Volatility and risk: understanding the difference

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For the Fund to meet a significant portion of the future cost of New Zealand Superannuation, the ability to take market risk to earn investment returns over long periods of time is crucial. But market risk means the Fund will experience mark-to-market losses from time to time when financial markets fall in value.

In addition to taking market risk, the Fund's endowments (long-term horizon, known cash flow profile, operational indepedence and sovereign status) enable it to embrace active, contrarian investment strategies in order to further enhance returns.

The Fund takes market risk to earn investment returns over the long-term

In keeping with the Fund's long investment horizon (no sustained withdrawals are projected until the 2050s), and in order to meet its mandate of "maximising return without undue risk", we have deliberately weighted the Fund towards growth assets (80% equities, 20% fixed income). This is a similar approach to the "growth" mandates offered by typical KiwiSaver funds.

The Fund's high exposure to growth assets is set by the Board in the Reference Portfolio, a simple passive low-cost portfolio of listed equities and bonds that serves as a benchmark for the Fund's investing activities.

In the short-term, growth assets can be volatile, moving up and down in price. The Fund has the ability to ride out and potentially benefit from these short-term movements. In the long-term, the Fund's exposure to market risk from growth assets such as shares is expected to pay off in the form of higher returns than the cost to the Government of contributing to the Fund.

The Fund uses active investment strategies to earn additional returns

The Fund uses active investments to diversify away from equity markets (for example, into timber and rural land). It also employs active investment strategies that take advantage of its long-term horizon and known cash flow profile, such as investing in illiquid, privately held assets.

The Fund has the ability to act as a contrarian investor, buying when other investors are selling (and vice-versa). This is the purpose of the Fund's strategic tilting programme, which uses derivatives to take positions across a number of investment markets (equity, bond and currency). This programme relies on a belief in mean reversion in asset prices towards fair value and is a buyer of "risky" assets during financial market downturns. Since the tilting programme began in 2009, it has been a significant contributor to the value the Guardians has added to the Fund. See page 40 for further details.

In a market crisis, the Fund may suffer large financial losses

By taking on the market risk associated with growth assets, the Guardians accepts the risk that markets may experience sharp drops in value, be they driven by financial or political shocks, large commodity price movements, natural disasters or war. It is largely unavoidable that a growth-oriented portfolio such as the Fund will fall in these periods.

The Fund is well-placed to withstand such losses, as there is no immediate need to withdraw capital from it.* Short-term, volatility in the Fund's return is an expected outcome of the Board's choice of the level of equities in the Reference Portfolio. These fluctuations can be treated as "paper losses" with little long-term ramifications for the Fund's ability to fulfill its purpose.

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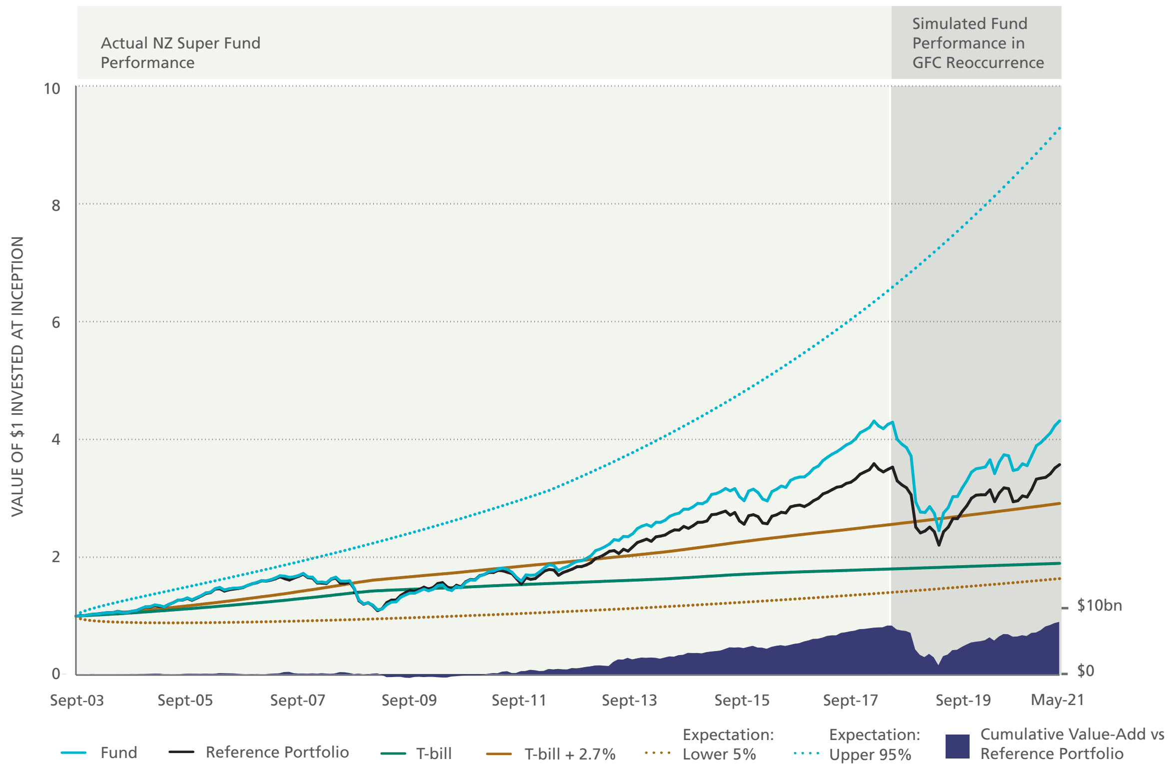
* On current projections, sustained withdrawals from the Fund begin in 2053.

Simulated Fund performance if the GFC were to reoccur



Having made the choice to expose the Fund to short-term volatility in order to generate long-term returns, the key is to ensure we have the discipline and resources to hold our course when volatility happens. Critical in this is understanding what these times could look like, before they happen. The chart above shows a simulation of what would happen to the Fund if the Global Financial Crisis (GFC) period of returns (2008-2011) were to repeat themselves. For this scenario, we used the Fund's current asset mix and a representation of how the Fund's active investment strategies would react to market movements.

From peak to trough (a ten-month period), we estimate the Fund would lose **$20.3b (-52.6%)** in a repeat of the GFC. The notional Reference Portfolio benchmark would fall by 44.7%. The reason we estimate that the Fund would lose more money than the Reference Portfolio benchmark is largely because we expect our strategic tilting programme would buy more growth assets as they fall in value. This is because the times when the global economy and financial markets are in distress are those that present the best buying opportunities for long-term investors such as ourselves.

These numbers would not necessarily be reflected in our annually reported returns, as market volatility does not always line up with our fiscal years - hence the largest annual downturn we experienced in the actual GFC was -22%.

The Fund expects to recoup any investment losses over the recovery period

The GFC was characterised by both an unusually sharp drawdown and rapid recovery in financial market values. This is a relatively rare occurrence; recoveries from significant market crises can often take longer than this. In general, however, the Guardians believes that equity markets eventually mean-revert to higher fair values following transitory periods of crisis. As a result, the Guardians expects the Fund would earn back losses suffered by our active strategies in subsequent years as markets recover.

The above simulation also illustrates how, in a repeat of the GFC, the Fund would recover its initial value, and catch-up lost ground, within 20 months.

Holding the Course

The expected recovery in the Fund's value, however, is only feasible if we are able to "hold the course" with our investment strategies through a market cycle.

So, the major risk to the Fund is not that it will experience significant volatility in its returns - we know that will happen. The major risk to the Fund is that we lose our nerve, close down our investment positions and lock in the losses experienced in the crisis. This would significantly impair the ability of the Fund to fulfill its long-term purpose.

The next 60 years

As the Fund becomes bigger in dollar terms, and grows as a share of the economy, its gains and losses from short-term market volatility will also increase in size. We encourage stakeholders to understand that the main challenge in persisting as a long-horizon investor is in looking through short-term shifts in value and focusing instead on more appropriate and long-term metrics of success.

Even considering the risk of market crises, the Guardians' view is that the Fund's market risk and active strategies are appropriate and compensated risk exposures for a long-term investor.

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