlo simulations over 2 cases.

In both case active management was assumed to add 0.40% p.a., with a 2% relative volatility to the SAA Benchmark. (i.e. Over the long-term the options would outperform the Performance Test critical value of -0.50% p.a. by 0.90% p.a.)

Performance of the options was forecast forward for the next 20 years, with 8 years prior to year 1. (i.e., The simulation starts with a full 8 years Performance Test period being completed. It is then projected out over the next 20 years.)

1. In Case 1, it was assumed that the investment strategy would be modified if the previous 8 year relative return to the Performance Test was -0.25% p.a. or greater.
2. In Case 2, it was assumed that the investment strategy would be modified if the previous 4 year relative return to the Performance Test was -0.50% p.a. or greater.

The simulation was repeated 1,000 times for each Case.

The analysis found that:

1. For Case 1, over 1/3<sup>rd</sup> of Funds (37%) would modify their investment process over the next 20 years as a result of the Performance Test.
2. For Case 2, over 1/2 of Funds (53%) would modify their investment process over the next 20 years as a result of the Performance Test.

These modifications could be expected to be:

- a. Towards a greater indexed allocation; and
- b. Irreversible

It would therefore be expected that the Performance Test will directly cause a significant increase in indexed investing by Australian Superannuation Funds, with a corresponding decrease in returns to members and the flexibility and diversity of investments.