



“HOW WE INVEST” WHITE PAPER  
**STRATEGIC  
TILTING**

By David Iverson and Alex Bacchus  
JANUARY 2019

[www.nzsuperfund.co.nz](http://www.nzsuperfund.co.nz)  
[email:enquiries@nzsuperfund.co.nz](mailto:enquiries@nzsuperfund.co.nz)

## PREFACE

The Guardians of New Zealand Superannuation uses a number of active investment strategies to add value to the New Zealand Superannuation Fund. Of these, the most significant is our strategic tilting programme. Tilting, which exploits some of the Fund's [key endowments](#), has added substantial value to the Fund since it began in 2009.

This paper aims to explain how tilting works and how it aligns with our endowments and investment beliefs. It also explains the performance of the strategy to date.

For further information on tilting refer to the [tilting section](#) on our website.



**Matt Whineray**  
Chief Executive Officer



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## WHAT IS STRATEGIC TILTING?

Strategic tilting is a value-adding strategy which alters the Fund's exposures to certain asset classes, including equities, bonds, credit and currencies. This strategy is designed to capitalise on certain investment advantages that the Fund has. These advantages are two of the Fund's endowments, specifically the Fund's long-term investment horizon and certain liquidity profile, and our belief in mean reversion of asset prices and risk premiums.

Essentially, strategic tilting increases exposure to cheap assets and decreases exposure to expensive assets based on price and long-term valuation signals. This type of strategy is sometimes called dynamic or tactical asset allocation.

## WHAT ARE THE UNDERPINNINGS OF THE PROGRAMME?

We believe there are three key elements for operating a successful strategic tilting programme.

- a supportive investment philosophy that links to the Fund's advantages as an investor;
- a disciplined risk allocation approach; and
- strong governance and alignment of interests.

### ***Investment philosophy***

The strategic tilting programme incorporates a number of investment philosophies in its design and excludes others. The investment philosophy relies on (i) mean reversion and (ii) long horizon. It does **not** rely on momentum trading or short-term forecasting.

These are described in greater detail below.

### ***Included in investment philosophy***

- *Mean reversion* is a belief that asset prices tend toward their values over time. By value, we mean the level where the ex-ante expected return is fair compensation given the riskiness of the asset. This belief makes no claim about the specific path prices may follow, nor how long it will take until fair value is reached. The tilting programme has been designed such that it does not rely on our ability to forecast short-term price movements. This is not our competitive advantage as an investor. It does rely on our ability to value assets which provides the anchor for judging whether markets are cheap or expensive.
- *Long horizon* leverages the Fund's long horizon endowment, stable risk aversion and operational independence. Effectively, the Fund has the ability to weather short-term volatility (i.e. mark-to-market losses) and we can look through short-term changes in market risk aversion.

### ***Excluded from investment philosophy***

- *Forecasting* means predicting how and when an asset class price will move using subjective methods, quantitative methods or both. The ability to predict when and how an asset price moves (for example, towards fair value) would greatly enhance the value-add of the programme. However, we do not believe we have a competitive advantage in forecasting shorter-term price movements. Forecasting of this kind is not required for the programme to add value.
- *Momentum* is an investment approach that uses quantitative methods to predict short term market price movements. As with forecasting, we do not believe we have a competitive advantage in this area. While momentum, in some form, exists in market prices, there are any number of ways to define it. Further, it is difficult to choose which measure will have predictive ability in the future.

### ***A disciplined allocation approach***

We believe that having a disciplined approach to allocating capital is important for achieving long-term success in the strategic tilting programme. The tilting allocation approach is a formalised process and mechanism for translating valuation signals into portfolio positions based on long-term valuations, expected returns, risk and confidence assessments.

The approach aims to ensure discipline in allocating to asset classes and markets, to be more objective and to avoid the temptation to allocate based on “gut feel”. This approach is designed to monetise our belief in mean reversion and helps reduce some of the behavioural bias that could prevent us from holding true to a contrarian strategy. Such a bias could detract from performance.

### Governance

Successful implementation of the strategic tilting strategy requires robust governance and decision-making processes. The elements that we see as critical to support the implementation of strategic tilting include strong board commitment and alignment of interests.

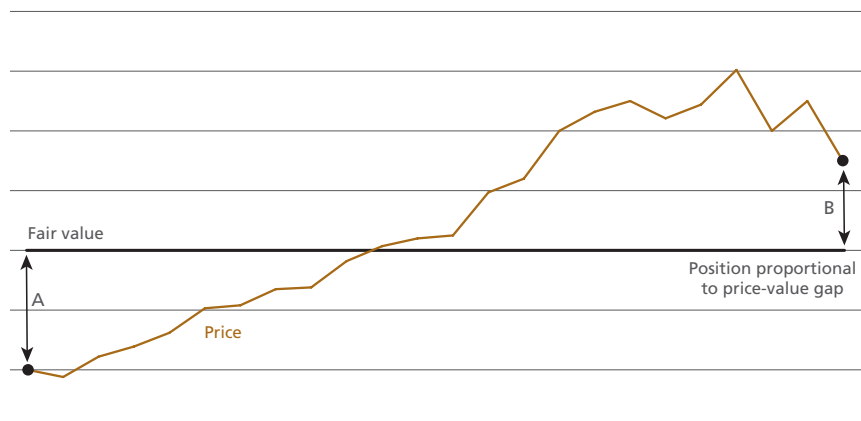
- *Board commitment.* Strategic tilting is a contrarian strategy that may result in an extended period of losses. Being underweight an asset class in a bull market or overweight in a bear market can bring to bear enormous pressure to unwind the strategy. The worst possible outcome would be to abandon a position when valuations for an asset class prove to be, ex-post, at the extreme end of the trading range. For this reason, it is imperative that the Board is strongly committed to the strategy – both from the perspective of buying into the investment philosophies 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. In particular, this means sizing the amount of risk used carefully when establishing the strategy – to avoid the losses created by abandoning the strategy at the wrong time.
- *Alignment of interests.* Strategic tilting is managed internally at the fund. Therefore, the Board’s commitment to strategic tilting also rests upon their confidence in the management of the strategy. We think that internal management of strategic tilting makes most sense in order to avoid alignment of interest problems given that the strategy can produce large losses over an extended period of time.

To ensure alignment of incentives, we make decisions to adjust exposures in-line with a disciplined and formalised capital allocation process. These allocations are the default position. As strategic tilting is contrarian by nature, it can be somewhat uncomfortable to follow such a path in practice. By making the default decision to tilt based on formalised signals, we put the burden of proof on why the decision should not be followed.

### HOW DOES IT WORK IN PRACTICE?

In practice, the tilting program changes the allocations to a market according to changes in the expected returns of the market. The expected returns are driven by how far prices deviate from fair values. The greater the price-value gap the larger the position and the smaller the price-value gap the smaller the position. An example for the US equities market is shown in the figure below. At the start of the period, US equities are under-priced as marked by point A. As a result there would be a long position to US equities. As price moves closer to fair value, the long position gradually decreases until no position is taken. When price moves above fair value, a short position in US equities is established. The further the price moves above fair value, the greater the short position. At the end of the period US equities remain overpriced, as marked by point B.

**Figure 1: Hypothetical example for US equity market**



This US equities example demonstrates the allocation approach of the tilting programme. The approach means that positions are put on and taken off as the price-value gap moves up and down. While this may lead to frequent trading of positions, it is completely consistent with our investment beliefs and long investment horizon. Critically, the strategy does not require picking extreme points of market pricing, whether expensive or cheap, then establishing positions which are held until the fair value is reached.

## WHAT MARKETS DO WE COVER?

We cover markets across equities, property (real estate investment trusts or REITs), bonds, credit and currencies. Below are the specific markets that we determine valuations for and take positions in.

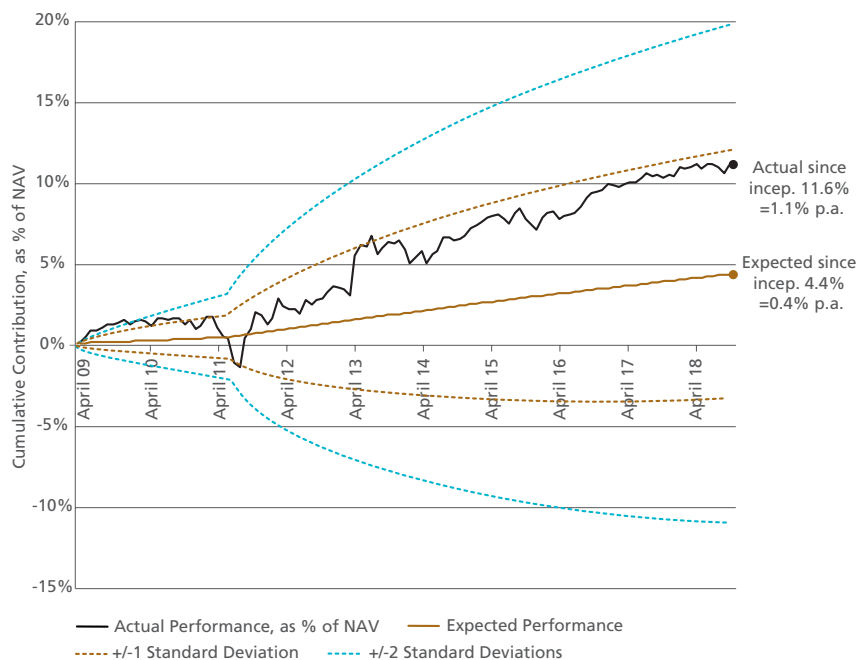
Equities	Bonds	Credit	Currencies	Property (REITs)
United States	United States	United States	United States Dollar	United States
Japan	Japan	Japan	Yen	
United Kingdom	United Kingdom	Asia ex Japan	British Pound	
Europe	Germany	Europe	Euro	
Canada	Canada	Australia	Canadian Dollar	
Australia	Australia		Australian Dollar	
Emerging Markets			New Zealand Dollar	
			Swiss Franc	

## PERFORMANCE SINCE INCEPTION

The strategic tilting programme is well aligned with the Fund's endowments and beliefs and has a reasonably large share of the total portfolio active risk. It is also expected to contribute significantly to the overall value-add over time.

Performance versus expectations for strategic tilting is illustrated in the chart below. As shown in the chart, cumulative performance to date is above expectations but within one standard deviation of the expected outcome.

**Figure 2: Performance of strategic tilting versus expectations**  
(From inception to 31 January 2019)



The strategic tilting strategy has performed above expectations since inception on 1 April 2009 to 31st January 2019, returning about 1.1% per annum (or about 2.6 billion New Zealand Dollars). This exceeds our expectations of 0.4% return per annum (estimated since inception). Tilting returns have been uncorrelated with the Reference Portfolio returns since we began, and the strategy has only marginally increased the Fund's realised risk during this period. However, we acknowledge that the ten years since inception is a relatively short timeframe for performance evaluation of a long-term strategy.

In assessing the performance of such a strategy we always ask whether the returns have been consistent with the investment philosophy, whether there have been any changes to that philosophy and, if so, why. This discipline keeps us focused on the long-term and ensures we act consistently with our investment beliefs and endowments.

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## SUMMARY

Strategic tilting is a value-adding strategy which alters the Fund's exposures to certain asset classes, including equities, bonds, credit and currencies. At its core, the strategy increases exposure to cheap assets and decreases exposure to expensive assets based on price and long-term valuation signals.

This strategy is designed to capitalise on certain investment advantages that the Fund has. These advantages are based on the Fund's endowments, specifically the Fund's long-term investment horizon and certain liquidity profile, and the belief in mean reversion of asset prices and risk premiums.

The performance of strategic tilting has been above expectations to date while being consistent with the programme's investment philosophy.