

Invesco Australian Equities

Executive summary

This paper provides an overview of the role equities play in meeting the performance test requirements of Your Future Your Super (YFYS) legislation.

With the performance test becoming a critical aspect for super funds, the focus has shifted towards constructing reliable equity portfolios that deliver consistent risk-controlled alpha at low fees. Equities play a significant role in MySuper products, and their performance greatly impacts the overall success or failure of the performance test.

The key determinant of success in delivering above YFYS benchmark returns for equity investment strategies is the information ratio, which represents the active return per unit of active risk taken. The probability of clearing the 8-year YFYS performance hurdle can be calculated based on the active performance target and information ratio. This shows that reducing active risk alone does not significantly reduce performance risk but diversifying active management to investment styles with better risk control and higher information ratios can greatly improve the chances of passing the test.

To maximise the information ratio, there is a need to focus on improving both the information coefficient (manager skill) and the breadth (number of independent investment opportunities). Emphasising breadth by avoiding concentration, maintaining a focus on stock-specific positions, embracing turnover, and using underweights as well as overweights can enhance the decision-making breadth of an investment process and increase the chances of outperformance.

In addition to breadth, managing costs, tax implications, and outcome risks are crucial for efficient use of investment risk and maximising returns. Cost-efficient processes that effectively manage tax and investment manager fees can pass on active returns without needing to take on additional investment risk.

Furthermore, effective management of portfolio outcome risks, particularly ESG exposure, can significantly impact returns and contribute to performance test results. ESG and low carbon targets creates off benchmark risk in the YFYS performance test and a quantitative and systematic approach is well suited to manage risk-adjusted alpha and ESG requirements in an integrated way.

By focusing on maximising the information ratio, diversifying investment opportunities, managing costs, and addressing outcome risks, super funds can improve their chances of beating the performance test. A combination of skilful investment strategies, risk control, and efficient portfolio management can help super funds deliver consistent and risk-adjusted alpha while staying on the right side of the performance test. Additionally, adopting such approaches within listed equities can enable higher allocations to longer-term absolute return seeking investments in other investment classes.

Your Future Your Super

Active equities versus the performance test

Passing the performance test: the role of equities

Passing the performance test has become one of the primary goals of all super funds with the punishing consequences of failure an unacceptable outcome.

The performance test effectively forces investment teams to construct portfolios around the 'benchmarks' for each asset class, as failing to meet or beat these benchmarks could lead to serious repercussions for the fund.

This has created a tension between the desire to deliver consistently higher than market returns for members and decreasing underperformance risk.

Which brings us to the elephant in the room – equities (Australian or otherwise). Making up a significant portion of any MySuper product, equities can be why a fund's performance sinks or swims.

In this paper we take a look at what influences the likelihood of passing the YFYS performance test, and how information ratio can be maximised to generate the best risk-adjusted upside for super funds while staying on the right side of the test.

The new goal of equities

We believe that the role of equities in MySuper products has significantly changed since the performance test was introduced. With the increased risk of failing the test, taking risky bets on your equity positions is no longer viable, funds now need to ensure that their equity portfolio is reliably delivering consistent risk-controlled alpha at low fees.

Why is this? Well in practice equities make up close to 50% of most MySuper product portfolios, as such their performance has an outsized impact on the passing or failure of the performance test. It also means that consistent out-performance of the benchmark within the equities sectors can facilitate a longer-term absolute return seeking approach in other investment classes where off benchmark risks can cause shorter term underperformance vs listed benchmark comparables (i.e. private markets, real assets and alternatives).

Information ratio: the key to performance risk

For a superannuation fund facing a YFYS performance test, the key determinant of success is active return per unit of active risk taken.

The approximate probability of clearing the YFYS 8-year performance hurdle of -0.50% p.a. can be calculated for a given active performance target and information ratio by assuming that active returns are normally distributed (which is reasonably accurate for modest alpha and active risk levels). This calculation is shown in Figure 1.

This demonstrates the strong relationship between information ratio and probability of failure. It is striking that the information ratio, not level of risk, is the dominant factor in determining the risk of failing the YFYS performance test. Reducing active risk by making smaller allocations to active management is not nearly as effective in reducing performance risk as is diversifying active management to better risk controlled, higher information ratio investment styles.

Figure 1: Your Future Your Super Performance test fail probability

Alpha Target	Information Ratio								
	1.00	0.90	0.80	0.70	0.60	0.50	0.40	0.30	0.20
0.50%	0.1%	0.2%	0.5%	1.3%	2.8%	5.6%	10.1%	17.0%	26.2%
1.00%	0.1%	0.3%	0.8%	1.8%	3.6%	6.6%	11.5%	18.4%	27.4%
1.50%	0.2%	0.4%	0.9%	2.0%	3.9%	7.0%	11.9%	18.8%	27.8%
2.00%	0.2%	0.4%	1.0%	2.1%	4.0%	7.2%	12.2%	19.1%	28.0%
2.50%	0.2%	0.5%	1.0%	2.1%	4.1%	7.4%	12.3%	19.2%	28.1%
3.00%	0.2%	0.5%	1.0%	2.2%	4.2%	7.4%	12.4%	19.3%	28.2%
3.50%	0.2%	0.5%	1.1%	2.2%	4.2%	7.5%	12.5%	19.4%	28.2%
4.00%	0.2%	0.5%	1.1%	2.2%	4.2%	7.5%	12.5%	19.4%	28.3%
4.50%	0.2%	0.5%	1.1%	2.2%	4.3%	7.6%	12.6%	19.5%	28.3%
5.00%	0.2%	0.5%	1.1%	2.2%	4.3%	7.6%	12.6%	19.5%	28.3%

It is the information ratio that counts, not the risk level per se, and so it is imperative that funds pay careful attention to maximising the information ratio of their active investment risk.

Maximising the information ratio

So how can a fund improve the information ratio of its active investment process?

The fundamental law of active management developed by Richard Grinold relates a portfolio's information ratio to its skill level, and the number of active positions taken:

$$\text{Information ratio} = \text{Information Coefficient} * \sqrt{\text{breadth}}$$

Skill refers to the manager's ability to generate superior forecasts or insights that lead to better investment decisions. It captures the manager's expertise, research capabilities, analytical skills, and any other factors that contribute to their ability to outperform the market.

Breadth represents the number of independent investment opportunities or active positions that the manager takes within their portfolio. A higher breadth implies a more diversified portfolio with a greater number of independent bets. It provides the manager with more chances to capture mispriced assets and enhance performance.

To maximise the information ratio, a fund needs to focus on improving both the information coefficient and the breadth.

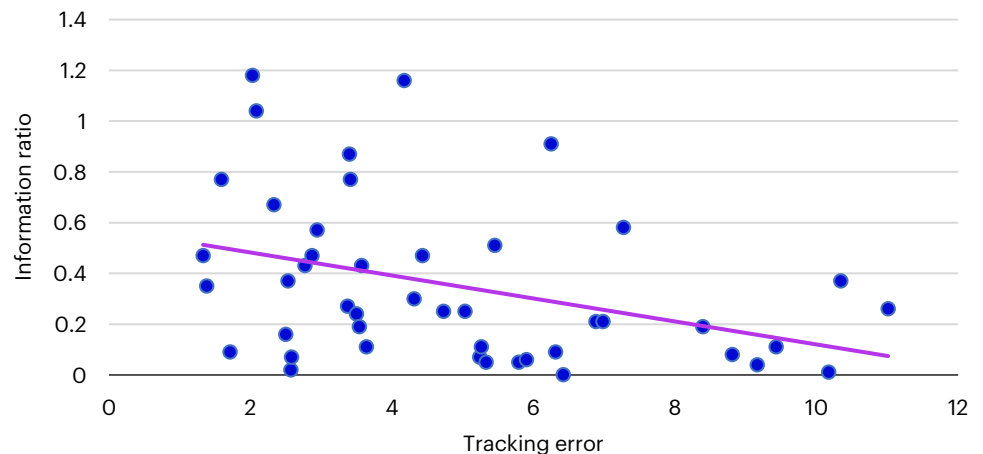
While information coefficient is dependent on the skill of the selected investment managers and diversification of management style across them, breadth is directly related to the type of investment process employed and can be explicitly influenced by a fund's choice of investment mandate structure.

High Information ratio equity management

Information ratio can vary greatly across equity managers, with some styles being naturally more risk efficient than others.

Looking at the results of the managers in the Mercer risk survey (Figure 2) shows a clear relationship between lower risk and higher information ratio. This tends to be a consequence of an increased focus on risk control leading to lower risk outcomes and higher return per unit of risk.

Figure 2: Manager information ratio by active risk: Mercer risk survey (7yr to Mar 2023)



So, what are the key features of managers with high information ratio?

Breadth is key

As noted above, investment processes with greater breadth will have a natural advantage in achieving a higher information ratio for a given level of skill. A fund can therefore greatly improve its chances of outperformance by increasing the breadth of its active exposure.

Here we explore some of the key features a fund can emphasise to increase the effective decision-making breadth of an investment process.

Focus on stock specific

A key to maintaining high breadth in an equity portfolio is avoiding a high proportion of risk being taken up by a small number of industry or macro thematic driven trades. Such positions tend to be less frequent and more concentrated than stock specific positions, and have the effect of reducing the proportion of active return relative to extraneous market movements. This can add huge value at the right time but at the risk of irretrievably damaging a product's track record when things go awry.

Processes with tighter limits on active industry positions and other risk factors are likely to provide a higher return per unit of active risk.

Avoid concentration

High conviction, concentrated investment styles make fewer investment decisions than broadly diversified portfolios. This provides less diversification across the investor's investment views, leading to more volatility and a higher likelihood of encountering periods where a significant proportion of the stock positions are not adding value.

Concentrated equity portfolios can be subject to appreciable style risk where the market environment does not reward the investor's approach, resulting in large drawdowns and extended periods of challenging performance.

Embrace turnover

Another important aspect of diversification is time diversification, i.e. achieving decision breadth by making a series of independent investment decisions over time.

Low turnover strategies have fewer active decisions per year, requiring more time for the skill of the manager to outstrip the noise of the market and provide a strong likelihood of success. High turnover strategies, conversely, will more rapidly trend toward their expected return level, providing meaningful and sustained outperformance.

Systematic quantitative strategies will often have a higher turnover level than fundamental approaches as the automation of decision making lends itself to continual updating and adjustment of active positions.

Use underweights as well as overweights

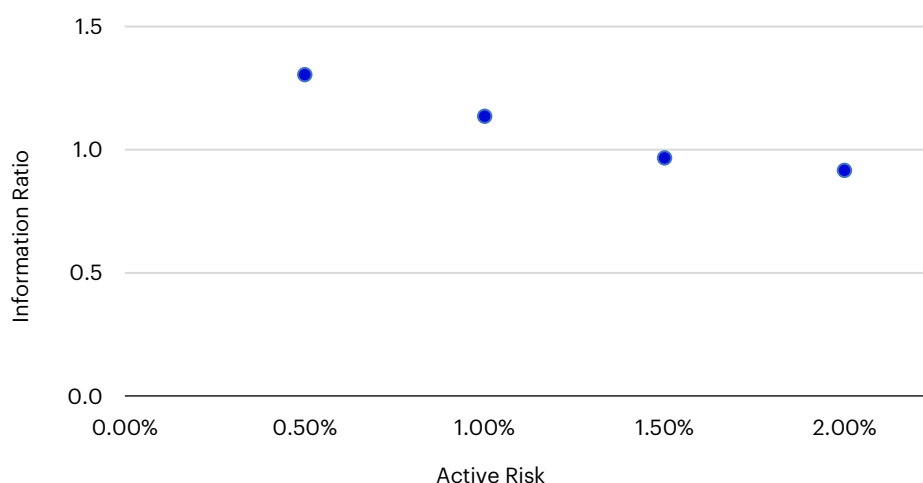
In a benchmark relative world, performance can be gained from selecting which stocks are held significantly below benchmark weight as well as those that are overweighted. The more concentrated the portfolio, the less flexibility there is in judicious selection of disliked stocks, as most stocks will not be held at all, and the size of underweighting is just a function of their benchmark weight.

For a long only portfolio, a higher information ratio can be obtained by lowering active risk so that underweight positions can better express negative factor exposures. This increases effective portfolio breadth because now both underweight and overweight positions reflect active investment decisions.

The information ratio of active factor strategies rises consistently for lower active risk levels, with a tracking error in the region of 0.5% generally being sufficient for an Australian equity manager to gain the majority of the benefit from underweight position selection.

In Figure 3, simulations of Invesco's Australian equity active factor process are shown to demonstrate risk efficiency at various active risk levels. The improved risk efficiency at lower tracking error levels is clearly evident.

Figure 3: Information ratios of Invesco Australian equity active factor strategies



Source: Axioma and Invesco as at 30 June 2022. Results provided are for the time period Jan 2011 to June 2022.

Beyond Breadth – Managing costs and outcome risk

While manager skill and breadth are the key to efficient use of investment risk to create active returns, the management of costs such as tax and fees can have a significant impact on the quantum of return that the end investor receives, and that is assessed by the YFYS performance test. Cost efficient processes are able to better pass on active returns without needing to take on extra investment risk to compensate for the cost performance drag.

Two of the most significant sources of cost to manage for an active investment process are tax and investment manager fees.

Similarly, risks associated with portfolio outcome objectives such as ESG exposure can significantly impact returns, and effective management of this source of investment risk can be crucial for performance test results.

Tax awareness

Meaningfully improving the after-tax outcome of an investment process requires selecting trades that have a more benign tax impact over those with an adverse tax impact. This can be difficult to achieve consistently without significantly disrupting the underlying investment process but can be implemented in a quantitative investment strategy where an explicit trade-off between return expectation and tax impact is made regularly and systematically.

A factor-based strategy which incorporates a lot-level penalty on tax realisation will tend to select trades that realise losses and delay those which realise gains, while maintaining the desired overall factor characteristics of the portfolio. This improves after tax return while preserving pre-tax outperformance. Such a tax-based process enhancement improves after tax returns without increasing active risk, providing a direct and meaningful increase in information ratio.

Above we noted that information ratio can be improved by reducing tracking error to better use benchmark relative underweight positions, however risk optimality is somewhat different for post-tax returns. Careful timing of capital gain realisation in portfolio trading has a very significant impact on post tax returns, greatly improving the post-tax information ratio. But to obtain this benefit the process needs to have sufficient active trading to allow meaningful selection between trades with a benign or adverse tax impact.

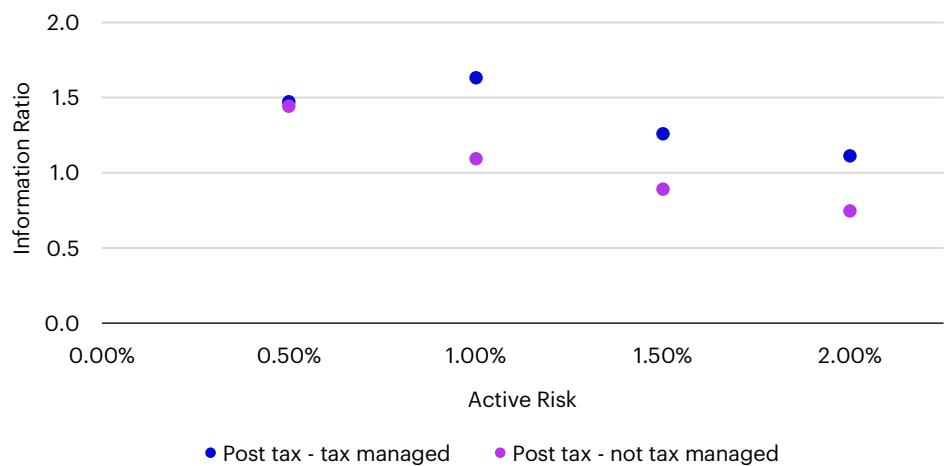
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Consequently, the optimal active risk level for maximising after tax information ratio in an Australian equity active factor process is around 1%. This incorporates both the benefit of increased contribution from underweights at lower risk levels, and the improved after-tax returns from tax lot-level trade selection.

In Figure 4 simulations of the IQS tax managed active factor process demonstrate after tax risk efficiency at various active risk levels. The improved risk efficiency at lower tracking error levels and the benefit of tax aware trading are both clearly evident. A tracking error level around 1% maximises post tax information ratio for a long only superannuation fund.

Figure 4: Information ratios of IQS tax managed active factor strategies



Source: Axioma and Invesco as at 30 June 2022. Results provided are for the time period Jan 2011 to June 2022. Post tax returns include imputation credits and tax paid on income and realised net gains.

Fees

Seeking the best fee outcome for clients has been a major focus for the industry for a long time and has driven many funds to move to lower risk systematic core managers, as managers with scalable systematic processes are often more cost effective than fundamental managers.

Performance based fees can also help cushion the fund from extra costs when disappointing active returns threaten to push the fund below the YFYS performance threshold, however they add the complication of high comparative fee levels at other times or on a forward-looking expected return basis.

ESG risk management

In a YFYS framework it is essential that Environmental, Social and Governance objectives are not only managed effectively from an outcome point of view, but also from an investment risk perspective. Balancing the impact of specific portfolio objectives on the investment process can be a complex multi-dimensional task.

While many managers can assess the activities of individual companies to decide on their appropriateness for portfolio inclusion, the decision-making process becomes a lot more complicated when trying to manage the impact on the overall portfolio style biases and active risk. Going beyond simple industry and stock exclusions to provide effective factor exposure control and balance ESG risk versus expected return is best managed by a quantitative investment approach that can simultaneously manage multiple competing objectives.

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Systematic processes allow asset owners to understand and control the investment risk impact of ESG objectives by explicitly modelling the entire investment process under ESG constraints. These processes are an essential tool in maintaining control of investment outcomes if ESG objectives are not to be abandoned.

Breadth is key

Equities have an outsized impact on whether or not a super fund passes the performance test in a given year. This brings increased scrutiny on downside active performance in a highly competitive industry making it even more important for superannuation funds to manage their return per unit of risk to maximise their chances of achieving their objectives. Key decisions around mandate parameters and investment management styles can significantly impact this outcome.

Specific features to look for to optimise the active risk adjusted returns of equity managers include:

- **Favour stock specific positions over macro/thematic risk**
- **Avoid highly concentrated, conviction-based styles**
- **Use turnover to improve time diversification**
- **Harness active underweights via lower tracking error strategies**
- **Enhance after tax returns via tax aware trading**
- **Ensure cost effective allocations and/or judicious performance-based fees**
- **Risk aware management of ESG objectives**

Getting the listed equities side of the equation right also allows higher off-benchmark allocations in private markets, real assets and alternatives to seek superior long-term total returns.

Important information

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