Governance, investment beliefs and dynamic asset allocation*

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Abstract

The investment beliefs of funds (whether explicit or implicit) tend to fall into two groups - those that imply there should be very little deviation from listed markets benchmarks and those that imply that the asset allocation and risk-profile should be allowed to deviate substantively to capture expected excess risk-adjusted returns. In practice, however, most funds do not deviate substantively from their benchmarks, regardless of their investment beliefs. Based on discussion with our asset managers and peer funds, we attribute the main reason for this is that it is difficult to sustain strategies that result in losses relative to benchmarks even if *ex-ante* the strategy is expected to add-value given sufficient time. Drawing on the case of the New Zealand Superannuation Fund, this paper argues that the sustainability problem can be significantly reduced with prior investment beliefs in the strategies and with governance that has clear accountability, reporting and decision-making structures.

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1. Introduction

The Guardians of the New Zealand Superannuation Fund (NZSF) employs a “reference portfolio” construct to specify the basic risk-profile choice required to meet the NZSF’s investment objective, and to provide a high level governance benchmark against which the actual portfolio may be assessed. The reference portfolio comprises widely-recognised global and New Zealand listed asset classes only. As such, it is a low-cost simple alternative to the NZSF’s actual portfolio.

The NZSF’s employs various strategies that are expected to add-value relative to the reference portfolio, including:

- Beta diversification strategies – underpinning the NZSF’s investment in, for example, infrastructure, private equity, private property and timber.

- A dynamic asset allocation approach to listed asset classes we call “strategic tilting”.

- A public markets’ active management programme.

- Opportunistic investments, i.e. investments that are expected to improve the performance of the portfolio in the short to medium-term, but are not necessarily expected to be held over the long-run. An example is direct arbitrage transactions.

All of these value-adding activities may involve substantive deviation from the reference portfolio, and all and are supported by “investment beliefs”. That is, by a set of propositions which cannot be definitely proven, yet still reflect theory, empirical evidence, experience and judgement. For example, one belief held is that certain investments opportunities have life-cycles and the NZSF will only be adequately rewarded for investing in such opportunities at the early to mid-stages of these cycles.

This paper focuses on one particular value-adding activity - strategic tilting. This activity involves adjusting broad listed asset class holdings around benchmark weights according to their forecast relative return prospects. In other terms, it involves dynamically adjusting the long-run risk profile embodied in the NZSF’s reference portfolio.

In the following section we detail further the strategic tilting approach employed by the NZSF, the investment beliefs that support this strategy, and the types of funds for which such a strategy would appear most applicable. Section 3 discusses the governance and decision-making structures that the NZSF has adopted to enhance the sustainability of strategic tilting, while Section 4 outlines future developments of this strategy.
2. Strategic tilting at the NZSF and applicability to other funds

What do we mean by strategic tilting?

At a high level, strategic tilting at the NZSF is an internally managed dynamic asset allocation strategy that involves adjusting listed asset classes around benchmark weights according to their forecast relative return prospects. In principle, any listed asset class - or alternatively risk exposures - could be a candidate for strategic tilting. In practice, to date the exposures that the NZSF currently tilt over include: equities, listed property, duration, credit spread and foreign currency exposures.

The forecasts are based on simple valuation models that assume, as elaborated below, that asset markets are subject to mean reversion. It is instructive to contrast this strategy from more common tactical asset allocation (TAA) approaches:

- First, in our approach a ‘signal’ to tilt an exposure is only generated when the models suggests valuation levels, or return premiums, are statistically extreme. This implies that tilts will only be applied infrequently for any given market.
- Second, unlike TAA, the strategy makes no attempt to incorporate market timing and momentum factors.
- Third, even though signals are only generated when models suggests markets are at extreme levels, it is still expected that if positions are executed they will be held over a much longer period of time (months or even years) than is usually the case with any position undertaken in a TAA strategy. This is because mean reversion in asset markets is often a long-lived process. In contrast, momentum-type factors commonly employed in TAA strategies tend to be shorter lived.
- Fourth, our strategy inherently involves changing the short-run risk profile of the portfolio based on a relatively small number of positions (i.e. relative to TAA there is a very narrow breadth).
- Finally, the strategy is not a purely mechanical exercise. An explicit judgemental overlay mechanism is built into the strategy to incorporate off-model concerns that are not captured by our analytical framework.
**Investment beliefs underpinning strategic tilting**

The two key investment beliefs held by the NZSF relevant for strategic tilting are:

1. Expected returns are at least partly-predictable within asset classes and these returns are subject to a mean reversion process.

2. Investors with a long-term horizon can outperform more short-term focused investors over the long-run.

As stated in the introduction, these beliefs are propositions that cannot be definitively proven; instead, they are judgmental assessments based on our take of the relevant literature, internal research, and investment experience.

Most of the strategies that NZSF pursues rely on a long-term horizon and our belief that investors with a long-term horizon can outperform more short-term focused investors over the long-run. This belief is based more an economic intuition and observation than academic research. There is, however, some empirical and theoretical work which supports the notion that a shorter-term focus tends to be disadvantageous given that over short-horizons the signal-to-noise ratio tends to be very low (Black 1986, Kyle 1984, 1985, Merton, 1971, Summers 1986 and Shiller 1981, 1984).

With regard to mean reversion, causal empiricism from centuries of financial market behaviour suggests markets go through boom-bust cycles, or in other terms, get in some sense highly disconnected from their fundamental earnings determinants. However, formal academic empirical evidence that long-run returns and risk premia are subject to mean reversion is not uncontroversial. For example, the strong predictive power of “fundamental” valuation metrics for forecasting long-run equity returns claimed in early studies (e.g. Poterba and Summers, 1988, and Fama and French, 1988) was undermined by latter work that corrected for biases in the empirical specifications (e.g. see in particular work by Stambaugh 1999) On the other hand, recent studies with more robust econometric methods such as Hjalmarsson 2008, Campbell and Yogo 2006 and Lewellen 2004 find some evidence that fundamentals help explain long run equity returns.

The lesson we drew from the empirical literature is that while risk premia may be subject to mean reversion and valuation metrics can help predict this reversion, the signal-to-noise ratio is fairly low. We have conducted internal research comparing the portfolio implications of strategic tilting over a static approach (see Drew et al. 2008). The key finding of this work was that the long-run distribution of returns can be improved by strategic tilting. Moreover, even if returns were not predictable the study found that the long-run distribution of outcomes under strategic tilting were almost identical to a static asset allocation strategy – albeit over shorter horizons performances
could differ materially. As such, the challenge this study presented for the NZSF was, as a long-horizon investor, why should we not adopt strategic tilting as a value-added activity?

**Applicability of strategic tilting to other funds**

To examine whether strategic tilting, as described above, might at least in principle be a strategy worth considering for other funds we partition all funds into six categories, i.e. based on whether they have defined liabilities, whether they hold an investment belief (either explicit or implicit) in long-horizon return predictability, and whether they employ a flexible asset allocation strategy, i.e., permit asset allocation or policy weights to adjust over time. We represent this partition in the table below, and place the NZSF, and like funds, in the shaded box:

<table>
<thead>
<tr>
<th>Belief in long-horizon predictability?</th>
<th>Asset-defined liability (e.g. defined benefit plan)</th>
<th>Asset only (e.g. defined contribution plan)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
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| Flexible asset allocation strategy? | Yes | No | No | Yes | No | No |

For defined benefit funds, the focus is on the assets relative to liabilities; tilting in such a context could operate by reducing exposure to risky assets when in surplus relative-to-target and increasing exposure when in deficit (see Bone and Goddard 2009). In contrast, funds with an asset-only focus, such as a defined contribution funds and the NZSF, the focus of strategic tilting is on exposures to risky assets in isolation. As such, conditions that lead a defined benefit plan to tilt exposures may not always align with conditions from an asset-only perspective. The nature of strategic tilting for a defined benefit plan would depend on the nature of the liabilities, such as the how mature the plan is, and the funded status (whether the plan is fully funded or underfunded).

As stressed in the section above, strategic tilting is underpinned by a belief in mean reversion. This belief may be held explicitly and evidenced by a statement of investment beliefs (such as our beliefs on NZSF’s website), or may be inferred implicitly through the types of strategies employed by a fund.
Lastly we distinguish between funds that permit flexibility in the asset allocation relative to strategic benchmarks, and those that do not because they anchor strongly to an asset or policy benchmark. The latter asset allocation approach would tend to preclude strategic tilting for two reasons:

1. Strong anchoring to a policy benchmark is often motivated by a view that the markets do not offer a changing risk/return relationship through time. Or in other terms, that mean reversion in risk premia, even if it were present, is not able to be profitably exploited. As such, it tends to result in fixed asset class (or policy) weights through time.

2. Rather than viewing risk in absolute terms, risk is seen as underperforming a benchmark. With such a tracking error approach, deviations from the policy weights would be seen as ‘risky’ even in the context of reducing absolute risk exposures.

In summary, we see the strategic tilting approach described in this paper as most relevant, in principle, for funds that (i) are concerned with managing assets only, (ii) believe that markets are subject to mean reversion, and (iii) have been granted (or taken) the flexibility to adjust asset allocations or risk exposures around longer-run benchmarks.

In practice, there appears to be a regional dimension in the investment beliefs of funds regarding strategic tilting, based on our observation of published statements of investment beliefs and discussion with various funds around the world. In particular, we note that strategic tilting is practiced by some Australasian-based funds, and it is also seen in Swedish and French based funds. In contrast, the approach seems relatively uncommon for US, Canadian and Dutch based funds.

3. Governance and decision-making

It is widely reported that the governance of managed funds often falls short due to poor decision processes, inadequate resources, and lack of focus or mission clarity (see Ambachtsheer et al. 1995 and Ambachtsheer et al. 2007). With this in mind, our view is that successful implementation of any strategy that involves deviation from low cost passive benchmarks hinges upon having in place robust governance and decision-making processes. The elements that we see as critical to support the implementation of strategic tilting, in particular, include:

*Board commitment*

Strategic tilting is a ‘contrarian’ strategy that may imply an extended period of losses relative to long-run benchmarks. Being underweight an asset class in a bull market or overweight in a bear market can bring to bear enormous pressure to unwind the strategy. Moreover, perhaps the worst possible outcome for a fund would be to abandon a position when valuations for an asset class
prove to be extreme \textit{ex post} (see Drew \textit{et al}, 2008). For this reason, it is imperative that the Board is ‘strong’ and committed to the strategy – both from the perspective of buying into the investment beliefs behind the strategy, and being willing to defend the strategy against other stakeholders who may not be as committed, particularly in periods when the strategy under-performs.

\textit{Internal management of the strategy}

Board commitment to strategic tilting also rests upon their confidence in the management of the strategy. We think the strategic tilting approach applied in this paper makes most sense if managed internally, to avoid alignment of interest problems, principally because the strategy involves changing a fund’s risk profile on a relatively small number of ‘bets’ or positions – something that most fund’s would not contemplate externally contracting. Moreover it is questionable whether external managers, who are influenced by business risk considerations, would be as willing to stick with the strategy during periods of poor performance.

As with any strategy, there needs to be clear delegated constraints from the Board to the managers of the strategy. There are many ways this could be managed in the context of strategic tilting. The approach the internal management of the NZSF took was to seek delegated authority from the Board to tilt particular asset classes up to specific limits from their benchmark weights, subject to an overall constraint on the total positions taken. The latter constraint was motivated by the absolute ‘tolerance’ the Board and internal management would have to running losses relative to the benchmark asset allocation. In this sense, the implementation of strategic tilting does not entirely escape ‘tracking error’ considerations, although at the time of writing an active area of debate is whether the tolerances should be increased.

\textit{Alignment of interests and incentives}

Internal management of strategic tilting does not guarantee alignment of incentives. Pressure may arise internally, either through negative reputation effects or more directly if remuneration structures are at least partially based on performance relative to passive market benchmarks (as they are at the NZSF).

Part of the way that the NZSF has managed this problem is to make the default decision one which adjusts exposures in-line with the model-based strategic tilting signals. As had been noted, strategic tilting is contrarian by definition, and it can be somewhat ‘unnatural’ to follow such a path. Making the default decision the mechanistic signal puts the burden of proof on why it should not be followed. However, even though the natural human inclination may be to avoid going ‘against the market’ that does not mean there is no room for judgement in the decision-making process. An override may still be justified by concerns that, for instance, the models exclude important economic fundamentals, or that extreme events are occurring that heighten uncertainty...
well above normal levels, or by operational considerations. Judgements also allow more ownership of the tilts by the fund’s managers.

Another way we have consciously managed the incentive problem is to tilt when signals are at extreme levels. In principle, this implies significantly shorter periods of time away from policy benchmarks. Finally, as was the case during the recent financial crisis, when we engaged our tilt positions we were certainly not alone in assessing that the market had reached extreme levels – there is some comfort in going with that crowd even if it was a rather small number at the time.

*Transparency in operation of the strategy*

Separation of duties and clear accounting for and reporting on strategic tilting are also essential elements in the implementation of the strategy. Transparency in reporting ensures the Board and internal management can clearly identify and attribute performance from the activity, including the impact of any judgemental over-rides to the tilting signals. Separation of duties is necessary to manages operational risks and to maintain Board and internal management confidence in the process.

4. **Summary and Future Directions**

This paper has discussed the investment beliefs and governance aspects that have underpinned the implementation of strategic tilting at the NZSF. We think these aspects are crucial for any strategy that involves dynamically adjusting the risk profile of a fund from its longer run benchmark; this is particularly the case for strategic tilting given it can involve going against the markets in periods of heightened uncertainty and stress.

An active area of debate in the NZSF is whether we should seek delegation to tilt by larger amounts, particularly in the case of taking risk off the table. Aside from this, the tilting program at the NZSF is set to expand as models are developed to support the usage of further tilting levers. We are also considering a number of refinements in the modelling frameworks, whose broad aims are to enabling us to consider more formally a broader set of risks and uncertainties, and to take better advantage of markets when they reach, and correct from, extreme levels.

**References**


