

MAKING EVERYONE LOOK GOOD? (PART I)

HOW 'EASY BEAT' BENCHMARKS¹ DISTORT THE MARKET
(AND WHAT TO DO ABOUT IT)

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'Bogus benchmarking is the single biggest problem in the field of institutional investing'. Richard M. Ennis, CFA, co-founder of EnnisKnupp & Associates and former editor of the Financial Analysts Journal.

'What do you call a benchmark a pension fund didn't beat? Its old benchmark'. Edward Siedle, President, Benchmark Financial Services, Forbes contributor, expert forensic investigations of pensions.

In the first of a two-part series on performance benchmarking in New Zealand, we review the practices of local fund managers and institutional investors. We find that through inappropriate benchmarking of single asset class funds, many fund managers set themselves easy to beat targets, often collecting performance fees in the process. Next, we argue that the 'Reference Portfolio' construct is an improvement on the unnecessarily complex and opaque, but often 'easy beat', total portfolio composite benchmarks used by many local institutional investors. In the second part of the series, to be released shortly, we review benchmarking by KiwiSavers. We suggest regulatory objectives, as well as fund manager, financial adviser and member requirements are not being met by current practices and propose a better alternative – simple KiwiSaver Benchmarks.

¹ Bloomberg, Pension Veteran Tears into Public Funds for 'Bogus Benchmarking', 17 August 2022. For a more detailed explanation of benchmarking practices, e.g., Lies, Damn Lies and Benchmarks: An Injunction for Trustees, and additional institutional investment research and commentary visit: <https://richardmennis.com/blog>.

SUMMARY

- Benchmarks are a vital element of modern investment management but all too often they end up being sub-optimal ‘easy beats’.
- A total portfolio benchmark should be useful as a gauge of both security selection and asset allocation – a simple, easy-to-understand yardstick to assess how an investment programme (or diversified portfolio) is tracking over time.
- Most traditional asset classes and market segments have robust, independently calculated and representative indices – there is no need to adopt anything other than standard ‘off-the-shelf’ indices as benchmarks for most single asset class funds that adopt traditional, long-only strategies.
- Many local retail investors find themselves in funds using inappropriate, self-selected performance fee benchmarks, the result often being that they end up paying hedge fund-like fees for what amount to run-of-the-mill equity and diversified funds (with results comparable – or worse – to those achieved by low-cost index-oriented funds).
- The impact of Responsible Investment decisions (and other *active* decisions) should be clearly attributed and accounted for. For most, that means tracking results versus broad market benchmarks (rather than heavily modified ESG indices).
- The industry and its many participants have incentives, financial and otherwise, to adopt easy beat benchmarks. Chief Investment Officers, Risk Managers and governance teams as well as Fund Supervisors must hold themselves accountable for ensuring that representative, transparent, appropriate and fair benchmarks are used.
- The Reference Portfolio is a straightforward total portfolio construct that can either be used alongside the composite portfolio benchmark or in isolation to judge the overall impact of active decision-making and provide a better assessment of the real value add for institutional investors.
- To be explored further in Part II, we suggest applying the Reference Portfolio (*‘KiwiSaver Benchmarks’*) approach to KiwiSavers, which will result in improved transparency for millions and greater fairness for the approximately 300,000 Default members².

² An interesting extension of the KiwiSaver Benchmark portfolios would be to expand to wealth management portfolios. Approximate default members: KiwiSaver Annual Report 2022, Financial Markets Authority

INTRODUCTION

Investors use benchmarks to track the performance of their investments. Most often these benchmarks are market indices, such as the S&P/NZX 50 Index or the Bloomberg Global Aggregate Bond Index, which are managed and maintained by independent, third-party organisations like S&P Dow Jones Indices, MSCI, FTSE Russell and Bloomberg.

Fully invested, single-asset class portfolios, e.g. New Zealand equities or global bonds, typically use single asset class or market segment indices, while multi-asset or diversified portfolios generally use benchmarks constructed based on a series of indices, manager universes or objectives spliced together to form a composite, or total portfolio, benchmark.

For institutional investors, such as retirement schemes, charities and other asset owners, total portfolio benchmarks invariably reflect some approximation of their Strategic Asset Allocation (SAA). These composite benchmarks may change frequently through time as investments and divestments occur with component parts often consisting of benchmarks used by underlying fund managers, rather than broadly accepted measures of the particular asset class.

As the SAA gets more complex, so too does the total performance benchmark itself. Once they move beyond a handful of core and liquid asset classes, the total portfolio benchmarks can become complex, opaque and largely incalculable (and unverifiable) for anyone other than those with intimate knowledge of the asset allocation (past and present) and access to a wide range of financial data sets. Additionally, as the range of strategies employed moves beyond the plain vanilla, the proportion of the benchmark which becomes uninvestable (or based on easy to beat cash or cash-plus targets) tends to increase, sometimes markedly.

Far from being practical, transparent and investable alternatives representative of the key opportunities available to investors, the very complicated and customised composite total portfolio benchmarks can wind up being somewhat meaningless constructs, notwithstanding the collective effort expended trying to 'beat' them.

For the many retail investors in diversified funds, e.g. the three million-plus KiwiSaver and retirement scheme members, the composite fund benchmarks, as well as their historical asset mixes, are essentially inaccessible³, incomprehensible, uninvestable and therefore utterly meaningless.

In the asset owner setting, much of the focus of governance teams (e.g. Trustee Boards at foundations or superannuation schemes) and communication with constituents relates to whether or not the portfolio is outperforming its benchmark, whatever that might be.

We question whether the composite benchmarks as used today should be the primary means of evaluating investment programme success, particularly as they move away from the liquid, transparent and investable.

This paper, and the forthcoming one, consider benchmarking for both single-asset and multi-asset diversified portfolios. We discuss multi-asset portfolios as both diversified funds offered by fund managers, e.g. KiwiSavers, as well the diversified portfolios of institutional investors like asset owners. We show that local market practices often fall short and offer advice for investors when evaluating either the benchmark arrangements of their fund managers or developing benchmarks for their own portfolios.

We delve into the *Reference Portfolio*⁴ concept, developed by the Canada Pension Plan Investment Board (CPPIB) and adopted by local Crown Financial Institutions (CFIs), most notably New Zealand Superannuation Fund (NZ Super), but also the Government Superannuation Fund Authority. We suggest that, at a minimum, all multi-asset investors should compare their portfolio outcomes relative to those generated by a straightforward Reference Portfolio on a regular basis.

Past performance tells us little about the future but understanding the results of a portfolio or an investment programme relative to an appropriate, viable alternative, i.e. a different portfolio strategy and/or comparable peers, is a vital element of modern institutional investing. Likewise, retail investors should be able to clearly determine how well they are tracking relative to alternatives. We show in the two benchmarking papers how adopting a Reference Portfolio framework can bring clarity for both sets of investors.

³ Fund Update regulations require that performance be displayed relative to a 'market index', which for diversified funds is often a composite index 'made up of the individual asset class benchmark indices used to measure the performance of each asset class into which the fund invests'. However, most frequently, the benchmark itself is not depicted nor the rules around its construction and history displayed. Those seeking further information are directed to www.disclose-register.companiesoffice.govt.nz.

⁴ Also known as the Passive Benchmark, see Ennis, Richard M., Lies, Damn Lies and Benchmarks: An Injunction for Trustees (2022) and other work available at <https://richardmennis.com/blog>

THE BENCHMARKING OF SINGLE ASSET CLASS FUNDS

Benchmarking of single asset class, fully invested and liquid ('traditional' or marketable securities) portfolios and funds *should* be straightforward, but we find that local practices often end up serving fund managers far better than their clients. The most glaring example involves the use of benchmarks that bear little or no resemblance to the underlying assets of the fund or portfolio. Often used as a performance fee hurdle, 'cash-plus' benchmarks for fully invested equity portfolios represent the most egregious example of benchmark-mismatch, with the impact on investors being that they end up paying hedge fund-like fees for what amount to plain vanilla, run-of-the-mill equity funds.

The fund and wealth management industry has made this an art form, dressing up simple market 'beta' returns as 'alpha' or value-add. Beta returns can be obtained easily and (should be) at low cost, while true alpha, very often transient and certainly much harder to attain, is (rightly) a whole lot more costly. This deception, even if not deliberate, means investors of all sizes end up paying far too much in the way of fees for what are essentially market or beta returns. And, of course, as a result of these high fees, quite often end up performing materially worse than they would have had they adopted lower-cost investment strategies over the long term⁵.

Some managers point to high absolute performance targets as justification of such fee structures; a 'win-win' arrangement for investors. However, even if a manager uses a relatively high absolute return target, say 10%, the nature of markets means that much of the time performance targets can be met with little or no actual alpha or value-add. Equity markets in particular routinely deliver double-digit annual returns, even if the long-term average is closer to 8% or 9%. The sad reality of the local scene is that many fund managers have used targets as low as 3% or 4% given the ultra-low cash rates of the last decade or more, which is an absurdly low performance fee hurdle for funds investing wholly in asset classes regularly delivering double-digit returns.

Under many of the fee arrangements employed locally, simple New Zealand and global equity index funds would have ended up attracting 2%, 3% or even more in fees in more than 50% of the calendar years since 2009⁶. This is clearly ridiculous and highlights how one-sided these arrangements are in practice.

A related point made during the pilot is that passive funds are not a useful performance reference point for active strategies. This is nonsense. Second to judging performance relative to an appropriate market index, judging the performance of an active fund relative to passive implementation of the same or very similar exposure is a key indicator of if, and how, the active manager is adding value with their idea generation and position management.'

Financial Markets Authority, Value for Money Industry Report (May 2022).

We note that market practices do appear to be evolving, perhaps due to increased attention from the Financial Markets Authority (FMA). Some firms have dropped performance fees for retail investors, others have increased their excess return targets and introduced high water marks and caps. Several funds appear to have moved away from cash benchmarks entirely in favour of target market indices, such as the S&P/NZX 50. Nonetheless, we see no reason why performance fees should be so common locally, when in other large markets they are seldom found in simple, long-only funds for retail, 'mum and dad' investors. We find no evidence that local investors have benefitted from the widespread use of performance fees in retail managed funds.

That these types of 'cash-plus' performance fee arrangements are rarely, if ever (in our experience), accepted by institutional investors for comparable strategies is arguably evidence enough that they are unfair and not in the best interests of those retail investors who hold such funds⁷.

⁵ It is widely accepted that fees are an important determinant of long-term investment results. e.g. Kinnell, Russell, Morningstar Manager Research Predictive Power of Fees: Why Mutual Fund Fees are So Important (2016).

⁶ Morningstar Direct. The S&P/NZX 50 (TR) with ICs delivered greater than 10% returns in nine of the 13 calendar years since 2009, with four years in excess of 20%. The MSCI ACWI (NR) delivered greater than 10% in five years with four years in excess of 20%. Performance in NZD. Past performance is no guarantee of future results.

⁷ Note, we are referring to fully invested, long-only equity funds and diversified, long-only funds. Funds adopting shorting, i.e. long-short, long-short market neutral, short-biased, etc., within their portfolios, for professional institutional investors may see fit to benchmark to absolute return targets.

PERFORMANCE FEES FOR SIMPLE FUNDS – ADVICE TO INVESTORS

The FMA has taken aim at performance fees for some time now. The advice to investors on this is: if you consider performance fees are an appropriate means to align your interests with the fund manager's interests, make sure you adopt institutional best practices. For example, ensure that:

1. **Base fees are low**, approaching the cost of comparable passive or index-based strategies; or
2. A **fulcrum structure is employed** where there is symmetrical upside and downside for both client and fund manager, e.g. base fee 1.25%, performance fee +/- 0.75%; and
3. **Appropriate, industry standard benchmarks** that accurately represent the risk and opportunity set in the portfolios are used as targets, i.e. for traditional markets with long-only strategies, avoid fixed, absolute return targets like 10% or cash + 3% in favour of standard market indices; and
4. **Measures are incorporated that discourage outsized risk-taking to maximise fees** at the expense of long-term results, e.g. high-water marks, total fee caps and long-term crystallisation periods aligned with the recommended investment period (e.g. multiple years rather than *six months*).

In theory, performance fees offer some alignment between fund managers and their clients, i.e. 'we win when you do' and brings a focus on performance rather than asset gathering. In practice, it can often be hard to ascertain any particular benefits for retail clients. Performance fees incentivise short-termism and risk-taking while adding complexity⁸ and reducing transparency. Given the short-term and asymmetric nature in New Zealand, they tend to result in higher overall fees relative to other fee structures, which is to say few fund managers 'share the pain' if they do not deliver. It becomes a one-way bet for fund managers, i.e. 'high or higher fees' for clients, rather than an equitable arrangement reflecting aligned interests.

The practices in the local market mean that the experience of many investors over the last several years will have been one of very high fees in the 'good' years, followed by still relatively high fees and crushing portfolio declines in the subsequent market sell-off. A classic, 'heads I win, tails you lose' outcome. The absurd example of a fund manager charging its retail customers annual fees approaching 25% highlights the need for significant change in local market practice⁹.

INCOMPLETE AND UNREPRESENTATIVE BENCHMARKS

Other examples of sub-optimal practices include using benchmarks that ignore large swathes of an investor's opportunity set, say, emerging markets for global equity portfolios or credit securities for bond portfolios.

For many years, this was unavoidable for investors in the New Zealand bond market as there were simply no appropriate broad market, so called 'aggregate,' indices. Fixed interest managers, if they wanted to benchmark at all, needed to use a government bond index as a market proxy even if their opportunity set included corporate credit or other non-government issues. However, today there are a range of aggregate indices which include corporate and securitised bonds as well as government-related securities. This has been the case globally for decades, with indices such as the investment-grade Bloomberg Global Aggregate Bond Index the staple for many bond investors. There is no reason why broad market bond investors today should

be using government-only indices, be it in New Zealand or globally.

This matters because higher risk corporate and securitised bonds deliver higher returns over the long term, albeit with higher volatility than high-quality government bonds¹⁰. As such, if allocating to corporate or securitised bonds, it would be hard not to outperform a government-only index over any meaningful period of time. Such instances would be a clear example of beta (credit performance) being 'dressed up' as alpha (excess returns relative to the benchmark).

There are, of course, a few exceptions. Insurance companies and some de-risking defined benefit pension schemes have long-dated obligations requiring very long duration and/or inflation-linked investments and there may not be suitable off-the-shelf indices available, particularly in small bond markets like New Zealand's.

⁸ As an example, the European Securities and Market Authority (ESMA) has published five guidelines (including 35 explanatory points) on performance fees in UCITS funds and some AIFs.

⁹ The performance fee party is over, Janine Starks, (Stuff.co.nz) 9 July 2022.

¹⁰ This is widely accepted. As an example, the Bloomberg US Credit (TR) has outperformed the Bloomberg US Treasury (TR) over the long-term (i.e. 20 and 30 years ending 31 Dec 2022.) Morningstar. Past performance is no guarantee of future results.

In such situations, it may be necessary to adopt customised indices as benchmarks, or even create spliced index returns as a benchmark proxy, to more accurately reflect the true opportunity set and risk profile. These cases are very much in the minority in New Zealand with a small number of defined benefit retirement schemes remaining and only a handful of insurers for which this might apply.

Preference should be given to the most recognisable and widely adopted indices, e.g. the S&P/NZX 50 Index, the MSCI ACWI Index and the Bloomberg Global Aggregate Bond Index to name a few, but there remains scope to use comparable indices calculated by alternative index providers. Index management is itself a very large and profitable business, with many different players and fund managers and investors may wish to lower index license costs by tracking alternative indices. Inevitably, though, whatever index is officially used, investors will want to compare themselves to the bellwether indices that have made the leap from the pages of financial almanacs to represent 'the market'; the yardstick by which investors and fund managers alike compare themselves. Ideally, alternative indices should line up very closely to the

market capitalisation-weighted methodologies used by most of the popular benchmark indices.

Note, even with broad index benchmarks, some managers do invest outside of that universe, often in an opportunistic fashion. For instance, aggregate bond managers have long taken to investing in high yield or emerging market bonds to add value relative to their benchmarks and many equity managers invest tactically in non-benchmark stocks, i.e. ex-benchmark small cap stocks or stocks from countries not included in the benchmark.

It may be that in the future investors routinely adopt all-encompassing indices as asset class benchmarks that are truly investable as well as being representative, e.g. the MSCI ACWI Investable Market Index or the Barclays Multiverse Index. Until then, broad multi-sector, currency, bond and global (developed and emerging markets) indices make sense for most investors while recognising the need to monitor fund managers to ensure they are not simply loading up on ex-benchmark risk and fundamentally altering the nature of the investment.

SPLICING OF INDICES FOR SINGLE 'TRADITIONAL' ASSET CLASS FUNDS

There are (too many) instances where fund managers splice together indices to reflect their investment 'style' or favoured universe. Examples we have seen include blending a style index with a cap-weighted index to reflect a style orientation of sorts, i.e. 'We're a little bit value, but not as value as the typical value indices', or blending one country index with another to reflect a portfolio manager's preferred opportunity set, i.e. 'We buy New Zealand stocks *and* Australian stocks because of their proximity'.

In our view, these spliced-together composite benchmarks, which are almost always created by the manager (and sometimes form the basis by which to calculate their performance fees), rarely make sense from the investor point of view. They add a layer of complexity and results can be difficult to verify, too. Spliced benchmarks for traditional asset classes are often randomly weighted, i.e. 50/50 or 80/20, have no investor acceptance or profile as far as a representation of an asset class, and are not replicable passively outside of large, customised segregated accounts. These features, or rather the lack of features, mean that they fail the very simple test of what makes a good benchmark (see later for more details).

These benchmark concoctions created by fund managers to reflect *their* particular investment style, strategy or desired opportunity set seems entirely the *wrong* way to go about portfolio benchmarking.

There are tens of thousands of indices produced today by reputable index providers covering all manner of asset classes, sectors, industries, regions, market segments and investment styles. Locally, there are a dozen or so broad market, widely adopted indices for the core asset classes and market segments. For New Zealand investors, they come in unhedged, partially hedged and fully hedged versions. In a complex world with opacity seemingly at every turn, we see no reason to move off-piste when it comes to benchmark selection for traditional, simple, liquid asset class funds like global or New Zealand equities and fixed income. Opt for independence, transparency and simplicity where possible.

SUBSTANDARD BENCHMARKING PRACTICES

As an advisor to global investors and a researcher of fund managers, we have a front row seat to performance benchmarking practices. Whether due to carelessness, ignorance or something more sinister, we believe that benchmarking practices of local fund managers, asset owners and wealth managers often times fall short of global best practice.

Examples of practices by local fund managers that fall short:

1. **Using the incorrect return index.** There are typically three, sometimes two, 'types' of index return series. *Total or Gross Returns* reflect a total return of an index where dividends or coupons are reinvested, pre-tax. Since there are markets which collect withholding taxes, e.g. the US, Japan and Germany, there is typically a *Net Total Return* index where dividends are reinvested assuming the worst, or highest, possible withholding tax rate. Many investors, through their domicile or investor-type, are able to reclaim some withholding taxes through international tax treaties. Finally, there is the *Price Return* index, where the impact of dividends (or coupons) is ignored. Using the incorrect return index, i.e. comparing the total return of a fund versus a price return index that doesn't incorporate dividends, is a blatant misrepresentation, equating to a head start of about 2% per year in global equities.
2. **Deducting fees from an index return to reflect 'costs'.** Some argue index returns are not attainable and thus an inappropriate benchmark for a fund manager. We disagree. Firstly, a skilled index fund manager, in an efficiently structured vehicle, i.e. directly held securities in a tax-efficient fund domicile, should be able to deliver returns very close to that of an index over time and, in some cases, an index fund might actually 'outperform' an index return. Secondly, the introduction of hypothetical fees adds a level of subjectivity to a benchmark which should, where possible, be independent and objective and free of potential manipulation. If looking to remove the impact of fees for some reason, it is better to use a gross of fee portfolio return relative to a benchmark return, rather than adjusting the index return to attempt to account for fees.
3. **Using an Exchange Traded Fund (ETF) as a benchmark.** In rare cases where there is no suitable index available, there may be an argument for using an ETF as a benchmark. ETFs have fees, taxes and may experience tracking error relative to the index in which they track. Additionally, their net returns may reflect the impact of taxes which do not apply to New Zealand investors. In short, these ETFs may underperform a comparable index from the perspective of a New Zealand investor, lowering the bar for the fund manager or asset owner using the ETF as a performance benchmark. Avoid where possible.
4. **Using inappropriate indices that do not reflect the underlying assets.** Described earlier, we see no reason why fund managers should stray from well-recognised, core benchmarks for standard, traditional long-only assets funds. The practice of using easy beat cash-based benchmarks, particularly as a base for performance fee calculations for traditional single-asset portfolios, is not, in our opinion, in the best interests of investors. Moreover, they don't actually reflect the risk that is being taken in the portfolio. Benchmarking a broad fixed income fund against a government-only fixed income index is another example of benchmark-mismatch.

BENCHMARKING PRIVATE MARKETS AND ALTERNATIVES FUNDS

Benchmarking of private markets and alternatives such as private equity and hedge funds poses significant challenges for investors both from a product/strategy point of view, i.e. how is the particular product, strategy and/or portfolio of investments doing relative to its opportunity set, and an asset class point of view, i.e. how are the alternative assets performing relative to other asset classes and as part of the total portfolio.

This is particularly relevant in the total portfolio context where investors require a measure of their overall results, typically displayed at a point in time, e.g. end of financial year, and on a time-weighted basis. Asset classes with lagged returns and uneven cashflows add to the complexity. This is made all the more challenging when track records are limited as it's difficult to present meaningful performance reporting on immature private markets programmes. Finally, there are few indices that accurately reflect the investor opportunity set and represent an achievable return through passive or low-cost management.

In practice, we see a range of benchmarks used for the broad range of alternatives, both at the asset class level and as component parts of the total portfolio composite benchmark. These include:

- Fixed absolute return targets, e.g. 7%.
- Variable absolute return targets, e.g. cash rate + 3% or Consumer Price Index + 2%.
- Public market indices, with or without¹¹ premiums added, e.g. MSCI ACWI (NR) + 4%.
- Indices consisting of unlisted assets, e.g. unlisted real estate or infrastructure assets.
- Composites made up of funds, e.g. universes of hedge funds or private equity funds.
- Public market equivalents, i.e. considering timing and flow of funds assumed to be invested in a public market

There are pros and cons to each of these approaches and one could devote an entire paper to their review¹². In comparison to traditional fund and asset class benchmarks, which are mostly standard indices, alternatives strategies are often managed relative to uninvestable objectives-based or fund-universe benchmarks. While these may be suitable at the fund or investment level to evaluate how a fund or portfolio has performed relative to objectives or peers (and perhaps, the internal professionals involved in managing it), they become less relevant when used in the context of the total portfolio.

For the purposes of this paper, we will focus on a single alternatives sector – hedge funds – to illustrate how benchmarks can actually end up distorting the picture rather than bringing clarity and insight, particularly from the total portfolio perspective. In the case of hedge funds, we show that commonly used performance benchmarks, often delivering little more than cash returns, represent low-bar, easy beats that can distort the overall total portfolio picture.

This makes the job of governance teams and overseers evaluating the success or otherwise of their investment programmes more challenging, as a particular investment might appear to be doing fine against one benchmark, but relative to another it may be lagging.

Impact of lagged unlisted asset returns on total portfolio performance

Due to time taken to complete valuations, funds and portfolios investing in unlisted or private assets tend to be reported on a lagged valuations basis. Additionally, these are often estimates of value rather than actual realisable prices and often involve a process of smoothing from one period to the next. At best, they often represent an approximation of fair value.

During periods of market declines like we saw in 2022, the lagged returns will typically have the effect of improving overall portfolio returns. This is because they are based on higher market values which have yet to be 'marked down' to reflect prevailing conditions, i.e. comparing Dec 2021 estimates of value with March 2022 actual market values.

Conversely, during periods of rapid listed market appreciation, private market valuations may lag, typically becoming something of a headwind for total portfolio performance.

Total portfolio performance can be completed with lagged returns, i.e. the trailing quarter, or delayed until the up-to-date returns are received. The latter approach is obviously preferable, if not always practical.

The different performance methodologies sometimes make like-for-like comparisons challenging and short-term returns of limited use, particularly for private markets programmes that are in build-up mode.

¹¹ Benchmarking private markets and other illiquid strategies to public market indices (without premiums) may not account for the additional costs, risks or illiquidity constraints relative to public markets.

¹² Gupta, V, Benchmarking Private Equity – Getting through the Maze (2012)

CASE STUDY – BENCHMARKING HEDGE FUNDS

Consider the case of hedge funds. While undoubtedly there are a cohort of skilled investors who have generated fantastic value-adding returns over the long-term, hedge funds as an investment approach bring with them complexity, increased risk, a lack of transparency, illiquidity and high costs. There are also many styles of hedge funds, including long- or short-biased, long-short market-neutral, managed futures, global macro, relative value, distressed debt, convertible arbitrage, merger arbitrage and fund-of-fund. Such diversity of strategy makes performance benchmarking particularly challenging.

Evaluating and selecting a diversified portfolio of hedge funds is beyond the capabilities of all but a handful of local investors, so the route for most with an allocation to this investment approach is through a diversified fund-of-fund strategy recommended, and sometimes built, by an advisor or fund manager. These strategies benefit from being researched and constructed by professionals and typically offer a highly diversified entry point into hedge funds (and sometimes other alternatives strategies within the same fund, too). Some of them undoubtedly perform well over time. But how best to benchmark these diversified fund-of-

fund offerings, most of which will be targeting positive absolute returns with a margin between 2% and 5% over cash?

The most common approach used by local hedge fund investors appears to be to benchmark relative to one of three Hedge Fund Research Indices (HFRI): the Fund of-Funds Market Defensive Index, the Fund-of-Funds Composite Index or the Fund-of-Funds Diversified Index. These indices are universes of fund-of-funds manager returns rather than being a reflection of a tangible opportunity set and are denominated in US dollars (USD). Given the desired characteristics of hedge fund investments, standard practice appears to be that local investors fully hedge their currency exposure.

To illustrate how the indices used to benchmark hedge funds have performed, we show calendar year (in the appendix) and trailing returns for the three hedge fund indices relative to four core asset classes plus cash. To remove the complexity of currency we have used US asset classes – US equities, global bonds (USD-hedged), global equities (USD-hedged), US government bonds and the US cash rate. Incorporating hedging to NZD may introduce return sources unrelated to hedge funds, i.e. NZD currency hedging premium.

Exhibit 1

Trailing returns – HFRI Fund-of-Fund Indices vs. equities, bonds and cash (in USD)

	HFRI FOF: MARKET DEFENSIVE INDEX	HFRI FUND OF FUNDS COMPOSITE INDEX	HFRI FOF: DIVERSIFIED INDEX	S&P 500 (NR)	MSCI ACWI (NR) USD-H	BLOOMBERG GLOBAL AGGREGATE (TR) USD-H	BLOOMBERG US GOVT BOND (TR)	BLOOMBERG US TREASURY BILLS (TR)
1 Yr	5.87	-4.67	-3.04	-18.51	-15.48	-11.22	-12.32	1.30
3 Yr	4.42	3.93	4.36	7.14	5.51	-2.59	-2.57	0.69
5 Yr	2.83	3.15	3.51	8.85	6.79	0.36	-0.06	1.25
10 Yr	2.28	3.57	3.68	11.91	9.60	1.70	0.60	0.77
15 Yr	1.88	1.76	1.92	8.14	5.85	2.88	2.12	0.73
20 Yr	3.25	3.60	3.69	9.14	8.22	3.22	2.61	1.30

Exhibit 2

Volatility (annualised standard deviation of returns) – HFRI Fund-of-Fund Indices vs. equities, bonds and cash (in USD)

	HFRI FOF: MARKET DEFENSIVE INDEX	HFRI FUND OF FUNDS COMPOSITE INDEX	HFRI FOF: DIVERSIFIED INDEX	S&P 500 (NR)	MSCI ACWI (NR) USD-H	BLOOMBERG GLOBAL AGGREGATE (TR) USD-H	BLOOMBERG US GOVT BOND (TR)	BLOOMBERG US TREASURY BILLS (TR)
5 Yr	3.62	6.24	5.73	18.69	16.36	4.22	5.00	0.35
10 Yr	3.62	4.96	4.58	14.77	13.13	3.52	4.12	0.29
15 Yr	4.42	5.51	5.15	16.32	14.99	3.32	4.24	0.30

Source: Morningstar Direct, HFRI, in USD ending 31 December 2022. For illustrative purposes only. Past performance is no guarantee of future results.

The long-term performance records of the fund-of-funds universes displayed above are decidedly mediocre. With annualised returns of sub 2% over 15 years and below 4% annualised over 10 and 20 years, returns are significantly below those generated by equities and comparable to those generated by investment grade bonds. This is even after including periods of significant market drawdowns like the Global Financial Crisis, the equity market sell-off we saw in the fourth quarter of 2018, the COVID-19 market meltdown and 2022, the worst calendar year for '60/40' portfolios in a generation.

Adding value in these market environments is surely the *raison d'être* of these types of investments – a means of lowering the overall directional exposure to bond and equity markets and reducing total portfolio volatility. They may achieve those goals, but New Zealand trustees, consultants and asset allocators surely must answer to what end? Hedge funds are inevitably harder to research, costlier to hold, have worse liquidity and have lower transparency characteristics than listed markets and traditional strategies.

Certainly, the performance delivered by the common benchmarks used by fund-of-funds investors, which should, notwithstanding the challenges with universes, be a fair representation of the opportunities and returns available, is weak. It's hard to imagine any risk-asset strategy that could do worse than the sub 2% annualised returns that has been delivered by the fund-of-fund universes over the last 15 years.

FOCUSING ON WHAT MATTERS MOST – THE TOTAL PORTFOLIO

Monitoring individual asset classes, market segments and funds may be an important part of the benchmarking process, particularly for those involved in the management of assets such as internal investment staff at asset owners, Chief Investment Officers, multi-asset portfolio managers and advisers. However, for most investment programmes it is the total portfolio that really matters. This is particularly true for governance teams like Trustee Boards and Investment Committees that should be focused on the overall mission and other high-level strategic issues rather than the day-to-day investment minutiae. It is even more the case for the vast majority of KiwiSaver members who really don't know, or care, what's happening at the individual asset class level. For them, it's their overall KiwiSaver fund performance that counts.

It is one of the quirks of institutional investment management that much of the collective effort is focused on security selection at the asset class level, even as there is widespread acknowledgement that asset allocation is the more important factor in long-term results.

Does this mean New Zealand investors should avoid hedge funds and alternatives via fund-of-funds? While the above data points suggest restraint, we are not attempting to address that question here. We're simply stating that the common benchmarks used to track the performance of hedge funds for New Zealand investors are the very definition of easy beats.

By including these low-returning components as part of their overall composite benchmarks, investors are systematically dampening the performance of the total portfolio benchmarks, effectively 'slowing the rabbit'¹³ (and helping make everyone look good).

Our recommendation is that investors carefully evaluate any performance benchmark used for their alternatives investment in light of the underlying characteristics of the asset itself, noting that most investments share elements of bonds or equities. While it may make sense to track the performance of alternatives against peer funds or absolute return targets, i.e. cash-plus or real return targets, investors should also evaluate the performance of their alternatives against realisable, investable substitutes.

Investors should also always sense check results. If the hedge fund or alternative investment benchmarks, in theory tough to beat measuring sticks, are routinely delivering returns resembling those generated by high quality government bonds (or worse) then consideration should surely be given to an alternative means of measurement. Adding alternatives should not mean *easier* benchmarks.

For instance, governance teams and other overseers of capital often focus their time on attempting to identify the right managers, investing in them at the right time and tracking them closely to make sure they are delivering. And they do this while being egged on by advisers and consultants whose businesses have evolved around identifying the asset class winners.

Sometimes then the focus is perhaps lost on the total portfolio. How has that performed over time? Has it managed to capture the risk premia and excess returns over cash of investing in bonds and equities? Have our active management decisions added value and what about our asset allocation decisions? Are we getting rewarded for the extra complexity? Finally, are we delivering on our objectives? These questions are important and current benchmarking practices are not as helpful as they might be.

¹³ Ennis, Richard M., Institutional Portfolio Benchmarks: Slow Rabbits? (2021) <https://blogs.cfainstitute.org/investor/2021/06/07/institutional-portfolio-benchmarks-slow-rabbits/>

COMMON APPROACHES TO TOTAL PORTFOLIO BENCHMARKING

There are several approaches to total portfolio benchmarking. For the purposes of this paper, we will focus on total portfolio benchmarking from a high-level governance perspective, i.e. what we view to be the most appropriate high-level benchmark for most investment programmes. There are additional considerations for staff managing asset classes, e.g. equities, or segments, e.g. active strategies, within a total portfolio and how they're evaluated (and potentially compensated) at fund managers and asset owners.

The most common approach to total portfolio benchmarking is based on SAA, i.e. a composite benchmark that is made up of underlying asset class, market segment or fund benchmarks. These portfolio benchmarks range from fairly straightforward, including a small number of indices, for instance local and global equities and bonds, through to very complex creations consisting of a range of different component benchmarks and some composites within an overall composite. These are static in the sense that they are notionally rebalanced back to target weights – typically monthly but sometimes quarterly or annually. However, they do evolve as asset classes, market segments and/or fund managers change. Relative performance will be determined by excess returns at the fund or asset class level as well as any asset allocation variation, e.g. either purposeful or incidental.

A similar approach creates a so-called dynamic composite benchmark that reflects the actual portfolio allocations. This benchmark changes over time as asset classes (or funds) rise and fall or come and go from the portfolio. Relative performance is largely the result of returns generated at the fund or asset class level with the impact of asset allocation variation, deliberate or incidental, not meaningful due to the composite benchmark mirroring the actual allocation of the portfolio.

Other typical benchmarks are objectives-based, e.g. inflation plus 4%, or peer-based with an objective to perform at a certain level relative to similar investors or funds over time. While these total portfolio objectives are useful and often reflect the long-term aspirations of

investors, their relevance as total portfolio benchmarks are somewhat limited. As investors, we are all largely at the mercy of core market performance, be it equities or bonds, over the long term. Most investments share attributes of one or both asset classes, so if markets experience a period of low returns, portfolios of most investors will also experience low returns. 2022 was a painful reminder of the sometimes harsh realities of investing.

The composite benchmark displayed in Exhibit 3 on the following page is fairly typical of contemporary New Zealand-based asset owner portfolios. The total portfolio composite benchmark consists of a range of asset classes and/or investment approaches tracking individual or composite benchmarks. It is weighted according to the SAA and it evolves as the portfolio does, with component benchmarks being tweaked regularly to reflect the current portfolio, investment strategy and/or an underlying fund benchmark.



No doubt the benchmarkers see such tweaking as a way of legitimising the benchmark so that it better aligns with the actual market, asset class and factor exposures of the fund. It accomplishes that, to be sure. But it also reduces the value of the benchmark as a performance gauge because the more a benchmark is tailored to fit the process being measured, the less information it can provide. At some point, it ceases to be a measuring stick altogether and becomes a mere shadow.

Richard M. Ennis, CFA
Institutional Portfolio Benchmarks: Slow Rabbits?
CFA Institute Blogs

Exhibit 3

Total portfolio composite benchmark for a growth-oriented investor

ASSET CLASS	INDEX	WEIGHT
Global Equity	MSCI World Index (50% - 100% hedging)	33%
Emerging Markets Equity	MSCI Emerging Markets Index	10%
Private Markets	MSCI World Index	15%
Diversifying Assets	HFRI Fund of Funds Composite Index (100% hedging)	15%
Inflation Sensitive Assets	Blend of: <ul style="list-style-type: none"> • FTSE Developed Core Infrastructure 50/50 (50% - 100% hedging) • 85% Bloomberg NZBond Comp 0+ Yr / 15% Bloomberg NZBond Inflation 0+ Index • FTSE EPRA/NAREIT Developed Real Estate Index (50%-100% hedging) • MSCI Investment Property Databank NZ Index 	12%
Fixed Interest	<ul style="list-style-type: none"> • 75% (85% Bloomberg NZ Bond Govt 0+ Yr Index / 15% Bloomberg NZ Bond Inflation 0+ Index) • 25% FTSE World Government Bond Index (100% H) 	10%
Cash	<ul style="list-style-type: none"> • ANZ NZ 90 Day Bank Bill Index 	5%
Impact	<ul style="list-style-type: none"> • ANZ NZ 90 Day Bank Bill Index 	0%

Source: Asset owner annual report 2022.

As portfolios broaden into asset classes and investment approaches that are outside of core equity and fixed income, the composite benchmarks become complex constructs in their own right. Consider the above example, which is built from more than 10 different indices and benchmarks. Within the broad composite benchmark there may be uninvestable component benchmarks like the HFRI Fund-of-Funds Composite Index above, as well as 'benchmarks' such as 'cash plus a margin' or 'index plus a margin'. As noted earlier, these composite indices are generally rebalanced monthly, but sometimes quarterly or annually. The result is a composite benchmark that aims to reflect the underlying portfolio insofar as possible and 'success' is often determined by whether the portfolio has added value relative to the benchmark.

Inevitably, as portfolios get more complicated – the direction of travel for many institutional investors as they grow in size and resources – such composite benchmarks will evolve to include meaningful allocations to uninvestable benchmarks and absolute return targets. As illustrated earlier, these components have proved to be easy beats over the last decade and more as cash rates have declined to near zero and alternatives such as hedge funds, as measured by hedge fund-of-fund universe benchmarks, have trailed simple bond and equity markets.

The total portfolio composite benchmark above consists of a 20% weighting to cash-like returns (ANZ NZ 90 Day Bank Bill Index and HFRI Fund of Funds Composite Index), even though there is only a small allocation to cash. Additionally, there is a 10% allocation to government bonds, both nominals and linkers, with very limited exposure to credit. Finally, private markets are

benchmarked to a standard global equity index (MSCI World) without any premium attached to reflect what *should* be a higher required return due to illiquidity constraints, complexity and increased risks.

Such a composite benchmark would appear to be hard *not* to beat over the last decade if one adopted a globally diversified, growth-oriented investment strategy. There will be periods when complex composite benchmarks like the one above perform well relative to simpler, more investable alternatives, but for much of the time constructs such as this will prove to be easy beats, with cash and cash-like components dampening overall returns.

Note, we're not making any comment about the specific asset allocation or portfolio. Indeed, we have not reviewed it. We're simply stating that the composite benchmark above, which is fairly consistent with practices in New Zealand among the asset owner community, represents an easier to beat alternative than if one had constructed a more straightforward benchmark, made up of public market and investable indices more closely reflecting the risks taken within the typical growth-oriented portfolio.

We see this time and again in annual reports and press releases. *'Our investment programme is outperforming its benchmark. 'Nuff said.'*

THE REFERENCE PORTFOLIO AS A PRACTICAL, UNDERSTANDABLE AND INVESTABLE ALTERNATIVE

A straightforward and transparent approach to benchmarking of multi-asset portfolios is represented by the Reference Portfolio, also referred to as the *Passive Benchmark*¹⁴. Developed by the Canada Pension Plan Investment Board (CPPIB) and used by a small, but increasing universe of investors, the Reference Portfolio is a straightforward, investable and globally diversified notional portfolio that reflects the investor's risk appetite and meets their long-term objectives based on estimates of long-term returns.

For the CPPIB, the Reference Portfolio is the high-level benchmark consisting of 85% global equity and 15% Canadian government bonds¹⁵. The CPPIB employs extensive internal management as well as external firms and uses a variety of benchmarks and target portfolios in its investment process and overall programme. But the ultimate gauge as to whether value is being added over the long term is the comparison with the Reference Portfolio. The Reference Portfolio reflects an investment strategy that could be implemented at next to no cost for an investor the size of the CPPIB. The strategy employed by the CPPIB is similar to the approach taken by local Crown Financial Institutions (CFIs), New Zealand Superannuation Fund and the Government Superannuation Fund Authority.

Unlike composite benchmarks, which change regularly with the portfolio, the Reference Portfolio is a static, long-term benchmark which can be revisited from time to time, i.e. every three to five years. For the most part, it remains a consistent reflection of an investor's risk appetite and is forecast to meet realistic investment objectives over the long-term.

This stable Reference Portfolio contrasts with composite benchmarks, which typically change as the portfolio does.

The Reference Portfolio can be considered the starting point, or neutral position, for investors, providing a measure that is akin to the cost of capital in a corporate finance setting. It is also basis for a real alternative portfolio insofar as it can be implemented at low cost with little hassle, i.e. via a small number of index funds.



The Reference Portfolio, which is capable of meeting the Fund's objectives over time, is a shadow, or notional, portfolio of passive, low-cost listed investments suited to the Fund's long-term investment horizon and risk profile. It has an 80/20 split between growth and fixed income investments and its foreign currency exposures are 100% hedged to NZD.

The reference portfolio is therefore a very clear and 'pure' way for the Guardians to:

- *estimate the Fund's expected returns;*
- *benchmark active (value add) investment returns net of all costs; and*
- *be clear on the 'hurdles' for active investments.*

New Zealand Superannuation Fund

¹⁴ Ennis, Richard M., Lies, Damn Lies and Benchmarks: An Injunction for Trustees. 2022.

¹⁵ They also operate the 'Strategic Portfolio', an equivalent risk portfolio to the Reference Portfolio but more diversified, the 'Target Exposures' and the 'Annual Target Portfolio'. These are managed by internal staff and outside managers and advisors.

BUILDING THE REFERENCE PORTFOLIO FOR NEW ZEALAND INVESTORS

Local investors building a Reference Portfolio should consider:

- 1. Growth/income split.** Of all decisions, this is arguably the most important one an investor makes, i.e. how much risk to take on, expressed as the mix between defensive bonds and volatile equities. This will be based on estimates, mainly using historical volatility and correlations but also forward-looking forecasts. For governance teams, e.g. Trustee boards at retirement schemes or charitable funds, the risk setting process is usually conducted at the total portfolio level. It might involve the completion of a risk questionnaire. In practice, it often comes down to answering a simple question: 'How much pain (loss of capital) are we willing to accept in the short-term to seek the higher returns that can be expected through investing in risk assets such as equities over the long-term?'
Most long-term growth investors such as perpetual funds with a high-risk tolerance land at between 65% and 85% in growth assets, while more cautious, capital preservation-oriented investors land around 20% to 35% in growth assets.
- 2. Local and global asset mix.** Investors taking a market capitalisation approach to this decision may conclude that there is no need for any specific allocation to New Zealand assets as they are already represented in the global assets (and there is no good reason to 'overweight' a particular country or region). We are supportive of this 'academic' approach as it means that the Reference Portfolio can be very straightforward, i.e. a mix of global equities and global bonds hedged back to New Zealand dollars (NZD) with total local assets representing about 0.2%¹⁶.
However, for most investors a much larger allocation to local assets than suggested by the market portfolio is warranted. Favourable tax treatment of domestic equities is one reason, but several qualitative factors also drive this. The first is the desire to contribute to local capital markets and support the development of the local economy. While there are many ways investors can do this, holding a significant portion of their portfolio in local, familiar assets and 'buying local' is a straightforward route for many investors. Secondly, most investors have familiarity with the local market, meaning there is a high level of comfort. There is also a broad suite of products managed and distributed by local fund and wealth

managers. Finally, and not to be underestimated, most local investors allocate significant assets to New Zealand assets¹⁷, exposing those who do not to peer performance risk.

Some investors adopting a Reference Portfolio, like the CPPIB highlighted earlier, prefer to include only local bonds. This may be appropriate for investors in some markets but we do not support this approach for New Zealand investors. This is due primarily to the nature of the local fixed income market, which is small in size, has limited diversification and where sovereign bonds are issued by a government responsible for the affairs of a small, earthquake prone country that is heavily reliant on the primary sector.

We believe an allocation of 20% to New Zealand assets is an appropriate starting point.

- 3. The currency hedging policy.** The primary rationale for allocating to fixed income is to access the defensive, diversifying and income-oriented nature of the asset class. While we believe investing globally is preferable to local when it comes to fixed income due to opportunity set and diversification, etc., that is on the proviso that currency risk is hedged. An unhedged global bond portfolio would shift from a lower risk, generally stable investment to something much more volatile due to the gyrations of global currency markets. We note some segments of the global bond market, e.g. local currency emerging markets bonds, include potential currency appreciation as a rationale for investment; however, in the main, fixed interest investments should be hedged for the Reference Portfolio.
Similar thinking could apply for global equities, i.e. 100% currency hedging. The NZ Super Fund applies a 100% hedging policy within its Reference Portfolio¹⁸ framework as it believes this offers the highest return relative to other hedge ratios. For a long time, our recommendation was also that local investors apply a 100% hedging policy¹⁹ for their global equity investments. This rationale rested on: 1) maintaining purity of exposure, i.e. access global equity market returns rather than currency; 2) benefiting from the interest rate differential between New Zealand and key overseas markets like the US (and thus earning a hedging premium); and 3) alignment with the liabilities of our clients, which were predominantly in NZD.

¹⁶ Source: MSCI and Bloomberg. Weight of New Zealand in MSCI ACWI (0.1%) and Bloomberg Global Aggregate Bond (0.2%) as of 30 September 2022.

¹⁷ New Zealand investors, like most around the world, have a significant home country bias. <https://russellinvestments.com/-/media/files/nz/investor-forum-2021/symon-parish-home-country-bias.pdf>

¹⁸ <https://www.nzsuperfund.nz/how-we-invest/reference-portfolio/>

¹⁹ Darby, Julian, To Hedge or Not to Hedge: The Currency Dilemma, Russell Investments (2014).

Today, we recommend that clients adopt a 50% hedge ratio for global equities. This is something of a cop out in that it is arguably neither one thing nor the other, but it provides investors with some benefits of hedging as well as the benefits of an unhedged exposure. For unhedged exposures, benefits include improved diversification and risk mitigation given New Zealand's small economy with significant vulnerabilities, i.e. natural disasters and commodities, etc. Additionally, the interest rate premium has reduced in recent years and we note that as a starting point, or neutral position, a 50% hedging ratio for global equities seems appropriate. It provides room to increase or decrease the hedge ratio, whereas starting at 100% leaves only one way to move.

Below we display a sample Growth Reference Portfolio. We have used broad market, well-accepted indices as building blocks. In fixed income, the Bloomberg NZBond Composite 0+ Year Index has become the benchmark of choice for investors looking for a broad market representation of the local bond market, while the Bloomberg Global Aggregate Bond Index has long

been the flagship investment-grade global bond index. Within equities, we have used the bellwether S&P/NZX 50 Index for local equities and the MSCI ACWI Index for global equities. The MSCI ACWI Index includes a significant allocation to emerging markets equities (currently around 12%), though it doesn't include frontier markets. While not all capitalisation, the index captures more than 85% of the global investable opportunity set.

We note that many local investors do not allocate to emerging markets. While this may have served them well in recent years due to the underperformance of emerging markets relative to developed markets, we believe an appropriate starting point (and Reference Portfolio) must include an allocation to emerging markets. With more than \$10 trillion in market capitalisation, close to 50% of global gross domestic product and home to more than four billion people, emerging markets are quite simply too big to ignore²⁰.

Exhibit 4

Sample Growth-oriented Reference Portfolio

ASSET CLASS	BENCHMARK	WEIGHT
Income/Defensive		
NZ Bonds	Bloomberg NZBond Composite 0+ Yr (TR)	5%
Global Bonds	Bloomberg Global Aggregate Bond (NZD-H)	20%
Growth		
NZ equities	S&P/NZ 50 with Imputation Credits (TR)	15%
Global equities (Unhedged)	MSCI ACWI (NR)	30%
Global equities (Hedged)	MSCI ACWI (NR) 100% NZD-H	30%

The Reference Portfolio above tracks most of the local and global equity markets and the vast majority of the local and global investment-grade bond markets. For all intents and purposes, it is the core, liquid, investable market for Kiwi investors. It represents an appropriate starting, or neutral, position for most growth-oriented investors. The indices used benefit from being well accepted by the industry, both locally and around the world. There are a wide range of funds, active and index-oriented, that track these indices, so it is investable. It represents a true alternative for most growth-oriented investors and is an appropriate total portfolio benchmark.

The Reference Portfolio as a benchmark construct is simple. This is desirable. In our opinion, time and collective resource is better spent building portfolios rather than agonising over the make-up of the most efficient composite benchmark.

Trustees can more easily 'own' these benchmarks. They do so safe in the knowledge that they *will* prove tough to outperform over time, even if it might be *possible* to construct a series of benchmarks that have higher risk-adjusted returns and/or offer diversifying characteristics based on capital markets forecasts.

²⁰ MSCI, World Economics.

FORECAST RISK-RETURN PROFILE FOR THE SAMPLE GROWTH REFERENCE PORTFOLIO

We expect this portfolio to deliver an annualised return of around 7% over the next decade with volatility of 12%. It is expected to deliver a negative return one out of every three years over the long term. Over the past decade, it has delivered a return of about 9% annualised with volatility of 8%.²¹

Investors willing to accept more variability and with a longer time horizon could allocate more to growth assets, while more risk averse and capital preservation-focused investors could focus on fixed income.

We sometimes hear that investors 'need' higher returns and thus are compelled to invest in higher-octane, more esoteric asset classes. This is another example of getting things back to front. The focus of governance teams (or individual investors) should be on setting an appropriate risk appetite and building from there. So, rather than asking what mix of assets *might* get us the lifestyle we want (or achieve the future level of spending needed to support charitable objectives or pensions), investors should instead be asking what level of risk they are willing to tolerate.

It may be that some investors can accept more risk than they do. A 20-year-old saving for retirement or a perpetual fund with significant surplus capital are examples of investors that *may* have the capacity to bear high risk within their portfolios.

Ultimately, though, the investors themselves have to be willing to take on more risk and accept what that means. While riskier portfolios typically offer the prospect of higher long-term returns than conservatively postured portfolios, there are no guarantees. High-risk portfolios, by definition, have a higher probability of performing badly. The most recent market environment has highlighted just how badly high-risk portfolios can perform when the market environment is challenging²².

THE REFERENCE PORTFOLIO AS A GOVERNANCE TOOL FOR INVESTORS

Over the long-term, the Reference Portfolio should become a key tool for governance teams at asset owners and other institutional investors. Few local investors will have access to the resources of the likes of NZ Super or CPPIB, but by taking a leaf out of their book they too can benefit from the clarity and transparency introduced by the Reference Portfolio.

All Trustees and governance team members, with advice perhaps, should have the capacity to understand and own a simple Reference Portfolio benchmark. It should be consistent over time, revisited infrequently, perhaps every three to five years. It can be the ultimate high-level expression of the risk appetite of an investor used by all to assess how investment programmes are tracking over time. It helps governance teams answer the question, 'is everything we are doing, on behalf of retirement scheme members or the local community or other constituencies, adding value?' This is particularly the case for investors who allocate to more complicated asset classes such as hedge funds, alternatives and private markets, which don't always have sound benchmarks, so use variations of cash or cash-plus instead.

This is, of course, not the end point for many investors. For large-scale asset owners and fund managers employing specialist asset class teams, it makes sense to benchmark them to asset class or strategy appropriate benchmarks. A New Zealand equity portfolio manager contributing to the management of a global multi-asset portfolio at a sophisticated asset owner should not be benchmarked to the MSCI ACWI Index, but rather the local market index. Likewise, an Australian credit portfolio manager at an insurer should not be benchmarked to a broad market index, including a large percentage of government issues.

As highlighted earlier, CPPIB has multiple benchmarks and target portfolios to measure and monitor their investment strategy and outcomes. It may be appropriate for certain local investors to have multiple benchmarks. But it is the Reference Portfolio that provides clarity as to whether or not the investment programme, in its totality, is adding value over time.

For local asset owners such as Community Trusts, retirement schemes, foundations and iwi, we suggest developing straightforward Reference Portfolios

²¹ Expected return based on Russell Investments Capital Markets assumptions as of 31 Dec 2022. Gross of fees and tax. For illustrative purposes only. Trailing 10-year return, as of 31 Dec 2022, in NZD, no fees, gross of tax, annual rebalancing. Past performance is no guarantee of future results. For illustrative purposes only.

²² As an example, consider the return generated by the high-profile ARK Innovation ETF, down almost 67% in 2022 and 77% off the highs of January 2021. Source: Morningstar Direct, NAV return, net of fees, in USD. Past performance is no guarantee of future results. For illustrative purposes only.

consisting of public market indices like the MSCI ACWI Index and the Bloomberg Global Aggregate Bond Index as well as indices tracking local stocks and bonds. This need not mean that investors throw out their actively managed strategies or divest from alternatives and other more complicated strategies, though some might. Rather, through the adoption of a high-level, easy-to-understand yardstick, all parties involved in the management and oversight of an investment programme's activities can clearly assess how it is progressing relative to the lower cost alternatives.

As noted earlier, an appropriately weighted Reference Portfolio *will* prove to be a hard performance benchmark to beat over time, net of costs. There *will* be periods, potentially of a long duration, when active, highly diversified, multi-asset, multi-strategy portfolios

underperform simple Reference Portfolios, as was the case in much of the last decade²³. Likewise, there will be times when Reference Portfolios deliver weak returns. 2022 was an example of such a year, meaning most diversified, multi-asset, multi-strategy funds should probably have outperformed.

While difficult periods may be confronting for overseers of capital, that a portfolio underperforms a benchmark should not in and of itself be reason for alarm, certainly over short time periods. Underperformance is a fact of investing. Rather than sticking the collective heads in the sand – as can be the case when opaque, hard to decipher composite benchmarks are used – the Reference Portfolio benchmark provides an easy-to-understand means of assessing how an investment programme is tracking over time.

RESIST THE TEMPTATION TO TINKER WITH THE REFERENCE PORTFOLIO (AND BENCHMARKS GENERALLY)

Should a Reference Portfolio benchmark reflect restrictions, exclusions and all manner of investor preferences? Or should it be constructed using the core, all-encompassing broad market benchmarks as described earlier? In our view, the latter approach is most appropriate (and useful), with a couple of notable exceptions.

The increased focus on Responsible Investment and Environmental, Social and Governance (ESG) considerations in investing in New Zealand has been welcomed by many. Increasingly, many investors desire that their portfolios reflect their 'values' be those related to climate change and the environment or social and/or governance considerations.

Many investors view ESG as a value-additive and/or risk mitigation strategy and so consider this when building portfolios. Others wish to lower the carbon emissions profile of their portfolio holdings so as to be seen to be 'doing something' about climate change. Most local investors now choose not to invest in tobacco stocks, while some choose to shun controversial weapons, fossil fuels, pornography, alcohol, civilian firearms, animal testing, etc.

In most cases, these decisions are *active* in the sense that the investor or fund manager has chosen to exclude securities or otherwise shift away from the broad, market capitalisation weighted portfolio. Sometimes those shifts will be barely noticeable, e.g. the tobacco exclusion applied for many New Zealand-based global funds, with fund managers and investors generally not altering the performance benchmarks.

However, as the list of exclusions or the magnitude of portfolio tilts and/or active bets increase, there can be the urge to have the fund or portfolio benchmark also altered to reflect these changes and the reduced opportunity set. Depending on *who* made the decisions, this may make sense at a fund level (or for an internal investment team at an asset owner); as an example, it is arguably unfair to benchmark a fund manager against an index that includes fossil fuels if they are effectively prohibited from owning them.

Generally though, we believe fund and portfolio benchmarks should represent the starting point, or neutral stance, rather than some form of the end state. In the case above, someone, somewhere, has taken the decision to exclude certain securities and make active bets away from the market. This needs to be captured and through using broad, standard market capitalisation-weighted indices, it is clear what impact these decisions are having on total portfolio results. This is preferable to removing those securities or heavily modifying the benchmark to reflect the portfolio.

Russell Investments manages an index-oriented global fund²⁴ for New Zealand investors which modestly tilts away from companies that have high carbon emissions in favour of companies with relatively lower emissions and better ESG scores. Rather than creating a benchmark to reflect the strategy, it is managed relative to the standard, capitalisation-weighted MSCI ACWI Index. Over time, the impact of the decision to 'decarbonise' or to tilt toward companies that look favourable through an ESG lens becomes very clear. We believe this approach, rather than managing relative to

²³ This is based on anecdotal evidence as well as the strength of the capitalisation-weighted equity market indices.

²⁴ <https://russellinvestments.com/nz/funds/russell-investments-sustainable-global-shares-fund>

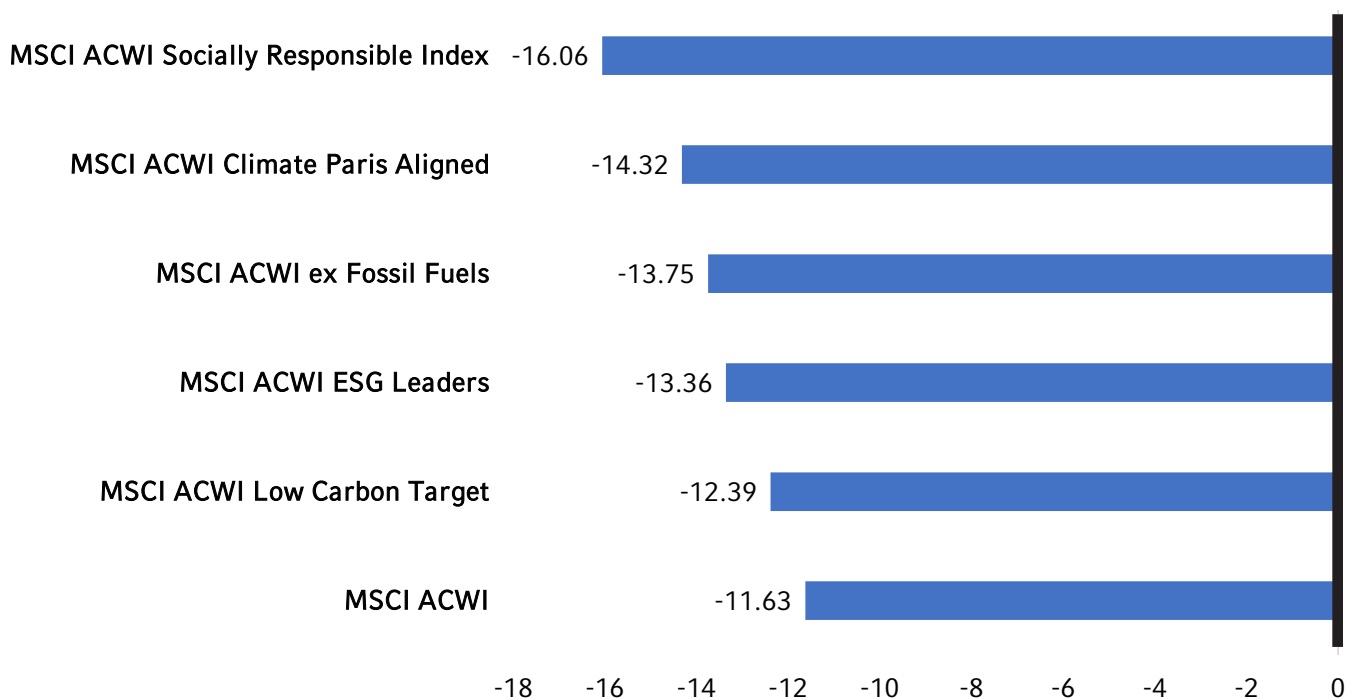
a modified index more closely reflecting the strategy, is preferable for governance teams and investors alike. The alternative is that the impact of these decisions gets lost in the shuffle – the benchmark looks very much like the fund – and there is arguably less transparency and accountability.

Does it matter? Sometimes it does. Using 2022 as an example, we can see a significant performance differential between various ESG-oriented and low carbon indices. In 2022, decarbonising or tilting toward companies with favourable ESG profiles has been a significant detractor.

Again, in our view the answer is not to ‘make the benchmark easier to beat’, but rather to acknowledge that underperformance and be very clear as to the driving factors. Investors may argue the underperformance is a short-term market dynamic or accept that it is a cost of investing along those lines, both fine positions, clearly attributed through the use of broad, standard market indices.

Exhibit 5

2022 performance for global equity benchmarks (unhedged NZD)



Source: Morningstar Direct. 2022 Returns in NZD, Unhedged Net Total Return indices. Past performance is no guarantee of future results.

There are, of course, exceptions to this. We highlighted the hypothetical situation of the fund manager not permitted to invest in fossil fuel stocks, but there may also be instances where modified asset class and total portfolio benchmarks are appropriate. For example, the local CFIs have been directed by the Minister of Finance to lower their carbon footprints and lean into Responsible Investment more broadly within their portfolios.²⁵ Such directives take the 'decision' out of the hands of the CFIs, they have been forced to comply. In such circumstances, it may be appropriate that benchmarks are reflective of the reduced opportunity set and thus relative performance can be cleanly attributed to factors within the control of the investor.

The NZ Super Fund recently announced it would be adopting the MSCI Climate Paris Aligned indices (World and Emerging Markets) as their equity benchmarks, while the Accident Compensation Corporation and the Government Superannuation Fund have adopted the MSCI Low Carbon Target indices as their equity benchmarks. These may be more reflective of their actual, permissible investment opportunity set and arguably more appropriate portfolio measuring sticks, but even in these cases we believe it is appropriate to

illustrate the impact of these ESG-related decisions on investment results through continuing to track results relative to the broad market indices.

Based on the earlier commentary around easy to beat benchmarks, it will not be lost on readers that, at least in 2022, these indices have underperformed the core, flagship MSCI ACWI, due to the strong outperformance of the Energy and Utilities sectors as well as defence and tobacco stocks. However, over longer time periods, these indices have performed in line with or exceeded the returns of the flagship index.

To the credit of the CFIs, and NZ Super in particular, they set a high standard in regard to portfolio transparency, detailing information on many items such as their over-arching investment beliefs, benchmarks, Responsible Investment policies, decarbonisation strategies and active management within their portfolios²⁶. Other local institutional investors would do well to follow the example of the CFIs and be clear as to the costs and benefits of their ESG-oriented strategies, as well as other elements of their investment programmes.

CONCLUSION

A fair investment benchmark *should* be tough to beat. Global investment markets are highly competitive, which means adding value after costs – and from the bottom of the world no less – is always likely to be a challenging proposition. Those employing active management should expect potentially long periods where portfolios underperform benchmarks. After all, even Warren Buffet doesn't outperform the market every year²⁷. Performance relative to peers may also suffer.

For those not comfortable with this market reality, the only real answer is to make significant use of indexing. This might be at the fund level or at the total portfolio level. Where peer risk is a significant concern, adopting an asset allocation broadly aligned with peers may be appropriate.

Too often we find that performance benchmarks, be it at a fund level (and sometimes where performance fees apply) or at a total portfolio level, are self-selected easy beats which are neither truly reflective of the risks being taken in the portfolio nor representative of the alternatives.

Like others²⁸, we argue that fund managers, fund officials, Chief Investment Officers, Investment Committees and, yes, investment consultants, have incentives to develop complicated but easy to beat benchmarks so they look better or, in some cases, earn more in the way of fees (or remuneration in the case of employees).

For overseers of asset pools, this myopic focus on outperforming the benchmark also distracts from the long-term objectives of the funds.

The Reference Portfolio - the ultimate portfolio yardstick - is appropriate for retail investors as much as it is for institutional investors. We will illustrate its value for that group of investors in the upcoming work on KiwiSaver benchmarks.

²⁵ Enduring Letter of Expectations to Crown Financial Institutions in Relation to Responsible Investment.

²⁶ <https://www.nzsuperfund.nz/how-we-invest/reference-portfolio/>

²⁷ Berkshire Hathaway Shareholder Letters (<https://www.berkshirehathaway.com/letters/letters.html>)

²⁸ How to Improve Institutional Fund Performance, Ennis, Richard M. (2021) <https://richardmennis.com/blog/how-to-improve-institutional-fund-performance>

TOP 10 BENCHMARK RECOMMENDATIONS FOR LOCAL INSTITUTIONAL INVESTORS

- 1. Use benchmarks that are easy to understand and transparent.** Favour broad, widely accepted, 'off-the-shelf' indices over opaque composites constructed by interested parties, i.e. fund managers or advisers.
- 2. Use benchmarks that are both reflective of the risks in the portfolio as well as the underlying characteristics of the investment.** Cash indices should be used sparingly, if at all, as fund and portfolio benchmarks. Growth-oriented multi-asset investors should not have significant cash or cash-like components in their total portfolio benchmarks.
- 3. Avoid frequent benchmark changes and be sure to mitigate potential conflicts.** It may be appropriate to change fund, asset class or portfolio benchmarks, from time-to-time. However, recognise the potential for conflicts of interest, as it is often fund managers, consultants or internal investment teams that are recommending changes. It is good practice, particularly where performance fees (or other forms of compensation) are involved, to ensure it is not a case of 'out with the old hard to beat benchmark, in with the new easier to beat benchmark.' Another good practice is to review the performance of the old benchmark versus the new one.
- 4. Adopt a simple Reference Portfolio as a high-level investment programme benchmark.** Build a Reference Portfolio benchmark that appropriately reflects the long-term risk appetite and can be used as the ultimate gauge of how an investment programme is tracking over time.
- 5. Resist the temptation to use heavily modified, ESG indices, as fund and asset class benchmarks.** Benchmarks should be reflective of the wider opportunity set, i.e. the starting point, rather than some form of the end state. Adopting modified indices can make it harder to ascertain the impact of Responsible Investment (and other active) decisions.
- 6. Be sure to clearly identify the benchmark in reporting and communications with constituents, noting how it has changed over time and any assumptions.** As benchmarks are often used as the measuring stick, be sure to be transparent as to what it is! Present time-weighted performance relative to benchmarks over multiple time periods.
- 7. If performance fees are employed, ensure that there is alignment with your interests.** Avoid one-way bets for fund managers that encourage short-termism and risk-taking.
- 8. Accept that there will be times when portfolios lag the performance benchmark.** The answer is not to make the benchmark easier, but rather be up-front as to the realities of investment. For those that can't tolerate underperformance relative to benchmarks or peers, employ indexing extensively and adopt 'peer-like' asset allocations.
- 9. Use widely accepted asset class benchmarks, rather than fund benchmarks as high level measuring sticks.** The practice of adopting fund or strategy benchmarks, rather than true asset class benchmarks, in portfolio composites or as asset class benchmarks can distort the overall picture, leading to the appearance of outperformance when in fact there is underperformance.
- 10. Simplify!** Many involved in the governance and oversight of investment portfolios are not investment experts. Those in positions of responsibility, hold fund managers, internal staff, advisors and consultants to account and demand, clear, easily understood portfolio benchmarks.

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QUALITIES OF A GOOD BENCHMARK – CFA SOCIETY UNITED KINGDOM

Unambiguous. The identities and weights of securities or factor exposures constituting the benchmark are clearly defined.

Investable. It is possible to forgo active management and simply hold the benchmark. That is, investors can effectively purchase all securities in the benchmark.

Measurable. The benchmark's return is readily calculable on a reasonably frequent basis. A good benchmark will have a transparent set of public rules and, therefore, predictability for investment managers.

Appropriate. The benchmark is consistent with the manager's investment style or area of expertise.

Reflective of current investment opinions. The manager has current investment knowledge (be it positive, negative, or neutral) of the securities or factor exposures within the benchmark.

Specified in advance. The benchmark is specified prior to the start of an evaluation period and its calculation methodology is known to all interested parties.

Owned. The investment manager should be aware of the strengths and weaknesses of any benchmark they are asked to replicate or be judged against. It must also accept accountability for a client's portfolio performance against that benchmark, and be ready to explain to the client any variance from the benchmark. Consideration of the benchmark should be embedded in and integral to the investment process and portfolio construction conducted by the investment manager.

In essence, a high-quality benchmark or index should be:

1. Free of conflicts of interest
2. Provide independent review/pricing; and
3. Have transparent methodology

...Essentially, a good benchmark that possesses the qualities cited above will be best placed to enable the asset owner/beneficiary to:

- Assess how their portfolio is progressing towards their objectives.
- Provide insight into how performance aligns with risk appetite and tolerance for losses.
- Evaluate the value for money delivered by their asset managers/investment team.

While benchmarks are not always perfect, the closer they are to reflecting the risk appetite, loss tolerance and beliefs of the asset owner, the more meaningful the benchmark will be.

Benchmarks and Indices

Ansumana Bai-Morrow & Sheetal Radia, CFA

Supported by CFA UK's Market Integrity and Professionalism Committee

Calendar year returns – HFRI Fund-of-Fund Indices vs. equities, bonds and cash (in USD)

	HFRI FOF: MARKET DEFENSIVE INDEX	HFRI FUND OF FUNDS COMPOSITE INDEX	HFRI FOF: DIVERSIFIED INDEX	S&P 500 (NR)	MSCI ACWI (NR) USD-H	BLOOMBERG GLOBAL AGGREGATE (TR) USD-H	BLOOMBERG US GOVT BOND (TR)	BLOOMBERG US TREASURY BILLS (TR)
2000	15.41	4.07	2.47	-9.42	-9.71	10.34	13.24	6.21
2001	7.31	2.80	2.79	-12.23	-13.34	7.24	7.23	4.43
2002	8.18	1.02	1.17	-22.48	-24.26	8.45	11.50	1.80
2003	8.46	11.61	11.42	27.99	25.25	3.11	2.36	1.11
2004	3.27	6.86	7.19	10.21	11.08	4.89	3.48	1.24
2005	5.87	7.49	7.46	4.33	17.02	4.28	2.65	3.05
2006	8.97	10.39	10.18	15.14	17.72	3.64	3.48	4.82
2007	10.76	10.25	9.72	4.90	8.02	5.33	8.66	5.01
2008	6.01	-21.37	-20.85	-37.45	-39.32	5.58	12.39	2.44
2009	3.40	11.47	11.46	25.55	29.58	5.09	-2.20	0.29
2010	5.00	5.70	5.48	14.37	10.70	4.61	5.52	0.22
2011	-6.70	-5.72	-5.00	1.47	-6.70	5.40	9.02	0.15
2012	-1.66	4.79	4.81	15.22	15.53	5.72	2.02	0.12
2013	0.54	8.96	9.04	31.55	24.96	-0.14	-2.60	0.10
2014	6.39	3.37	3.42	12.99	8.88	7.59	4.92	0.06
2015	-0.98	-0.27	-0.17	0.75	0.94	1.02	0.86	0.10
2016	1.04	0.51	0.45	11.23	9.15	3.95	1.05	0.38
2017	1.81	7.77	6.87	21.10	20.14	3.04	2.30	0.82
2018	-1.35	-4.02	-3.29	-4.94	-7.03	1.76	0.88	1.86
2019	2.37	8.39	8.10	30.70	27.15	8.22	6.83	2.34
2020	3.79	10.88	10.62	17.75	14.95	5.58	7.94	0.72
2021	3.62	6.17	5.95	28.16	20.91	-1.39	-2.28	0.05
2022	5.87	-4.65	-3.06	-18.51	-15.48	-11.22	-12.32	1.30

Source: Morningstar Direct, HFRI, in USD. Past performance is no guarantee of future results.

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