SUBMISSION TO THE STRATEGIC REVIEW OF THE PENSIONS' INCOME AND ASSETS TESTS

FROM PHIL GALLAGHER, DIRECTOR OF THE RETIREMENT INCOME MODELLING TASK FORCE*

ANALYSIS OF THE INSTITUTE OF ACTUARIES' PROPOSALS FOR REFORM OF THE RETIREMENT INCOME SYSTEM

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BACKGROUND

The Government announced its intention to set up the Retirement Income Modelling Task Force (RIM) in May 1992. The joint press release from the Treasurer, the Minister for Finance and the Minister for Social Security stated the purpose of the Task Force as:

> " *The Task Force will model the impact of retirement income policies over the next half century. It will address key issues, including the implications of the Government's policies for the age pension system as well as for the level of retirement savings - by individual household categories and in aggregate - and for the distribution of retirement income benefits.* "

The *Proposed Retirement Incomes Strategy* from the Institute of Actuaries of Australia (1994a) is a major proposal which has attracted a good deal of public interest and has been subjected to quantitative analysis by groups containing members of the Institute (eg Atkinson, Creedy, Haberecht and Knox (1994)), and by the Institute of Actuaries of Australia (1994b). Much of the Institute's analysis has been based upon the National Mutual Retirement Income Policy (RIP) Model as enhanced by the RIM Task Force.

Given the public interest in the Institute's proposals and the Review's discussion of them on pp106-116 of *Questions of Balance* (Barber, Moon and Doolan 1994), it seemed appropriate for me to pass on my views on the use of the RIP model to analyse the IAA's proposals and to raise some concerns with you about the cost to government of the proposals and about their equity based on analysis using the RIM Task Force's current lifecycle model for individuals and couples, INDMOD.

Analysis of the Institute of Actuaries Proposals Using the RIP Model

The National Mutual Retirement Income Policy Model is the best existing Australian model of the accumulation of superannuation by the working population. However, it does have several limitations which have led the Task Force to begin the complex and expensive task of building a replacement model, RIMGROUP. These limitations are:

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- RIP does not have an assets or income distribution for people already retired at the start of the model's simulations. The model creates an income stream record only in the year of retirement. All persons retired at the start of the model receive a full age pension. **Therefore RIP without modification cannot accurately cost short term changes to pensions which mostly affect those already retired (as in the universal pension proposal).** RIP is suitable for modelling the effects of different policies for those not yet retired (such as the SGC) and could be used to model a universal age pension introduced after 2015.

- RIP allocates early retirees a full pension when they reach pensionable age and those retiring at age pension age are 'pooled' together with others who have received superannuation and are in the same income band to become part rate pensioners. This means that the RIP model cannot estimate the number of full or part rate age pensioners nor the number of retirees who are not pensioners. This pooling makes the checking of age pension costings more difficult.

- RIP does not model social security payments other than age pension payments and as a consequence does not model the additional costs to other payments of options such as raising the age pension age of women. I understand that the Department of Social Security has estimated that 80% of the women affected by any increase in age pension age would become entitled to other social security payments. Without adjustment, the RIP model greatly overstates short term savings from options such as changes in women's age pension age.

- RIP does not separate its superannuation accumulations on the basis of income. The model combines high and low accumulations of superannuation each year. This averaging can 'pool' away some of the differences between retirement incomes which may be important for costing changes to income and asset tests. The averaging can also affect estimates concerning excessive retirement benefits and tax expenditures. The original National Mutual Model had a four point benefits distribution to deal with this problem and the RIM Task Force has developed an 11 point distribution of benefits.

- The RIP model does not estimate the balance of funds used for retirement payments (such as amounts in pension and annuity funds or in other savings accounts) with the effect that it understates the national savings impact of policies which discourage lump sums and which encourage retirement income streams (as proposed by the Institute of Actuaries).

Implications of the RIP Model Limitations for the Costings of the IAA Proposals

We are not aware of any significant changes which National Mutual or members of the Institute of Actuaries have made to the RIP model to correct these limitations in the retirement phase of the model. We understand that some minor changes to taxation code may have been made.

Of the above points, the most important is the fact that the RIP model does not have income for the existing retired, who are modelled as full-rate pensioners. Dr George Rothman of the RIM Task Force has examined the cost estimates of a universal age pension using the RIP model. His report to me says " *a recent run which I have done compares pension costs with the pension income and assets tests turned off and otherwise identical assumptions. The impact at the beginning of the run is an almost negligible less than 1% rising to about 19% at the end of the run, whereas back of the envelope calculations of the **initial impact** suggest up to 30% additional cost."* If the model worked properly when analysing a universal age pension, it would show an increase in pensions for the aged of about $4.2 billion, or 30% of the $14.2 billion now spent on Age and Service pensions.

In fact it only shows a 1% increase initially and the increase in any year does not reach the actual cost impact.

The costings as outlined by the Institute in its *Supplementary Submission to The Senate Select Committee on Superannuation* (1994b) show the pattern of cost differences which would arise from existing retirees having no income or assets but future retirees having some. The graphs do not show a large increase in expenditure from the introduction of a universal age pension in the short term, but they do show an increase in later years when the model contains more part rate pensioners. Instead, the graphs show a large decrease in expenditure as the age pension age for women is phased in more rapidly than in the Government's legislation. Atkinson, Creedy, Haberecht and Knox (see Figure 2, 1994) show that the estimated savings from the Actuaries' proposals disappear if women's age pension age is held constant.

In order to reduce the total budgetary impact of a universal age pension, the Institute proposes a number of tax measures. The Institute has stressed that its proposal would lead to greater overall taxation of benefits and far more stringent taxation of 'non-approved' benefits (pensions over 50% of final salary) and lump sums. Given the low existing average levels of superannuation accumulations (see Brown, 1994), it seems unlikely that the Institute's proposals would yield tax revenues approximating the $3 billion estimate cited on page 116 of *Questions of Balance* (Barber, Moon and Doolan, 1994). Estimates of the savings in tax expenditures from stopping the phase in of the SGC at 6% do not approach these levels. The Institute does not propose increasing the taxation of contributions or earnings of superannuation funds. In fact, the Institute proposes a 16.4% tax rebate for personal contributions - an increase in tax expenditures.

What Can be Said About Aggregate Effects at This Stage

I believe that a full aggregate analysis of the Institute of Actuaries proposal would require the use of the still to be completed RIMGROUP model combined with some macroeconomic modelling. Previous modelling using RIP suggests a significant decrease in superannuation related national financial savings if the SGC is frozen at 6% from 1996:

- by the year 2000, about 2 1/2 billion dollars of national savings (measured in today's dollars) would be lost;

- by the year 2003, about 9 1/2 billion dollars of national savings would be lost;

- by the year 2003 this loss is estimated at $3 billion each year.

If the SGC were frozen, it is a common view that the lower growth in employer contributions would be offset by an equal increase in other forms of remuneration. The impact on the cost of labour to employers (as measured by the National Accounts average earnings) would probably be minimal. The Economic Division of Treasury has advised me that macroeconomic modelling of the impacts on activity, interest rates, inflation, the current account deficit and unemployment would require (as input) RIM estimates of the effects of the change on consumption, government outlays and taxation.

Of course, any aggregate modelling of the IAA proposals would require sensitivity testing to a wide range of behavioural changes sought by the policy (such as changes in personal contributions and in the purchase of retirement income streams).

Although we are unable to model the aggregate consequences of the IAA proposal at this stage, I have conducted a hypothetical lifecycle analysis which raises some interesting questions concerning the cost to government and the equity of the proposals.

Initial Hypothetical Modelling of the IAA Retirement Incomes Proposals

The effects of the Institute of Actuaries proposal on a range of hypothetical males with full working lives have been analysed by Atkinson, Creedy, Haberecht and Knox (1994). This analysis concentrated on the effects of the proposal on lifetime income differences as measured by Gini coefficients and similar measures. The conclusion was that inequality in the distribution of lifetime income was reduced by the proposal. The policy factors which contributed to this reduction were not demonstrated.

The analysis which follows differs significantly from that of Atkinson, Creedy, Haberecht and Knox. It uses the RIM hypothetical lifecycle model INDMOD to examine the effects of the proposals on 6 hypothetical baby boomer couples retiring in 2014/15. This retirement date was chosen because it is a period when the Institute of Actuaries' estimates significant savings from its proposals. These 6 couples have the same labour force participation and superannuation characteristics, namely:

- The wife does not work from 25-34 and only works half time between the ages of 35 and 40. The husband works full-time from age 25 to 64.

- When both partners are working full-time they have identical incomes.

- Both partners are eligible for 3% award contributions from 1986/87 and minimum SGC contributions from 1992/93. Both make member contributions of 1% of salary in 1997/98, 2% in 1998/99 and 3% thereafter. The members' contributions are encouraged in the IAA scheme and the government has reaffirmed its commitment to require member contributions under the SGC at a suitable time.

- On retirement both partners use 75% of their final benefit to buy a rollover annuity. Half of the remaining lump sum is invested.

The 6 couples have full-time salaries for both partners of 50%, 67% 100%, 150%, 200% and 300% of AWE. The exact levels of these incomes are not important in drawing conclusions about the cost to government and equity of the IAA proposals.

All the major features of the IAA proposal are modelled, including the universal age pension at 25% of AWOTE (rather than 25% of AWE), the capping of SGC employer contributions at 6%, the 16.4% rebate for personal contributions, the change in women's age pension age and the change in the methods of lump sum and ETP taxation. Behavioural differences between the policies have not been included because these effects are far from certain for the bulk of the population and because the couples would no longer be comparable.

The main economic parameters for the steady state projections beyond 1994/95 are CPI growth of 3% per year, wages growth of 4% per year, a bond rate of 6% per year and an accumulation fund earnings rate of 7% per year. The margins between these parameters are considered conservative. Higher real earnings rates by superannuation funds will give much higher final benefits. In both policy scenarios, wages are decreased by any increase in employer SGC contributions. In estimating

tax concessions, it is assumed that 50% of any counterfactual increase in disposable income would be saved. The importance of this parameter is explained in Brown (1993).

Results of Hypothetical Analysis

The results of the analysis are summarised at Attachment A.

The effect of the IAA's proposal to cap the SGC at 6% is to reduce final benefits for the couples modelled. This is demonstrated in Graph 1.
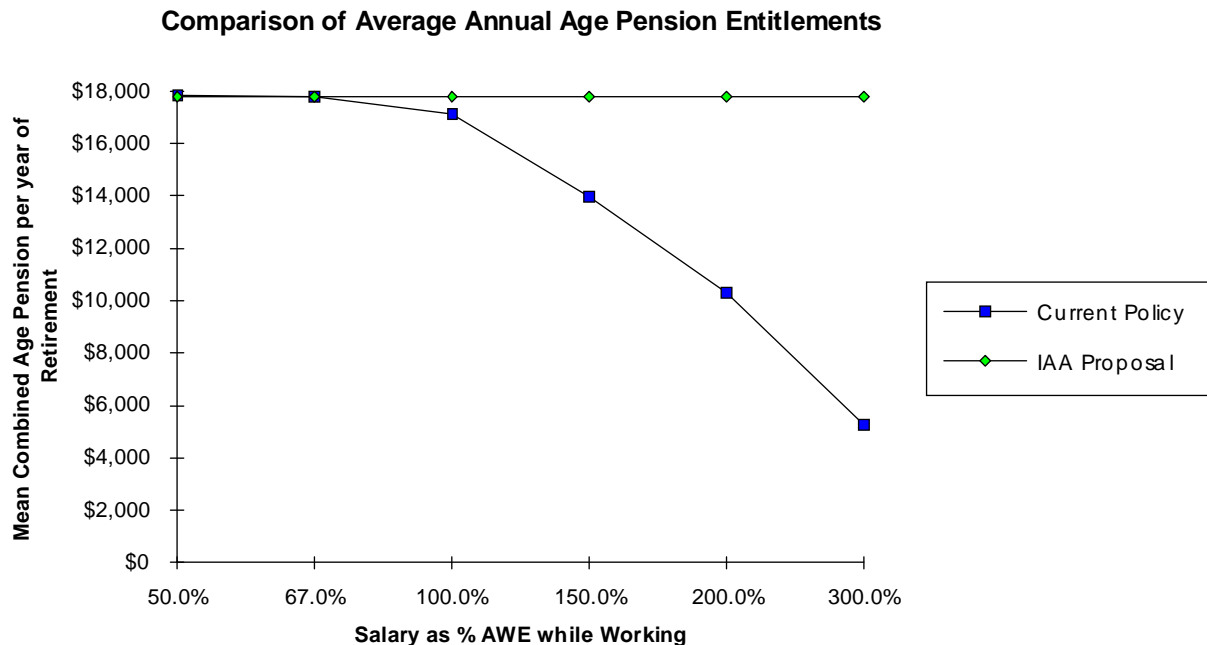
GRAPH 1:

COMPARISON OF FINAL BENEFITS

The reduced final benefit reduces private income from annuity payments and investment income. The differences are demonstrated in Graph 2.

GRAPH 2:

Mean Annuity & Interest Income per year ($1993)
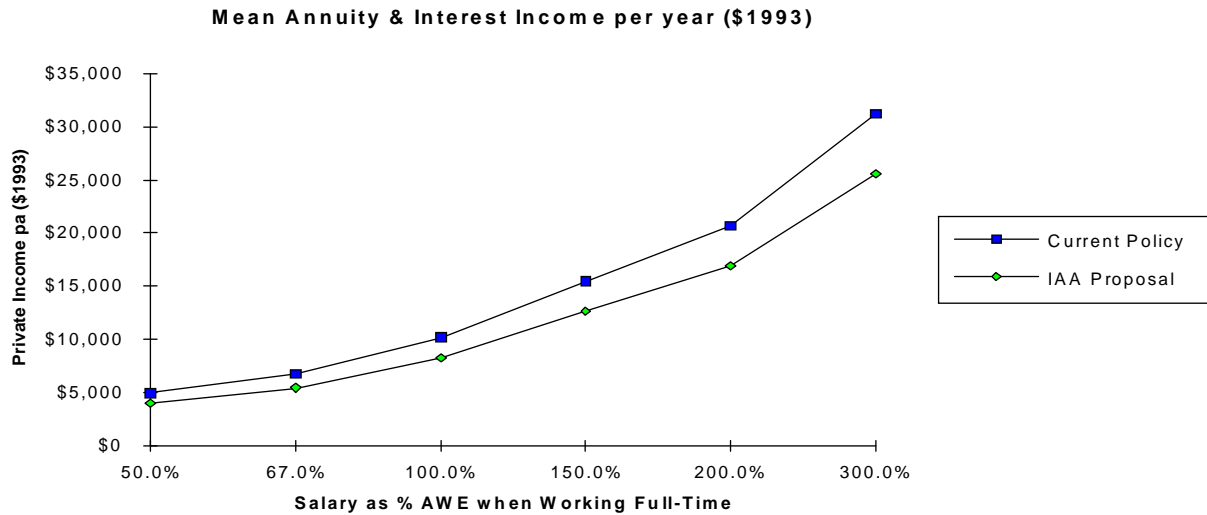
The differences in real age pensions for the couples are shown in Graph 3. The effect of the universal age pension is clear.

GRAPH 3

Comparison of Average Annual Age Pension Entitlements


The net result of the lower private income but the higher age pension in the IAA proposal is to produce lower incomes for the couples earning less than 100% of AWE but higher incomes for the couples whose wage rate was AWE or above (see Graph 4). The couples who earned 3 times AWE each (over $200,000 pa now combined) get a rise in retirement income of almost $6000 per year

from the IAA proposal. The couple with a wage rate of 50% of AWE (about $33,000 now combined) lose almost $1000 per year of retirement because their pension is lower (25% of AWOTE not AWE) and because their retirement benefit is reduced by capping employer SGC contributions at 6% of salary.
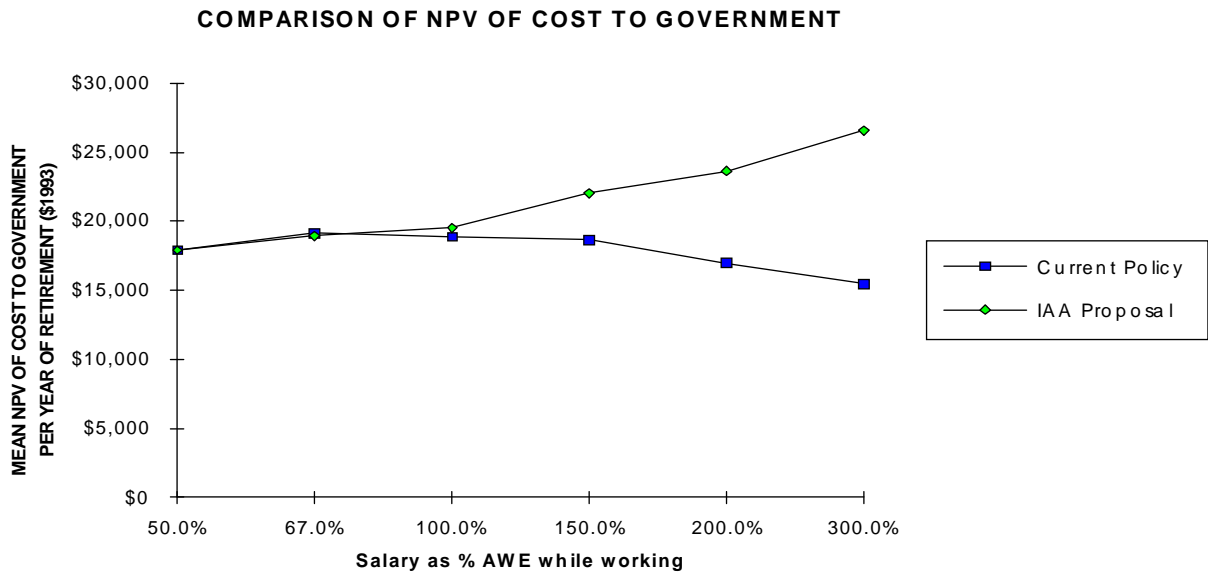
GRAPH 4

Comparison of Average Net Retirement Income (pa)
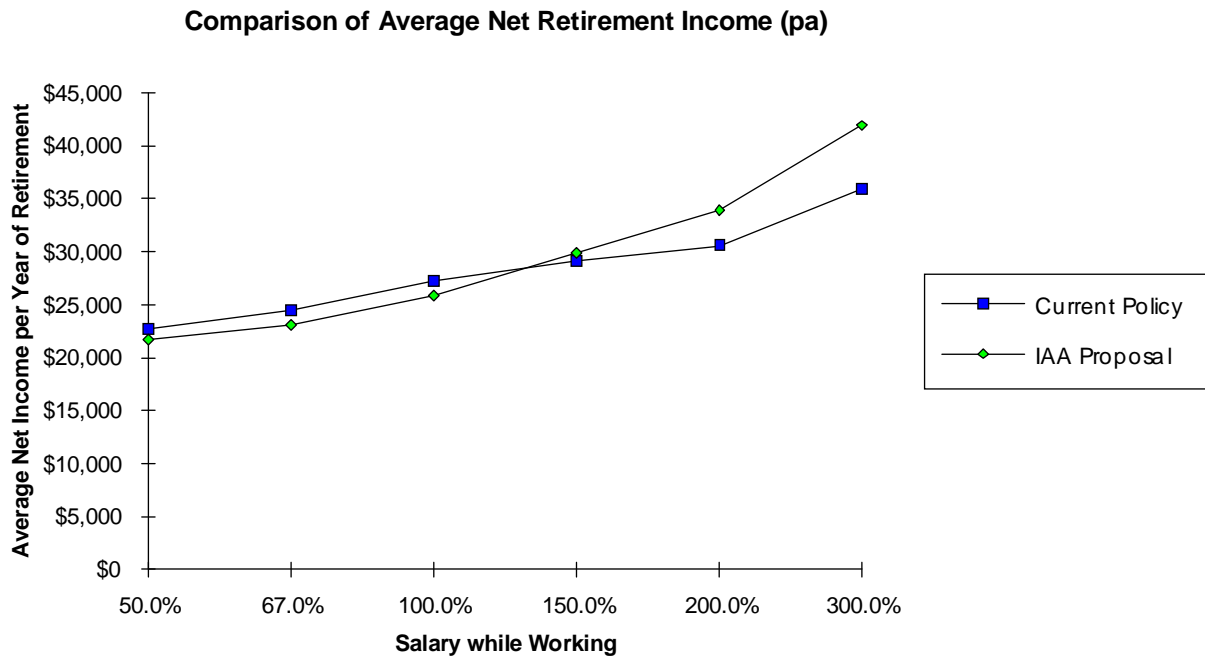
The tax expenditures from the IAA proposal do not differ appreciably from those in the current system (see Attachment A). The tax paid in retirement in the IAA proposal is higher (see Attachment A), but this is insufficient to recoup the higher age pension. The much higher pension cost in the IAA proposal for couples with a wage rate of AWE or above leads the IAA proposal to have a significantly greater cost to government for "self funded retirees". This effect is demonstrated in Graph 5. Although this is not a costing of the proposal, it does suggest that the IAA proposal is not fully funded.

Graph 4 of the current hypothetical analysis suggests that the IAA proposal may be regressive when measured in terms of total incomes in retirement. Graph 6 demonstrates that the proposal may also be less progressive in replacement rate terms. Those on lower incomes while working (below 150% of AWE) have real disposable incomes in retirement which are a lower percentage of their real pre-retirement disposable incomes. This is only partly due to the capping of the SGC at 6% giving higher wage rises in the IAA policy scenario. The lower age pension rate also contributes. Those on higher incomes have a higher replacement rate in the IAA scenario because the value of the universal age pension greatly exceeds the increased taxation in retirement.

GRAPH 5

COMPARISON OF NPV OF COST TO GOVERNMENT

Note: NPV stands for Net Present Value

GRAPH 6

Comparison of Net Replacement Incomes
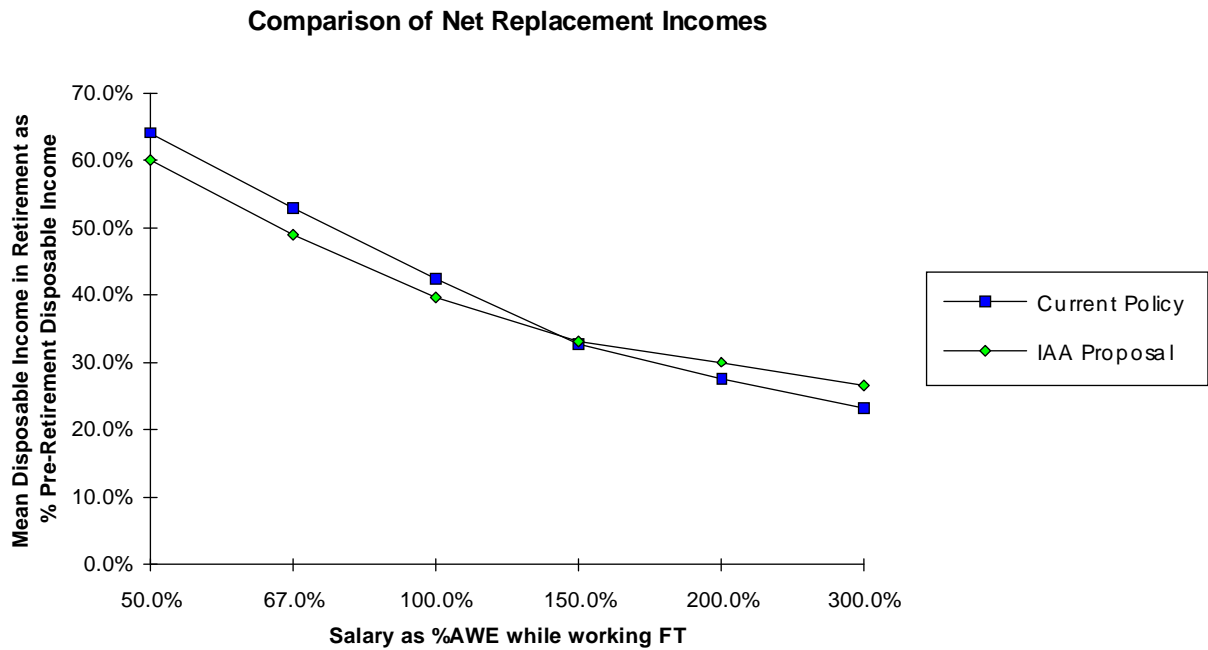
Conclusions from Initial INDMOD Analysis of the IAA Retirement Income Proposals

An analysis of six hypothetical couples is not a full analysis of the winners and losers from a policy proposal and is by no means a costing. The initial analysis presented above is suggestive rather than conclusive. However, the hypothetical analysis does demonstrate the interaction of the key policy features and the relative magnitude of their effects. The initial suggestions are that the Institute of Actuaries' proposals for reform of the retirement income system could be regressive for the retired because the proposals could give more in age pension increases to high income earners than is recouped through taxation. The cost to government for those earning over AWE is significantly higher for the IAA proposals while costs to government for couples earning up to AWE appear similar for both systems. This suggests that the IAA proposals are likely to be significantly more expensive overall.

The suggestion that the IAA proposals could be more expensive and more regressive than the existing retirement income system accords with common sense. However, I hope to present additional hypothetical analysis in a supplementary submission to the Review if time permits. Unfortunately RIMGROUP will not be ready in time for a definitive analysis to be presented to the Strategic Review of the Pension Income and Assets Tests.

THE BROADER QUESTIONS

The interest in the possibility of a universal age pension extends beyond the particular proposals developed by the Institute of Actuaries. To pay a universal age pension at current rates would cost $4.2 billion for all persons 65 and over and $5.25 billion in total if women aged 60-64 were also included (according to the latest Department of Social Security costings). These costs would increase as the population ages. It is highly desirable that such a policy change be fully funded. To finance the policy from borrowing would lead to inflation and possibly a worsening of our balance of payments. The higher inflation could significantly reduce the real value of the savings of the aged as well as causing problems in the broader economy.

Policy changes can be funded by either reducing other outlays or by increasing taxation. Analysing the equity of any proposal involves not only looking at who receives a change in Government benefits but also who pays for them. Proposals which attempt to fund greater benefits for the aged by taxing the aged involve issues of **intragenerational equity**. Proposals to fund increased benefits for the aged by higher taxes or reduced benefits for those of working age raise issues of **intergenerational** equity.

The Institute of Actuaries proposal raises issues of both intragenerational and intergenerational equity. The proposals to reduce the maximum rate of pension and to increase taxation on end benefits imply a re-distribution within the aged. The INDMOD results presented above suggest that this redistribution would be from lower income to higher income retirees. It is doubtful that any group believes that the redistribution within the aged implied by any pension reduction option could be satisfactory since both adequacy and equity would be severely compromised.

Any proposal which seeks to replace the existing income and assets tests with tax increases for the aged is unlikely to recoup outlays. In addition to having lower rates of taxation, the taxation system is not adapted to assess the value of non-income producing assets or unrealised capital gains. Income deferral is possibly more likely in the taxation system than under existing income and assets tests.

Over the next decade (or longer) full funding of any proposal for a universal age pension would need to involve tax increases or outlays reductions for the population of working age (or their children). The main taxation options would be an increase in general taxation or a reduction in tax expenditures, with the most frequently nominated tax expenditures being those for superannuation.

Increasing the effective rate of general taxation raises clear issues of intergenerational equity. Current workers are funding the age pensions of the existing retired and also forgoing some wage increase in order to provide for themselves (partially or wholly) in retirement. Many current workers may not be impressed by proposals involving higher taxation rates and/or tax base broadening measures which are used to fund pensions for high income retirees who accumulated their wealth in a period without capital gains taxation, without fringe benefits tax and when tax treatment of superannuation was more concessional.

Reduction of tax expenditures for existing superannuation contributions and earnings is clearly the path favoured by many welfare groups for funding a universal age pension (and other options). Any options developed in this area should take account of the following difficulties:

•   Since 1983, the Government has committed itself to an evolving retirement income policy now based on targeted age pension support, combined with private provision of superannuation under tax-preferred award and SGC arrangements. Given the long term character and growing scale of superannuation saving, there are significant costs associated with any major upheaval in those arrangements.

•   Existing tax expenditures are a cost-effective way for the current working population to fund better incomes for themselves when they retire (see McDiarmid 1994) - removal of all tax expenditures would lower retirement incomes.

•   If tax concessions for superannuation were removed, this would remove one of the major existing incentives for retirement funds to submit to the prudential supervision of the Insurance and Superannuation Commission. The replacement of superannuation with other forms of saving accounts, could possibly threaten the principle of preservation of benefits to age 55 or above. If preservation was no longer enforceable, or enforced, this could significantly reduce the national saving effect which comes from people not being able to spend their superannuation savings until age retirement.

•   The existing Treasury estimates of tax expenditures for superannuation (like most international tax expenditure estimates) are single year estimates of the immediate budgetary impact of removing tax concessions. These estimates use the standard behavioural assumptions that without tax concessions for superannuation, all existing employer contributions would be paid as wages and 100% of any increase in disposable income would be saved and fully taxed at marginal tax rates. In my view these behavioural assumptions would not hold except in the very short term. It is likely that the initial revenue gain from abolishing all concessions would rapidly decline in each successive year because accruals in a fully taxed savings environment would be lower (see Brown, 1993). This could lead to the declining revenue from the abolition of the tax concessions being increasingly insufficient to fund a universal age pension for a rapidly expanding aged population.

- Any system to align tax rates on superannuation contributions and earnings with individual marginal rates cannot be administered solely by superannuation funds because they can not know each member's marginal tax rate. People may have many jobs in a year and/or multiple funds. Only the individual concerned and the Australian Taxation Office (ATO) know an individual's marginal tax rate. Any system of adjusting concessions with members' income would probably need to rely on superannuation funds passing information to both its members and the ATO. The calculation of employer contributions and earnings for individuals in defined benefits funds would be a major problem in itself.

I now firmly believe that the attempts to cost the IAA proposal using the RIP model have been compromised by limitations of that model. My initial hypothetical modelling of the IAA proposal confirms my suspicions about the cost to government and equity of the proposals. I look forward to the completion of RIMGROUP by the Retirement Income Modelling Task Force so that serious proposals such as that of the Actuaries can be adequately analysed. Further hypothetical analysis remains an option at this stage.

Please phone me on 06 263 3945 if you would like to further discuss this submission.

Phil Gallagher
Director
Retirement Income Modelling Task Force

REFERENCES

Atkinson, M; Creedy, J; Haberecht, C; and Knox,D. (1994) *the Cost and Equity Implications of the Institute of Actuaries of Australia Proposed Retirement Incomes Strategy* Paper Delivered to the Second Colloquium of Superannuation Researchers, Melbourne, July 1994

Barber, J; Moon, G; and Doolan, S (1994) *Questions of Balance: A Discussion Paper Presenting Issues and Options arising from the strategic review of the Pension's Income and Assets Tests* Department of Social Security, July 1994

Brown, C. *Tax Expenditures and Measuring the Long Term Costs and Benefits of Retirement Income Policy,* Retirement Income Modelling Task Force Conference Paper 93/1

Brown, C. *The Distribution of Private sector Superannuation assets by Gender, Age and Salary of Members,* Retirement Income Modelling Task Force Conference Paper 94/2

The Institute of Actuaries of Australia (1994a) *Proposed Retirement Incomes Strategy,* Submission to the Senate Select Committee on Superannuation, March 1994

The Institute of Actuaries of Australia (1994b) *Proposed Retirement Incomes Strategy: Effect on Government Revenue,* Supplementary Submission to the Senate Select Committee on Superannuation, August 1994

McDiarmid, A. (1994) *Taxation of Superannuation and Disposable Income in Retirement,* Retirement Income Modelling Task Force Conference Paper 94/1

COMPARISON OF IAA PROPOSALS AND CURRENT POLICY FOR A COUPLE WITH EMPLOYER SGC CONTRIBUTIONS AND SOME MEMBER CONTRIBUTIONS (a)

	Salaries while Working as % AWE					
	50.0%	**67.0%**	**100.0%**	**150.0%**	**200.0%**	**300.0%**
COMBINED FINAL BENEFIT ($1993)						
Current Policy	$100,813	$137,362	$208,309	$315,806	$423,302	$638,295
IAA Proposal	$86,665	$118,874	$181,398	$276,130	$370,863	$560,328
Mean Annuity and Interest Retirement Income ($1993)						
Current Policy	$4,933	$6,721	$10,190	$15,449	$20,707	$31,222
IAA Proposal	$3,948	$5,417	$8,268	$12,587	$16,905	$25,542
Average Age Pension pa ($1993)						
Current Policy	$17,815	$17,773	$17,109	$13,963	$10,285	$5,271
IAA Proposal	$17,786	$17,786	$17,786	$17,786	$17,786	$17,786
Annual tax paid pa in retirement						
Current Policy	($2)	($20)	($70)	($329)	($411)	($537)
IAA Proposal	($19)	($58)	($132)	($433)	($798)	($1,416)
Average Net Retirement Income pa ($1993)						
Current Policy	$22,745	$24,474	$27,229	$29,083	$30,580	$35,956
IAA Proposal	$21,715	$23,145	$25,922	$29,940	$33,893	$41,911
Average Accrued Tax Expenditures pa ($1993)						
Current Policy	$81	$1,375	$1,846	$5,001	$7,080	$10,739
IAA Proposal	$131	$1,198	$1,876	$4,665	$6,648	$10,194
NPV Accrued Tax Expenditures as % Pre-Retirement Disposable Income						
Current Policy	0.2%	3.0%	2.9%	5.6%	6.4%	7.0%
IAA Proposal	0.4%	2.5%	2.9%	5.2%	5.9%	6.5%
NPV of Cost to Government pa ($1993)						
Current Policy	$17,894	$19,128	$18,885	$18,635	$16,953	$15,473
IAA Proposal	$17,898	$18,927	$19,530	$22,017	$23,636	$26,564
NPV of Cost to Government as % pre-retirement disposable income						
Current Policy	50.4%	41.3%	29.4%	21.0%	15.3%	10.0%
IAA Proposal	49.5%	40.1%	29.9%	24.3%	21.0%	16.9%
Mean Retirement Disposable Income as % Pre-Retirement Disposable Income						
Current Policy	64.1%	52.9%	42.5%	32.8%	27.6%	23.3%
IAA Proposal	60.0%	49.0%	39.6%	33.1%	30.0%	26.7%

(a) Couple have 3% employer award contributions from 1986/87 and minimum SGC contributions from 1992/93.
The IAA proposal does not increase employer contributions beyond 6%, whereas current policy raises them to 9%.
Member contributions are 1% in 1997/98, 2% in 1998/99 and 3% thereafter.
The wife does not work from age 25 to 34 and only works half time between ages 35-40.
The husband works full-time for his entire career.
When working full-time both partners have identical incomes.
Both partners use 75% of their final benefit to buy a rollover annuity. Half of the remaining lump sum is invested.

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AWE increases are reduced by the increase in employer contributions to the SGC
The IAA proposed changes in age pension rates and means tests, women's age pension age are modelled,
as are changes in tax rebates for member contributions, changes in lump sum taxation and in rebates for pensions.

SUPPLEMENTARY SUBMISSION TO THE STRATEGIC REVIEW OF THE PENSIONS' INCOME AND ASSETS TESTS

FROM PHIL GALLAGHER, DIRECTOR OF
THE RETIREMENT INCOME MODELLING TASK FORCE[1]

FURTHER ANALYSIS OF THE INSTITUTE OF ACTUARIES' AND OTHER PROPOSALS FOR REFORM OF THE RETIREMENT INCOME SYSTEM

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BACKGROUND

My original submission to the Strategic Review of the Pension's Income and Assets Test of 16 September:

- explained why the National Mutual Retirement Income Policy model was unsuitable for modelling the universal age pension proposal of the Institute of Actuaries (1994a);

- analysed 6 hypothetical baby boomer couples using the RIM Task Force's model INDMOD[2] showing that:

    - the Institute of Actuaries' (IAA) proposal was possibly regressive, yielding lower retirement incomes to those with lower wages while working, and higher incomes to those on higher wages for the cases modelled, and

    - the IAA proposal did not appear to be self funding, with markedly higher costs to Government for those on higher incomes;

- drew attention to the potentially significant lowering of national financial saving which could come from freezing the SGC at 6%;

and

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[1]The Retirement Income Modelling Task Force is equally sponsored by the Commonwealth Departments of the Treasury, of Finance and of Social Security. The views expressed in this submission are those of the author and do not necessarily reflect the views of the Departments financing RIM

[2]INDMOD is an EXCEL speadsheet model written by Mr Colin Brown of the Retirement Income Modelling Task Force. I would like to acknowledge Mr Brown's contribution to this analysis through his alteration of the taxation of superannuation benefits code of INDMOD to reflect the IAA proposals.

- discussed broader issues arising from budget neutral universal pensions proposals such as intergenerational and intragenerational equity and identified issues for proposals which seek to use the dropping of tax concessions for superannuation as a funding mechanism.

This supplementary submission seeks to complement the initial analysis by:

- giving examples from totally different hypothetical couples;

- further examining the issue of costs to government in retirement incomes analysis; and

- further examining the nature of retirement saving in the absence of tax concessions.

INDMOD Examples From Totally Different Hypothetical Couples

The original submission modelled 6 couples retiring in 2014/15 where:

- the wife did not work from 25-34 and only worked half time between the ages of 35 and 40. The husband works full-time from age 25 to 64;

- when both partners are working full-time they have identical incomes;

- both partners are eligible for 3% award contributions from 1986/87 and minimum SGC contributions from 1992/93;

- on retirement both partners use 75% of their final benefit to buy a rollover annuity with half of the remaining lump sum being invested.

This choice of couples has been subject to criticism because:

- the wife's salary is too high (sic);

- people would generally choose to have lump sums greater than 25% of benefits;

- corporate superannuation schemes are more likely to generate higher taxation revenue under the IAA proposals than SGC/award schemes and this extra tax on final benefits would be a major means of financing the universal age pension;

- a fund earnings margin of 1% above the bond rate is too conservative;

- higher non-superannuation saving and later retirement dates give more scope for SGC superannuation to affect age pension outlays; and

- the new version of the IAA proposal (1994b) does not propose lowering the age pension.

Accordingly, I have now modelled another 6 couples retiring in 2019/20 with the same labour force participation pattern but with different wage differentials, superannuation arrangements and retirement benefit arrangements. The income of the husband's is still 50%, 67% 100%, 150%, 200% and 300% of AWE. The wife's salary is 75% of her husband's when she is working full-time. The husband has continuous generous corporate superannuation from age 25 to 65 with 15% employer

contributions and 5% employee contributions. The wife has 3% award and minimum employer SGC contributions. At retirement, the husband has saved one year's salary in an ordinary savings account. Both partners use 50% of their final benefit to buy an allocated pension. Half of the remaining superannuation is invested. The IAA proposal is modelled with the same age pension rate as under current policy.

All the other major features of the IAA proposal are modelled, including the capping of SGC employer contributions at 6%, the 16.4% rebate for personal contributions, the change in women's age pension age and the change in the methods of lump sum and ETP taxation. Behavioural differences between the policies have not been included because these effects are far from certain for the bulk of the population and because the couples would no longer be comparable.

The main economic parameters for the steady state projections beyond 1994/95 are CPI growth of 3% per year, wages growth of 4% per year, and a bond rate of 6% per year. The accumulation fund earnings rate has been raised by 1% to 8% per year which gives higher final benefits. In both policy scenarios, wages are decreased by any increase in employer SGC contributions. In estimating tax concessions, it is assumed that 50% of any counterfactual increase in disposable income would be saved. The importance of this parameter is explained in Brown (1993) and later in this submission.

The results from this analysis are summarised in tabular form at Attachment A.

In this revised IAA proposal with age pension set to the same rate as under current policy, all couples show higher real disposable incomes in retirement under the IAA proposals (see Graph 1). These higher incomes reflect the fact that the age pension increase is higher than the increase in tax paid for all couples (see Attachment A). If everyone gains, the proposal could not be funded from intragenerational transfers.

GRAPH 1

Comparison of Average Net Retirement Income (pa)
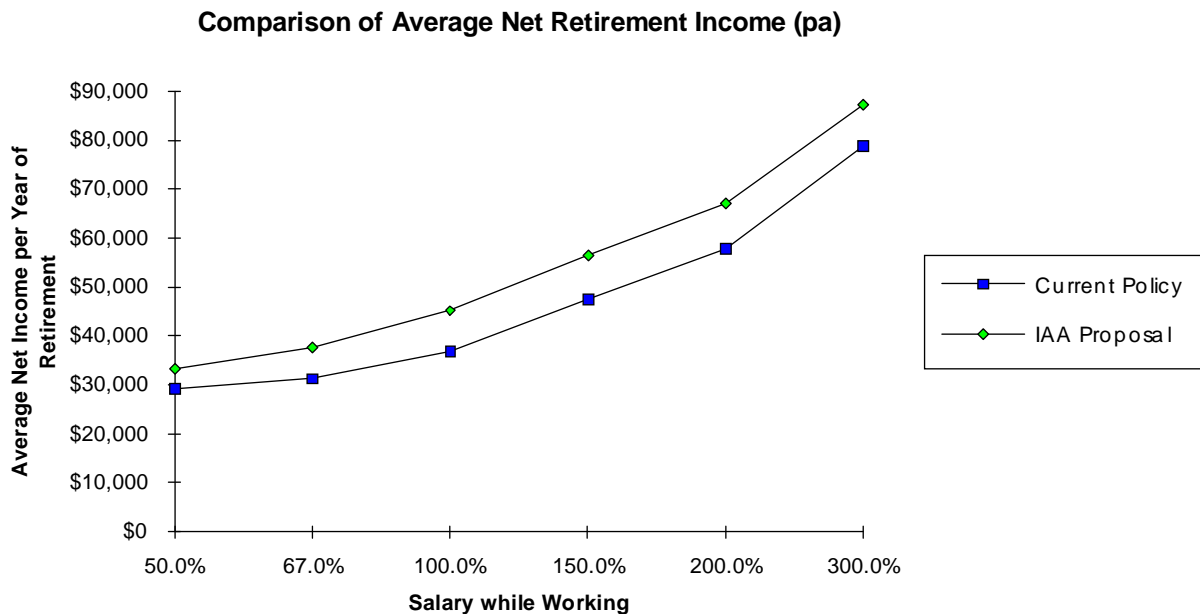
As expected, the IAA proposal shows consistently higher costs to Government (see Graph 2). Graph 2 shows the net present value of all costs to Government evaluated at the retirement year. Surprisingly, the cost for both scenarios decreases with income and for very high income earners is negative. This result is further explained in the next section.

COMPARISON OF NPV OF COST TO GOVERNMENT
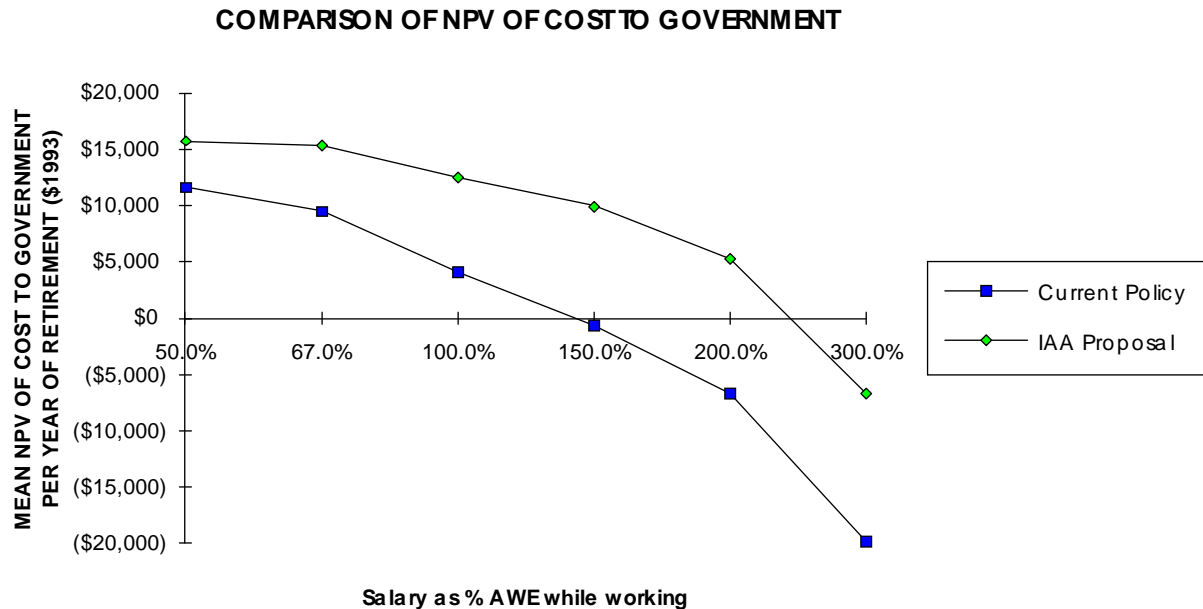
Costs To Government In Retirement Incomes Analysis

There are three major components of costs to Government of retirement income policy - tax concessions on superannuation, savings in age pension outlays and increases in tax paid in retirement. A number of analysts have sought to compare only two of these in analysing retirement income policy, and few have attempted to use an accruals (financial flows) basis for their comparisons (the notable exceptions are Knox, 1991 and Brown, 1993). Many authors (eg Cox, 1994) cite results from ACOSS which showed that people earning three times AWE would receive three times as much in tax concessions as they would if eligible for full age pension. This result fails to include tax payments in retirement and does not have an accruals basis.

Graph 3 shows the results from current policy for each component of the cost to government of retirement income policy for the couples described above. While accrued tax expenditures grow with income, they do not exceed full rate age pension. For example, the couple whose husband earns 3 times AWE and whose wife earns 2.25 times AWE when working full-time have real total accrued tax expenditures of $21,870 per retirement year whereas a full age pension would be $18,217. The gain from the tax expenditures is more than offset by the annual real tax paid per year of retirement of $41,694 and the loss in age pension which has an average value of $21 per year. That is, the net present value of the cost to government of the retirement income policy is <u>negative</u> $19,803. Superannuation and the age pension income test have played the major role in making this high income couple net taxpayers in retirement.

GRAPH 3

CURRENT POLICY: COMPONENTS OF COST TO GOVERNMENT
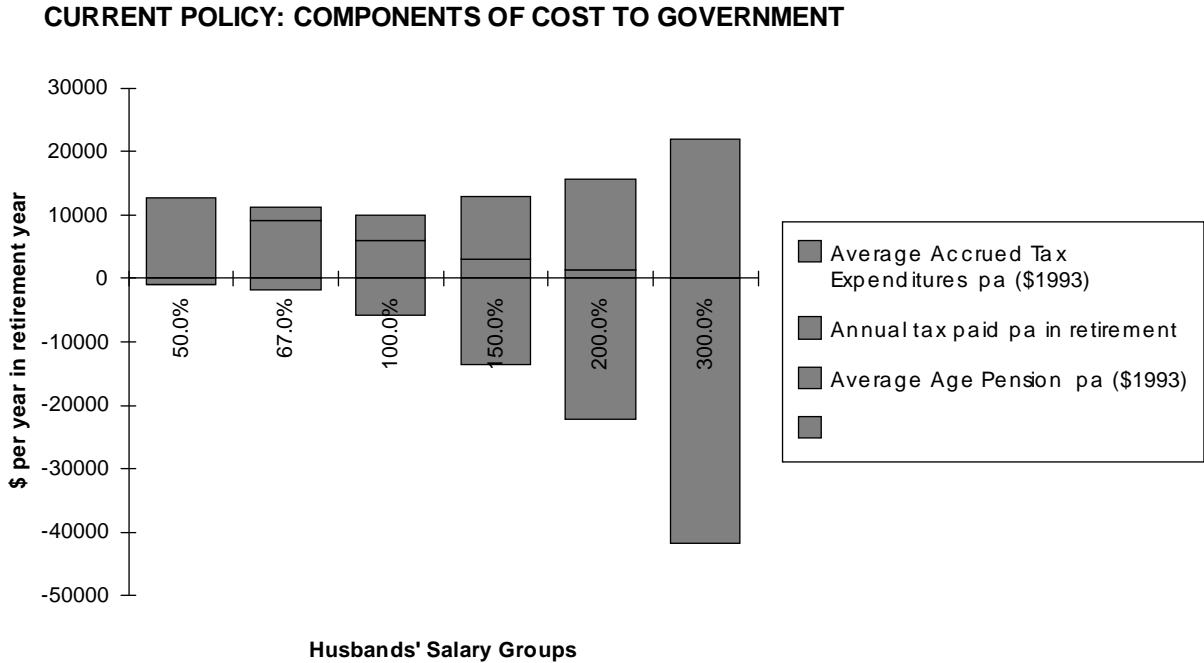
The IAA proposal shows significant increases in age pension outlays, accrued tax expenditures and tax paid during retirement. The couple where the husband earns three times AWE have an age pension of $18,217, accrued tax expenditures per year of retirement of $25,735 and pays income tax in retirement of $50,618 per year. That is, the net present value of the cost to government is negative $6,666 (see Attachment A and Graph 4). For the IAA proposal, unlike current policy for such cases, the cost to Government is substantially positive for the cases where husband's earnings are 150% and 200% of AWE.

GRAPH 4

IAA PROPOSAL; COMPONENTS OF NPV OF COST TO GOVERNMENT

Husband's salary as % AWE

Legend:
- Average Accrued Tax Expenditures pa ($1993)
- Annual tax paid pa in retirement
- Average Age Pension pa ($1993)

Retirement Savings In A World With No Tax Concessions for Superannuation

The Institute of Actuaries' proposal expands rather than restricts tax concessions for superannuation accumulations. Others have suggested that an appropriate way to finance a universal pension is to remove all tax concessions for superannuation. One recent example is Ms Eva Cox, in her recent submission to the Review (1994)(although it is important to note that the Cox paper also advocates other tax and superannuation changes). They argue that the $5.3 billion tax expenditure estimated in the Treasury Tax Expenditure Statement (1993) is sufficient to fund a universal age pension. My previous submission pointed out that the amount of tax revenue which would be gained from abolishing the concessions would decline each year as superannuation funds paid more tax and received less in (after-tax) contributions. The complete removal of tax concessions would also lead to higher age pension payments in the future, although this would be the result of a universal age pension in any case.

The effects of removing all tax concessions can be demonstrated using INDMOD. For convenience I have chosen to model the effect for the six couples used in the preceding analysis. The same effects would be observed in an entirely prospective analysis. The following analysis is not of specific and multi-faceted proposals such as those of Cox. It is an illustrative analysis of the effects of existing tax concessions.

Removing the tax concessions on superannuation could involve paying all employer contributions as wages and taxing those wages at marginal rates (rather than 15%). Although the standard tax expenditure statement methodology assumes that all of the increase in take home pay is saved, Gallagher, Rothman and Brown (1993) examined marginal saving rates within the SGC population and concluded that at most 30% of any increase in take home pay would be saved in a taxed account. For the purposes of the current modelling, this marginal saving rate has been set at a

generous 50% - that is, the current analysis assumes that 50% of the increase in take home pay is saved and that interest on those savings is taxed at marginal rates.

The current analysis effectively models a world in which compulsory superannuation contributions are not made by employers. A 100% marginal savings rate would be appropriate for modelling a system where compulsory contributions were made from post-tax wages.

Full results for the current analysis of the effects of tax concessions for superannuation are presented at Attachment B.

The taxation of the cashed out employer contribution at marginal rates and subsequent discretionary saving would result in significantly less money going into savings accounts than would have gone into superannuation accounts. The taxation of interest at marginal rates also results in the account growing more slowly. The net effect on retirement benefits can be seen in Graph 5. If we take as an example, the couple where the husband earns at AWE, their real retirement benefit is reduced from $816,360 to $185,170.
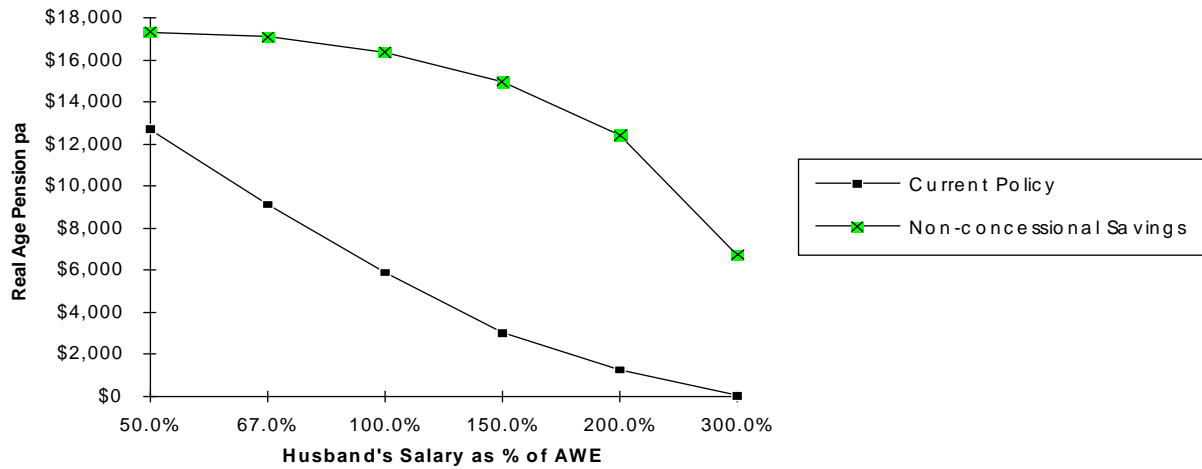
Graph 5

DIFFERENCE IN FINAL BENEFITS IF REMOVE SUPER TAX CONCESSIONS
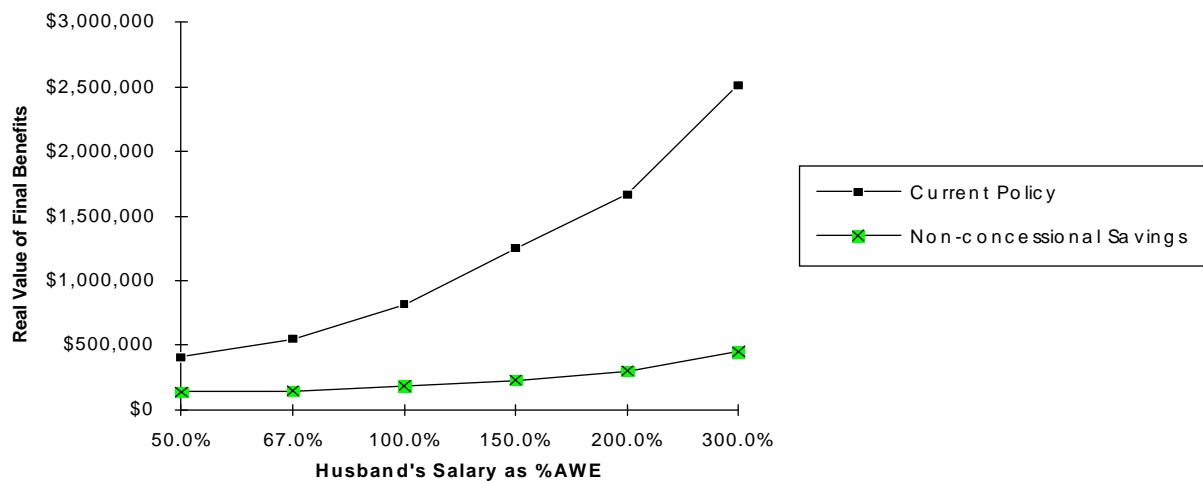
The far lower retirement saving results in considerably higher real age pension payments, as shown in Graph 6. The couple whose husband earns at AWE would receive a pension of $16,351 per year instead of $5,894.
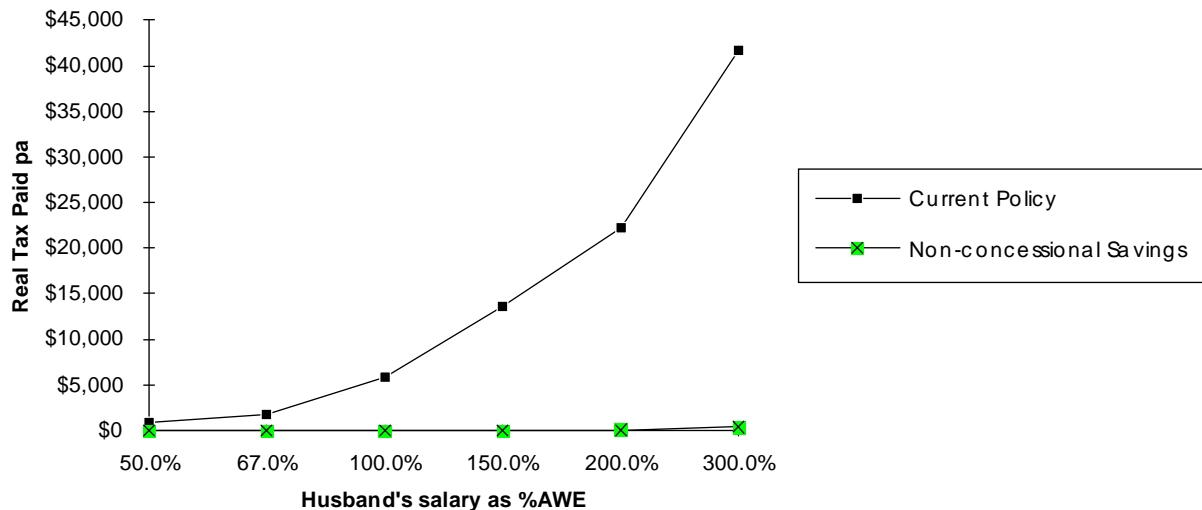
GRAPH 6

DIFFERENCE IN AGE PENSION IF REMOVE SUPER TAX CONCESSIONS

Because retirement income has been substantially reduced, tax paid during retirement is also lower (see Graph 7). The couple whose husband earned AWE have their annual real income tax liability reduced from $5,869 to $1!

**Graph 7**

DIFFERENCE IN TAX PAID IN RETIREMENT IF NO SUPER TAX CONCESSIONS

Of course there are no tax expenditures in the non-concessional scenario, so the difference in the tax expenditures equals the current policy tax expenditures shown in Graph 3. The net present value of the cost to Government of current policy and the non-concessional scenario is shown in Attachment B and Graph 8.

GRAPH 8

Difference in Net Present Value of Cost to Government if No Super Tax Concessions
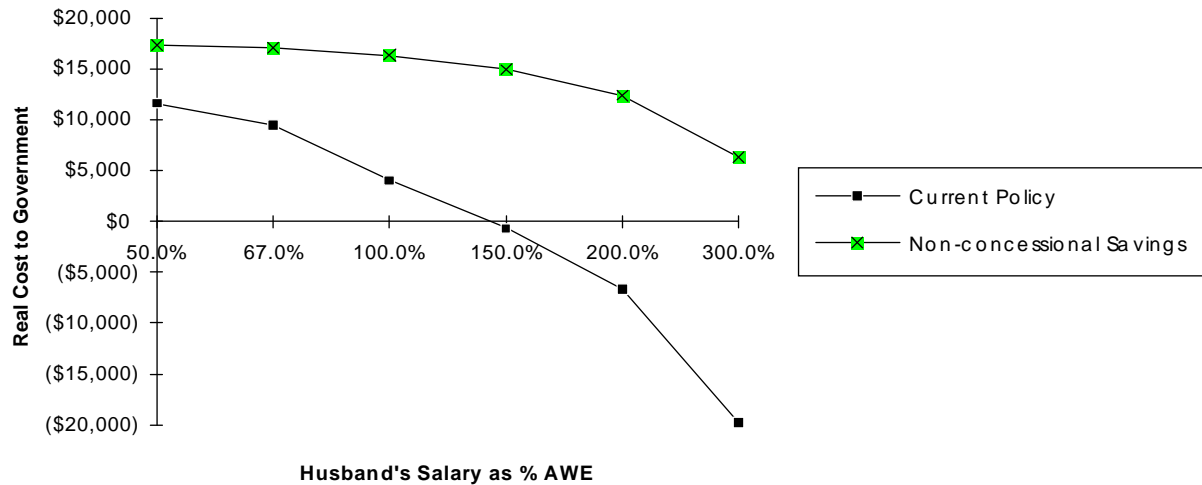
The net effect of removing the superannuation tax concessions is likely to be an <u>increase</u> in the total cost to government of the retirement income policy in the long term while there would be a declining short term increas in revenue. The couple whose husband earned at AWE originally cost the Government $4,056 per year of retirement (in net present value terms evaluated at the year of retirement). With the abolition of superannuation tax expenditures this couple would cost $16,350 per year of retirement. A universal age pension would add to this increase.

Tax concessions for superannuation are an investment by current working generations in their own retirement incomes. Because they are an investment, they should be subjected to the same methods of cost-benefit analysis as any other investment. This involves using discounted cash flow methodology and the calculation of net present values. It also involves looking at all of the relevant costs to Government, not just a subset. The preceding analysis of abolishing tax expenditures is indicative rather than definitive. However, other Task Force analysis has shown similar results. These analyses raise serious questions about the financial sense of using the abolition of all tax concessions for superannuation to fund a universal age pension. However, in the short term there are clear fiscal restraints on any further extension of tax concessions.

Please phone me on 06 263 3945 if you would like to further discuss this supplementary submission.

Phil Gallagher
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20 September 1994

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**COMPARISON OF IAA PROPOSALS AND CURRENT POLICY FOR A COUPLE
WITH HUSBAND IN 15% CORPORATE SCHEME + 5% MEMBER
AND WIFE WITH EMPLOYER AWARD/SGC CONTRIBUTIONS (a)**

	Husband Salary as % AWE (Wife at 75% of this when Working)					
	50.0%	**67.0%**	**100.0%**	**150.0%**	**200.0%**	**300.0%**
COMBINED FINAL BENEFIT ($1993)						
Current Policy	$406,987	$550,185	$816,360	$1,249,327	$1,670,497	$2,512,837
IAA Proposal	$399,325	$539,918	$812,834	$1,226,343	$1,639,851	$2,466,869
Average Net Retirement Income ($1993)						
Current Policy	$29,259	$31,275	$36,906	$47,422	$57,800	$78,836
IAA Proposal	$33,368	$37,579	$45,182	$56,374	$66,995	$87,175
Average Age Pension pa ($1993)						
Current Policy	$12,684	$9,119	$5,894	$3,007	$1,251	$21
IAA Proposal	$18,217	$18,217	$18,217	$18,217	$18,217	$18,217
Annual tax paid pa in retirement						
Current Policy	($948)	($1,718)	($5,869)	($13,646)	($22,254)	($41,694)
IAA Proposal	($2,682)	($5,366)	($11,145)	($20,228)	($29,864)	($50,618)
Average Accrued Tax Expenditures pa ($1993)						
Current Policy	($102)	$2,087	$4,056	$9,974	$14,341	$21,870
IAA Proposal	$207	$2,544	$5,411	$11,971	$16,916	$25,735
NPV Accrued Tax Expenditures as % Pre-Retirement Disposable Income						
Current Policy	-0.3%	5.2%	7.5%	12.7%	14.7%	16.2%
IAA Proposal	0.7%	6.2%	9.4%	15.0%	17.0%	18.7%
NPV of Cost to Government of Retirement Income Policy pa ($1993)						
Current Policy	$11,633	$9,488	$4,082	($664)	($6,661)	($19,803)
IAA Proposal	$15,742	$15,395	$12,482	$9,960	$5,269	($6,666)
NPV of Cost to Government as % pre-retirement disposable income						
Current Policy	37.9%	23.7%	7.6%	-0.8%	-6.8%	-14.7%
IAA Proposal	50.2%	37.6%	21.8%	12.5%	5.3%	-4.8%
Mean Retirement Disposable Income as % Pre-Retirement Disposable Income						
Current Policy	95.2%	78.0%	68.5%	60.6%	59.1%	58.4%
IAA Proposal	106.5%	91.9%	78.8%	70.6%	67.2%	63.3%

 (a) Husband has 15% employer support & 5% member contributions
Wife has 3% employer award contributions from 1986/87 and minimum employer SGC contributions from 1992/93.
The IAA proposal does not increase employer contributions beyond 6%, whereas current policy raises them to 9%.
The wife does not work from age 25 to 34 and only works half time between ages 35-40.
The husband works full-time for his entire career.
When working full-time the wife earns 75% of her husbands income.
Both partners use 50% of their final benefit to buy an allocated pension. Half of the remaining lump sum is invested.
AWE increases are reduced by the increase in employer contributions to the SGC
The IAA proposed changes in age pension means tests, and women's age pension age are modelled,
 as are changes in tax rebates for member contributions, changes in lump sum taxation and in rebates for pensions.

COMPARISON OF NON-CONCESSIONAL SUPERANNUTION (a) AND CURRENT POLICY FOR A COUPLE WITH HUSBAND IN 15% CORPORATE SCHEME + 5% MEMBER, & WIFE WITH AWARD/SGC CONTRIBUTIONS (b)
 50% marginal savings rate assumed

	Husband Salary as % AWE (Wife at 75% of this when Working)					
	50.0%	**67.0%**	**100.0%**	**150.0%**	**200.0%**	**300.0%**
COMBINED FINAL BENEFIT ($1993)						
Current Policy	$406,987	$550,185	$816,360	$1,249,327	$1,670,497	$2,512,837
Non-concessional Savings	$139,045	$147,946	$185,170	$230,795	$299,792	$451,444
Average Net Retirement Income ($1993)						
Current Policy	$29,259	$31,275	$36,906	$47,422	$57,800	$78,836
Non-concessional Savings	$23,641	$24,030	$25,327	$26,539	$27,562	$29,142
Average Age Pension pa ($1993)						
Current Policy	$12,684	$9,119	$5,894	$3,007	$1,251	$21
Non-concessional Savings	$17,327	$17,093	$16,351	$14,942	$12,398	$6,722
Annual tax paid pa in retirement						
Current Policy	($948)	($1,718)	($5,869)	($13,646)	($22,254)	($41,694)
Non-concessional Savings	$0	$0	($1)	($7)	($12)	($415)
Average Accrued Tax Expenditures pa ($1993)						
Current Policy	($102)	$2,087	$4,056	$9,974	$14,341	$21,870
Non-concessional Savings	$0	$0	$0	$0	$0	$0
NPV Accrued Tax Expenditures as % Pre-Retirement Disposable Income						
Current Policy	-0.3%	5.2%	7.5%	12.7%	14.7%	16.2%
Non-concessional Savings	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
NPV of Cost to Government of Retirement Income Policy pa ($1993)						
Current Policy	$11,633	$9,488	$4,082	($664)	($6,661)	($19,803)
Non-concessional Savings	$17,327	$17,093	$16,350	$14,935	$12,386	$6,307
NPV of Cost to Government as % pre-retirement disposable income						
Current Policy	37.9%	23.7%	7.6%	-0.8%	-6.8%	-14.7%
Non-concessional Savings	56.4%	42.6%	30.4%	19.1%	12.7%	4.7%
Mean Retirement Disposable Income as % Pre-Retirement Disposable Income						
Current Policy	95.2%	78.0%	68.5%	60.6%	59.1%	58.4%
Non-concessional Savings	76.9%	59.9%	47.0%	33.9%	28.2%	21.6%

(a) The non-concessional scenario assumes that employer contributions are paid as wages and taxed at marginal rates
50% of the resulting increase in take-home is saved in a savings account which is taxed at marginal rates.
(b) Husband has 15% employer support & 5% member contributions
Wife has 3% employer award contributions from 1986/87 and minimum employer SGC contributions from 1992/93.
The wife does not work from age 25 to 34 and only works half time between ages 35-40.
The husband works full-time for his entire career.
When working full-time the wife earns 75% of her husbands income.
Both partners use 50% of their final benefit to buy an allocated pension. Half of the remaining lump sum is invested.
AWE increases are reduced by the increase in employer contributions to the SGC