Broken Promises
The Failure of Defined Benefit Fund Solvency Legislation

by Shauna Ferris, (Macquarie University Actuarial Studies Department) ¹

INTRODUCTION

Over the last few years, newspapers all around the world have reported many distressing stories about defined benefit funds. For example:

- In October 2001, the Australian airline Ansett was placed under administration. Fifteen thousand employees were the losers. One of their superannuation funds ended up with deficit of almost $AUS 150 million, and members lost about 20% of the value of their benefits.

- In July 2002, British manufacturer Allied Steel and Wire (ASW) was placed into receivership. Workers at their Cardiff site will probably get less than 20% of the pension benefits which they expected to receive.

- In December 2002, the pension fund of the American Steel-maker, Bethlehem Steel, was terminated. The pension fund had a deficit of about $US 4.3 billion; assets covered only 45% of the benefit liabilities. Although a guarantee fund will pick up most of the shortfall, members will also suffer losses.

- In May 2005, the pension funds for United Airlines were terminated. The pension plans had promised $16.8 billion in benefits but the assets were only $7 billion, i.e. assets covered only 42% of liabilities. The guarantee fund covered $6.6 billion of the shortfall – the remaining $3.2 billion was a loss of the members of the fund. ²

Of course these are not isolated incidents.

¹ Te author may be contacted at sferris@efs.mq.edu.au
In 2003, the government-run guarantee fund, the US Pension Benefit Guaranty Corporation has a deficit of $23 billion. The PBGC estimated that total underfunding in American private pension plans exceeded $350 billion dollars. In 2003 alone, 155 underfunded pension plans were terminated, covering more than 200,000 members.

In the UK, analysts have estimated that there is a deficit of about £60 billion in the pension funds of the top 100 FTSE companies. The UK Department for Work and Pensions has estimated that 65,000 pension fund members suffered a significant loss (i.e. more than 20% of their benefits) when under-funded schemes were wound up by insolvent employers. Of those members, 35,000 lost more than 50% of their benefits.

In Australia, poor investment returns in 2001 and 2002 led to deficits in many defined benefit funds. Although APRA reported that most funds were “technically solvent”, they also reported that many funds had suffered sharp falls in solvency levels. Several funds were in an unsatisfactory financial condition. Surveys by ASIC and the Institute of Chartered accountants found that a significant number of corporate superannuation funds – 20% or more - were in deficit. The financial press reported large deficits in several corporate schemes. For example:

- NAB had a deficit of $252 million;
- News Corporation had a total deficit of $468 million;
- AMCOR had a deficit of $120 million.
- Unisuper had a shortfall of about $700 million (13% of vested benefits) as at December 2002.

Of course these shortfalls may not adversely affect member benefits, unless the employer becomes unable or unwilling to support the fund financially. But the insolvency of an employer is always a possibility.

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1 PBGC Annual Report 2003
2 (Companies Failing to Plug Pension Shortfall, Thursday July 22 2004 from FT.com.)
4 (APRA releases results of defined benefit superannuation funds survey, APRA media release 27 March 2003; Financial reporting by corporate sponsors of defined benefit superannuation plans, ASIC media release 21 August 2003; Super Survey reveals some defined benefit funds need top-up, Anne Lampe, SMH, 1 November 2002; Solvency of super funds declines thanks to bear market, Anne Lampe, SMH, 28 March 2003)
5 (The Super Time Bomb, by John Stensholt and James Thomson,BRW, 17 April 2003)
So the evidence suggests that there are some flaws in the solvency legislation for defined benefit funds.

Some may consider that the solvency of defined benefit funds is unimportant. After all, defined benefit funds are often considered passe. The number of defined benefit funds has been steadily declining in many countries around the world, including Australia (and of course the introduction of choice of fund may be expected to accelerate this process).

Nevertheless, a great many people are still members of these funds, and these funds still hold a great deal of money on behalf of their members. APRA statistics show that Australian defined benefit and hybrid funds still have about 6.5 million members, with assets of more than $217 billion. (These figures would include the accumulation fund members of the hybrid funds).

Of course, many defined benefit funds are public sector funds. There is no point in even discussing the solvency of such funds, because it is well known that these funds have nowhere near enough money to pay the benefits which have been promised to members. The amount of the unfunded liability in Australian public sector funds is about $90 billion, on Treasury estimates. The members of these funds are simply relying on the taxpayers of tomorrow to make good on the promises of yesterday’s politicians. This may be assurance enough for some trusting souls. In any event, this paper will not deal with the perfidy of politicians: we will only look at private sector funds.

In this paper we are concerned with this question:

> Suppose that you are a member of a defined benefit fund. Is there anything which will prevent the employer sponsor from reducing the level of funding, allowing a deficit to emerge, and then closing the fund?

We would suggest that in Australia, the solvency legislation is weak and provides quite inadequate protection for fund members.

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8 It would be easy to reduce the liability of public sector funds, simply by reducing the indexation rate for indexed pensions. In the early 1990s, the Victorian government did indeed attempt to change from biannual indexation to annual indexation, but this was thwarted by the intervention of the Federal Government.
In the USA, the system theoretically should provide a much better level of protection – if it worked. But the evidence suggests that the system is heading for trouble, and may only survive is the American taxpayer is willing to foot the bill. The Bush government is proposing urgent reforms.

In the UK, the government has already acknowledged that the pensions legislation provides inadequate protection, and reforms are underway – including the establishment of the Pensions Protection Fund, a guarantee fund similar to the US PBGC. No doubt, in due time, it will face the same problems.

**A framework for prudential legislation**

In the following proposals, I am assuming that it is in the public interest to provide a reasonable level of security for fund members. If the system fails, then members suffer the loss of their life savings; this undermines confidence in the entire superannuation system; and ultimately the taxpayer picks up the bill, in the form of increased social security payments. It does not seem desirable to allow employers to shirk their responsibilities and pass on their losses to the community.

The security of members’ benefits should, of course, be balanced against the reasonable costs to the employers.

However, it must be recognised that the sponsors of defined benefit funds are promising a certain level of benefits to their employees, and the employees have a reasonable right to expect that there will be a high probability that these benefits will be paid. It is unconscionable to make promises to employees, unless these promises are backed up with a commitment to meet the costs. If the employers feel that this imposes an unreasonable burden, then they can choose the alternative – i.e. they can provide benefits via an accumulation fund.
After the collapse of a few pension funds in the UK in the early 1990s, the UK government appointed a committee to review the legislation. The chairman, Mr Goode, expressed the following view:

“Those who favour the retention of the laissez-faire principle in all its vigour argue that the establishment of a pension scheme is a voluntary act on the part of the employer. Since the employer does not have to provide a scheme at all, surely it must have complete freedom to set the terms of any scheme it chooses to provide. Though such a proposition still has its advocates, it is not dictated by either policy or logic. It is perfectly legitimate to insist that if the employer does choose to set up a scheme, the bundle of benefits offered to the employees as an integral part of the remuneration package should be legally protected and financially secure.”

Of course, many employers would argue that it is unfair to expect them to bear all the risks inherent in defined benefit promises. They might argue that members should share part of the risk. However, the members are not in a very good bargaining position relative to the employers:

- they cannot readily assess the risks. Most members of defined benefit funds are not actuaries, and they cannot be expected to make an independent assessment of the solvency of their fund.
- they cannot control the risks, since members usually have no say in the financial decisions such as the investment of the fund assets or turnover of employees.
- there is a moral hazard. The employer can easily increase the risk of losses simply by withholding contributions – and what can the member do about it?
- they cannot readily withdraw from the fund (unless they are willing to resign from their jobs, often with a considerable loss of benefits). Note that even after the introduction of member choice of fund, many defined benefit members will still be effectively “locked in” to their existing scheme.

The members have no choice but to rely on the employers, the trustees and the regulator to protect their interests.

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9 Journal of the Institute of Actuaries, 1994, Goode
There are many responsible employers who are willing to provide adequate funds for their employees benefits. But when times are tough, many CEOs will look at the bottom line – the company profits, the share price, their performance bonuses – and adequate funding of the superannuation fund may not be high on their list of “key performance indicators”. There may be a strong incentive to minimise and/or defer contributions, so that funding is reduced to the legal minimum. 10

The trustees are appointed to look after the members’ interests. But traditionally, the powers of the trustee are limited: although they have the power to administer the assets held in the fund, they do not usually have the power to compel the employers to make contributions.

Therefore, prudential legislation must play a crucial role in protecting members’ benefits.

Unfortunately, there is a long tradition of weak or non-existent prudential legislation. Effective minimum funding requirements were first introduced in 1974 in the USA (ERISA), in 1995 in the UK (Pensions Act), and in 1994 in Australia (SIS). As noted above, this legislation has not been entirely effective – and in fact has been spectacularly ineffective over the last few years in both the USA and the UK. From time to time, improvements are suggested – but over the years there has been quite vehement opposition to these sporadic attempts to strengthen the legislation.

Many of these proposed amendments are controversial, because they would certainly make life more difficult for the employers. Indeed many employers might decide that defined benefit funds are too burdensome, and close their funds. Many would argue that this would be a shame, because defined benefit funds allow a degree of risk-sharing which is advantageous for employees (relative to the individualism of accumulation funds). No doubt a well-run defined benefit fund has many advantages over an accumulation fund, and many employer-sponsors do provide defined benefit excellent schemes.

However, the evidence suggests that the current legislation can create a moral hazard. If the legislation allows underfunding, then some employers will underfund. And it is sadly evident

10 For the general public, the recent debacle involving James Hardie’s treatment of asbestos victims might have undermined confidence in the integrity and compassion of the business community, particularly when ethical obligations clash with profit objectives (“obligations to shareholders”).
that in many many cases, the members are left to bear the losses. If the legislation cannot prevent such disasters, then perhaps a secure accumulation benefit would be better than a doubtful defined benefit.

In the following paper, we outline the strengths and weaknesses of the solvency legislation in Australia. The same analysis is applied to the UK and USA legislation in a separate paper. In our analysis, we look at the following questions:

1. **What benefits should be protected?**

   Should the legislation aim to ensure that the members receive their full benefits as promised in the Trust Deed of the fund? Or is it acceptable to provide a lower level of protection, so that members bear some of the risk themselves?

2. **How should the protected benefit liabilities be valued?**

   In defined benefit funds, the amount and timing of benefit payments is often a matter of probabilities: so it may require an actuary to estimate the present value of the benefits. The actuary must make a number of assumptions. Should these assumptions be left to the professional judgement of the actuary? Can we trust the integrity of the actuaries to withstand pressure from the employers to adopt the most optimistic assumptions? The actuarial profession in Australia has a very good reputation. However, the evidence in the USA shows that many of the most underfunded plans have adopted the most optimistic possible assumptions.

   The alternative is to use a standard set of assumptions: which then leads to controversy about how these assumptions should be determined. In the USA, pension funding seems to be quite a political process. it seems that the employers have often been able to persuade the government to adopt quite lenient valuation standards. For example, in 2002, when many plans were underfunded as a result of poor investment returns, the

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11 An earlier version of this paper also considered the situation in the UK. The UK legislation has recently been amended, and we intend to update this paper to allow for the new system. Similarly, the US legislation is currently in a state of flux, with a string of proposed amendments. The updated paper will be posted on the Macquarie University Actuarial Studies Research Papers website.

12 Although in recent years, a number of actuaries have appeared on APRA’s list of people who have erred.
government passed the “Job Creation and Worker Assistance Act of 2001”. This act changed the interest rate assumptions used in valuations, in order to REDUCE the level of minimum contributions required by law. The employers argued that they could not afford to make higher contributions, and if forced to do so this would have a negative impact on employment.

What is the minimum level of funding required by law? Is it enough to hold assets which exceed the value of the protected benefits? Or should there be a buffer above this, to allow for adverse experience?

3. How should the fund assets be valued, for solvency purposes?

If we are looking at solvency on a winding up basis, then clearly net market value is the likely to be an appropriate starting point. 14

Australian solvency rules do require the use of net market value in determining technical solvency.

But in some countries, (including the USA and UK) pension fund assets may be valued at “actuarial value” or “book value”. The use of such asset valuation methods helps to smooth out the market fluctuations, and thereby helps reduce volatility in employer contribution rates. Nevertheless, such measure can be very misleading, overstating the amount available to meet liabilities in a winding up situation.

4. Should there be a buffer of assets above the minimum level, to allow for adverse experience? If so, how big should the buffer be?

5. A solvent fund will only remain solvent as long as adequate contributions are paid to cover benefits which are accruing during the next period. Should contributions recommendations be based on "best estimate" or should they allow for adverse experience?

There is no doubt that defined benefit funds are risky: in most countries, the majority of fund assets are invested in the stock market, and hence asset values are prone to wide fluctuations. The liability side of the balance sheet is also uncertain: liabilities may increase rapidly as a result of early retirement and/or redundancies during economic downturns. And when this occurs, fund assets may be rapidly drained away by exiting members, leaving quite inadequate funding for those who remain.

If the minimum funding level is 100% (i.e. assets equal to the value of protected liabilities), and funds maintain the minimum level of funding, then it is inevitable that a deficit will arise from time to time.

This problem could be avoided by requiring funds to maintain funding levels above 100%, i.e. to include a buffer against adverse experience. The size of the buffer would be based on the level of risk in the scheme, e.g. using risk-based-capital methods commonly used in banking, life insurance, and general insurance.

In the past, actuarial textbooks usually recommended that funding levels be maintained above 110% of vested liabilities, or even higher if the fund had a high proportion invested in equities. This was not usually a burdensome requirement, because vested benefit levels were relatively low.

However, in the USA, the UK, and in Australia, the government has imposed minimum vesting laws, increasing the level of resignation benefits. This has pushed up vested benefits relative to retirement benefits. Maintaining assets above vested benefits has become more expensive.

Even so, historically, many employers have been willing to maintain large surpluses. During the 1980s, Australian funds often had very large surpluses, as a result of favorable investment experience in the 1980s. In the UK, in 1997-2000, the median

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14 There may be some problems with obtaining a correct value for assets such as property or unlisted shares, but at least the auditing profession can provide some checks on the reasonableness of the values
15 Under the benefit designs common in the 1970s and 1980s, resignation benefits were often very low compared to retirement benefits. Poor vesting was designed to help retain valuable employees and to “reward
level of fund assets was about 120% of the minimum required\textsuperscript{16} This gives the fund greater flexibility in investment: i.e. it can invest in more volatile assets without worrying about breaching the minimum solvency level.

However, this led to controversies about the ownership of such surpluses. Were employers entitled to withdraw surplus funds? Or were members entitled to share in the surplus? The trend over recent years has been to make it much more difficult for employers to withdraw surpluses (and this is true in the USA, the UK, and in Australia). In some cases employers are required to share the surplus with members (perhaps in the form of benefit improvements); in some cases the employers are required to share the surplus with the community (via increased taxes on surplus withdrawals).

The government is often opposed to “overfunding”. Superannuation contributions are tax deductible, so in good years a company can reduce its tax bill by paying excess profits into the superannuation fund (with a corresponding reduction in years of poor profitability). So from a government revenue perspective, “excessive” surpluses may not be desirable. This has led to limitations on the build up of surplus and/or laws preventing excessive contributions (“Maximum Deductible Contributions” laws).\textsuperscript{17}

So there is a conflict-of-interest here, between government revenue objectives and the security of members’ benefits.

- In the USA, the Government Accountability Office has proposed that the level of Tax deductible Contributions should be raised.\textsuperscript{18}

\textsuperscript{16} PBF, Faculty and Institute of Actuaries review, 2000
\textsuperscript{17} In Australia, Maximum Deductible Contributions were introduced into the tax laws in the early 1990s, when many superannuation funds had very large surpluses due to favourable investment performance. Prior to this, there were general restrictions on “overfunding”. (*)
\textsuperscript{18} Pension Benefit Guaranty Corporation : Single Employer Pension Insurance Program Faces Significant Long Term Risks, GAO Oct 2003, p34
In Australia, in a submission about strengthening of funding levels, the IAAust suggested that any such strengthening should be accompanied by a review of laws relating to withdrawal of surplus.

Of course, setting a minimum funding standard above 100% imposes extra costs on the employer, so there is usually considerable opposition to this (see below).

Alternatively, suppose that the minimum funding level is set at 100% of protected benefits, and deficits arise. The member’s security could be protected by either:
- requiring the employer to make additional contributions to fund the deficit over a reasonably short time; and/or
- in the event that the employer cannot pay, giving the superannuation fund a lien over the company assets

6. If the fund falls below the required standard, how long should it have to make up the shortfall? What is the employer is in financial difficulties? If the amortisation period is short, what impact is this likely to have on the employer? What are the potential consequences?

To limit the risk to members of the fund, we might aim to eliminate any deficiency over a relatively short time horizon. This could be done by requiring the employer to make additional contributions to cover the shortfall.

The main issue to resolve is: how long should the employer be given, to cover any shortfall? Should the deficiency be paid off over a short period, or a long period?

There is clearly a trade off here: a short amortisation period will provide greater security to the members, but will cause increased volatility in the employer contribution rate.

Employers do not appreciate volatility in contribution rates – particularly since the demand for extra contributions is likely to come at the most inopportune time, when
there is a downturn in economic markets. So they tend to lobby the government to allow longer amortisation periods.

In the UK, when the UK sharemarket was in the doldrums in 2000-2002, the government was persuaded to extend the amortisation periods, in order to make life easier for employers.

In the USA, the system is more complicated: there are different amortisation periods for different kinds of deficit (e.g. deficits from benefit improvements can be amortised over \(n\) years; deficits arising from poor experience must be amortised more quickly). Over the last few years, many airlines have been in financial distress and they begged for leniency – so in 2004 the government passed the “Pension Funding Equity Act”, which allow the airlines to delay paying off their deficits. Of course, in the interim, two major airlines have gone broke with huge pension plan deficits The PFEA expires soon, and the government is inclined to make the airlines pay up more quickly. But some airlines are still lobbying hard, asking for a 25-year amortisation period. 19

Suppose that the solvency standards require rapid funding of deficits, which can create volatility in employer contributions. The employer then faces a decision:

- Is he/she prepared to accept volatility in contribution rates?
- If not, should he keep a buffer of extra assets in the fund? The interest earned on these reserves will, of course, help to reduce the level of contributions required in future years. But there is an opportunity cost, since these funds will no longer be available for investment in his business enterprise.
- Alternatively, should the fund’s asset allocation be changed to be more conservative? This might reduce the asset risk, but is also likely to reduce the long term expected returns on the fund. Lower fund returns would mean higher long term contribution rates; or alternatively the cost could be contained by reducing future benefits.

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19 Commerical Aviation Preliminary Observations on Legacy Airlines’ Financial Condition, Bankruptcy, and Pension Issues GAO report June 22, 2005
If these options are unacceptable to the employer, then the employer might decide to close his defined benefit fund and switch to an accumulation scheme, which provides stability of contribution rates.

7. Should an employer be able to cease contributions to a fund which has a shortfall and then switch his contributions into an accumulation fund instead?

Suppose that a deficit arises in a defined benefit fund. The employer may be reluctant to make the additional contributions required to cover the deficit. Can the employer simply close the fund and walk away, leaving the members to bear the deficit?

Clearly, if this is permissible under the law, employers will have every incentive to underfund, and every incentive to take risks with the fund investments (assuming that the employer has some influence over the asset allocation). The employer will also have an incentive to remove surpluses from the fund where possible.

Although this might be considered to be unethical behavior, many companies have already taken this route, in both the UK and the USA.

In the USA, minimum funding requirements were established in 1974, under ERISA. In 1988, the government found it necessary to pass additional legislation to prevent employers from terminating underfunded plans. The guarantee fund, the PBGC, has been given additional powers to stop companies from avoiding their pension responsibilities, e.g. by selling off subsidiaries which have underfunded pension plans. Each year they are forced to take companies to court to protect the fund members.

In the UK, after the public outcry arising from a few high profile instances of “abandoned” pension schemes, the government took steps to amend the legislation, imposing a greater liability on the employers.
In Australia, the SIS legislation apparently does not impose a liability on employers to pay a deficit. Liability may arise under a trust deed or as part of the employer-employee contract (see below for more details).

8. *When an employer becomes insolvent, should the fund have some claim as a creditor? How much should they be able to claim? Should the fund have priority over other*

If the employer has a legal obligation to pay a fund deficit, then the fund becomes a creditor in the event of the employer’s insolvency.

The amount of the shortfall may be difficult to quantify, especially when the fund has pensioners or deferred pensioners. In some cases, the employer can “buy out” his liability, by purchasing annuities from a life office. Since life offices are for-profit institutions, annuities may well cost more than the fund’s actuarial estimate of the value.

In Australia, where lump sum benefits are payable, it is easier to determine the amount of the debt. However, in the Ansett case, when the airline was heading into insolvency, there were many unexpected last minute ill health retirement and disability claims, which affected the liability estimates.

If the fund is given high priority in the queue of creditors, of course this provides better security for members. However, the employers argue that this will make it more difficult for the company to borrow – an ailing fund would have a negative impact on the fund’s credit rating.

Of course, if the deficit is shown as a liability in the employer’s accounts, this creates a stronger motivation for the company to “cook the books” by using the most favorable actuarial assumptions in valuing the liabilities. Investors such as Warren Buffet unfavourably on the manipulation of pension fund valuations in the USA. The issue of pension fund accounting is a fascinating one, but beyond the scope of this paper.
9. *Should there be a government-run guarantee fund to make up any shortfalls? What are the advantages and disadvantages? How might this work?*

Insolvencies cannot always be prevented - there will always be some funds which wind up with a deficiency, where the employer’s assets are insufficient to cover the deficit.

Should the loss fall entirely on the members of that fund, or should the losses be spread across the community in some way?

As we shall see, different countries have taken quite different views on this issue
- the USA has a very strong guarantee fund, which is now in serious financial difficulty, largely as a result of moral hazard.
- the UK initially rejected the idea, but public opinion has forced an about turn and a guarantee fund has recently been introduced
- Australian legislators have recently considered the introduction of a guarantee scheme, but the idea was rejected. In submissions to the government enquiry, most industry spokesmen suggested that the existence of a guarantee fund would create a moral hazard, encouraging a lax attitude to risk management.

Australia has a limited safety net schemes for funds which are unable to pay benefits due to fraud or dishonest conduct.

If a guarantee fund is created, it is essential to design the scheme carefully so as to minimise moral hazard. Otherwise, employers will simply make generous pension promises, and then leave it to the guarantee fund to pick up the tab: which is exactly what is happening in the USA. As we shall see, it is extremely difficult to set up a scheme which has no loopholes. 20

10. *Where the members bear the shortfall, how should the losses be shared?*
In the absence of a guarantee fund, the members will bear any shortfall. But how will the assets be divided? Should some members have priority over others?

If one group is favoured, then there will be a gearing effect which will magnify losses to other members. This was a problem in the UK, where people who had already retired were given full benefits, and then the remaining assets were shared out for the in-service members. In some funds, in declining industries such as the steel industry, the size of the in-service workforce was quite small compared to the number of pensioners. The gearing effect meant that in-service members sometimes lost more than 80% of their superannuation savings.

As an example: suppose a scheme has assets of $100m and liabilities as follows:

<table>
<thead>
<tr>
<th></th>
<th>Value of liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pensioners</td>
<td>$90 m</td>
</tr>
<tr>
<td>In service employees</td>
<td>$20 m</td>
</tr>
</tbody>
</table>

If the deficit is shared evenly (pro rata), each person gets 92% of their entitlements. But if pensioners get priority for their full benefit, then the in-service workers would get just 50% of their entitlements.

Australia has a similar priority rule: under SIS, people who have already left the scheme are paid, before the people who are still in service receive anything. This rule caused considerable difficulty when Ansett became insolvent. Effectively, the last member left in the fund had no legal right to any benefits from the fund, since all the money had been used to pay employees who had previously been made redundant (see below for further details).

In the following sections, we critically assess the solvency legislation as it currently applies in Australia and the USA.

20 A paper on the OECD website, Benefit Security Pension Fund Guarantee Schemes, by Fiona Stewart,
AUSTRALIA’S SOLVENCY LEGISLATION

Historical background

Prior to the 1980s, there was little regulation of the solvency of superannuation funds.

Superannuation funds are set up under trust deeds, and in most cases the trust deed would require an actuarial review of the fund every three years or every five years. The actuary would report on the level of funding, including:

- coverage of vested benefits
- progress toward paying accrued benefits
- recommended contribution rates

Many funds had low levels of vesting, so the coverage of vested benefits was not usually a problem.

In 1993, an actuary commented that:

“This [solvency] is an issue which superannuation funds have been able to ignore to date, partly because vested benefits have traditionally been low relative to assets, partly because of the provisions of wind-up clauses of deeds, and partly because of the lack of any statutory requirements.”

Others agreed

“The paper points out (and I think fairly) that solvency has not received anything like the attention for superannuation funds that it has in life insurance. The main reasons why this has been the case for defined benefit funds are:

- Typical thinking has been that if at any stage a fund runs into financial problems the employer would provide support

provides a useful summary of the arguments for and against such guarantee schemes.

21 Bell, Buchanan et al (1993), Transactions of the Institute of Actuaries of Australia
• In the past benefits have typically not vested in members to any significant degree before retirement. This has meant that even a relatively slow pace of funding of retirement benefits has often resulted in a healthy margin of the assets (at market value) over vested benefits. 

There was no legal requirement to have an adequate level of funding.

**Tax Legislation**

Until the 1980s, the main legislation (other than trust law) affecting Australian superannuation funds was in the Income Tax Assessment Act. The ITAA was not concerned with minimum solvency standards - on the contrary, the Tax Commissioner was more concerned to ensure that funds did not build up excessive assets, in relation to the liabilities. The funds were eligible for tax concessions, and the Tax Commissioner did not want funds to abuse these tax concessions by overfunding. This became quite a problem during the 1980s, when investment conditions were favourable and large surpluses were accumulated.

**Introduction of Award Superannuation**

Prior to the 1980s, superannuation coverage was limited. The tax concessions made superannuation advantageous for well-paid workers (mainly male, full time, white collar workers) - but low paid and/or unskilled workers were unlikely to have any superannuation coverage. But in the early 1980s, the union movement became increasingly interested in superannuation benefits. Some of the larger and more powerful unions began a campaign to "persuade" employers to provide superannuation. This was done by negotiating changes to the minimum terms and conditions of employment, which are set out in legally binding agreements known as industrial awards. With the support of the government, the unions were successful. Over the period from 1986 to 1991, most awards were amended, so that employers were required to provide at least 3% of salaries as contributions to a superannuation fund, and this benefit had to be fully vested. (This is generally known as award superannuation).

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22 HM McNeilage in discussion following Buchanan, Bell et al, 1993, Transactions of the Institute of Actuaries of Australia
At about the same time, superannuation legislation was introduced: the Occupational Superannuation Standards Act 1987 (known as OSSA). This did not set minimum funding limits - instead it adopted a “freedom with publicity” approach. Defined benefits superannuation funds were required to have an actuarial review every three years, and the actuary was required to provide a certificate stating

- whether or not assets covered vested benefits,
- the contribution rate recommended, and
- whether or not the assets would still be likely to cover vested benefits at the end of three years.

This certificate was available on request to members of the fund.

The government decided that award superannuation was inadequate - 3% was insufficient to provide adequate retirement benefits. They wanted to increase the award superannuation level to 6%, and then 9%. But it proved difficult to achieve this by negotiating with the employers through the industrial relations system. Eventually, in 1992, the government decided to the Superannuation Guarantee Charge (SGC) - effectively making it compulsory for employers to make superannuation contributions for most employees. The rate was initially set at 3% (for small employers) and 4% (for large employers); but the rate increased from time to time until it reached 9% in 2002.

These compulsory superannuation contributions must be fully vested - so many defined benefit funds were forced to improve their resignation benefits to comply with the SGC legislation.

When the government made superannuation compulsory, they recognised that it would be necessary to improve the financial security of the system. The Government announced a review of the superannuation prudential system. The government objectives were set out in “Strengthening Super Security”, by Treasurer John Dawkins (1992).
'The Government is committed to the effective prudential supervision of the superannuation industry. This commitment recognises that official encouragement of superannuation savings brings with it an obligation to provide an appropriate prudential framework which will minimise prudential risk and ensure that superannuation fulfils its role in retirement incomes policy and the mobilisation and investment of savings.

In making this commitment, the Government emphasises, however, that the primary responsibility for the viability and prudent operation of the superannuation industry rests with trustees and fund managers’

Concern about solvency was exacerbated by some problems overseas, in particular the Maxwell case in the UK (whereby Robert Maxwell misused hundreds of millions of pounds taken from the pension funds of his employees). People asked: could the same thing happen here?

Solvency requirements for defined benefit funds were introduced from 1 July 1992, under regulations for the Occupational Superannuation Standards Act. However these were superseded by the Superannuation Industry (Supervision) legislation which was introduced in 1994, effective from 1995 for most funds.

**SOLVENCY REQUIREMENTS IN SIS**

**1A. What Benefits Are Protected? The Minimum Requisite Benefit**

In Australia, a fund is considered to be *technically solvent* if the assets cover the Minimum Requisite Benefits (MRBs).

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23 Some historical background is provided in Solvency Issues, by the IAAust Superannuation Practice Committee, Transactions of the Institute of Actuaries of Australia, 1993
24 The technical solvency requirements are set out in Part 9 of the SIS regulations
The MRB is roughly equal to the benefit arising from the member’s own contributions, plus compulsory employer contributions (award and SG), plus investment income, less taxes, insurance costs, and administration charges.

There are two important points:

- The MRB covers benefits arising from SG employer contributions, but the SG system only started in 1992 and it was phased in slowly over 10 years. Hence benefits arising from SG contributions may be quite low at present (but will gradually increase over time, since the SG is now at 9%).
- The MRB does NOT include any benefits arising from “voluntary” employer contributions, e.g. benefits which have been promised to members, over and above the minimum required by law.

Hence the Minimum Requisite Benefit may be much lower than the benefits promised to members in the Trust Deed. So even if a fund has enough money to cover MRBs with a healthy margin, it is by no means certain that the fund will be able to pay its members the benefits which they are expecting to receive.

If your fund provides benefits which are more generous than those provided by the SG legislation, then your MRB will be lower than your vested resignation benefit (i.e. the benefit payable upon voluntary resignation or retirement). If redundancy benefits are higher than resignation benefits, the shortfall between the MRB and the promised benefits may be even larger.

Many funds do promise benefits which are much higher that the MRB.

Take a fund like Unisuper as an example. For Unisuper, members contribute at 7% and employers contribute at 14% (plus another 3% into an accumulation account), i.e. the total employer contribution is 17%.

\[
\text{Contributions} = 7\% \text{ member} + 17\% \text{ Employer Contributions}
\]

However, the solvency regulations only require the MRB to be calculated on the basis of

\[
\text{Contributions} = 7\% \text{ Member} + \text{Compulsory Employer Contributions at the SG rate}
\]
Note that the SG rate is currently 9% p.a, but due to phasing in has varied from 4% to 9% over the period since 1/7/1992.

As an example, consider a person who is on a salary of $50,000 p.a., who started work on 1/7/92 at age 25 and now has 13 years of service. (We will ignore pay rises and inflation, for simplicity)

\[
\text{Unisuper Vested Benefit} = 18\% \times $50,000 \times 13 \text{ years} = $117,000
\]

Plus an accumulation benefit arising from 3% of salary per annum

Under the regulations\(^{25}\), the MRB may be calculated using a formula which is the sum of the MRBs for each year

\[
\text{MRB} = \Sigma (7\% / 0.85 + \text{SG rate} – 3\%) \times $50000 \times \text{Age-related discount factor}
\]

Giving a total of $55,146

Plus an accumulation benefit arising from the 3% of salary per annum

(Details of the calculation are given in the appendix, for those who are mathematically minded).

So in order to be considered “technically solvent”, the defined benefit fund would only need to have $55,146 in assets, less than half of the member’s resignation benefit payable from the defined benefit fund.

This discrepancy is partly due to the phasing in of the SG. For a member starting now, when the SG is at the full rate, the MRB calculation after 13 years would be a defined benefit of approximately $64,770 relative to a vested benefit of $117,000.

The difference represents the employer’s “voluntary” contribution of 8% p.a. (i.e. the contribution over and above the SG minimum). Under the SIS legislation, a fund is technically solvent if it covers the MRB and there is no requirement for the employers to provide funding for the remaining 8% of employer contributions. The regulation does

\(^{25}\) The formulae for calculating MRB are given in the regulations to the Superannuation (Administration) Act. The IAAust has provided a guidance note which is more intelligible than the legislation, Guidance Note 461
encourage employers to fund the full benefit (explained below in more detail), but there is no effective requirement to do so in the legislation.

Note that the above calculation does not represent the actual MRBs for Unisuper, which might be calculated in a more generous basis (see below). It is merely an illustration of how the MRB calculation might work. 26

Of course, the legislation only sets a minimum level of funding. The employer might be bound to provide a more adequate level of funding by a Trust Deed or industrial agreement (as is the case for Unisuper). But of course Trust Deeds vary from one fund to the next and some funds do not impose ANY minimum contribution requirements on the employer, other than the minimum required under the SG/SIS legislation.

Also, the employer might voluntarily decide to maintain a higher level of funding. But of course a system of prudential legislation which depends on the goodwill of the employer may not be entirely effective!

When the employer is in financial difficulties, there might be a temptation to allow funding levels to fall. And if the employer subsequently becomes insolvent, the losses are crystallised. Ansett’s superannuation fund is a good example. Prior to the collapse of Ansett in September 2001, the MRB was only about $420 million. The assets were about $600 million, so the fund was certain solvent by a healthy margin. But when Ansett crashed, the liabilities were more than $680 million – leaving a substantial shortfall. In the end, the members bore this loss.

When the prudential legislation sets such low solvency standards, most funds will be able to meet minimum standards. In 2003, APRA pointed out that nearly every fund was “technically solvent”, i.e. assets covered MRBs.

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26 Note that there are a few alternative methods of calculating the MRB, as describe below, and Unisuper might have chosen one of the more generous alternatives. This is not the actual MRB used by Unisuper.
However, APRA also acknowledged that “a significant number” of these technically solvent funds did not have enough money to pay the resignation benefits for their members. In one case, the fund assets were only about 60% of the Vested Benefits.

So when members are told that their fund is “technically solvent”, this might be reassuring to the members. But if they realised that this might just mean that “the fund has enough money to pay just 60% of your benefits”, then they might not be so complacent.

**1B What Benefits are Protected? Vested Benefits**

Although the technical solvency funding requirements are rather weak, the SIS legislation does encourage a higher level of funding.

A fund which does not have enough money to cover the Vested Benefits is said to be in an “unsatisfactory financial condition”. The actuary must inform the trustees. The trustees are expected to make a plan to rectify the situation – and if the actuary is not satisfied with the trustees’ proposals, then he must inform APRA.  

This is rather toothless legislation.

If the fund is underfunded, what can the trustees do about it? They can ask the employer-sponsor to make additional contributions, but the employer is not required comply with this request.

If the fund is reported to APRA, what can APRA do about it? They can ask the employer-sponsor to make additional contributions, but the employer is not required comply with this request. APRA does strongly encourage employers to rectify shortfalls.

In fact, if the employer does not wish to make additional contributions, then there is often not much that can be done about it (other than moral suasion by APRA and the actuaries).

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27 This requirement is set out in S130 of the SIS Act.
1C What Benefits Are Protected? Proposals for reform

It is interesting to note that when the solvency standards were first introduced, in 1992, the government apparently intended to set higher standards. However, after discussions, these rules were watered down.

The following outline of events comes from the IAAust Superannuation Practice Committee (TIAA 1993)

“The Occupational Superannuation Standards Regulations required that each defined benefit fund used for SG purposes should have in force a Contribution and Solvency Certificate signed by an actuary, certifying that on winding up at any time in the period covered by the Certificate the assets would be reasonably regarded as sufficient to cover expenses of winding up, MRBs, and any prior ranking liabilities. These requirements were due to take effect from 1 July 1983....

The effect of these requirements was potentially very onerous for many funds, because most funds do not have a hierarchy of winding up provisions. Whether they do or do not it is in most cases not legally possible to introduce such a hierarchy into existing funds, with MRBS at or near the top of the list.

As a result the requirements effectively meant that the actuary would have to certify that assets would be likely to cover total vested benefits at all times during the currency of the Contribution and Solvency Certificate. The consequence was that for a defined benefit fund to be used for SG purposes, assets would have to exceed total vested benefits with a healthy margin by June 30, 1983. In addition the ongoing requirement for assets to exceed vested benefits at all times posed potential long term problems for most defined benefit funds, given that in the long run the SG requirements will mean that the level of vested benefits will become increasing significant”.

28 Solvency Issues, Superannuation Practice Committee, TIAA 1993
After discussions between the Institute of Actuaries, the Government Actuary, and the Government, the original OSSR solvency regulations were withdrawn and replaced with the weaker SIS regulations.

In 2003, the government regulator became concerned about the weaknesses in the SIUS solvency regime and presented these concerns to the government. In 2004, the government considered strengthening the legislation, so that the minimum funding requirement would cover Vested Benefits instead of MRBs.

ASFA made a submission on this proposal, pointing out that this is a “major proposal” which would need further discussion.

“Requiring employers to contribute under SIS Regulation 9.08 is enforced through the Commonwealth’s taxation power and the Superannuation Guarantee. It remains difficult to see, from a legal and constitutional perspective, how employers could be required to contribute above the SG minimum benefits. Further consideration on this matter is required…..”

“The pros (increased security of defined benefits) need to be weighed up against the cons (impact in employer sponsors, accelerating closure of defined benefit funds etc).”

The Institute of Actuaries of Australia was not in favor of this proposal: at least, not without some additional changes designed to relieve the burden on the employer.

“This proposal effectively strengthens the current SIS-imposed funding requirements for defined benefit funds by mandating a maximum 5 year period for restoration of full funding of vested benefits, where these are not fully funded, or require the fund to be wound up. Currently the 5 year funding period is only mandated in relation to asset coverage of MRBs.

29 The submission dated 2 March 2004 is available on the ASFA website
This proposal is clearly designed to encourage defined benefit sponsors to ensure their funds have at least 100% coverage of vested benefits at all times. In practice, due to investment fluctuations which affect assets but not all vested benefits, the proposal would most likely result in the accumulation of large surplus assets in funds. For example, funds would need to top up assets to 100% of vested benefits when markets turned down, while the usual subsequent market recovery would lead to assets significantly exceeding vested benefits.

The Institute would be reluctant to support the proposal unless it was accompanied by changes to the surplus repatriation and tax regimes (and greater flexibility as recommended below). These regimes currently provide very significant disincentives for employers to risk the accumulation of significant surpluses in funds, since these employer funds are difficult to repatriate and in any case they will have been reduced by the 15% tax when paid into the fund.”

If this proposal was implemented with appropriate changes to deal fairly with surplus, the Institute agrees that a period of transition would be required and that appropriate transition provisions would need to be developed.

The Institute would support the consideration of alternative funding security measures such as the use of subordinated debt and/or bank Guarantees. “

Actuaries Rice Walker took the view that more stringent funding requirements could be counter-productive, since it would impose an undue burden on employers.

Rice Walker says that there is a danger of assuming a worst-case scenario and imposing strictures that are so hard and fast that the cure is worse than the disease.

“There has certainly been regulatory ‘encouragement’ for employers to make significant one-off lump sum payments into the fund to bring cover up to 100 percent of vested benefits,” it says.

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30 This submission, dated 27 February 2004, is available on the IAAust website www.actuaries.asn.au
But Rice Walker argues that regulators have to be careful not to push fund sponsors too hard, otherwise they will say ‘enough is enough’, close existing defined benefit funds and all members will suffer.

Rice Walker has in mind talk about mandating that assets should exceed vested benefits by a margin such as 5, 10, or even 20 per cent and/or requiring any shortfalls to be made good in, say, one year.

There is a conflict between stockmarket volatility when super funds have 70 to 75 per cent in equities and any requirement in proposed accounting standards to have any deficiency in a super fund made good in the year it occurs.

The result could be drastic, it says. “Employer contributions could fluctuate dramatically from year to year: 30 to 40 per cent of salaries in one year; as little as 5 per cent or zero per cent in the next. What company would willingly and knowingly enter into such an arrangement?”

Apparently, Australian employer would find it too onerous to fully fund the vested benefits, and the government has acceded to their views.

How does this compare with the solvency objectives in other countries? As we shall see, in the USA and the UK, minimum funding standards are based on the full vested and accrued benefits promised in the Trust Deed. However, there is no doubt that many employers find these requirements burdensome – and indeed they have spent many years lobbying the government to water down these standards (with considerable success, as described below).

And it is true that many UK and US employers have decided close down their defined benefit funds and switch to accumulation funds.

1D. What Benefits are Protected? Disclosure Issues

31 APRA Examines Troubled Super Funds, Financial Review, Barrie Dunstan, 8 September 2003
If the solvency legislation only provides partial protection, perhaps it would be desirable if members were specifically warned about this.

At present, most defined benefit fund members would have no idea of their MRB (and in fact they have probably never even heard the term). The method of calculating the MRB is defined in an actuarial Benefit Certificate, which is given to the employer and trustees. But there is no requirement to reveal the MRB calculation method to the members.

If the SIS legislation is designed to provide protection for MRBs, with minimal protection for any higher level of benefits, it seems reasonable to me that people should know their MRBs.

SIS legislation requires the funds to give members an annual member benefit statement, but this statement does not show the member’s MRB. The member’s benefit statement shows the benefits according to the Trust Deed, i.e. the Vested Benefit. But this benefit will only be paid if the fund has sufficient assets to pay these benefits, and the SIS legislation does not require funds to hold assets sufficient to cover these benefits.

The level of funding of Vested Benefits is provided in an actuarial report, produced once every three years. However, members do not usually see this report unless they specifically request a copy (and quite possibly most members would not be aware of the existence of this report, or their right to request a copy).

As an example, in December 2002 the Unisuper fund was in an unsatisfactory financial position: assets were only 86.9% of the Vested Benefits. Most members were probably unaware of this fact (Note that the 2004 annual report shows that the assets have increased back up to 93.6% of Vested Benefits).

In a recent review of the security of superannuation funds, the government suggested that members should be informed if the employer was not contributing enough money to cover the Vested Benefits, i.e. proposed
“Amending the Corporations Law to require that employer contributions being made at a rate less than regular contributions recommended by an actuary to fund vested benefits is a significant adverse event”. (Note that under the SIS regulations, members must be informed if a significant adverse event occurs)

The IAAust opposed this suggestion, arguing that

“this additional proposed reporting to members would not enhance security of benefits and is likely to unnecessarily raise member concerns, further eroding member confidence in the superannuation system, and to artificially constrain the way actuaries frame contribution recommendations.”

On the other hand, perhaps this disclosure would raise quite justifiable member concerns; and perhaps the superannuation system does not actually deserve the level of member confidence which it already enjoys.

2. How should the protected benefit liabilities be valued?

Ideally, for a sound solvency regime, the method of calculation of the minimum benefit should be clearly defined and objectively valued.

Unfortunately, there are several different methods which may be used to calculate MRBs.

The MRB arising from employer SG contributions may be determined using:

- Method 1: the accumulated value of the SG contributions, with interest, less tax, insurance, and administration costs; or
- Method 2: The SG rate * Salary at the date of exit * years of membership * an age-related discount factor; or
- Method 3: A non-standard method chosen by an actuary, which must produce a result which is between 80% and 125% of either Method 1 or Method 2 for any individual member of the fund. The present value of the total benefits for all

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32 Submission from the IAAUst dated 27 February 2004
33 The methods of calculation are set out in the SG Regulations and IAAust Guidance Note 456
members must not be less than the present value of total benefits under Method 1 or Method 2.

Depending on the assumptions used, there might be quite significant differences between the MRBs calculated on each basis.

For example, consider a 20-year-old person with salary $50,000, employer contributions 9% paid at the end of the year, net investment income 6% p.a., contributions tax 15%, salary increases of 2% p.a, and expenses of say $200 p.a.. After 10 years

Method 1 MRB : \(0.85 \times 0.09 \times 50000 \times s(10) \times 6\% = $54,683\)
Method 2 MRB : \(10 \times 0.09 \times 50000 \times (1.02)^{10} \times 0.70 = $38,398\)

In this case Method 2 is considerably lower than Method 1, but it may well be the other way around sometimes: it depends on the level of salary increases relative to the level of investment income.

Method 2 provides for different MRBS for people of different ages (even when they have exactly the same employment history, i.e. in terms of years of service and salary)

Method 2 MRB for a person aged 20 at entry: $38,398
Method 2 MRB for a person aged 40 at entry: $42,512
Method 2 MRB for a person aged 50 at entry: $54,855

Furthermore, the MRBs may be “tilted” to give higher benefits to some members, offset by lower benefits to other members. As long as the overall long term average cost is more than the 9% SG rate, this would satisfy the employer’s SG requirements. Under Method 3, the MRB for a 20 year old might conceivably be anywhere between $30,719 (80% of $38,398) to $65,059 (125% of 68,354). This would depend on the method of calculation specified by the actuary.
Whenever there are alternative definitions of the minimum benefit, there is a moral hazard. Naturally, a company is likely to choose the definition of MRB which produces the lowest cost to the company. And indeed this is perfectly permissible under the legislation.

Note that the MRB in the defined benefit scheme might be significantly less than the minimum benefit the member would have received, if he was in an accumulation scheme which was receiving SG contributions and earning the same investment income. On the other hand, depending on salary increases and investment income, in other cases the MRB might be higher than the accumulation benefit.

3. **How should the fund assets be valued, for solvency purposes?**

The SIS regulations specify the use of net market valuation of assets for the purposes of assessing technical solvency.

Should this be net market value as shown in the accounts, net of costs of realisation? It might be preferable to improve the solvency standard by making appropriate adjustments to allow for the impact of the employer’s insolvency and/or the winding up of the fund. In fact this is recommended in the IAAust Professional Standards for triennial reviews.

> “Where the accounts of the fund are relied upon in deriving a value of assets for the purposes of the investigation, the actuary should be satisfied that the valuation methods applied to individual items in the accounts are appropriate. Particular attention should be paid to items that are vulnerable to changes in circumstances including future income tax benefits, reserves for capital gains or other tax, assets depending on the continued operation of the employer, and any assets which represent a significant proportion of the total fund assets. Assets whose values are subjective, such as property and unlisted shares, should also be given careful consideration. It may be appropriate, where assets of the type described are significant in relation to the totals assets of the fund, to assess the sensitivity of the results of the investigation to a change in the value of the relevant assets.”

(Professional Standard 400, Para 23)
Some actuaries do perform stochastic projections of funds, to show the sensitivity of the funding indices to changes in asset values. However, these studies are expensive and hence may not be feasible for small funds.

4. Should there be a buffer of assets above the minimum level, to allow for adverse experience? If so, how big should the buffer be?

5. A solvent fund will only remain solvent as long as adequate contributions are paid to cover benefits which are accruing during the next period. Should contributions recommendations be based on "best estimate" or should they allow for adverse experience?

Under the Australian legislation, there is no “safety margin”. The fund is technically solvent as long as assets cover MRBs.

When the SIS solvency standard was first introduced, there was some discussion about the timeframe for recovery from insolvency. The original proposal required that the fund should be continuously solvent. The actuaries objected, on the grounds that this was unnecessarily onerous.

If the government had insisted on continuous solvency, it would mean that defined benefit funds would need to have assets significantly above the minimum level, to act as a buffer. The IAAust felt that this raised the prospect that “such funds would be too expensive for employers to retain.” The legislation was amended so that the continuous solvency test was dropped. Instead, the actuary only needs to specify the contribution rate which is “reasonably expected to be required to secure solvency on the expiry date of the certificate”.

Unfortunately, even if a fund is currently solvent, there is certainly no guarantee that it will remain solvent. A number of factors can push the fund into insolvency, and this may occur alarmingly quickly.

Most commonly, the value of assets might fall as a result of poor investment returns, e.g. as a result of a downturn in the stock market or a crash in property prices.
The fund assets may also be eroded by payment of benefits. This is likely to be a problem whenever a fund is underfunded, and it is paying out benefits which are higher than the funded amount (e.g. when there is a redundancy program and/or a high number of early retirements).

As an example, suppose:

- A fund has 200 members.
- Vested benefit is $1000 per member, Retrenchment Benefit is $1200 per member
- Fund has just enough assets to cover Vested Benefits, i.e. $200,000

*If fund is wound up now, each member gets $1000*

*If fund sacks 100 people, then is wound up*

<table>
<thead>
<tr>
<th>Assets</th>
<th>200,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retrenchment benefits</td>
<td>120,000</td>
</tr>
<tr>
<td>Remainder</td>
<td>80,000</td>
</tr>
</tbody>
</table>

Then if the fund is wound up, each remaining member gets only $800

*If fund sacks 150 people, and then is wound up*

<table>
<thead>
<tr>
<th>Assets</th>
<th>200,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retrenchment benefits</td>
<td>180,000</td>
</tr>
<tr>
<td>Remainder</td>
<td>20,000</td>
</tr>
</tbody>
</table>

If the fund is wound up, each remaining member gets only $400

The fund also will become insolvent if liabilities increase more quickly than assets, e.g. if the employer is contributing at a rate less than recommended by the actuary, or if the actuary’s assumptions were too optimistic (with hindsight).
Clearly, the level of contributions depends on the assumptions made by the actuary, as to future investment returns, number of exits, salary increases and so on. Although actuaries are generally considered to be conservative by nature, there is no requirement for the actuary to adopt conservative assumptions for these purposes: the actuary is not required to “allow for the worst case scenario”. The SIS legislation specifically states that the minimum contribution should be based on “reasonable expectations”.

The IAAust Guidance Note suggests that actuaries should usually use “best estimate assumptions” in determining the contribution rates. They suggest that:

“This reflects the need to provide proper estimation of the required contributions, rather than make overly conservative assumptions which may result in overfunding by the employer.”

The actuary can make more conservative assumptions, as long as he has discussed this with the employer and the employer is prepared to make additional contributions.

Even when the actuary makes perfectly reasonable assumptions, there is no guarantee that the recommended contribution will be adequate to maintain solvency. In fact, as is pointed out in IAAust Guidance Note 461, the contributions based on best estimate assumptions only a 50/50 chance of being adequate.

However, if the fund’s financial position is deteriorating, there may be an opportunity for the actuary to step in and recommend a higher contribution rate.

“While the use of best estimates may imply that there is as much chance of being insolvent as being solvent at the expiry date of the certificate, the other control mechanisms available to the actuary may be used to detect cases where a fund is moving towards insolvency.”

34 IAAust Guidance Note 461, 1994
To assist the actuary in monitoring the solvency of the fund, the legislation requires the identification of “Notifiable Events”, i.e. any events which might endanger the solvency of the fund.

The list of Notifiable Events may include such events as

- a change in the asset mix
- a fall in asset values of more than x%
- failure to pay contributions at the rate specified in the FSC
- refund of surplus assets to the employer
- increases in salary
- benefit increases
- a higher than expected number of retrenchments or early retirements (if the retrenchment and early retirement benefits are higher than the vested benefits)

If any of these events occurs, or if the employer fails to make contributions as recommended, the trustees must notify the actuary, who will then check the solvency of the fund and decide whether or not the fund remains solvent.

Hopefully, the actuary will be able to intervene in time to prevent the fund from sinking into insolvency. But suppose that the fund is already insolvent: what happens next?

6. If the fund falls below the required standard, how long should it have to make up the shortfall? Can an employer cease contributions to a fund which has a shortfall? What is the amortization period for deficits?

We’ll look at two cases here: technical insolvency and unsatisfactory financial condition.

When a fund becomes insolvent, it will be put under actuarial management for up to five years. The actuary must devise a plan to return the fund to technical solvency. The actuary will re-calculate the employer contributions needed to attain this objective, and this can be revised upwards as necessary.
Under S9.08 and S9.19(2) of the SIS Regulations, an employer must pay the contributions specified by the actuary.

This seems to provide quite good security for member benefits, up to the level of the MRB. However the fund may continue in deficit for up to five years. And despite the best efforts of the actuary, the situation might even continue to deteriorate (say if the stock market crashes); so it might take even longer than 5 years to return to solvency (If the period of insolvency last for more than 5 years, APRA must determine whether to continue the actuarial management program or wind up the fund).

And if the employer goes broke during this period, resulting in the winding up of the fund, then the employer might not be able to pay the contributions specified by the actuary.

In this case, the security of members’ benefits depends on the ability of the fund to claim money as a creditor of the insolvent employer.

*Case 2 : Unsatisfactory Financial Position*

As previously noted, the SIS legislation does not require employers to make additional contributions in order to cover Vested Benefits. Therefore there is nothing in the SIS legislation which would prevent an employer from simply ceasing contributions and closing the fund. The employer would be required to pay the amount required to fund the MRBs (as explained above) but this might be well below the level of Vested Benefits and/or Redundancy Benefits.

Although there is no obligation under SIS, there might be obligations under the Trust Deed and/or employment contracts.

In the Ansett case, the court decided that the company did indeed have an obligation to cover the shortfall. However, this decision depended on the exact wording of the Trust Deed. Other Trust Deeds may not impose any liability on the employer, and may indeed specifically state that the employer is not responsible for the shortfall. Many trust deeds would give the
employer the right to cease contributions at any time, and close the fund (subject to technical solvency rules)

The employer may also incur a legal liability if it has made assurances to the employees. For example, in the Ansett case, members were given information booklets which stated that Ansett would pay the contributions necessary to fund the benefits. This apparently influenced the court’s decision, in deciding that Ansett did have a liability to pay the shortfall contributions.

Of course, as a result, some employers will now specifically disavow any responsibility for funding benefits over and above the MRBs.

So do employers recognize any liability to pay off fund deficits? ASIC conducted a survey on this issue, covering 40 major corporate superannuation funds.

The results were:

- Of the 27 plans responding to a question about whether the employer-sponsor is legally bound to make good any deficit in a plan, 48% indicated that they believed that they had such an obligation.

- Of the plans that responded that the employer-sponsor is not legally bound to make good any deficit, 54% indicated that the sponsor had voluntarily agreed to increase future contributions or made/agreed to make a lump sum contribution to meet the deficit. 39% were not in deficit. The remaining corporate sponsor in this group had provided a guarantee to meet the future commitments of the plan.35

The Australian legislation provides a sharp contrast with the US legislation. Under the US legislation, employers suffer tax penalties if they do not make the required contributions; and an employer is not allowed to arbitrarily close an underfunded fund, unless they arrange to buy out the full benefit entitlements.

35 Financial reporting by corporate sponsors of defined benefit superannuation plans, ASIC media release 21 August 2003
In the UK, the legislation was previously quite weak. Employers had a legal liability to pay up to the level of the Minimum Funding Requirement, which was quite a weak standard, but employers were not required to fund the full benefits promised in the Trust Deed. They could close their fund and walk away from a significant shortfall – and indeed they did so. Two notorious cases, involving the Blagden company and Maerck. However, in 2003 the UK government tightened the law to prevent this. 36

8. **When an employer becomes insolvent, should the fund have some claim as a creditor?**
   
   **How much should they be able to claim? Should the fund have priority over other creditors?**

   This is another grey area of the Australian solvency legislation.

   As noted above, in the Ansett case, the court recognized that Ansett had a legal liability to pay additional contributions to cover the shortfall. So the fund became a creditor.

   But this did not necessarily mean that the members would be paid. Ansett did not have enough money to pay all its creditors: only the high-priority creditors would be paid in full. Low priority creditors would get almost nothing. Where did the fund stand, in the queue of creditors?

   The answer was: no one was sure. The law was quite unclear on this point. So the fund trustees went top court, seeking clarification. In the initial decision, the judgement went against the superannuation fund: they were not given priority. But the trustees were not convinced, and they appealed the decision. Unfortunately, this point of law was never resolved, because the case was settled by negotiation.

9. **Should there be a government-run guarantee fund to make up any shortfalls?**

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36 *A new way to combat pension Scrooges*, by Martin Dickinson, Financial Times, 20 December 2003
Australia does not have a guarantee fund to cover defined benefit fund shortfalls, except in
limited circumstances.

Under Part 23 of the SIS ACT, in the event that a superannuation fund suffers a loss caused
by fraudulent conduct or theft, and this loss leads to substantial difficulties in paying
benefits, then the trustee may apply to the Minister for financial assistance.37

The Minister MAY decide to help the fund, if he believes that it is in the public interest to do
so. It is up to the Minister to determine the amount of assistance.

If necessary, the money to provide such assistance will be raised by a levy on all other funds
(regulated superannuation funds and ADFs), under the Superannuation (Financial

In a 2001 review of the superannuation system, the government considered extending this
guarantee scheme to cover a wider range of losses. But after the consultation process, this
proposal was abandoned – nearly every submission was opposed to any extension of the
guarantee scheme38. Most submissions cited the problem of moral hazard.

Submissions were concerned that a broadening of Part 23 would increase the burden
on effectively managed, low-risk funds to provide compensation for poorly managed,
high-risk funds. Submissions also suggested that widening Part 23 would lead funds
to reduce their own levels of protection, resulting in increased moral hazard, which
was not considered appropriate. The Securities Institute of Australia stated that it
'does not support any broadening of such assistance at this stage, due to the inherent
moral hazard involved and to the difficulty in defining what sorts of losses would be
protected, given the absence of explicit promises'.

Further, most submissions were not supportive of a levy system to provide
compensation, preferring that it be provided by some form of insurance or

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37 Previously there were different rules for defined benefit funds and accumulation funds, but in June 2004 the
government announced that this distinction would be eliminated. See Review of Part 23 of the Superannuation
Industry (Supervision) Act, www.treasury.gov.au
consolidated revenue. AMP indicated that '[a]n industry assistance fund could in the longer term act as a disincentive for prudent risk management with the cost of failure being borne by prudent trustees and their members.'

Australia is somewhat out-of-step in this regard, because many other countries do have pension fund guarantee schemes – including the USA, Canada (Ontario province), the UK, Germany, Sweden, Switzerland, and Japan. In many cases these schemes were introduced in response to public concerns, after major fund insolvencies which affected many people.

Perhaps one day, when a major Australian fund becomes insolvent, Australia will reconsider this issue.

However, concern about moral hazard is certainly warranted – the experience of the PBGC in the USA stands as a dire warning of the potential problems.

**10. Where the members bear the shortfall, how should the losses be shared?**

The Australian legislation has a serious deficiency here. The SIS legislation sets out a method for dividing assets among members, when a fund becomes insolvent. In the only case where this legislation was applied, it turned out to be unworkable.

Under the SIS rules, the actuary was required to work out the Minimum Benefit Index, which is calculated as

\[
MBI = \frac{\text{Net Realisable Assets} - \text{Benefits for Former Members}}{\text{Minimum Requisite Benefits of Current Members}}
\]

If the MBI is less than 1, then the assets must be divided so that

* each former member must receive a benefit which is

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40 Benefit Security Pension Fund Guarantee Schemes, by Fiona Stewart, OECD
at least $MBI \times \text{Benefit Entitlement}$
but less than $1.00 \times \text{Benefit Entitlement}$

* each current member must receive a benefit which is

at least $MBI \times \text{Minimum Requisite Benefit}$
but less than $1.00 \times \text{Minimum Requisite Benefit}$

If Benefit Entitlements under the Trust Deed are higher than the MRBs, then this approach clearly favours the former members at the expense of the members who remain in service until the fund is wound up. This creates inconsistencies: someone who is sacked just one day before the fund is wound up can receive a much higher benefit than someone who is sacked a day or so later.

For example, suppose that

- the Benefit Entitlement for a former member is the Retrenchment Benefit, say $120.00$;
- the Minimum Requisite Benefit for a current member is $60.01$;
- assets are $180$;
- so the MBI is just under 100%

The former member (sacked the day before the winding up) will get $120$; but the current member (sacked the day after the winding up) will get only $60$. Under the SIS formula, the "last man out" will be disadvantaged, and this seems unfair.

The trustees of Ansett were faced with this problem, and they found a very practical solution. Ansett simply made sure that nearly all the members were "former members" before the date of winding up - by either terminating service (and re-employing under a separate legal entity) or ceasing to make contributions for these employees (under the SIS Regulations these employees are considered to be "Former Members" even though they remain employees). For legal reasons, one member volunteered to be the sole remaining member of the fund at wind-up. This meant that the available assets could be divided up among the members more equitably.

The Ansett case also revealed a flaw in the legislation: the MBI, as calculated above, might turn out to be a negative number. When the Ansett fund was wound up, most of the members
had been retrenched and therefore were former members. Hence the Benefit Entitlement of Former Members could easily become negative.

In this case, the minimum benefit payable to any member would presumably be $0. The trustee would have the discretion to allocate the assets in any way, as long as each member received more than $0 and less than his MRB (for in service members) or Benefit Entitlement (for former members). This does not provide much protection for the members !.

However, even though SIS does not provide any guidance for the trustee in this situation, the basic principles of Trust Law would apply: that is, treat all members equitably.

Conclusion:

The Ansett collapse revealed the strengths and weaknesses of the Australian prudential system. As described above, the existing system contains a number of significant weaknesses which undermine the security of members’ benefits, as described above. Wee hope that this analysis may prompt some discussion of reforms to the legislation.

Previous attempts to strengthen the solvency standards have generally been opposed, on the basis that this would impose an unduly onerous burden on the employer-sponsors. The government is entitled to make policy decisions, trying to find the appropriate balance between the security of members benefits and the interests of employer-sponsors. But where members are left to bear the risk, at the least, these risks should be disclosed.
References


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