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Updating the NZSF investment performance numbers

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This *PensionBriefing* updates the analysis of the New Zealand Superannuation Fund's investment performance to 30 June 2010. The NZSF has missed the 'hurdle rate' by an accumulated $1.8 billion since it started in 2004.

In summary

In *Pre-funding a government's future financial obligations - the New Zealand Superannuation case study* (Littlewood, 2010), the author suggested that the New Zealand Superannuation Fund (NZSF) was effectively 100% leveraged when looking at the government's accounts as a whole. The NZSF must therefore earn more than the cost of government bonds, and arguably the highest yielding government bonds, before New Zealand as a whole is better off financially by the presence of the NZSF. It needed to achieve at least a hurdle rate.

The paper suggested that the 'hurdle rate' should be the yield on the 10 year government bond at the start of each financial year. By 30 June 2009, the Guardians had missed that target by an accumulated $2.6 billion.

This *PensionBriefing* updates that analysis to 30 June 2010, based on the NZSF's audited accounts for the 2009/10 financial year (New Zealand Superannuation Fund, 2010). For 2009/10, the hurdle rate was 5.96%. The Guardians' published return for the year was 15.45% and that reduced the 2009 accumulated deficit against the hurdle rate. However, there is still another $1.77 billion to recover before the Guardians will have returned the government to its financial starting point in 2003.

New Zealand Superannuation in brief

New Zealand Superannuation (NZS) is a universal, taxable pension, funded largely on a 'pay-as-you-go' (PAYG) basis from general taxation.

The NZSF was established in 2001 to partially pre-fund future payments of NZS and received its first contributions in the 2003/04 financial year. The government has temporarily suspended contributions and said it intends to resume those from 2019.

> "Contributions to the Fund [are] suspended until 2017/18. Contributions begin again in 2018/19, and are consistent with the New Zealand Superannuation and Retirement Income Act 2001." (The New Zealand Treasury, 2010)

The presence of the NZSF does not change the cost of NZS; that is determined by the amounts of the benefits paid, but will modestly affect the incidence of that cost. This generation of taxpayers has effectively been paying higher taxes and setting aside financial assets to help meet the future NZS outgo. The cost of NZS will still be the actual benefits eventually paid.

The role of the NZSF in the government's accounts

Littlewood suggested that if the government's accounts were examined as a whole, every dollar in the NZSF is effectively borrowed:

> "However, whether the presence of the NZSF can be justified depends on looking at the government's overall financial position in a 'total accounting context'. By maintaining the NZSF's assets as financial investments (and even resuming contributions in 2020 as is intended), the government must assume that the return on the NZSF will exceed the cost of new borrowings it will be making in other parts of its financial activities. The interest payable on that debt is the 'hurdle rate' in this regard."

Littlewood concluded that the government was effectively borrowing money and investing the proceeds in financial markets. With each contribution the government made (even when that was out of fiscal surpluses) it had a choice: reduce debt or ask the Guardians to invest that money. The choice is the same for every dollar already in the NZSF. The government can leave it in the NZSF for the Guardians to invest or withdraw it to reduce debt.

In a 'total accounting context', the government is in a similar position to households. It is not sensible for a household to raise a mortgage on the family home and invest the proceeds in shares and other investments unless the before-tax[1] returns exceed the cost of debt. Similarly, if the family has a mortgage as well as financial investments, the returns on the investments (after tax[2] and costs) must be higher than the cost of the mortgage. If, in either case, the investment returns miss that threshold, the family's financial position will deteriorate.

Tax is not an issue for the government's NZSF but the analogy with households is otherwise appropriate.

Actual returns vs. the 'hurdle rate'

Table 1 updates the equivalent table in Littlewood's paper (2010, p. 96). It shows an approximate calculation of the accumulated notional deficit in the government's overall balance sheet that the NZSF has produced in relation to the hurdle rate from October 2003 to 30 June 2010.

Table 1

New Zealand Superannuation Fund's accumulations - actual returns vs. hurdle rates 2004-2010			
Year ended 30 June	**At NZS Fund's return**	**At hurdle rate**	**Accumulated difference**
2004	$3,956 m	$3,861 m	$94 m
2005	$6,555 m	$6,067 m	$488 m
2006	$9,864 m	$8,515 m	$1,350 m
2007	$12,992 m	$10,507 m	$2,485 m
2008	$14,212 m	$12,963 m	$1,249 m
2009	$13,688 m	$16,267 m	($2,579 m)
2010	$15,656 m	$17,425 m	($1,770 m)

Sources: The NZSF's actual accumulation is from the NZSF's annual reports; the accumulations at the hurdle rate[3] assume the Crown's contributions are received evenly through each year; also that all amounts shown in the financial statements as 'tax paid' (including GST) were in fact paid to the New Zealand government evenly through the year in question.

In other words, holding all else constant, if the government had not established the NZSF but rather had reduced debt (that would otherwise have cost it the hurdle rate of

[1] In this situation, the interest on the mortgage would be a deductible expense so gross investment returns must be greater than the gross cost of the mortgage interest.
[2] Where the mortgage was not taken out for investment purposes (but rather to buy the house) then the mortgage interest would not be deductible against the investment income.
[3] Hurdle rate calculations are by Michael Chamberlain, MCA NZ Limited, actuaries.

interest over each of the seven years measured), the overall balance sheet for the government would have been better off by about $1.8 billion at 30 June 2010. Net government debt at 30 June 2010 could have been $24.97 billion rather than the actual net debt of $26.74 billion (-6.6%).

The position since 30 June 2010

Investment markets have been kind to the Guardians in the first three months of the current financial year.

Based on unaudited numbers for 1 July to 30 September 2010, the investment deficit when compared with the 'hurdle rate' has been reduced to about $520 million; but that is only a provisional calculation.

So what do these numbers signify?

If there is a deficit to the 'hurdle rate', it means the government would have been better off had it reduced debt rather than invested the NZSF's assets in financial markets.

Even if the Guardians recover the 30 June 2010 deficit of $1.8 billion, it would still be the case that the government's balance sheet would only be returned to 'zero'. In other words, the NZSF would have made no contribution to the net worth of the government's assets. It would therefore have been pointless, financially, to have the NZSF.

Even the 'hurdle rate' is insufficient

From this analysis, it is clear the Guardians must exceed the cost of the government's own debt if they are to improve the government's financial position. In a 'total accounting context', anything less than the 'hurdle rate' actually worsens the government's financial position, by comparison with reducing debt.

Over the long term, returns from equity-style investments such as shares should exceed returns from both cash and bonds. Indeed, that is what history shows. In *real* terms (after inflation), the average return from global share markets has been 5.4% p.a. for the 110 years from 1909 to 2009. By contrast, the *real* returns from global bonds and cash averaged 1.7% and 0.9% p.a. over the same 110 year period (Dimson, Marsh, Staunton, & Wilmot, 2010).

To justify the NZSF's existence from an investment perspective and to be rewarded for the financial risk taken, the Guardians' return target should be akin to the average long term excess return of listed shares over bonds. That excess for the same 110 year period was an average of 3.7% a year. This should be designated the 'target return', to distinguish it from the 'hurdle rate'.

The Guardians missed the 'target return' by an accumulated $4.7 billion over the nearly seven years to 30 June 2010.

The Guardians may argue that the return target should reflect the fact that they have about 20% invested in bonds. However, for the reasons explained by Littlewood (2010), the NZSF should not be investing in bonds. Achieving returns in excess of the 'hurdle rate' with a portfolio of bonds is very unlikely, especially allowing for expenses.

The Guardians may also argue that a better measure of their success should be the returns from a portfolio of equivalent investments over the nearly seven years to 30 June 2010. Given the presence of the NZSF, success against that measure may support the

continued appointment of the current Guardians (and their fund managers) but it does not justify the NZSF's existence. The average return (after tax and expenses) achieved by the Guardians over the nearly seven years was 4.59% p.a. The average return of a portfolio of shares invested in line with the MSCI Index was 2.45% hedged (1.46% unhedged). The current Guardians may have out-performed markets but they have not improved the government's net financial position. That is not something within the Guardians' control; it is a public policy issue that is for the government to resolve.

"Challenges and Choices"

The last government intended that the New Zealand Superannuation Act 2001 and the NZSF would add stability to public policy. Littlewood (2010) suggested that, viewed through the microscope of the 'total accounting context', the NZSF seems little more than fiscal and political window-dressing. He suggested that its unintended consequence is likely to be greater instability in public policy at a greater cost than the pure PAYG alternative.

> "At best, the NZSF will make a relatively minor contribution to a partial inter-generational smoothing of cash flows. At worst, it could increase costs (the case to date), constrain growth, increase risk, reduce private savings and provide a distraction to the real issues that affect the size and shape of NZS." (Littlewood, 2010, p. 108)

Littlewood suggested that the NZSF should be dismantled (carefully) and NZS returned to the original, pure PAYG model. The NZSF's 2010 numbers add nothing to the case in favour of the NZSF's continued existence.

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