

**DEPARTMENT OF VETERANS AFFAIRS**

**DISABILITY PENSION OFFSETTING**

**SEPTEMBER 2003**



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# 1 Introduction

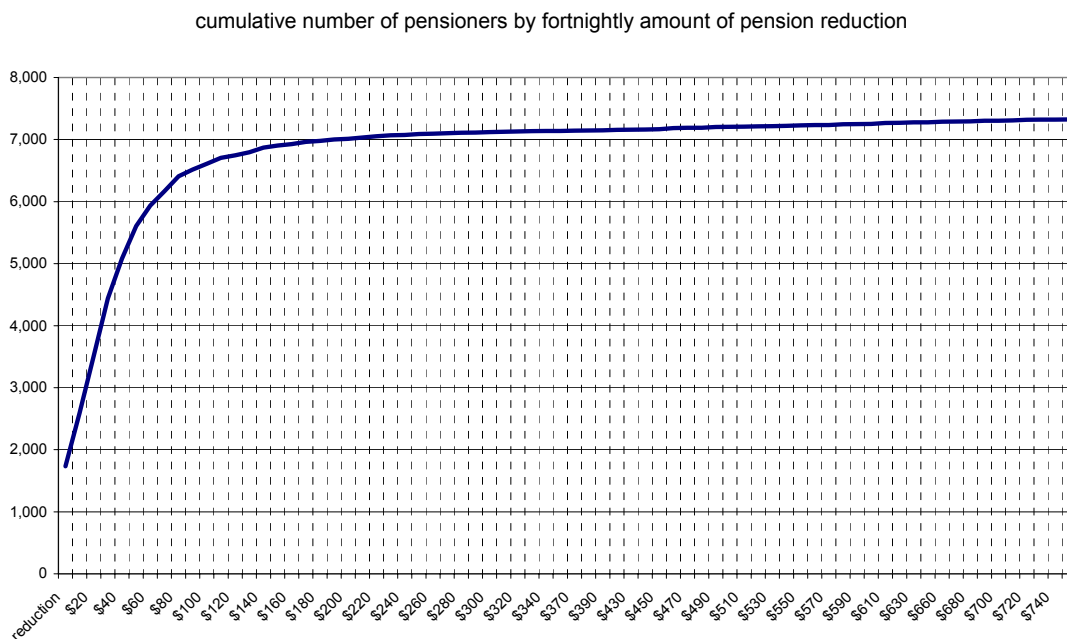
- 1.1 We have been asked by the Department of Veterans' Affairs to prepare a brief report covering three questions which have been raised by the Senate Standing Committee on Foreign Affairs, Defence, and Trade (the Senate Committee). The Senate Committee is conducting an inquiry into the disability pension offsetting arrangements under the *Veterans Entitlements Act 1986* (VEA).
- 1.2 Under the VEA, disability pensions are reduced to take account of lump sum compensation paid for the same injury.
- 1.3 The amount of the reduction in disability pension is based on an actuarial calculation, which takes account of the amount of the lump sum and the veteran's age. The calculation is based on realistic assumptions about future economic conditions and about veterans' mortality.
- 1.4 The calculation gives a 'fortnightly equivalent' to the lump sum. The disability pension is reduced accordingly, for the life of the veteran.
- 1.5 We have been asked:
  - ◇ For veterans who have had their disability pension reduced, how much of the corresponding lump sum has already been 'paid off', allowing for a reasonable rate of interest?
  - ◇ What is the value of outstanding offsets? That is, if everyone on a limited pension had it restored to full value, how much would this cost? What if pensions were restored to full value at sometime in the future, say 2005?
  - ◇ How might a loan model work for future grants?
- 1.6 This report sets out the results of our analyses. It should not be relied on for any other purpose than that set out above.

## 2 Background

- 2.1 Offsetting arrangements have been in place since the early 1970's.
- 2.2 In brief, under the *Safety, Rehabilitation and Compensation Act 1988* (SRCA) claimants are paid lump sums for permanent impairment (s24) and non-economic loss (s27). Under the *Veterans' Entitlements Act 1986* (VEA), veterans are paid disability pensions for incapacity (the degree of which depends on both impairment and lifestyle effects).
- 2.3 Under existing arrangements, when both a lump sum (under the SRCA) and a disability pension (under the VEA) are paid for the same injury, offsetting arrangements are applied to ensure that:
- ◇ Claimants are not compensated twice for the same disability; but at the same time
  - ◇ Claimants receive compensation benefits equal in value to the more generous of the two regimes.
- 2.4 The model used for offsetting is referred to as an actuarial model. Under the actuarial model, the disability pension is reduced by an amount which is actuarially equivalent to the lump sum. If the lump sum is big enough, the pension is fully offset and no disability pension is payable.
- 2.5 The actuarial model is prospective in nature. That is, for any claimant, at the time of the commencement of the offsetting process, the actuarial present value of future offset amounts equals the value of the lump sum which is being offset.
- 2.6 A natural consequence of the actuarial model is that this valuation equivalence does not hold after commencement. The assumptions underpinning the actuarial model (both demographic and economic) will not be exactly borne out in practice for an individual. Therefore, the actual (after death) hindsight value of the offsets in any individual case will be different from the lump sum. This feature of the model is not a flaw, but it has led to perceived inequities.

### 3 Data

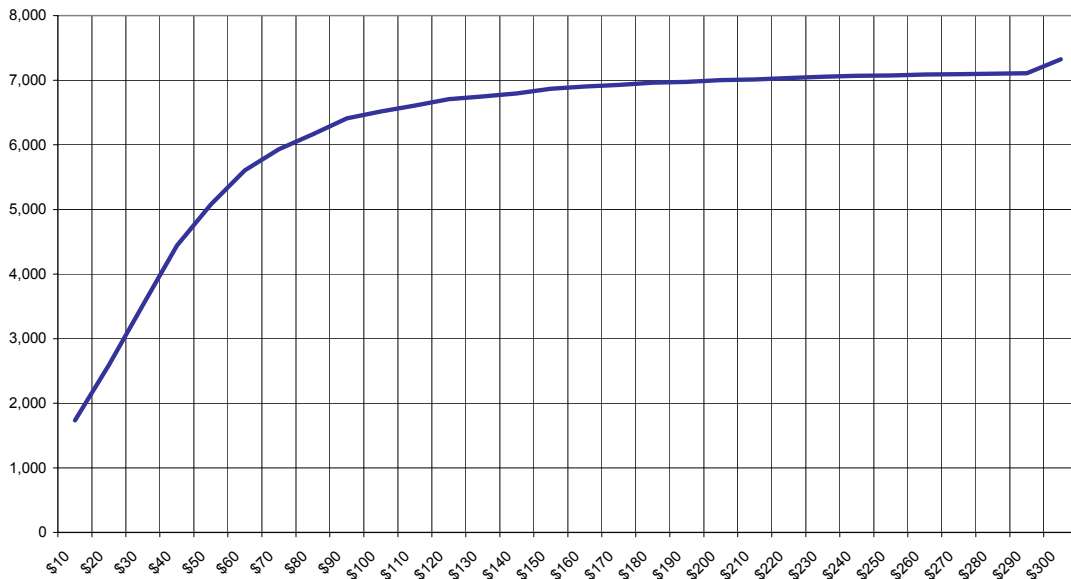
- 3.1 DVA provided a data set for our analysis. The data set contained one record for each veteran who is currently in receipt of a reduced pension, where the pension reduction relates to a lump sum paid under the SRCA.
- 3.2 After a small amount of 'clean-up' by DVA, there were records for 7,324 veterans. The graphs below illustrate the population of disability pensioners who are currently receiving such a reduced pension.



- 3.3 This graph shows that over 1,700 of the 7,324 pensioners have their pensions reduced by less than \$10 per fortnight. Over 5,000 have their pensions reduced by less than \$50 per fortnight and about 6,000 by less than \$70 per fortnight. 323 have their pensions reduced by more than \$200 per fortnight.
- 3.4 It seems unlikely to us that very large offsets are associated entirely with lump sums. The largest lump sum payable under the SRCA is currently about \$170,000. This would equate to an offset of \$297.50 for a 40 year old veteran.
- 3.5 Therefore, we have judgementally limited individual fortnightly offset amounts to \$300 for the purpose of this report. Accordingly, we adjusted the data for 210 veterans. After these adjustments, the total fortnightly amount of offset is about \$360,000.

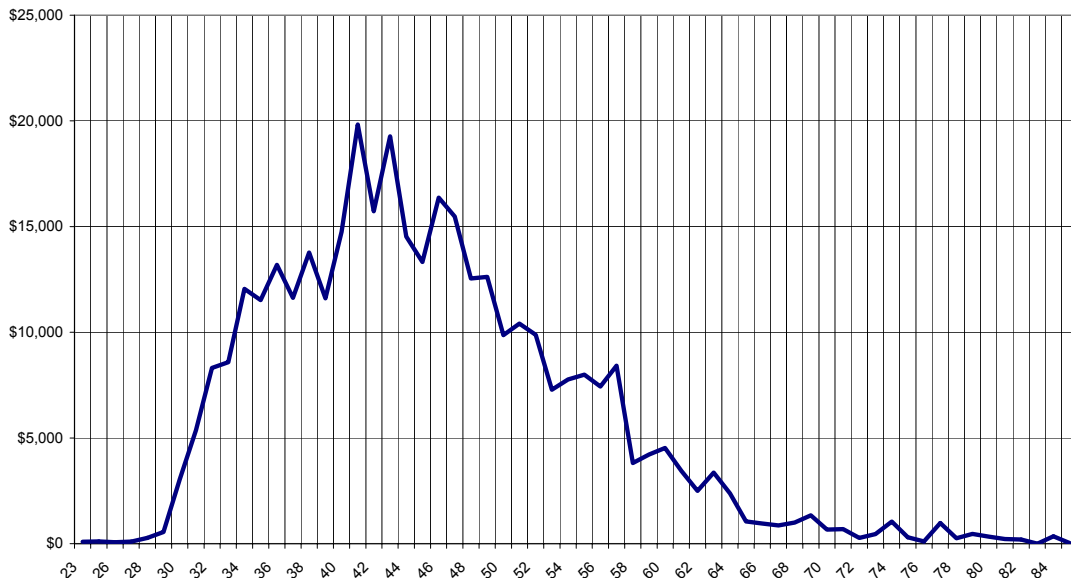
3.6 The graph below presents the adjusted data.

cumulative number of pensioners by adjusted fortnightly pension reduction



3.7 It can be seen from the graph that we have only adjusted data for those veterans whose offset amount was shown as more than \$300 per fortnight, and for those veterans we have set the offset amount at \$300 per fortnight. We have not tried to validate the data in any way. Our analysis in Chapter 5 is based entirely on this adjusted data.

Total Fortnightly Offset by age of Veteran



3.8 This graph shows that pension offsetting is concentrated mostly among veterans currently aged between their middle 30's and their middle 50's. The available data does not permit analysis by time on reduced pension.



## 4 Scheme experience—how much has been ‘repaid’?

- 4.1 The Senate Committee heard from a number of witnesses that they ‘had paid back their lump sum’ and so the full pension should be restored. As a result, we have been asked to examine the question:
- For veterans who have had their disability pension reduced, how much of the corresponding lump sum has already been ‘paid off’, allowing appropriately for a reasonable rate of interest?
- 4.2 The actuarial model results in a ‘fortnightly pension equivalent to the lump sum’ for offsetting purposes. This means that a lifetime, CPI-linked fortnightly pension of the amount of offset has the same actuarial value (at the outset) as the lump sum.
- 4.3 Paragraph 2.5 noted that the model was prospective in nature. That is, the calculations are based on a set of assumptions about the future. In any individual case, the actual (after death) hindsight value of the offsets actually ‘paid’ over the life of a veteran will not exactly equal the lump sum. This is not a flaw of the model, rather it is a natural consequence. This feature has, however, led to perceived inequities and, therefore, to the current set of questions.
- 4.4 In assessing the extent to which a veteran may have ‘over-’ or ‘under-paid’, it is very important to take proper account of the time value of money. That is, appropriate allowance must be made for interest. This point was recognised and accepted by the Veteran representatives who gave evidence to the Committee.
- 4.5 For this exercise, we have used historical yields on Commonwealth 10 year bonds as the interest basis. It is noteworthy that residential mortgage rates tend to be one or two percentage points higher than bond yields and cash management returns tend to be a couple of percent points lower. In the circumstances, we regard the use of Commonwealth bond yields as reasonable for the purpose. Note that we have ignored tax effects as they depend upon the individual.
- 4.6 The Committee has asked that we construct a number of examples, which demonstrate the extent of ‘over-’ or ‘under-payment’ in different circumstances.
- 4.7 We have set out below a Table which compares the accumulated value of a lump sum of \$1,000 with the accumulated ‘repayments’, both as at June 2003, for a range of starting dates and a range of starting ages.
- 4.8 The calculations have had regard to the actual Table of factors in use at the time of commencement of the offsetting process. In some cases the applicable factors generated fixed offset amounts (1975 and 1980), while

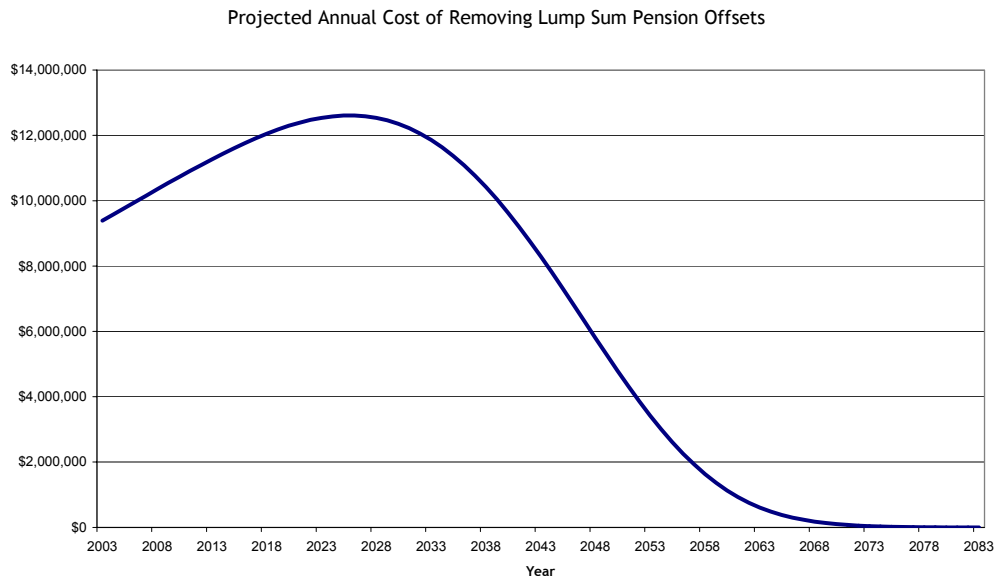
in other cases the factors generated offset amounts that were intended to be increased in line with CPI. Where offset amounts were intended to be indexed in line with the CPI, we have used actual historical CPI up to June 2003.

<b>Accumulated Repayments to June 2003 based on a lump sum of \$1,000</b>						
<b>Age at commencement</b>	<b>Year of commencement</b>					
	<b>1975</b>	<b>1980</b>	<b>1985</b>	<b>1990</b>	<b>1995</b>	<b>2000</b>
<b>30</b>	\$6,199	\$7,467	\$2,602	\$1,082	\$517	\$189
<b>40</b>	\$7,147	\$7,934	\$2,999	\$1,236	\$586	\$213
<b>50</b>	\$8,763	\$8,892	\$3,678	\$1,504	\$705	\$253
<b>60</b>	\$11,619	\$10,752	\$4,876	\$1,978	\$920	\$328
<b>Accumulated lump sum</b>	\$15,521	\$9,726	\$5,060	\$2,754	\$1,704	\$1,193

- 4.9 The Table shows that by June 2003, only one of the illustrative groups of disability pensioners have had pension offsets which have accumulated to more than the value of the lump sum. For disability pensioners who were aged 60 in 1980 and who are still alive today, the value of accumulated pension offset 'repayments' at June 2003 was \$10,752, compared with an accumulated value of the \$1,000 lump sum of \$9,726.
- 4.10 These results may appear somewhat surprising. The Veterans who gave evidence to the Senate Committee were strongly of the view that in many cases the lump sum had been 'more than paid off'. It is very important to note that interest rates were quite high in the late 70's and throughout the 80's. For example, \$1,000 invested at the long term bond rate in 1975 would have grown to over \$15,000 today. Veterans who had the use of their lump sums in the late 70's and 80's stood to benefit from the high interest rate environment at the time.
- 4.11 The results for pensions commencing in 1975 may look a little counter intuitive when compared to the results for pensions commencing in 1980. The Table of factors in use in 1975 was based on an interest rate of 6%. The 1980 Tables, on the other hand, were based on 9% (which was closer to the prevailing interest rate environment). The pension offset from the 6% tables was lower than the offset from the 9% tables. As a result, veterans whose pension offsets were calculated using the 6% tables have less accumulated 'repayments' than veterans whose pension offsets were calculated using the 9% tables, even though they have had their pensions reduced for 5 years longer. Linking pension offsets to CPI results in a more durable system.

## 5 The Present value of pension offsets

- 5.1 DVA data provided to us showed 7,324 disability pensioners who are currently in receipt of a reduced pension, where the reduction relates to a lump sum paid under the SRCA.
- 5.2 The total fortnightly amount of pension offsets (for SRCA lump sums) is about \$360,000 (after judgemental adjustment to the data, limiting fortnightly adjustments to \$300). This is about \$9.4m per year. This means that if all reduced pensions were immediately restored to full value, the cost would be over \$350,000 per fortnight, or over \$9m in the first year.
- 5.3 The graph below illustrates the annual cost of immediately ceasing the lump sum offsets for this group of 7,324 disability pensioners (no new pensioners included). The projections are based on an assumed average CPI-indexation increase of 2.5% pa and that mortality of disability pensioners will be in line with Australian Life Tables 1995-97 (Males).



- 5.4 The graph shows the annual cost increasing (in nominal dollars) until the middle of the 2020's and then decreasing after that as the population of disability pensioners dies.
- 5.5 Based on the adjusted data, the present value of the total cost, assuming a discount rate of 5.5% per annum, is estimated at about \$194m. The data adjustments described in paragraph 3.5 were entirely judgemental. There are likely to be some residual data errors. However, despite this, we regard it as reasonably likely that the true liability is at least of the order of \$150m.

## 6 Loan model

- 6.1 The model used for offsetting is referred to as an actuarial model. Under the actuarial model, the disability pension is reduced by an amount which is actuarially equivalent to the lump sum. If the lump sum is big enough, no disability pension is payable.
- 6.2 Under the actuarial model, pension offsets apply for the life of the veteran.
- 6.3 The actuarial model is prospective in nature. That is, valuation equivalence holds at the time of commencement of the offsetting process. At the time of the commencement of the offsetting process, the actuarial value of future offset amounts equals the value of the lump sum which is being offset.
- 6.4 A natural consequence of the actuarial model is that valuation equivalence does not hold after commencement. The assumptions underpinning the actuarial model (both economic and demographic) will not be borne out in practice for an individual. Individuals will live for longer or shorter than assumed. Interest rates and CPI growth will not be exactly the same as assumed. Therefore, the actual hindsight value of the offsets in any individual case will be different from the lump sum. This feature of the model is not a flaw, but it has led to perceived inequities.
- 6.5 As a result of this the Senate Committee has expressed a desire to examine the feasibility of a loan model alternative to the actuarial model.
- 6.6 In developing the framework for a possible loan model, we have assumed that the underlying principles of the model should be the same as the actuarial model, namely that the loan model should ensure that:
- ◇ Claimants are not compensated twice for the same disability; but at the same time
  - ◇ Claimants receive compensation benefits equal in value to the benefits payable under the more generous of the two regimes.
- 6.7 Given these constraints, then the formulation which works most practically is one where:
- ◇ At the time of commencement of the offsetting process, the relevant part of the disability pension is set to zero (ie fully offset); and
  - ◇ When the loan is ‘fully repaid’ including an appropriate allowance for interest, the disability pension is restored to full value for the rest of the veteran’s life.

- 6.8 The relevant part of the disability pension is that part which is deemed to correspond to the disability which was compensated by a lump sum under the SRCA.
- 6.9 Therefore, a veteran would never receive a 'partial' pension for the relevant disability. A veteran would always receive either a 'full' pension or no pension for that disability.
- 6.10 Under this approach, the veteran receives for the disability:
- ◇ The lump sum, plus
  - ◇ Any disability pension which is payable after the lump sum 'loan' has been fully discharged.
- 6.11 Importantly, under this approach, a different interpretation of the underlying principles applies:
- ◇ The actuarial model tests relative benefit generosity and makes the necessary adjustments on a prospective basis (ie at the time of commencement); but
  - ◇ The loan model tests benefit generosity and makes the necessary adjustments on a retrospective basis (ie only if all of the lump sum is 'repaid').
- 6.12 It is important to note that the loan model would cost the Commonwealth more than the actuarial model.
- 6.13 We very roughly estimate that the loan model would cost the Commonwealth about 5-10% more than the actuarial model.

**Example**

- 6.14 The following example illustrates this formulation of the loan model.  
 Male veteran aged 35 yrs  
 lump sum = \$35,000  
 disability pension at 20% of the General Rate (\$57.08 pfn)
- 6.15 The actuarial value of the pension is \$35,245 while the lump sum is \$35,000. Therefore, under the actuarial model, the disability pension would be almost completely offset. The value of benefits paid under the actuarial model is close to \$35,000.
- 6.16 Now, the table below shows the 'repayment' schedule under the loan model.

Age	Balance Brought Fwrd	Interest	Repayment	Balance Carried Fwrd
35	\$35,000.00	\$1,883.53	\$1,507.83	\$35,375.70
36	\$35,375.70	\$1,903.16	\$1,545.53	\$35,733.34
37	\$35,733.34	\$1,921.77	\$1,584.17	\$36,070.94
38	\$36,070.94	\$1,939.25	\$1,623.77	\$36,386.42
39	\$36,386.42	\$1,955.48	\$1,664.36	\$36,677.53
40	\$36,677.53	\$1,970.35	\$1,705.97	\$36,941.91
41	\$36,941.91	\$1,983.72	\$1,748.62	\$37,177.00
42	\$37,177.00	\$1,995.45	\$1,792.34	\$37,380.11
43	\$37,380.11	\$2,005.38	\$1,837.15	\$37,548.35
44	\$37,548.35	\$2,013.37	\$1,883.08	\$37,678.65
45	\$37,678.65	\$2,019.25	\$1,930.15	\$37,767.74
46	\$37,767.74	\$2,022.82	\$1,978.41	\$37,812.15
47	\$37,812.15	\$2,023.90	\$2,027.87	\$37,808.19
48	\$37,808.19	\$2,022.29	\$2,078.56	\$37,751.91
49	\$37,751.91	\$2,017.77	\$2,130.53	\$37,639.15
50	\$37,639.15	\$2,010.10	\$2,183.79	\$37,465.46
51	\$37,465.46	\$1,999.04	\$2,238.39	\$37,226.12
52	\$37,226.12	\$1,984.34	\$2,294.35	\$36,916.12
53	\$36,916.12	\$1,965.71	\$2,351.70	\$36,530.13
54	\$36,530.13	\$1,942.87	\$2,410.50	\$36,062.50
55	\$36,062.50	\$1,915.49	\$2,470.76	\$35,507.23
56	\$35,507.23	\$1,883.25	\$2,532.53	\$34,857.96
57	\$34,857.96	\$1,845.80	\$2,595.84	\$34,107.92
58	\$34,107.92	\$1,802.77	\$2,660.74	\$33,249.94
59	\$33,249.94	\$1,753.75	\$2,727.26	\$32,276.44
60	\$32,276.44	\$1,698.33	\$2,795.44	\$31,179.33
61	\$31,179.33	\$1,636.07	\$2,865.32	\$29,950.07
62	\$29,950.07	\$1,566.49	\$2,936.96	\$28,579.60
63	\$28,579.60	\$1,489.09	\$3,010.38	\$27,058.32
64	\$27,058.32	\$1,403.35	\$3,085.64	\$25,376.03
65	\$25,376.03	\$1,308.71	\$3,162.78	\$23,521.95
66	\$23,521.95	\$1,204.56	\$3,241.85	\$21,484.66
67	\$21,484.66	\$1,090.28	\$3,322.90	\$19,252.04
68	\$19,252.04	\$965.20	\$3,405.97	\$16,811.27
69	\$16,811.27	\$828.61	\$3,491.12	\$14,148.77
70	\$14,148.77	\$679.78	\$3,578.40	\$11,250.15
71	\$11,250.15	\$517.89	\$3,667.86	\$8,100.19
72	\$8,100.19	\$342.12	\$3,759.55	\$4,682.76
73	\$4,682.76	\$151.58	\$3,853.54	\$980.79

6.17 The loan is repaid by age 73. At this point the disability pension would be restored to full value. That is, under the loan model, provided the veteran lives long enough, he will receive some disability pension. It can be seen therefore that there will be a greater cost to the Commonwealth under the loan model than under the actuarial model.

6.18 Under the loan model, the expected value of benefits is the lump sum plus the value of any pension payments which are (expected to be) paid after the loan has been repaid. This is a present value of \$35,000 plus \$3,035 at the commencement of the pension. That is, the loan model costs the

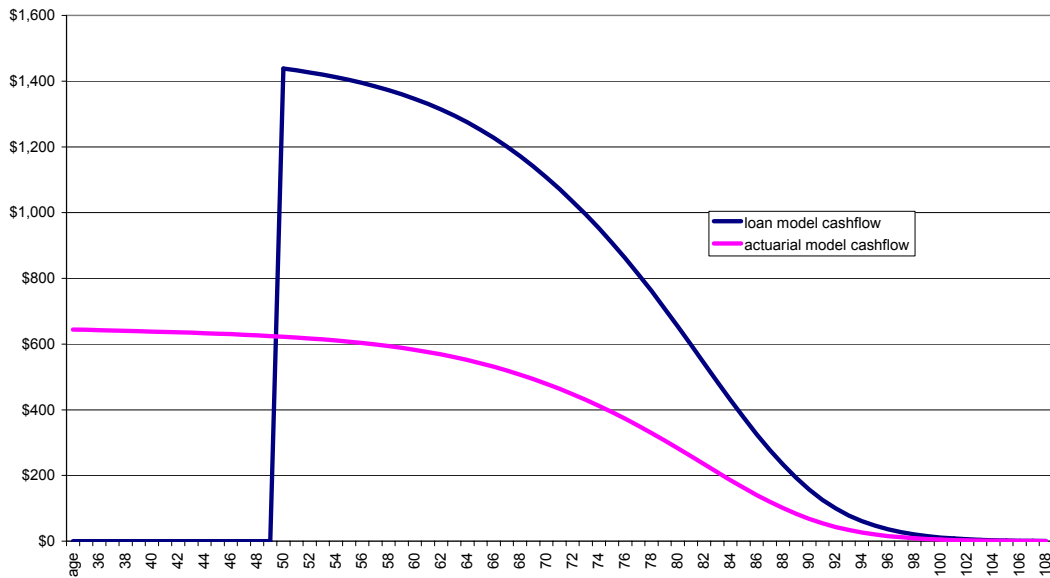
Commonwealth about 8% more than the actuarial model (value of benefits = \$35,245).

- 6.19 If the lump sum were \$20,000 instead of \$35,000 but the other details were the same, then the value of the benefits under the actuarial model is still \$35,245 (the greater of the lump sum and the pension). Under the loan model, the value is \$20,000 plus \$17,767 = \$37,767 or about 7% more than under the actuarial model. (\$17,767 represents the value of disability pension expected to be received after the loan has been paid off - this is a lot higher in this case because the loan is expected to be repaid faster.)
- 6.20 The Table below shows the 'repayment schedule' if the lump sum is \$20,000.

Age	Balance Brought Fwrd	Interest	Repayment	Balance Carried Fwrd
35	\$20,000.00	\$1,058.53	\$1,507.83	\$19,550.70
36	\$19,550.70	\$1,032.79	\$1,545.53	\$19,037.96
37	\$19,037.96	\$1,003.52	\$1,584.17	\$18,457.32
38	\$18,457.32	\$970.50	\$1,623.77	\$17,804.05
39	\$17,804.05	\$933.45	\$1,664.36	\$17,073.13
40	\$17,073.13	\$892.11	\$1,705.97	\$16,259.27
41	\$16,259.27	\$846.17	\$1,748.62	\$15,356.82
42	\$15,356.82	\$795.34	\$1,792.34	\$14,359.81
43	\$14,359.81	\$739.27	\$1,837.15	\$13,261.93
44	\$13,261.93	\$677.62	\$1,883.08	\$12,056.48
45	\$12,056.48	\$610.03	\$1,930.15	\$10,736.35
46	\$10,736.35	\$536.09	\$1,978.41	\$9,294.04
47	\$9,294.04	\$455.41	\$2,027.87	\$7,721.58
48	\$7,721.58	\$367.53	\$2,078.56	\$6,010.54
49	\$6,010.54	\$271.99	\$2,130.53	\$4,152.00
50	\$4,152.00	\$168.31	\$2,183.79	\$2,136.52
51	\$2,136.52	\$55.95	\$2,238.39	-\$45.91

- 6.21 The lump sum is repaid in just less than 17 years. After that the disability pension becomes payable at the full 20% rate for the remainder of the veteran's life.
- 6.22 The Graph below compares the expected pension cashflows under the two models (in constant CPI dollars) in the example where the lump sum is \$20,000.

pension cashflow comparison



- 6.23 Under the actuarial model, the pension cashflow is smooth over time. Under the loan model, pension cashflow is zero for the first seventeen years (while the loan is repaid), and then reverts to the full value. The curves are probability weighted. That is, they represent expected cashflows, allowing for mortality.
- 6.24 Under the loan model, long-livers do better than they do under the actuarial model and short-livers do worse than they do under the actuarial model. Overall, there would be an additional cost to the Commonwealth under the loan model of about 5-10% of the cost of the actuarial model.
- 6.25 A final example may help to further explain why the loan model is more expensive for the Commonwealth than the actuarial model.
- 6.26 Suppose a veteran is entitled to a lump sum and a disability pension, but the lump sum is larger than the value of the disability pension.

Under the actuarial model, the pension would be fully offset. That is, no disability pension would ever be payable. It is clear that the only benefit which will ever be paid under the actuarial model is the lump sum.

However, under the loan model, provided that the veteran lives long enough, he will receive some disability pension as well as the lump sum.

Thus, whilst under the actuarial model, the only benefit which is paid is the lump sum, under the loan model the lump sum is certainly paid and some disability pension may also be paid.



It is clear that the loan model is more expensive than the actuarial model in this case.

In the case where the actuarial value of the pension is higher than the lump sum, the loan model is also more expensive, although it is not as intuitive.

As stated above, we estimate that this formulation of the loan model would be roughly 5-10% more expensive than the actuarial model.

***Partial offsetting in a loan model***

- 6.27 Under any other approach, (ie partial offsetting instead of full offsetting until repayment), the cost to the Commonwealth would be higher (assuming no recovery from estates).

***No-cost loan models***

- 6.28 To implement a no-cost loan model, a complex (and unpopular) recovery system would be needed. Under such a recovery system, the Commonwealth would recover 'unpaid' amounts from estates in cases of 'premature' death. Such a model would be difficult to design, probably very cumbersome to administer, and would be very unpopular in (the possibly 25% or so of) cases where recoveries were required.

Peter Martin  
Australian Government Actuary  
September 2003