MyFiduciary
Governance & Investment Support

MyFiduciary Analysis of Active versus Passive Management in KiwiSaver

14 August 2020[1]

[1] This is an updated version from the 2 March 2020 report incorporating feedback from KiwiSaver Providers

Contents

1. Introduction and Summary

Purpose and Scope

This report was commissioned by the Financial Markets Authority (FMA). In the report we examine how active or passive each KiwiSaver Provider is. We also examine whether investment management fees differ between active and passive approaches.

Our coverage includes the full KiwiSaver universe including public and restricted schemes. In all, 31 KiwiSaver Providers are assessed, including 26 public Providers and 5 restricted Providers. KiwiSaver Providers with a track-record of less than 1-year (as at 30 September 2019) have not been included in our report. KiwiSaver Providers are not named in the body of this report, however, they have been included in the data tables within Annex 2.

Our analysis reviews KiwiSaver Providers' stated investment philosophy towards active and passive management and assesses how this compares with their actual implementation. It also includes a quantitative analysis of the underlying investment and sector exposures of KiwiSaver Providers and KiwiSaver funds to assess the extent to which the exposures are passive or 'truly' active. We use several analytical techniques to examine the degree of activeness, including Active Share, active risk (tracking error), and the extent to which Providers appear to employ tactical asset allocation.

Data used in our analysis include Disclose Register data, Provider data and Morningstar data. We have also used other information from Provider websites (offer documents) and from direct engagement with KiwiSaver Providers. Most of the report data, including fee levels, is as at 30 September 2019. Subsequent to the completion of the first version of this report there have been changes to the fees charged by some funds. These changes have been incorporated into this updated report, if the Provider was able to demonstrate that the fee change was effective before 30 September 2019.

In addition to assessing the degree of activeness, we provide our view on trends in investment management fees and how this relates to what we observe with respect to KiwiSaver fees.

Key Findings

We find that most but not all KiwiSaver schemes are 'true to label' in terms of the style they deliver. For example, most Providers who claim to be taking a 'passive' investment approach are in fact showing a low level of activeness based on the measures that we use. That said, a minority of Providers who describe themselves as 'active' are not materially more active than passive Providers.

Most KiwiSaver Providers take little active risk in New Zealand equities. The Active Share scores (similarity of the holdings in a fund relative to the benchmark) for New Zealand equities are low. In contrast, the Active Share for global equities shows a wide dispersion, and Providers who are classified as active typically had high Active Share scores. The difference is partly due to the concentration of companies in the New Zealand sharemarket.

The key finding of our report is that **there is no significant relationship between the level of active management employed by Providers and the fees they charge**. This finding is robust to differences in Provider scale, the differing risk profiles that KiwiSaver Providers offer in their schemes, and the differing ways we measure activeness.

We would have expected to find that the less active Providers would have lower fees, on average, than the most active Providers. Compared with a passive or index-tracking approach, active management is more expensive to deliver in-house and the external funds, such as global equity managers, are more expensive for active than for passive management.

While investment management fees have declined globally, and economies of scale for the larger KiwiSaver Providers have grown considerably, these lower input costs have not resulted in systemically lower fees to KiwiSaver investors. We would have expected to have seen fee levels decline further than they have given the fall in input costs.

Overall, our results suggest that value for money in some KiwiSaver products is not as high as it could be. With greater competition and scrutiny, we would expect over time to see fees more closely aligned to the investment strategy, and lower KiwiSaver fees overall.

Limitations of use and our analysis

The report should be read in its entirety and not be used for a purpose other than that to which it is intended. The report does not address the following areas:

- **KiwiSaver Provider quality or skill.** We have made no qualitative assessments about Providers' style, processes or people. There is no reason to believe, however, that there is any relationship between the level of use of active management and quality or skill. That is, we are not suggesting that the most active Provider is the best active Provider, nor that the least active is the best passive Provider.
- **Advice.** Many Providers quite reasonably noted that advice is a key component of their offering to investors, and that with the provision of advice (whether internal or via external advisers), comes an associated cost. We agree, but this report is unable to assess whether the amount and cost of advice goes up with the degree of activeness or the fees charged.
- **Socially Responsible Investing (SRI).** There is no direct consideration of Providers' SRI approaches, and the degree to which they incorporate ESG in their security selection process. This matters to the extent that incorporation of ESG results in portfolios that perform differently to their relevant indices. We do not, however, expect that this omission will materially impact results given most Providers' approach to SRI still involves a small set of exclusions, rather than comprehensive incorporation of ESG into their security selection process.[2]
- **Provider profitability.** Along with consideration of advice, it is outside the scope of this report to consider all of the costs (fixed and variable) a Provider faces, and the profit margin it charges. As with consideration of advice, we think it would be useful for the FMA to periodically benchmark these costs and profit margins so that a more comprehensive assessment of whether KiwiSaver is delivering value for money for its members can be assessed. That said, our general view is that fees should have declined over time as Provider scale has increased (reducing fixed costs), and fees for third-party global funds have fallen.

Authors

The report has been written by Chris Douglas & Greg Peacock with quality assurance by Aaron Drew and David Rae.

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[2] https://www.myfiduciary.com/uploads/1/1/3/9/11394355/kiwisaver_socially_responsible_continuum_december_2018.pdf

2. Approach

All KiwiSaver Providers state their investment philosophy and management style in their Statement of Investment Policies and Objectives (SIPO). It is also presented in the Quarterly Fund Updates, it can sometimes be inferred from advertisements, but it is generally absent from Providers' Product Disclosure Statements. Most Providers also explicitly state in their SIPO if they are active or largely passive (index tracking) in their security selection approach. For example, one Provider states "Asset markets can be inefficient and active managers can generally add value over benchmarks." That implies a belief in active management.

The first step in our analysis classifies the degree of active management based on Providers' documentation (which we term in the next section 'activeness promised'). To do this, we classify each Provider under three broad categories[3]: (1) Mainly Passive; (2) Mixed and (3) Mainly Active.

Out of the 26 public KiwiSaver Providers, 4 are classified as mainly passive (only one Provider describes themselves as entirely passive), 5 employ a mixture of active and passive management, and 17 Providers claim to adopt a mostly active investment style. This means they largely allocate to active investment strategies at the sector level (either directly or through external managed funds) and may also employ some form of dynamic or tactical asset allocation.

The second step in our analysis estimates how active each offering actually is, based on their holdings data, rather than what is stated in their documentation (which we term in the next section 'activeness delivered'). For each offering, an activeness ranking is produced from the metrics outlined below (and discussed in more detail in Annex 1). Four activeness measures are used and cover the degree to which funds deviate from their benchmarks at both the asset allocation and security selection level. This helps ensure our data is not skewed by any single measure. We have provided a detailed summary of the process in Annex 1, but in brief, the four measures of activeness we assess are:

1. The degree to which actual asset allocations deviate from their target or Strategic Asset Allocations.
2. The Active Share of the New Zealand and international equity portfolios.
3. The tracking error (deviation of returns relative to the benchmark) of the underlying sector exposures for each KiwiSaver Scheme.
4. The number of asset classes employed within the KiwiSaver Scheme.

3. Findings

Activeness Delivered versus Promised

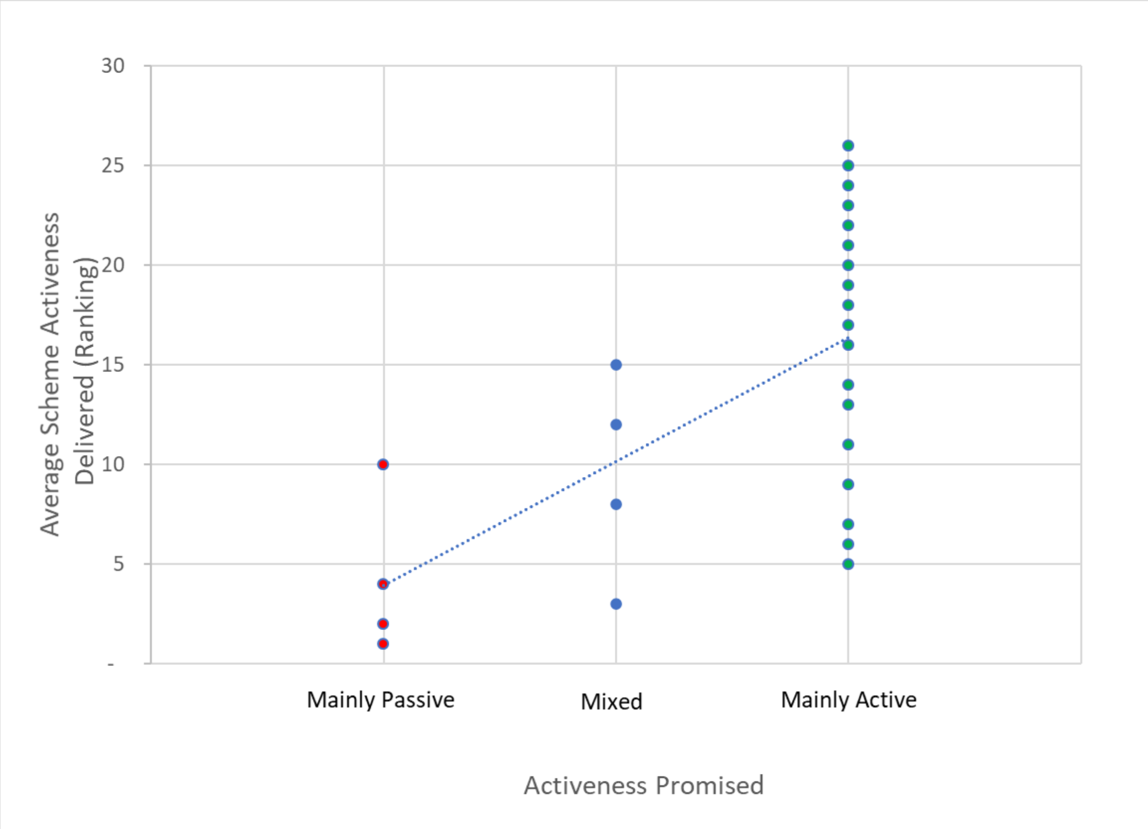
Chart 1 below plots the activeness ranking we derive for each scheme (activeness delivered) against the degree of activeness we classify from the Provider's SIPO (activeness promised). The trend line between the activeness promised and activeness delivered is upward sloping, indicating that there

[3] Results in the paper are robust to a more granular categorisation of each Provider to 5 categories rather than 3.

is a positive but loose relationship between the measures. However, the very wide range of activeness rankings for Providers who classify themselves as 'active' suggests that in practice this term means little. Those classified as 'mainly passive' and 'mixed' are reasonably true to label, but many of the KiwiSaver Providers who describe themselves as 'mainly active' managers are not so, based on our 'activeness delivered' measure.

In Charts 1 to 9 below data points in green are for 'mainly active' funds, those in blue are 'mixed' and those in red are 'mainly passive' funds.

Chart 1: KiwiSaver Provider Style Versus Level of Activeness



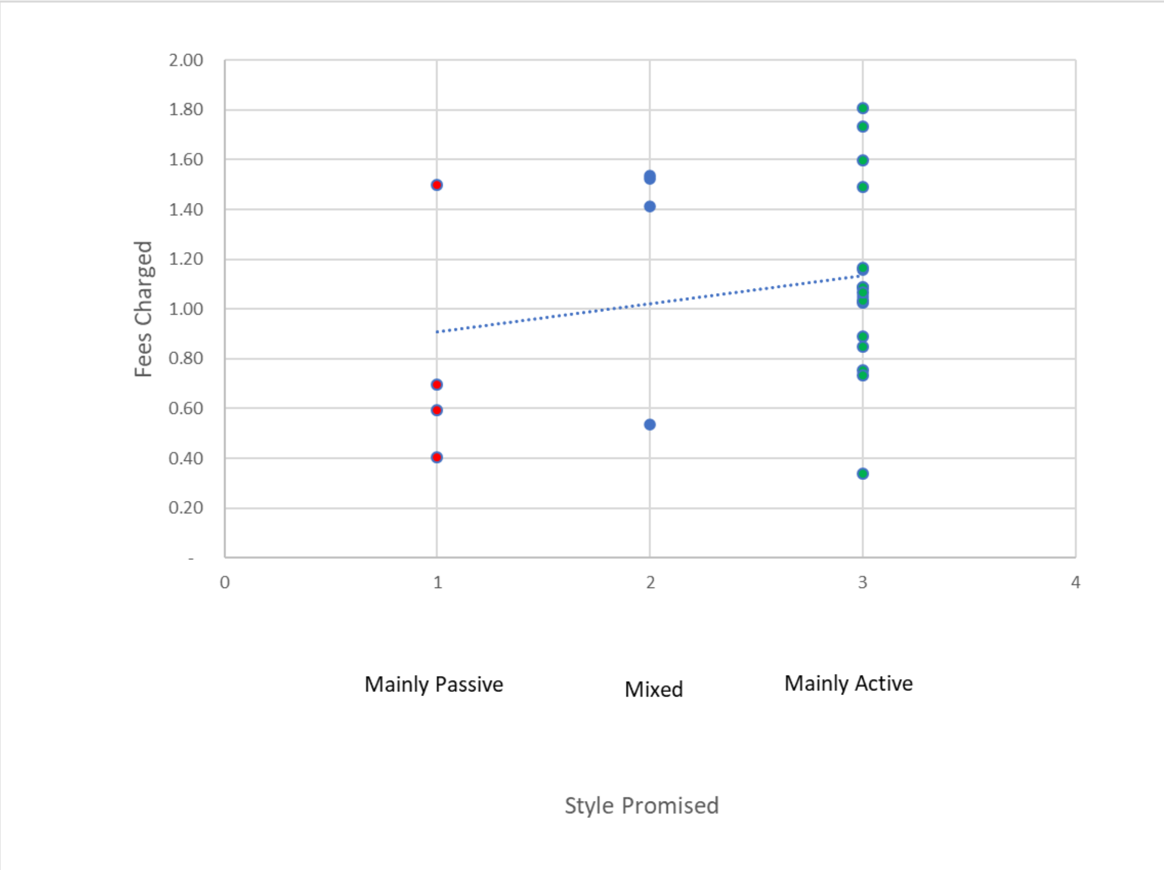
There is a degree of subjectivity in assigning Providers into one of the three levels of active management based on their SIPO documentation, and so results are probably better assessed across the whole universe rather than focusing on individual Providers. That said, the finding that there is a wide range of activeness delivered for Providers we classify as active is robust both to a more granular 5-category measure of activeness promised, and to differences in how we develop the activeness ranking.

We also suspect results may reflect caution in the writing of SIPOs – Providers possibly being equivocal about their style in order to ensure they are always compliant.

Activeness Promised versus Fees Charged

Chart 2 below plots the relationship between the style Providers profess to employ, and the fees charged to members. Fees are measured in percentage terms using the approach described in Annex 1. As with Chart 1, the most notable feature again is the dispersion between Providers who classify themselves as active. The relationship between professed style and fees is very weak. As such, there is no evidence of any relationship between the style Providers claim to implement and the fees they charge. One active Provider has the lowest fees in the market, whereas one 'mainly passive' Provider has fees that are well above the average level seen for active Providers.

Chart 2: KiwiSaver 'Activeness' versus Fees

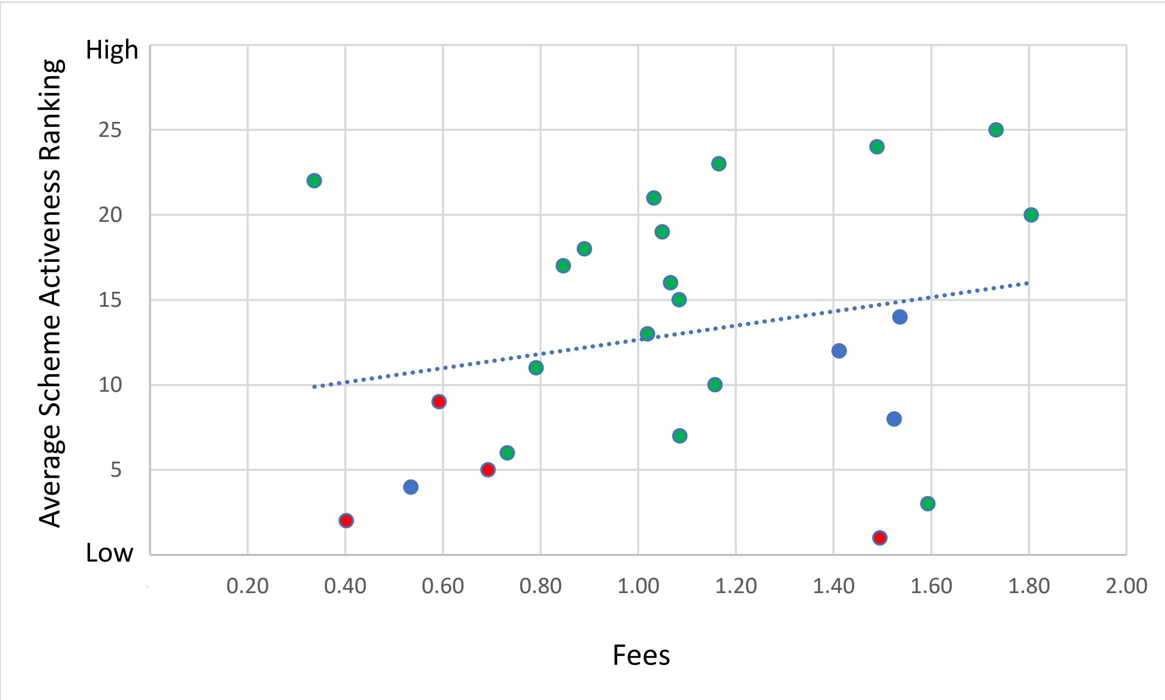


Activeness Delivered versus Fees Charged

In this section we compare fees charged against our 'activeness delivered' measure. We start with a comparison of fees against the FUM weighted average of all multisector schemes that Providers offer. We then consider individual schemes with similar asset allocations to see whether there are any differences in the relationship between fees and activeness at this level.

Chart 3 illustrates the relationship between fees charged and activeness delivered at the scheme level. The trend line is marginally upward sloping, indicating that fees tend to rise with the degree of activeness. However, there is considerable dispersion around the trend line, indicating that the relationship is far from conclusive. The data in Chart 3 therefore illustrates that there is no significant relationship between activeness delivered and fees charged at the Scheme level.

Chart 3: KiwiSaver Active Management for Multisector Schemes versus Fees



To test whether these results are robust, we also report below the relationship between activeness and fees for each category of funds that Providers offer their members, i.e. from low risk cash funds to high risk growth funds. Note that the activeness score is estimated for individual funds, rather than schemes. Whereas there are 26 public KiwiSaver Providers, there are 185 individual funds.

As is apparent from Charts 4 to 9 below, once again there is little obvious relationship between how active a fund is, and the fees that are charged. Cash funds (Chart 4) are a particularly stark case. The activeness measure shown in the vertical axis of Chart 4 is relatively low (compared to Charts 5 to 9) and varies very little between funds. This should be expected because there is not as much scope for active management of cash and cash-like instruments. However, there is a surprisingly large range of fees charged; with several Providers charging a fee that sits above the current level of 90-day bank rates (which is a common benchmark return for cash management).

Chart 4: KiwiSaver Cash Funds 'Activeness' versus Fees

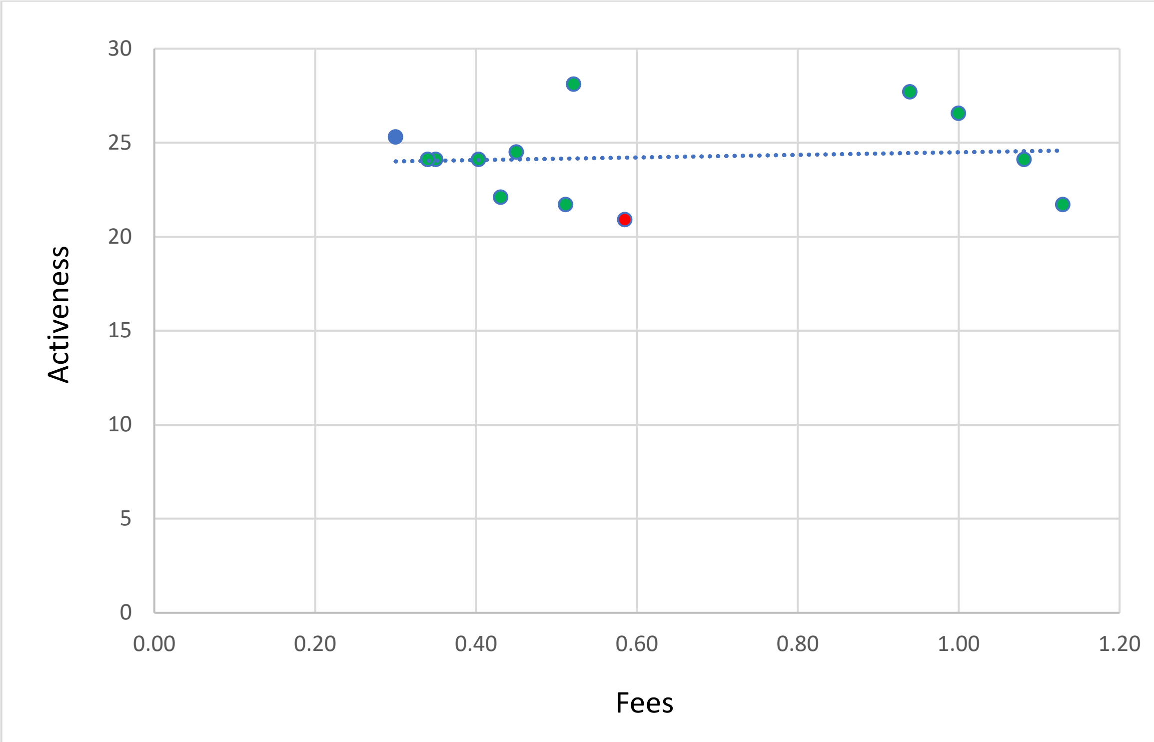


Chart 5: KiwiSaver Conservative Funds 'Activeness' versus Fees

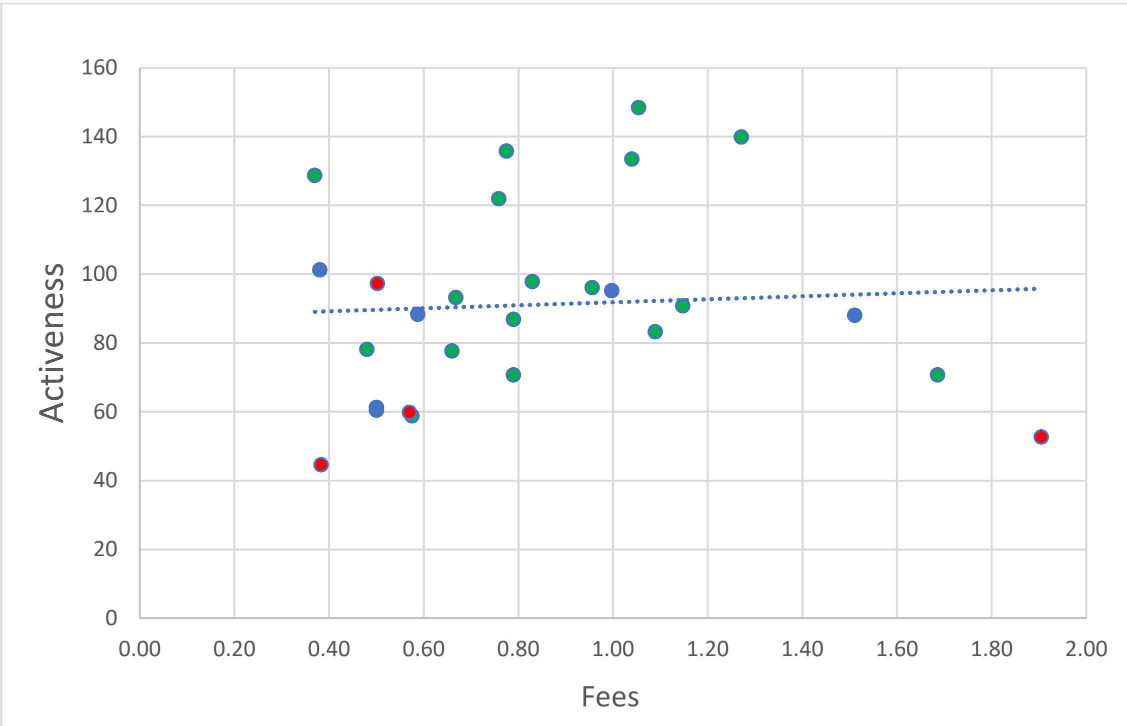


Chart 6: KiwiSaver Moderate Funds ‘Activeness’ versus Fees

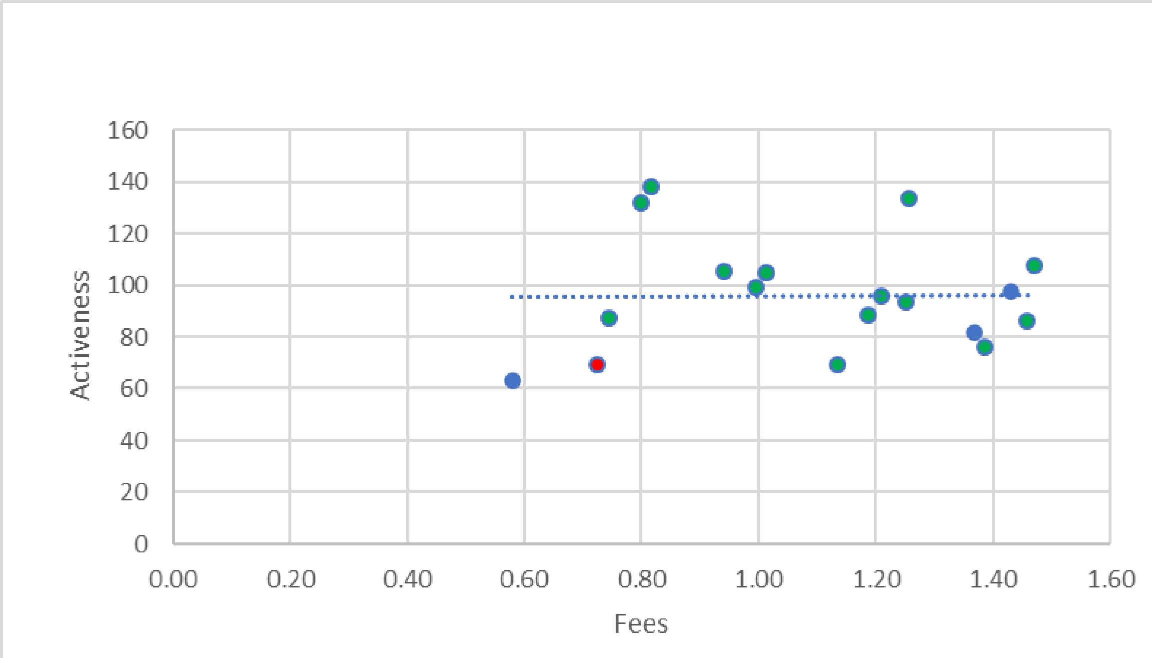


Chart 7: KiwiSaver Balanced Funds ‘Activeness’ versus Fees

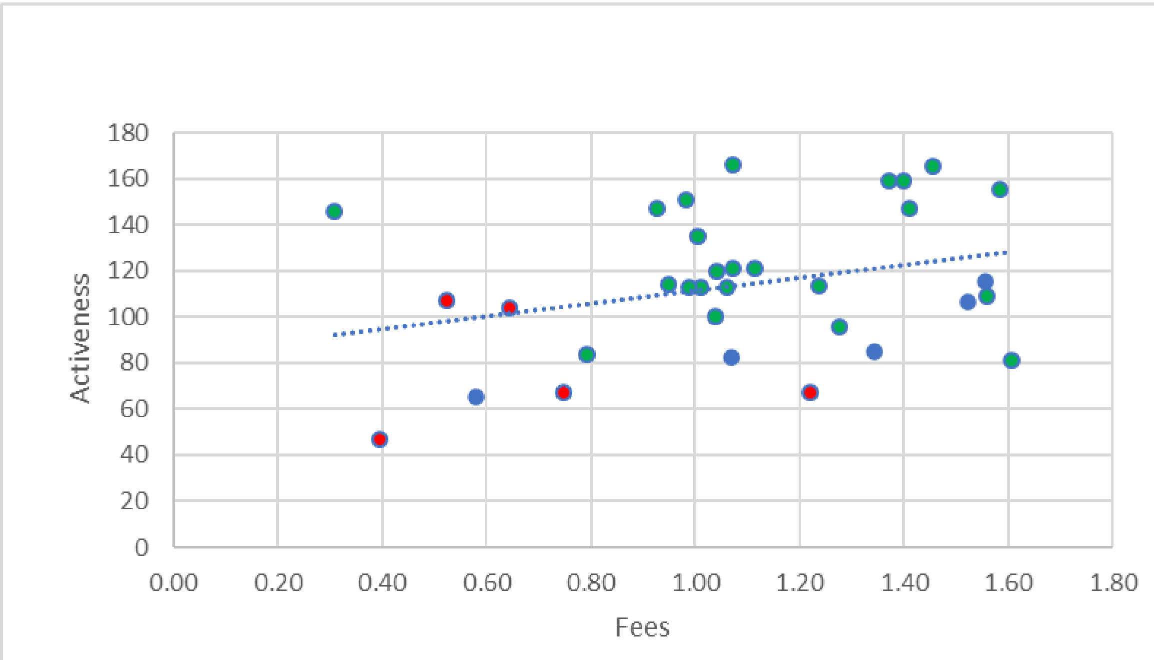
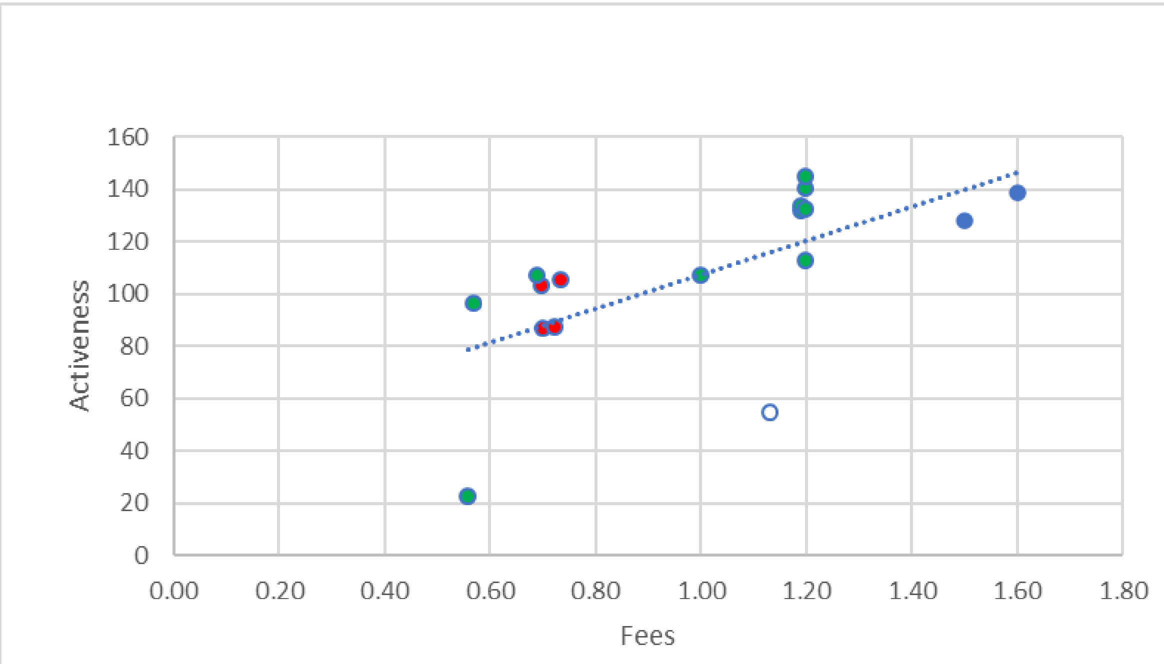


Chart 8: KiwiSaver Growth Funds 'Activeness' versus Fees

Chart 9: KiwiSaver Restricted Funds 'Activeness' versus Fees



As a further test on the robustness of our key finding that there is little relationship between activeness and the degree of fees charged, we have also examined whether the results are similar if we eliminate smaller funds (FUM under $100m) from the analysis, wherein fixed costs may be materially higher as percentage of FUM.

This analysis revealed that size does not appear to be a factor, and we can still assert that there is no significant relationship between fees and the degree of active management employed.

4. Analysis of KiwiSaver Fees

In this section we report trends in New Zealand and international fund costs and compare this to what has been occurring in KiwiSaver.

Fund fees have declined globally for all investment types over the last 10 years. According to the Investment Company Institute, US target date fund fees (multi-sector retirement products) have declined substantially over the past decade from 0.67% in 2008 to 0.40% in 2018[4]. Further to this, a 2017 global study by Morningstar on managed fund fees also found continued downward pressure on fees in many global markets[5]. Most dramatically, for large scale wholesale investors, the cost of obtaining an index tracking product in global equities is now only a few basis points.

A significant factor behind the fall in fees has come from the rise of passive investment, which also features to some extent in most KiwiSaver Schemes. The price of investing for New Zealand investors has fallen dramatically in the low-cost passive space over the last four years. To provide an indication, Table 1 below provides select fund costs for passive products available to NZ retail investors, who do not enjoy the scale advantage to secure the cheaper wholesale rates that KiwiSaver Providers have. A New Zealand DIY investor can build a low-cost balanced portfolio for around 0.22% (excluding platform or custody charges)[6]. This is considerably cheaper than every KiwiSaver Scheme. This highlights that the decrease we have seen in fees also applies in New Zealand.

Table 1: Historical fees for low cost passive funds available to New Zealand Investors

Asset Class	2016	2017	2018	2019
New Zealand Fixed Income*	0.54%	0.54%	0.10%	0.10%
Global Fixed Income**	0.54%	0.54%	0.54%	0.30%
New Zealand Equities^	0.50%	0.33%	0.10%	0.10%
Global Equities^^	0.56%	0.56%	0.39%	0.39%

* Smartshares NZ Bond (2016-17); Simplicity NZ Fixed Income (2018-19)
** Smartshares Global Bond (2016-17); Smartshares Global Aggregate Bond ETF (2019)
^ Smartshares NZ 50 (2015); AMP Capital Index NZ Shares (2017); Simplicity NZ Shares (2018-19)
^^ Smartshares Total World (2016-17); AMP Capital All Country Global Shares Index Fund (2018-19)

In contrast to the unambiguous trend decline in fund management fee costs, we do not see obvious declines in the fees charged by KiwiSaver Providers overall. Chart 10 illustrates how the historical weighted average fee for a KiwiSaver Scheme has, in fact, marginally *increased* over the last 8-years,

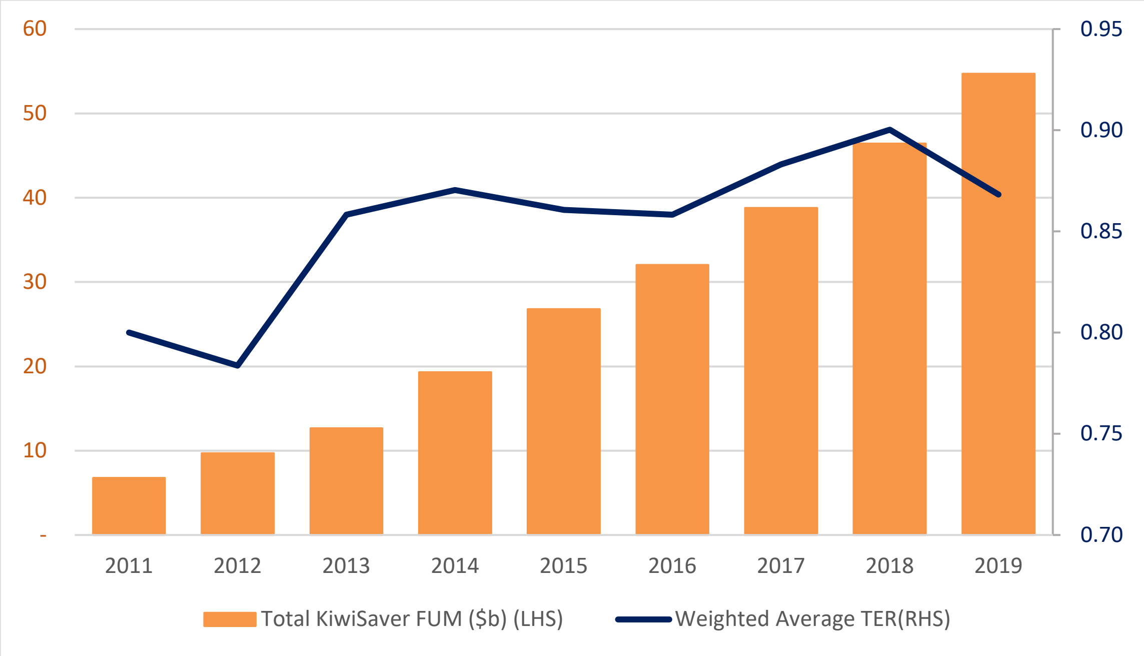
[4] ICI Research Perspective, March 2019, Expense Ratios of Target Date Mutual Funds, Figure 11, Asset-weighted average, Page 13

[5] Morningstar 2017 Global Investor Experience Survey

[6] This portfolio allocation is: 25% to New Zealand Fixed, 25% to Global Fixed, 25% to New Zealand equities and 25% to global equities

despite the fall in underlying fund manager costs and a significant rise in assets managed in KiwiSaver.

Chart 10: KiwiSaver Historical Weighted Average Fee relative to Asset Growth



Source: Morningstar

This is the opposite to what we would expect to see in a dynamic, competitive market. The inference we draw is that KiwiSaver investors, on average, are not price sensitive and do not appear to fully appreciate the impact of costs on their returns[7]. Transparency, and a focus on fees from the FMA since 2018, appears to have stopped the growth in fees but it has not changed this behaviour, nor has the entry of new KiwiSaver Providers into the market aggressively marketing their lower costs. As such, the incentive for Default Providers in particular, to reduce fees appears to be insufficient.

There are a number of reasons why a greater decline in KiwiSaver fees over the last five years 'should have' occurred:

- Provider fund input costs have likely substantially fallen: KiwiSaver Providers have a significant exposure to offshore fund managers, where we have seen a large decrease in fee levels.
- In addition, as their assets have grown, the ability of Providers to secure cheaper fees from managers would also have strengthened, whether a manager is foreign or domestic, passive or active, or external or part of an internal team of the Provider.
- In addition, the large adoption of passive strategies across different Providers would have decreased the overall costs.
- Finally, the various fixed costs Providers face should in principle have also declined due to economies of scale as assets have grown. However, analysis of this, and other costs that Providers face, is outside the scope of our analysis.

[7] See for example Heuser et al (2015), page 88

To provide further nuance on fee levels, in our 2019 KiwiSaver Default Fund submission, we analysed the fees of all Conservative KiwiSaver Schemes and found that Default Providers have *more expensive* non-default schemes than non-default Providers, despite their typically much larger scale.[8] This is shown in Table 2 below.

Table 2: Comparison of Fees for a Conservative KiwiSaver Scheme

	Average Cost (total expense ratio)*	Range (total expense ratio)*
Default Provider's default conservative scheme	52bps	38bps[1]-61bps[2]
Default Provider's non-default conservative scheme	98bps	70bs[3] – 115bps[4]
Non-default providers conservative scheme	85bps	31bps[5] – 119bps[6]

Source data: Morningstar and Disclose Website. * excludes dollar-based account fees

1. Booster 2. Mercer 3. Westpac 4. Booster 5. Simplicity 6. Lifestages (SBS Bank)

Default Providers are in a privileged position - they receive direct fund flows from the IRD due to their status, and retain a large proportion of this money. Default Providers had 90%[9] of all KiwiSaver assets as at 31 December 2019. Hence, one possible reason why we have not seen a fall in fee levels is that Default Providers may be recommending investors move out of their low-cost default schemes into their more expensive non-default schemes. We stress, however, that this has not been investigated and is just a conjecture that the FMA may wish to further explore.

Given the privileged position of Default Providers, and the importance of KiwiSaver overall to New Zealanders' retirement incomes, we believe costs should be more transparent and open to scrutiny. Part of this could involve periodically **benchmarking** all material costs in the Providers' supply chain so that the total fee can be tested to ensure that Providers are earning a fair and not excessive rate of return on their equity.

These costs include:

- Custody and registry of members.
- Source fund management fees (and sub-fund manager fees where applicable); whether through engagement of external managers or internally run mandates.
- Any overlay fees and charges applied by the KiwiSaver Provider to the source fund manager fees. We observe that this is an area where there is large variation in costs for the same or similar underlying manager access and strategies. In principle, these overlay fee could be set on a fixed cost basis rather than percentage basis.
- Administration and compliance costs.
- Marketing and member advice costs.

Regulators should be assured that the Providers' margins over these costs are reasonable. In short, if a KiwiSaver Provider wants to be a Default Provider, in our view they should be prepared to open their books.

[8] See https://www.mbie.govt.nz/dmsdocument/7365-myfiduciary-review-of-kiwisaver-default-provider-arrangements-submission-pdf

[9] Morningstar KiwiSaver Survey 31 December 2019

Annex 1: Activeness Measures

Below we provide descriptions of the activeness measures we use in the report, and then how they are combined into our summary indicator. There is no single measure of activeness and we have incorporated several to try and get as broad a measure as possible.

Tactical Asset Allocation (TAA)

All funds publish a neutral or Strategic Asset Allocation (SAA) in their SIPO. Having established an SAA, an active Provider may decide to position the fund differently, based on their view of the relative attractiveness of each asset class. This practice is a form of active management referred to as Tactical Asset Allocation (TAA), or sometimes, dynamic asset allocation. Not all Providers' SIPOs allow TAA, and some who have the mandate to use it, don't tend do so in practice.

We look at two measures of TAA:

1. An active share-like measure of the deviation of individual asset class weightings relative to those stipulated by the SAA. We have treated cash and NZ Fixed Interest as a single asset class for these calculations, observing that many Providers often have significant and generally offsetting deviations from SAA in these two asset classes, and that the driver for this is often technical/operational rather than tactical/active management.
2. Variations in the allocation to 'growth' asset classes versus those in the SAA. Growth is defined by all asset classes other than cash and fixed income. This is a blunter instrument than above, but because these variations can have significant performance implications, they are invariably more indicative of active management.

We have looked at these measures at two points in time, 30 September 2019, the most recent published quarter when data requests were made to Providers, and 30 December 2018. This latter date was chosen because the fourth quarter of 2018 was a stressed market environment likely to prompt active Providers to alter their asset class weightings.

We note that if an asset allocation is away from its long term target, we are not able to determine whether this is due to drift that has not been rebalanced back, or due to a conscious and active investment decision by the Provider.

Active Share

Active Share is a holdings-based calculation designed to measure the similarity between the equity holdings in a managed fund and the underlying holdings of its benchmark. It is expressed as a percentage. A fund that has no holdings in common with the benchmark will have an Active Share of 100%, and a fund that has exactly the same holdings as the benchmark will have an Active Share of 0%.

This framework was first pioneered in an academic study conducted by researchers from the Yale School of Management in 2006[10]. It has since become accepted as one of the better ways to

[10] How Active Is Your Fund Manager? A New Measure That Predicts Performance, August 2009, K.J. Martijn Kremers, Antti Petajisto

measure the activeness of a managed fund, although it shouldn't be used in isolation, but in combination with other measures.

The rule of thumb in the industry is that an Active Share below 60% is regarded as low (i.e. not active). However, within the more concentrated New Zealand market, the top-10 companies alone account for almost 60% of the S&P/NZX 50 Index. As a result, active managers who typically take a position of +/- 3% against an index will still have a large overlap and hence low Active Share. In Australia (which also has a reasonably concentrated index in the top 20 names), Morningstar's thorough 2011 analysis of large cap Australian equity funds[11] found that a score above 50% was the median. In New Zealand, we assess an Active Share above 40% is indicative of active management.

For global shares, commonly used indexes are much more diversified with the top-10 holdings accounting for around 14%. The MSCI World Index holds over 1,500 companies, so it is much easier for a fund manager to have a high Active Share. A score above 60% is indicative of a truly active fund.

The Active Share component for a Provider has been calculated as the average of the New Zealand equities and international equities portfolios. Where possible, the portfolio Active Share was calculated over multiple time periods. However, this wasn't always possible and to ensure consistency across the KiwiSaver Providers, the Active Share calculation used in the report was as at 30 September 2019. (For all Providers where we calculated multiple active share scores, we found very little difference in the score over the last 1-2 years).

One effect of higher Active Share scores globally than domestically, is that Providers without specific New Zealand Equities allocations are likely to register higher Active Share scores than those who do. We do not believe this materially alters our overall conclusions.

The Active Share calculation was derived from the portfolio holdings of each Provider compared to the fund's benchmark. We used Disclose data and Morningstar data for the portfolio holdings and data directly from each Provider (this included name of the security, an identifier and the percent weight). We also requested each Provider include their Active Share calculation if they were able to do so. Around half the Providers were able to do this. We did this in order to cross-reference our calculation against the KiwiSaver Providers' own calculations. We found that the calculations matched in all cases but one due to lack of look-through holdings data in our dataset of some of the fund and ETF exposures. In this case, and after closely scrutinising the holdings, we used the Provider's measure.

Tracking Error

Tracking error is a cumulative measure of the 'Activeness' in a fund, calculated by measuring performance variations relative to an index. Whereas Active Share is focused on a point in time, tracking error applies over a given period of time and hence it is a complementary measure of activeness.

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[11] Active Share: The Activeness of Large-Cap Australian Share Fund Managers, Tom Whitelaw and Kevin O'Donnell, November 2011, Morningstar

Passive management aims to replicate a relevant benchmark, and thus minimise tracking error. As the management style becomes more active, the portfolio's composition diverges from the index, and so we can expect to see performance variations increase, for better or for worse. If the portfolio differs from the index, that will inevitably create a tracking error over time. The more the deviation, the greater the tracking error.

The tracking error contribution of each component of a fund is calculated over the past 5 years, multiplied by its allocation on 30 September 2019, and then added to that of the other components of the fund to create an overall fund level tracking error. This is a far more accurate gauge than simply comparing the overall fund's tracking error to its benchmark. A fund consisting entirely of passive components could, in theory, register a fund level tracking error similar to that of an active fund if the active fund's areas of outperformance and underperformance each month cancel each other out. By adding sector level tracking errors, this netting-out is minimised, and we get a more accurate measure of the level of active management employed.

For those Providers who were unable to provide sector level performance, we have had to utilise a fund level tracking error. To do this we have compared the fund's overall performance with either a relevant benchmark or an index of KiwiSaver peers with similar SAAs. As discussed above, this approach will almost certainly result in a lower tracking error, and hence underestimation of a fund's activeness relative to that calculated from sector performance.

Tracking error also has the advantage that it can be used with equal effectiveness across any asset class. All that is needed is performance and that of a benchmark. This makes it a particularly useful tool for the multi-sector funds that predominate in KiwiSaver.

Number of Asset Classes

Diversification is the surest route to improving risk adjusted returns. The diversification benefit from owning more holdings within a single asset class will be much less than that from owning more distinct (i.e. less correlated) asset classes. There are certain asset classes owned by nearly all multi-sector funds (e.g. NZ equities and bonds) but 'alternatives' such as unlisted property, commodities, infrastructure and hedge funds are not universally employed.

The goal of active management is to deliver superior risk adjusted returns and so a higher number of diversifying asset classes is *indicative* of a higher level of active management, particularly so if this involves adding alternative asset classes which in general can only be accessed via active fund managers. As discussed in the section below, however, this may not always be the case.

Active Measure Weightings

We do not believe that the various measures of active management described above are of equal importance in determining a Provider's 'true' level of activeness. Accordingly, we have weighted the overall 'activeness' score to emphasise those measures that are most indicative as per the table below

Table 3: Activeness Measure

Activeness Measure Weightings			
TAA	Active Share	Tracking Error	Number of Asset Classes
15%	30%	40%	15%

Active Share is the single most precise measure of active management because it is a direct measure of a fund manager's deviation from benchmark at a given point in time. Tracking error is a step removed, because it measures the impact on performance of Active Share over time. However, whereas Active Share is difficult to apply to all asset classes (we have applied it here, where applicable, to domestic and international equities), tracking error is relatively straightforward. It is because we have been able to employ tracking error across all asset classes that it has been given the highest weighting. Both TAA and the number of asset classes provide useful additional information but have limitations and so have smaller weightings.

Active Share and tracking error measure active management at the security level, TAA measures it at the more macro asset allocation level. It must therefore be included in any measure of active management for multi-sector funds. However, with the TAA measure we have not been able to distinguish between deviations from the SAA due to deliberate positioning, and those that result from drift of portfolios from the SAA targets. Some Providers very precisely rebalance to SAA weightings, and others do not. For these latter Providers we can get a reasonably high TAA score which is not indicative of active management. TAA therefore has a modest weighting.

The number of asset classes employed is also an imperfect measure. For example, all asset classes a Provider employs could be passive. There are however three reasons for employing it as a gauge of active management. Firstly, an active decision has been made to utilise additional asset classes in order to enhance risk adjusted returns; secondly, it typically costs more to do so; and thirdly, as discussed above, most 'alternative' asset classes can only be accessed by active Providers.

All sensible weightings between the four measures, consistent with the comments above, produce broadly similar results. For those Providers who are particularly active or inactive in one measure, the impact of changing weightings is obviously greatest, but the conclusions in this report are not especially sensitive to the weightings adopted.

We also considered three other measures below but decided against using them.

1. *Foreign Exchange Hedging*

Adjusting foreign exchange hedges on the basis of market views is a form of active management. We asked Providers for information on their approach to, and use of, hedging but found it difficult to get consistent data, particularly in terms of how active Providers were in this area, and felt that its use would be potentially misleading. We note however that tracking error measures will capture the effect of active foreign exchange hedging activities.

2. *Portfolio Turnover*

As with foreign exchange, we recognise that high portfolio turnover is indicative of active management. We did not seek information on turnover from Providers though because we believe that both Active Share (variation from an index at a point in time) and tracking error (the performance effect of variations in portfolio composition over time) should capture its use. Also, turnover is affected by the degree of fund inflows and outflows, as much as by repositioning a portfolio based on active investment views.

3. *Sharpe Ratio*

We considered using the Sharpe Ratio (risk-adjusted returns) but decided that it was not a measure of whether a manager was *being* active, but whether the manager was making good active decisions over the time period in question. Two managers could be equally active but one of them may have made bad calls, or had bad luck, over the relevant period. We calculated Sharpe Ratios for all funds, and in fact the results tended to reveal higher Sharpe Ratios for passive and less active portfolios, emphasising that it is not a good measure of activeness.

Measuring Activeness in Restricted Schemes

These schemes are only required to produce fund updates annually, rather than the quarterly fund updates required of public schemes, and their last reporting date is 31 March 2019. We have used that date (i.e. just one point in time) for analysis of these schemes. As such their results are not exactly comparable to the public schemes and so we have generally reported results for the Restricted Schemes separately.

Classification of KiwiSaver Offerings

As well as looking at Schemes as a whole, we have also analysed peer funds with similar asset allocations. The asset classes we have used are:

• Cash	
• Conservative	circa 20/80 (80% income)
• Moderate	circa 40/60
• Balanced	circa 60/40
• Growth	circa 80/20 (80% growth)
• Restricted	

We have not considered the diverse and mostly small single asset class funds, nor those with track records of less than 12 months. The Koura and Caresaver schemes are excluded from this analysis on that basis.

Determining Member Fees

There are generally two components of fees charged to KiwiSaver members: (i) a percentage-based fee levied as a percentage of funds under management, and (ii) a fixed dollar charge per investor, typically referred to as a membership fee. There are some signs that the fixed fee is under pressure, as average balances and other economies of scale grow, but most Providers still charge both the variable and fixed fees. In order to determine a single overall fee in percentage terms, the membership fee needs to be converted from dollars into basis points. To do this the average investor balance for each fund is used. For example, if the fixed fee is $30 and the average balance is $15,000 then the membership fee is equivalent to 0.20% (30/15,000). This approach gives a measure of the fee that the average-sized investor in each offering pays. It should not be used by individuals as a measure of the fee that they would pay in any given offering because that is a function of their own account balance rather than the average balance. This would also be true if we had employed an overall average KiwiSaver balance for the calculation or an average balance for funds with a similar risk profile.

Fees used in this report are as at 30 September 2019. For Restricted Schemes the 31 March Updates have been used. If a Provider was able to demonstrate that their fees had changed relative to what was displayed as at 30 September 2019, then we have used updated fee data from the Provider. The fees therefore are those that prevailed in late 2019, consistent with the data used to calculate the activeness measures.

The data source for fees was primarily from Disclose, although if a Provider supplied a lower fee, we cross-checked this against the Disclose data.

Annex 2: Report Data

Table 4: KiwiSaver Provider Style Versus Level of Activeness (Data from Chart 1)

Public Provider	Investment Approach in SIPO	Active Classification	Scheme Activeness Ranking
NZ Funds	Mainly Active	3	26
Juno	Mainly Active	3	25
Amanah	Mainly Active	3	24
Milford	Mainly Active	3	23
Fisher	Mainly Active	3	22
Fisher TWO	Mainly Active	3	21
Generate	Mainly Active	3	20
Mercer	Mainly Active	3	19
KiwiWealth	Mainly Active	3	18
Nikko	Mainly Active	3	17
Summer	Mainly Active	3	16
Booster SRI	Mixed	2	15
ANZ	Mainly Active	3	14
OneAnswer	Mainly Active	3	13
QuayStreet	Mainly Active	3	11
SuperLife	Mainly Passive	1	10
ANZ Default	Mainly Active	3	9
Booster Asset Class	Mixed	2	8
Booster	Mixed	2	8
AMP Lifesteps[12]	Mainly Active	3	7
Westpac	Mainly Active	3	6
Aon Russell[13]	Mainly Active	3	5
ASB	Mainly Passive	1	4
BNZ	Mixed	2	3
SBS Lifestages	Mainly Passive	1	2
Simplicity	Mainly Passive	1	1

[12] Refers only to offerings managed internally by AMP i.e. excludes those managed by ANZ, ASB, Mercer and Nikko

[13] Refers only to Aon offerings managed by Russell Investments

Table 5: KiwiSaver Cash Funds ‘Activeness’ versus Fees (Data from Chart 4)

Cash Funds	AUM ($m)	Fee	'Activeness'
Mercer Cash	18	0.52	28.1
AMP Cash Fund	80	0.59	27.7
Summer NZ Cash	2	1.00	26.6
BNZ Cash Fund	167	0.30	25.3
Kiwi Wealth Cash	219	0.45	24.5
ANZ Cash	490	0.40	24.1
ANZ Default Cash	10	0.35	24.1
ANZ OneAnswer Cash Fund	45	0.34	24.1
Aon ANZ Cash Fund	5	1.08	24.1
Westpac Cash Fund	367	0.43	22.1
Aon Nikko Cash Fund	2	1.13	21.7
Nikko AM NZ Cash Fund	1	0.51	21.7
ASB NZ Cash Fund	464	0.59	20.9
Weighted Average		***0.48***	***23.4***

Table 6: KiwiSaver Conservative Funds 'Activeness' versus Fees (Data from Chart 5)

Conservative Funds	AUM ($m)	Fee	'Activeness'
Fisher TWO Conservative Fund	156	1.05	146.7
JUNO Conservative Fund	4	0.37	144.7
Fisher KiwiSaver Conservative Fund	822	1.27	136.9
Fisher TWO Cash Enhanced Fund	675	0.77	134.0
Milford Conservative	124	1.04	130.5
Kiwi Wealth Conservative	791	0.86	120.4
Mercer Conservative	1,130	0.76	119.0
Kiwi Wealth Default	251	0.52	100.6
Booster Default Fund	85	0.38	98.3
SuperLife KiwiSaver Conservative Fund	14	0.50	97.3
ANZ Conservative	954	0.96	94.9
OneAnswer Conservative Fund	462	1.00	94.1
Westpac Conservative Fund	2,665	0.67	92.0
AMP ANZ Conservative Fund	6	1.15	89.6
Westpac Default Fund	243	0.59	87.2
QuayStreet Conservative	14	0.79	86.9
Booster Capital Guaranteed Fund	56	1.51	85.1
AMP Conservative	384	1.09	83.2
ANZ Default Conservative	1,142	0.66	77.7
QuayStreet Income Fund	1	0.79	70.7
Aon Russell Lifepoints Conservative	76	1.69	69.5
BNZ First Home Buyer Fund	154	0.50	61.3
BNZ Conservative Fund	735	0.50	60.5
ASB Conservative Fund	3,912	0.57	59.9
AMP Default	1,367	0.58	58.8
SBS Lifestages Capital Stable Portfolio	139	1.91	52.7
Simplicity Conservative Fund	66	0.38	44.6
Weighted Average		**0.73**	**87.8**

Table 7: KiwiSaver Moderate Funds 'Activeness' versus Fees (Data from Chart 6)

Moderate Funds	AUM ($m)	Fee	'Activeness'
Mercer Moderate	130	0.82	134.5
AMP Nikko AM Conservative Fund	22	1.26	130.3
Nikko AM Conservative Fund	0	0.80	128.5
Generate Conservative Fund	260	1.47	123.3
OneAnswer Conservative Balanced Fund	203	0.97	103.9
ANZ Conservative Balanced	1,199	1.01	103.4
ANZ Default Conservative Balanced	50	1.00	97.9
Booster Moderate Fund	178	1.43	94.5
AMP Income Generator Fund	4	1.21	95.7
AMP Moderate Balanced	722	1.25	93.0
AMP Moderate	537	1.19	88.0
Westpac Moderate Fund	514	0.74	86.0
AMP Responsible Investment Balanced	10	1.46	85.8
Booster Asset Class Conservative Fund	21	1.37	82.0
Aon Russell Lifepoints Moderate	26	1.39	74.3
AMP ASB Moderate Fund	12	1.14	68.9
ASB Moderate Fund	1,897	0.72	68.9
BNZ Moderate Fund	496	0.58	63.0
Weighted Average		**0.94**	**89.8**

Table 8: KiwiSaver Balanced Funds 'Activeness' versus Fees (Data from Chart 7)

Balanced Funds	AUM ($m)	Fee	'Activeness'
Fisher TWO Balanced Fund	866	1.07	164.0
AMP Nikko AM Balanced Fund	77	1.46	162.3
JUNO Balanced Fund	12	0.31	161.2
Fisher KiwiSaver Balanced Fund	754	1.40	155.8
Milford Balanced	361	1.37	155.8
Aon Nikko Balanced Fund	10	1.59	152.0
Nikko AM Balanced Fund	1	0.99	147.6
Mercer Balanced	413	0.93	144.0
AMP Mercer Balanced Fund	50	1.41	143.9
Kiwi Wealth Balanced	1,715	1.04	136.1
Summer Balanced Selection	84	1.01	131.8
ANZ Balanced Growth	2,207	1.12	119.5
ANZ Default Balanced Growth	176	1.07	119.5
ANZ OneAnswer Balanced Growth Fund	521	1.04	118.3
Booster Socially Responsible Investment Balanced	60	1.56	112.3
AMP ANZ Balanced Growth Fund	266	1.24	111.8
ANZ Balanced	2,517	1.06	111.3
ANZ Default Balanced	163	1.01	111.3
OneAnswer Balanced Fund	596	0.99	111.0
Aon ANZ Balanced Fund	32	1.56	107.6
SuperLife KiwiSaver Balanced Fund	42	0.53	107.1
SuperLife KiwiSaver Ethica	35	0.65	103.7
Booster Balanced Fund	511	1.52	103.6
QuayStreet Balanced Fund	58	1.04	99.7
AMP Balanced	992	1.28	95.2
Booster Asset Class Balanced Fund	16	1.34	85.2
QuayStreet Socially Responsible Investment	10	1.07	82.6
Westpac Balanced Fund	1,638	0.79	82.2
Aon Russell Lifepoints Balanced	181	1.61	79.3
AMP ASB Balanced Fund	20	1.22	66.7
ASB Balanced Fund	1,938	0.75	66.7
BNZ Balanced Fund	447	0.58	65.4
Simplicity Balanced Fund	162	0.40	46.4
Weighted Average		**1.03**	**113.9**

Table 9: KiwiSaver Growth Funds 'Activeness' versus Fees (Data from Chart 8)

Growth Funds	AUM ($m)	Fee	'Activeness'
NZ Funds Growth	181	1.63	166.8
NZ Funds Inflation Strategy	52	1.90	163.8
Fisher TWO Growth Fund	492	1.22	160.5
Fisher KiwiSaver Growth Fund	2,030	1.61	159.5
JUNO Growth Fund	55	0.34	158.1
AMP Nikko AM Growth Fund	17	1.53	158.1
Milford Active Growth	1,489	1.13	157.7
Aon Milford Active Growth	158	1.46	157.6
Amanah	18	2.29	156.7
Generate Growth Fund	584	1.73	152.1
Generate Focused Growth Fund	756	1.98	148.2
Fisher TWO Equity Fund	150	1.38	147.5
Mercer High Growth	196	1.08	147.3
Mercer Growth	112	1.06	147.0
Kiwi Wealth Growth	1,530	1.15	140.8
Nikko AM Growth Fund	4	1.11	139.2
ANZ OneAnswer Growth Fund	432	1.13	127.9
ANZ Default Growth	159	1.15	127.5
ANZ Growth	3,296	1.24	127.5
AMP ANZ Growth Fund	16	1.45	119.7
Booster Socially Responsible Investment Growth	70	1.52	114.8
Booster Geared Growth Fund	63	1.99	113.9
QuayStreet Growth Fund	79	1.29	109.5
AMP Global Multi-Asset Fund	14	1.69	108.6
Booster Balanced Growth Fund	327	1.63	108.3
SuperLife KiwiSaver Growth Fund	20	0.55	108.3
AMP Aggressive	342	1.51	106.5
Booster High Growth Fund	367	1.69	105.4
AMP Growth	773	1.32	102.6
SuperLife KiwiSaver High Growth Fund	374	0.59	102.1
Booster Asset Class Growth Fund	77	1.44	89.5
Aon Russell Lifepoints Growth	47	1.50	82.6
Westpac Growth Fund	1,517	0.87	79.9
AMP ASB Growth Fund	8	1.41	69.1
ASB Growth	2,928	0.82	69.1
BNZ Growth Fund	586	0.58	68.7
SBS Lifestages High Growth Fund	156	1.34	54.1
Simplicity Growth Fund	618	0.41	46.8
Weighted Average		**1.18**	**123.5**

Table 10: KiwiSaver Restricted Funds 'Activeness' versus Fees (Data from Chart 9)

Restricted Funds	AUM ($m)	Fee	'Activeness'
MAS Aggressive Fund	87	1.20	141.7
MAS Growth Fund	227	1.20	137.3
Christian KiwiSaver Growth Fund	13	1.60	135.9
MAS Balanced Fund	240	1.19	130.6
MAS Global Equities Fund	49	1.20	128.9
MAS Moderate Fund	60	1.19	128.6
Christian KiwiSaver Balanced Fund	30	1.50	124.8
Christian KiwiSaver Income Fund	6	1.40	124.8
MAS Conservative Fund	53	1.20	109.6
Maritime KiwiSaver Scheme - Balanced	11	0.69	106.9
SuperEasy Balanced Fund	9	0.73	104.9
SuperEasy Growth Fund	17	0.70	102.9
Maritime KiwiSaver Scheme - Conservative	2	0.57	96.3
SuperEasy Aggressive Fund	14	0.72	87.3
SuperEasy Conservative Fund	7	0.70	86.5
BCF KiwiSaver Scheme	9	1.13	54.5
MAS Cash Fund	8	0.56	22.5
Weighted Average		**1.17**	**127.7**

Table 11: Active Share Analysis for KiwiSaver Providers

KiwiSaver Schemes	NZ Equity Active Share Score	Active Share Rating	Global Equity Active Share Score	Active Share Rating
Amanah	N.Ap	N.Ap	88%	Active
AMP Lifesteps[14]	13%	Passive	23%	Benchmark Aware
ANZ Investments	20%	Benchmark Aware	72%	Active
ANZ Default[15]	20%	Benchmark Aware	72%	Active
AMP Responsible Investment Balanced Fund	N.Ap	N.Ap	68%	Active
Aon Russell[16]	22%	Benchmark Aware	63%	Active
ASB	1%	Passive	2%	Passive
BNZ	35%	Benchmark Aware	17%	Passive
Booster	18%	Passive	83%	Active
Booster Asset Class	19%	Passive	34%	Benchmark Aware
Booster SRI	31%	Benchmark Aware	84%	Active
Fisher Funds	58%	Active	71%	Active
Fisher Funds TWO	54%	Active	93%	Active
Generate[17]	N.Ap	N.Ap	94%	Active
Juno	N.Ap	N.Ap	93%	Active
KiwiWealth	N.Ap	N.Ap	67%	Active
Mercer	36%	Benchmark Aware	65%	Active
Milford Conservative	53%	Active	88%	Active
Milford Balanced	37%	Benchmark Aware	88%	Active
Milford Active Growth	53%	Active	88%	Active
NZ Funds Management	38%	Benchmark Aware	95%	Active
Nikko	40%	Active	92%	Active
OneAnswer	20%	Benchmark Aware	72%	Active
QuayStreet	38%	Benchmark Aware	29%	Benchmark Aware
SBS Bank	18%	Passive	4%	Passive
Simplicity	3%	Passive	4%	Passive
Summer	37%	Benchmark Aware	84%	Active
SuperLife	19%	Passive	2%	Passive
Westpac	30%	Benchmark Aware	58%	Benchmark Aware
Restricted Schemes				
BCF KiwiSaver Scheme	N.Ap	N.Ap	N.Ap	N.Ap
SuperEasy	1%	Passive	34%	Benchmark Aware
Maritime KiwiSaver Scheme	31%	Benchmark Aware	36%	Benchmark Aware
Medical Assurance Society NZ	40%	Active	81%	Active
Christian KiwiSaver Scheme	41%	Active	65%	Active

NZ Equities Key:		Global Equities Key:	
<20	Passive	<20	Passive
21 - 39	Benchmark Aware	21 - 59	Benchmark Aware
>40	Active	>60	Active

[14] Refers to offerings managed internally by AMP excludes managed by ANZ, ASB, Mercer and Nikko
[15] ANZ Default Conservative Fund has a Global Equities Active Share score of 4.8%
[16] Refers only to Aon offerings managed by Russell Investments
[17] Generate has material exposure to NZ equities classified as Property and Infrastructure holdings

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