



Actuarial Solutions Pty Ltd

Office:
37 Vannam Drive
Ashwood VIC 3147

Postal Address:
PO Box 469
Ashburton VIC 3147

CONSULTING ACTUARIES - Senior Actuary deLancey Worthington BA FIAA

Phone: 03 9888 1853

ACN 077 949 627

Fax: 03 9888 1482

General Manager
Superannuation, Retirement and Savings Division
The Treasury
Langton Crescent
PARKES ACT 2600

30 September 2004

Dear Sir

Review of the provision of pensions in small superannuation funds

I offer for consideration an alternative lifetime pension design that overcomes many of the perceived regulatory shortcomings of the existing lifetime pension arrangements

1. Regulatory requirements of a retirement income stream

1.1 Superannuation Industry Supervision Act and Regulations

- The sole purpose test requires the assets to be used to provide a retirement income. This effectively puts a minimum on the pension amount at commencement.
- Ancillary benefits such as death benefits to dependants may be provided. For the allocated and growth pensions this is the full remaining assets. For defined benefit pensions it is more limited.
- The pension may be reversionary to dependants.
- The benefits should be secure. This is a solvency requirement that puts an upper limit on the pension amount at commencement.
- There is an ongoing requirement for actuarial certification of solvency. Insolvency can cause severe problems to the RBL treatment of the pension.
- Lifetime defined benefit pensions may decrease only to the extent that the annual rate of CPI decreases.
- Term defined benefit pensions may not decrease.
- Lifetime defined benefit pensions have no upper indexation limit in the regulations but there is an understanding that the regulator will not accept an indexation rate above 8% or CPI + 1% or AWOTE.
- For term defined benefit pensions the annual pension may not increase by more than the higher of 5% and the annual rate of CPI + 1%.

- Pension indexation is on the anniversary of the commencement of the pension.

1.2 Income Tax Assessment Act

- The investment income on the assets backing the pension is exempt to the extent that it is expected to be used to ultimately pay a retirement income.
- Where it is part of the benefit design it is also exempt to the extent that it is expected to be used to pay a death benefit.
- Standard income tax is payable on pension income except to the extent that it is a repayment of tax-paid capital i.e. the annual deductible amount. The annual deductible is the undeducted purchase price divided by the expected term of the pension.

1.3 Social Security Act

- Except on reversion a defined benefit pension may not decrease the annual pension amount.
- The annual defined benefit pension may increase by no more than the higher of 5% and the annual rate of CPI + 1%.
- The annual defined benefit pension plus indexation should return the purchase price over the expected term of the pension.

1.4 Australian Government Actuary

- Where Centrelink or Department of Veterans Affairs are involved the AGA assesses the defined benefit pension for proper use of assets to provide a retirement income.
- Using his discretion, he uses the annuity rates available in the market on the day the pension starts as a benchmark. To enable the comparison to be “fair” the AGA insists the pension indexation is guaranteed by the superannuation fund.

1.5 Treasury

- They are concerned that the system is not being abused, that a fair share of the tax burden is being met by each participant in the Australian economy.
- There are shortcomings in the current defined benefit legislative environment that cause
 1. RBL value of benefits to be considerably less than purchase price
 2. Pensions to become insolvent during periods of prolonged poor investment performance or due to poor investment choices.
 3. Assets to grow significantly during periods of prolonged good investment performance without the ability to pass that back to the pensioner as increased pension income.
- They want to overcome these problems.

2. Environmental problems for lifetime defined benefit pensions

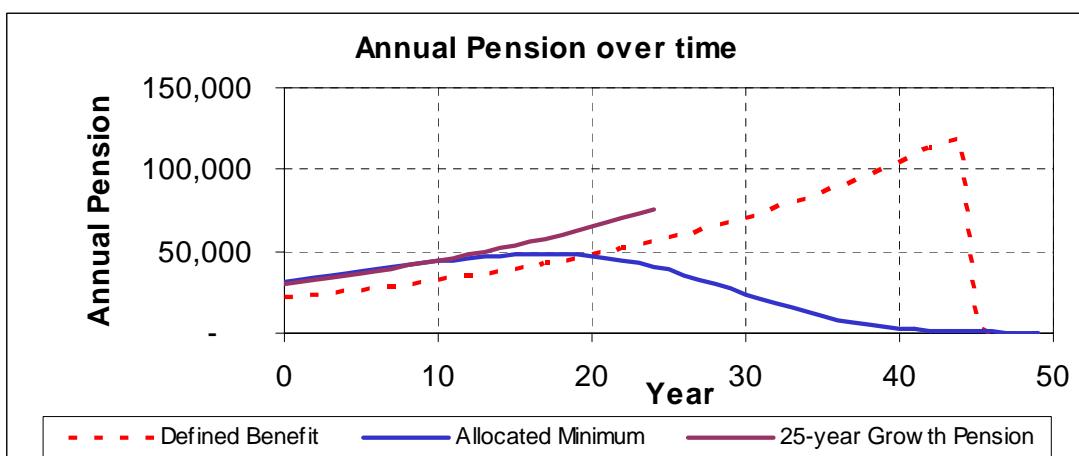
- Investment markets fluctuate over the short term. This makes it difficult to compare liabilities measured on a long term stable basis to assets measured on a current net market basis.
- Investment markets can suffer medium to long term trends of good and poor performance. This performance can be considerably different to what was anticipated by the actuary at the time the pension commenced.
- The current solvency requirements of a high degree of probability require solvency reserves even at times when the investment markets are at low levels or the pensioner has lived longer than average. You are required to have solvency reserves but you cannot use them to support the situations they are supposedly being held against.
- Life expectancies are lengthening quickly. Over the 5 years between censuses the life expectancies for retirees increased by about 1.25 to 1.5 years. This is an average of 0.25 years improvement for each year. If this is extrapolated current retirees with a life expectancy of 20 years could have on average an extra 5 years, or 25% longer in retirement.
- When the spouse of a pensioner dies there is a decrease in the expected liability but no corresponding decrease in the assets. This results in reserves that cannot be passed back as increased pension payments.

3. Suggested new lifetime defined benefit pension

- The pension ceases on the death of the last pensioner.
- The pension is based around a target pension payable until the youngest pensioner reaches the limit of the life tables, currently age 110. The indexation on the target pension is guaranteed to be 4% per annum. The assumed investment return on the pension is the best estimate assumption the actuary uses for tax exemption calculations and will depend on the asset allocation and expenses of the fund. This will result in a set of factors similar to those used for growth pensions.
- At commencement the annual pension rate is the purchase price divided by the factor for the term to age 110.
- Each year after commencement the target pension level is determined as the assets divided by the relevant term factor. The target is compared with the actual pension. If the actual is above the target the pension continues unaltered. If the actual is below the target it is increased to the lesser of current + 8% and the target. This calculation is better done as at 30 June, in line with accounts, rather than at the anniversary of the pension. This calculation manages the investment risk.



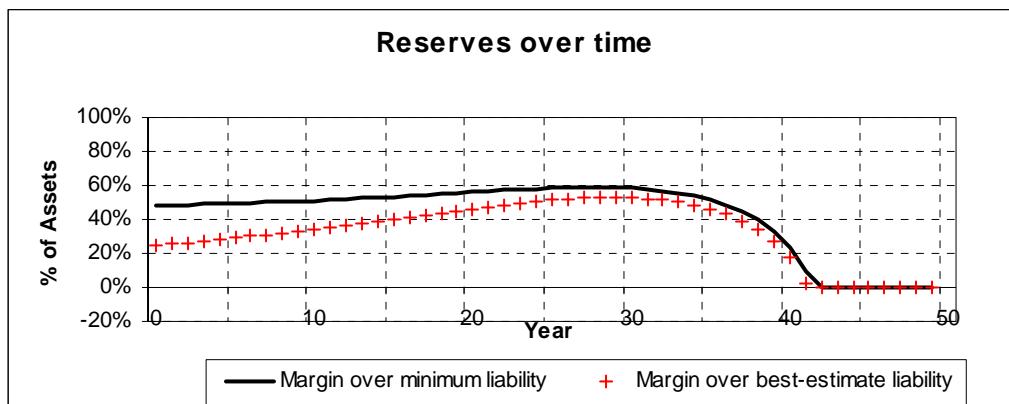
The relatively low level of pension at commencement allows the assets to be retained for pension payments later in life. Assuming experience is in line with best-estimate assumptions the pension payments from an allocated pension, the longest available term allocated pension and the proposed defined benefit pension for a purchase price of \$500,000 are demonstrated below.



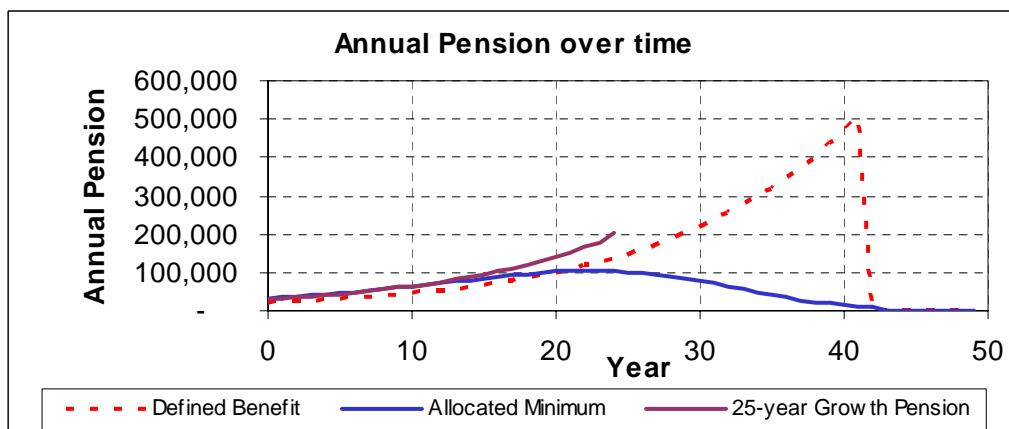
- The large differences between the levels of potential outcome allow the pension to absorb a wide range of investment outcomes. If the target pension indexation rate is less than 4% it does not give sufficient downside protection against poor investment performance. If the target pension indexation rate is higher than 4% then the maximum indexation rate needs to be above 8%. This will cause good investment performance to be absorbed too quickly, leaving the fund open to more downside risk. The high target pension indexation rate also defers receipt of pension income. The first year's pension for \$100,000 purchase price for pensioners aged 65 is shown in the table on the next page.

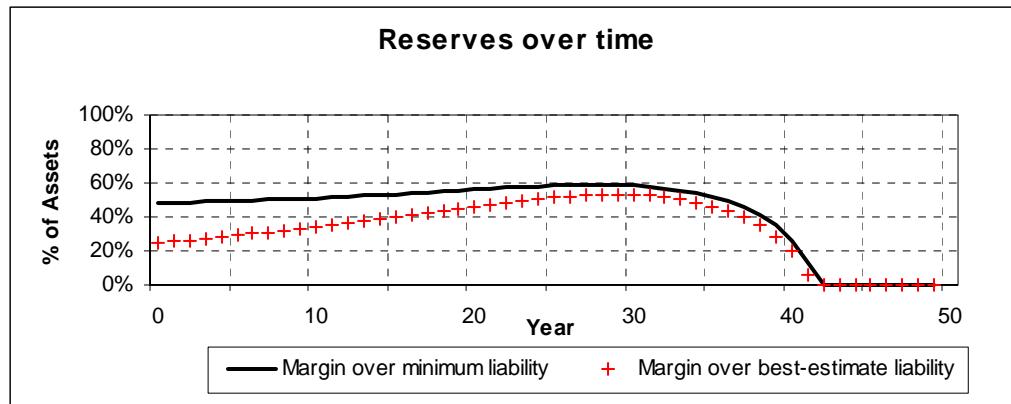
Indexation Rate	Best Estimate Return After Expenses		
	7.5%	8.0%	8.5%
3%	5,269	5,672	6,086
4%	4,519	4,896	5,286
5%	3,828	4,175	4,538

- The exempt amount of assets is determined actuarially allowing for target indexation rate of 4% and probabilities of survival. Because the target pension level does not allow for death until age 110 there should be taxable reserves each year. The graph below shows the actuarial reserves using best-estimate assumptions and with experience in line with those assumptions.



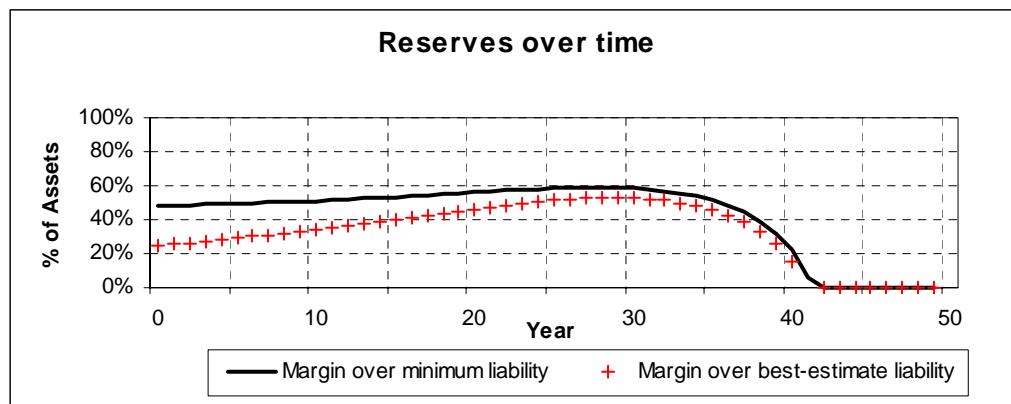
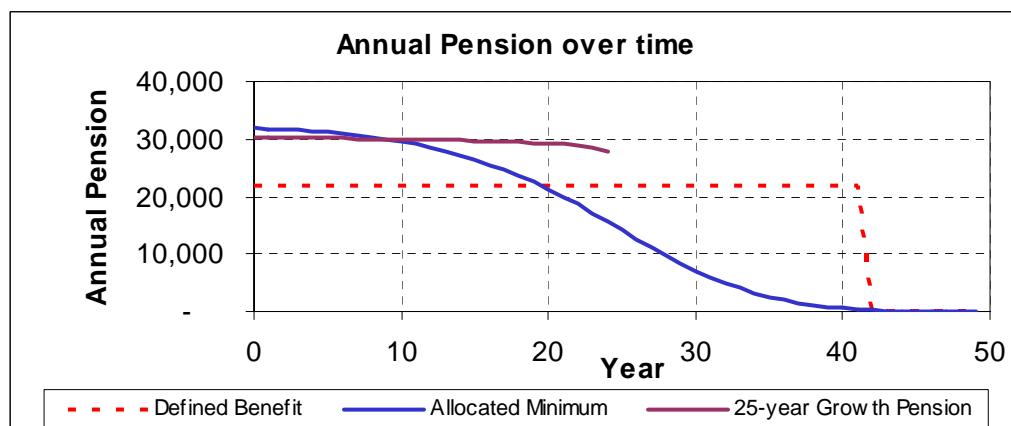
If actual net investment experience is on average 4% per annum higher, i.e. 11.5% per annum return, the pension amounts and reserves are as shown below.





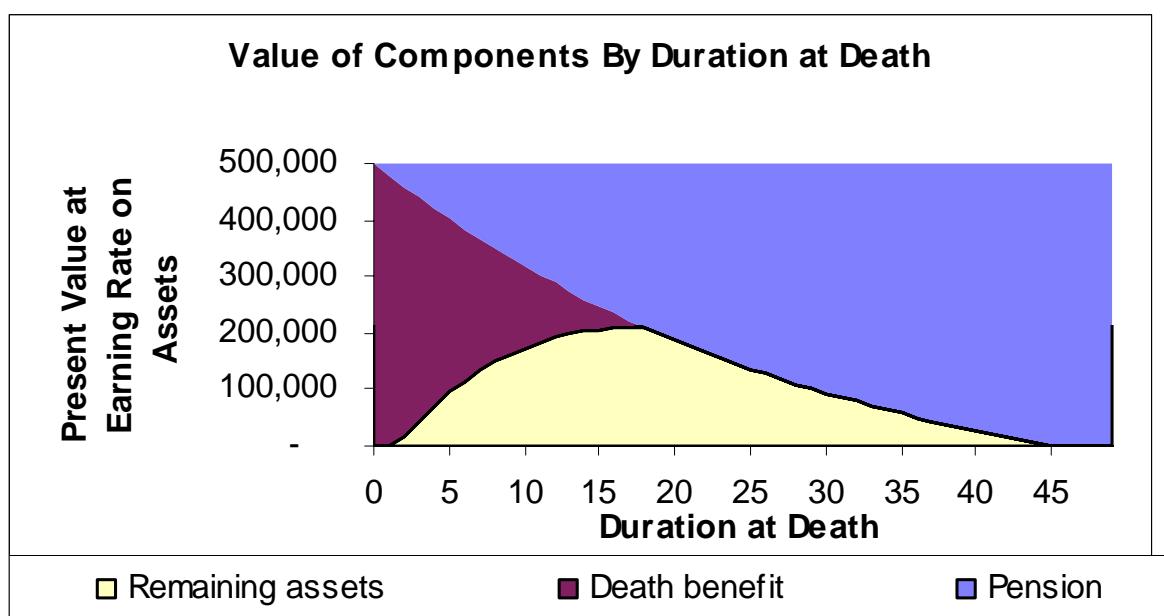
The pension automatically adjusts the pension to limit excessive reserves developing.

Similarly if the actual net investment experience is on average 4% per annum lower , i.e. 3.5% per annum return, the pension payments and reserves are as shown below.



- The reserves build to a significant level because the pension needs to retain sufficient assets to last to age 110 whereas the pension payments cease on death. The design of the pension completely absorbs these reserves at age 110. Regardless of investment performance the reserves

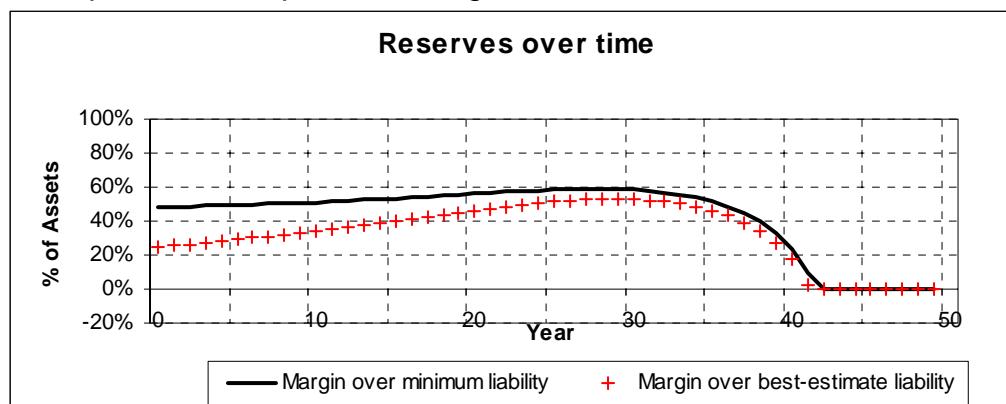
- The solvency level is to ensure the pension can be maintained without indexation using best estimate assumptions. This allows the pension to continue during periods of prolonged poor investment performance. If there are insufficient assets to meet this minimum level then the pension does not meet a satisfactory funding level.
- The reversion options are limited to nil or 100%.
- The deductible amount should be determined as UPP divided by longest life expectancy as the pension ceases on death.
- The RBL value is purchase price less actuarial reserves. This can be justified as there should always be assets left over on death. Those assets are those required to meet the pension between the date of death and age 110. The actuarial reserves represent the amount required in excess of best-estimate assumptions to meet pension payments during the remainder of the pensioner(s) life.



- The death benefit could be a number of alternatives:
 - the remaining assets. This cannot be justified unless the RBL treatment is the full purchase price.
 - the actuarial liability at the previous anniversary less the pension payments made during the year. This can be justified from the RBL treatment of the pension but involves some discretion.
 - annual pension at date of death times pension valuation factor for the relevant reversion level and target indexation rate. This should be less than the assets in normal circumstances.
 - the guarantee payment allowed from the existing lifetime pension.
- The pension is deliberately designed to last into extreme old age. This should help offset improvements in longevity. This is met from the resources of the superannuation fund without the need to fall back on government support in old age when assets have run out.

4. How the new pension meets the regulatory requirements and overcome the environmental problems

- The pension is annually adjusted to meet the level of pension that can be afforded from the then current assets. The sole purpose test is met on an ongoing basis.
- The security of the pension is assessed annually. The pension is gradually self-adjusting to the level of assets and is much less likely to become insolvent.
- The pension never decreases.
- The indexation never exceeds 8%.
- Pension increases are not discretionary.
- Because the same investment and expense assumptions are used by the actuary for the target pension and the exempt amount there should be taxable solvency reserves.
- Part of the investment earnings on assets backing the pension should be taxable as the target pension lasts until age 110 but the pensioners are expected to die prior to this age.



- The pension adjusts to the assets to stop large reserves developing in a tax protected environment.
- The RBL value is close to the purchase price and limits abuse of the tax system. If you have relative conservative actuarial reserves to limit tax on investment earnings then you have a high RBL assessment.
- The pension design allows leeway for periods of prolonged poor investment experience and survival beyond normal life expectancies. The reserving is within the design without the need to establish reserves to meet a high degree of probability. Investment risk is handled through the indexation rate. Longevity risk is handled through the target pension ceasing at age 110 of the youngest pensioner. There are no reserves established that cannot ultimately be taken as pension income if the pensioners survive to age 110.
- Where a spouse dies, altering the expected term of the pension, the target pension factors can be adjusted to spread the assets over the lifetime of the remaining pensioner. This will limit the build up of unnecessary reserves.
- At current market interest rates the pension levels from the target rate of 4% are competitive with those available from a life office for a pension indexed at a guaranteed 4% for life.

5. Changes to the regulatory environment necessary to allow this pension to operate effectively

- The Social Security Act should permit indexation of up to 8% per annum.
- The solvency requirement should be sufficient assets on a best-estimate basis to provide a pension indexed at the minimum rate, i.e. no indexation. This will force actuaries to use consistent valuation methods and assumptions for the tax exemption and solvency valuations.
- The AGA must allow pensions without guaranteed indexation if the initial pension is at a reasonable level and there is a non-discretionary formula that enforces good investment performance to be passed through to the pensioner as increased pension payments.

6. Conclusion

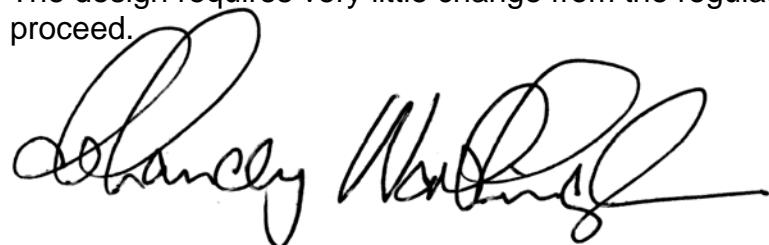
The proposed pension design provides a method of allowing retirees to provide a genuine lifetime income stream that can adapt to changing financial markets. It manages the investment risk internally. As the target pension is designed to last until age 110 it also manages longevity risk internally.

At the same time it solves many of the regulatory problems inherent in the existing defined benefit lifetime pensions. There are large taxable solvency reserves that offset the lower annual tax take from the pension payments.

It significantly reduces the likelihood that retirees will need to fall back on government support in extreme old age.

If financial support is required beyond age 110 for a large number of retirees then the world financial system will be in crisis from insolvent life insurance companies with the same problem.

The design requires very little change from the regulators to allow it to proceed.



deLancey Worthington BA FIAA
Managing Director / Senior Actuary