

# SHOULD FUNDS TAKE BIGGER RISKS?

## RESERVES, RETURNS AND FINANCIAL MARKETS



By MICHAEL BARKER

*A run for safety by risk-averse superannuation funds could have a disastrous backlash on financial markets. A proposal for avoiding market "meltdown" could see fund members choosing their own levels of risk.*

The question of reserving policy for accumulation funds (particularly industry funds) is one which a number of superannuation industry participants have been addressing. Most of the thoughts published so far have been concerned with the adequacy of reserve levels and the legality or equity of smoothing crediting rates over time, given that this reduces benefits for some members in favour of others.

This paper focuses on an additional angle: the process of managing the reserves, and the interaction of this process with the investment markets. The paper concludes that a rigid, formula-driven reserving process will actually create instability in the financial markets and could lead to increased systemic risk—or even a financial “meltdown”.

Let us start with an example. Suppose a \$100 million fund has 10 per cent surplus or reserves, and believes that this supports a 40 per cent exposure to equity markets (a commonly suggested reserve level is 25 per cent of equity exposure). The balance sheet will appear thus:

	\$ mil.		\$ mil.
Cash	60.0	Liabilities	90.0
Equities	<u>40.0</u>	Reserves	<u>10.0</u>
	100.0		100.0

Assume for simplicity that the next year's contributions and benefits cancel out, and that investment earnings

consist of 8 per cent on cash and minus 30 per cent on equities (most bear markets show falls greater than this). The total fund return for the year is minus 7.2 per cent (8 per cent x 0.6 - 30 per cent x 0.4).

The fund balance sheet a year later, before crediting interest to members, will appear thus:

	\$ mil.		\$ mil.
Cash	64.8	Liabilities	90.0
Equities	<u>28.0</u>	Reserves	<u>2.8</u>
	92.8		92.8

The Trustees are now faced with three choices:

(1) Leave the assets alone, but restore the reserve ratio to 25 per cent (\$7.0 million). This involves declaring a negative interest credit (minus \$4.2 million, ie, minus 4.7 per cent). Not a popular choice!

(2) Leave the assets and reserves alone, declare a zero return for the year, and accept a lower reserve ratio temporarily. In this example the reserve ratio is down from 25 per cent to 10 per cent. The justification for this would presumably be an opinion that, after falling 30 per cent, equities must be good value and likely to recover.

My response to this is that trustees

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should not be playing chicken with the financial markets. In the 1973-74 bear market, when equities had fallen 30 per cent, they then fell a further 42 per cent! A repeat of this, together with a continued 8 per cent earning rate on the rest of the fund, would generate a total return in the following year of minus \$6.6 million (8 per cent x 64.8 - 42 per cent x 28). The balance sheet would appear thus:

	\$ million	\$ million
Cash	70.0	Liabilities 90.0
Equities	16.2	Reserves -3.8
	86.2	86.2

Members faced with a zero credit for the second year running, and with a balance sheet significantly "underwater", could well be showing some restlessness.

(3) The third alternative is for the trustees to cut back the equity exposure to restore the reserve ratio to 25 per cent. In this example they could reduce equities from \$28.0 million to \$11.2 million, ie, liquidate 60 per cent of the equity portfolio. This solution, coupled with declaration of a zero crediting rate, would be portrayed as a disciplined and responsible approach to maintaining the appropriate standard of capital adequacy for the fund, and would no doubt meet the approval of those parties concerned with the solvency and integrity of the superannuation industry.

But what about the financial markets? This particular \$100 million fund has just taken a decision to dump \$17 million of equities, or 60 per cent of its equity portfolio. All over Australia, similar decisions are being faced by many other industry funds. At the same time, life insurance companies have had their reserves severely depleted by the market fall, and are facing a very similar problem (Circular 273 Reserves, for those familiar with the life insurance industry).

Any intelligent observer of the equity market will know that, as the market falls, a tidal swell of semi-forced sales is building up. The sensible thing is to be quick and get out first.

Some of this should sound familiar

to those who remember October 1987. The legion of portfolio insurers in the US market was well known, and was largely prevented from implementing sales by the "front-running" of a few bigtraders acting in anticipation. Wall Street narrowly escaped a total meltdown.

The similarity of scenarios is not accidental. The operation of a disciplined ratio-driven balance sheet strategy such as is described in alternative (3) above has a well-known name in investment management circles: *constant proportion portfolio insurance*. As a technique it is very simple and effective, provided it is used only to a modest degree (as is the case in Australia at present). Once it becomes dominant and institutionalised, it becomes highly de-stabilising—as Wall Street showed in 1987.

Harry Markowitz, Nobel prizewinner for his work on portfolio theory, has carried out simulations (Kim and Markowitz, *Journal of Portfolio Management*, Fall 1989) and demonstrated that for each portfolio insurer, the market needs several contrary "rebalancing" investors to stabilise the situation. It very easily runs out of control.

Professor Michael Brennan also referred to this destabilisation in a recent speech (AFIR Colloquium, Brighton, UK, April 1991, unpublished). His point was that it is difficult to monitor the volume usage of portfolio insurance systems. Traded options are much easier to monitor. A growth in demand for protection would be reflected in rising option prices, which would act as a warning to these risk-averse investors, and at the same time attract an increased supply of risk-taking capital to the option market.

Prof. Brennan's point is perfectly valid. From the viewpoint of the stability of the financial system, options are healthier. On the other hand, portfolio insurance can be a great deal cheaper, if its use is only in moderation.

Let us return to the problem at hand. The trustees are faced with three choices, all with unpalatable consequences:

(1) Declaring negative crediting rates is what the reserving policy is trying to avoid.

(2) Sweating out the problem raises

severe capital adequacy questions.

(3) Strictly enforcing the reserve ratio turns the funds into closet portfolio insurers and courts financial disaster.

Is there an answer? My solution is twofold. But first it is necessary to understand one aspect of risk. Fundamentally risk cannot be eliminated, it can only be transferred. Generally people are risk-averse, and have to pay others to take their risks away. The price at which risk is transferred becomes a matter of supply and demand (see Prof. Brennan's comments).

In the long run, as industry accumulation funds grow in size, they will become dominant players in the markets. They will not be able to get rid of their risks, because there will not be enough risk-takers to accept the other side of the transactions (unless extremely high prices are paid).

There is only one long-term solution which allows these funds to hold risky assets, and that is for the risks to be passed back to the members themselves—not necessarily to all members, but enough of them to create a stable financial environment. The long-term solution is thus member choice, by members who have received sufficient education and are given sufficient information to be able to exercise that choice sensibly. Younger members will favour higher-risk, higher-return alternatives, while older members will prefer lower risk, lower return.

The education process will take a considerable time, and this is why we need a shorter-term solution as well.

This shorter-term solution involves the funds recognising that they have needs for protection, and that this protection cannot be fulfilled by reserving policy; a recognition that reserving policy used alone turns the funds into closet portfolio insurers, who could find themselves accidentally acting in concert to bring down financial markets.

Instead of relying on reserves, funds who need protection should purchase it directly, through one of the option-based products available from professional investment houses. The challenge for trustees, and their advisers, is to understand these products so the funds do not end up paying excessively for the protection they require.