

# ASSESSING THE NATIONAL SAVING EFFECTS OF THE GOVERNMENT'S SUPERANNUATION POLICIES:

## *SOME EXAMPLES OF THE NEW RIMGROUP NATIONAL SAVING METHODOLOGY*

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### **ABSTRACT**

This paper discusses the RIM national saving methodology used for the aggregate analysis of superannuation and retirement income policies. A new feature of this methodology includes a fiscal account which accrues changes in public debt yielding changes in public debt interest. The methodology can also include a marginal private saving rate for the private offset account which varies by decile of income. Other strengths and limitations of the methodology are discussed.

Three examples of the use of the methodology are presented:

1. The Government's total superannuation policy as announced in the 1996-97 and 1997-98 Budgets is compared to a base without the Superannuation Guarantee;
2. A Government policy scenario in which the new saving rebate encourages behaviour change adding 12% to member contributions over 5 years; and,
3. A Government policy scenario in which the new saving rebate encourages behaviour change adding 24% to member contributions over 5 years.

The total effect of these measures on national financial saving compared to a base without the employer superannuation guarantee or other Government policies is projected to be:

<b>Financial Year</b>	<b>Example 1 No increase in member conts</b>	<b>Example 2 12% increase in member conts</b>	<b>Example 3 24% increase in member conts</b>
2000-01	1.5%	1.6%	1.6%
2004-05	2.3%	2.4%	2.5%
2009-10	2.9%	3.0%	3.2%
2014-15	3.2%	3.3%	3.5%
2019-20	3.6%	3.8%	4.0%

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## INTRODUCTION

This paper discusses the new RIM national saving methodology used for the aggregate analysis of superannuation and retirement income policies. Three examples of the use of this methodology are presented in this paper and further examples are presented in the paper by Rothman (1997).

The new RIM methodology is primarily used for output from the cohort projection model, RIMGROUP, but can also be used for output from the RIM superannuation microsimulation models, MEMSUPER and SEMSUPER in conjunction with RIMGROUP output (see Gallagher 1995 & 1996).

## RIMGROUP

RIMGROUP is a comprehensive cohort projection model of the Australian population which starts with population and labour force models, tracks the accumulation of superannuation in a range of account types, accumulates non superannuation savings, and calculates tax payments and expenditures, social security payments including pensions and the generation of other retirement incomes.

The model has been benchmarked to recent history and has been used extensively for policy analysis over the last two years.

RIMGROUP projections are done for each year of the projection period *separately for each birthyear, gender, and career earnings decile cohort*. The model projections begin in July 1992 and can run out to June 2060. There are over 4300 cohorts in the model covering the Australian population, which includes relevant demographic detail for each cohort. Each cohort is tracked through its lifecycle (between age 18 and 100+ depending on birth year) with superannuation and asset modeling through all of working life and retirement.

The model includes seven superannuation accounts which receive contributions (public defined benefit, public SGC, private defined benefit, private established defined contribution, private SGC, personal and self-employed). The first five of these accounts can receive both employer and member contributions. The rate of contribution depends on age, gender, income, account type, policy settings and user settings of takeup behaviour. A complex multiple decrements approach (from death, disability, retirement, job change and hardship) is applied to the superannuation asset accounts of each cohort.

The main uses of RIMGROUP are to distinguish between the implications of various policies, including the analysis of fiscal, national financial saving and distributional consequences, and assessing the robustness of differences between policies to reasonable differences in key parameter settings. **RIM never claims to predict the future, but RIM's models are useful for projecting the long term impact of different superannuation and retirement income policies given the user's scenario about the future.**

More details about RIMGROUP are given in Gallagher and Preston (1993), Gallagher (1995) and in Rothman (1996, 1997).

## THE RIM NATIONAL SAVING METHODOLOGY

The RIM national saving methodology is a way of projecting the effects of a change in superannuation policy on public saving or on private saving which together are taken to comprise national saving. These ‘effects’ are limited to financial flows in the household sector and the government sector. The RIM aggregate models are micromodels of the policy links between these sectors. The models are not macroeconomic models and do not show the effects of policy on the corporate sector or on the rest of the world.<sup>1</sup> The models do not yet directly estimate non-financial flows such as changes in housing equity, but these may be reflected in flows to the offset account.

The current RIM national saving methodology is an extension of the methodology originally used by FitzGerald and Harper (1993) to project the national saving impact of superannuation policy using the National Mutual Retirement Income Policy Model. Five major changes have been made to that methodology:

- tax revenue differences between runs are used rather than tax expenditures which require the construction of counterfactual worlds with no superannuation;
- wage growth is higher in the no-SG scenario than in the SG scenario with the consequence that PAYE taxation receipts are lower for the SG scenario;
- public saving goes beyond the single year change in the fiscal balance to be the amount of change in public debt or saving plus the change in public debt interest outlays;
- the private saving offset methodology has been changed from applying to the change in gross income from changing from wages to superannuation contributions to applying to the change in after tax income, and the offset saving is now accrued in a separate account with its own dynamics; and,
- the 50% private saving offset to net superannuation flows used by FitzGerald and Harper has been changed to a number of offset rates depending on the nature of the superannuation flow being offset and, in this analysis, the income decile of the person changing non-superannuation financial saving.

The RIM methodology compares two output files from RIMGROUP. One output is designated to be the ‘base’ and the other the ‘new policy’ run.

### Public Saving

The difference is calculated in every modelled source of taxation revenue (workers, retirees, superannuation funds) and in modelled outlays (age pensions, disability pensions, unemployment and sickness allowance outlays) between the two runs for every year (and group). The difference in revenue and outlays arising from the policy is used to calculate a change in the *fiscal balance*.

Given the existence of an annual budget process not all of this change in the fiscal balance is necessarily treated as adding to or lessening public debt. Governments can choose to increase or decrease outlays or to increase or decrease taxation as part of a budget process. A specified proportion of the change in the fiscal balance is treated as changing public debt. This percentage can vary between 100% and 0% depending on user views about how an option may be funded from

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<sup>1</sup> The AMP Savings model developed by ACCESS ECONOMICS is a macroeconomic model with response to Life Office and Superannuation saving (see AMP 1995).

policies outside the scope of the model. The value for the *fiscal offset factor* used in the examples for this paper is 50%.

The amount added to or subtracted from public debt in a given year is placed in a public sector offset account and accrues interest at the assumed value of the Government 10 year bond rate. Accruals of amounts and interest can occur in each year of the projection after the new policy starts.

In a given year *public saving* hence equals:

(the modelled change in the fiscal balance)\*(the fiscal offset factor) + (public debt interest).

The public sector accruing account does not have a 'decrement' structure like the private accounts other than that due to new policies specified in the models or in any year by year variation in the fiscal offset factor.

### Private Saving

The analysis of private saving is based on the direct projection of changes in the flow of money to superannuation. This is the totality of differences in employer contributions (less fees, charges and contribution taxes) and personal contributions as well as differences in fund earnings and taxes on earnings less differences in the withdrawal of superannuation because of death, disability, job change, retirement or hardship. This difference in total flows is estimated as the annual difference in the growth of assets in superannuation funds between the new policy and base runs.

Changes in superannuation will be partly funded by changes in other forms of saving. Therefore some offset factor to the superannuation saving should be applied to a non-superannuation offset saving account.

The effect of superannuation saving on non-superannuation saving has been extensively debated. An important attempt to put a value on the offset was made by FitzGerald and Harper (1993) who assumed that non-superannuation saving would be reduced by 50% of new saving in compulsory superannuation (on the basis that the offset was neither 0 nor 1 but somewhere in between, with 50% their estimate for income-constrained employees). Tulip and Stott (1994) reviewed the relevant overseas research and concluded that the offset for additional compulsory superannuation would be about a third.

The former Treasurer's statement on *Saving for Our Future* (Willis, 1995) used a 30% offset on compulsory contributions based on the Tulip and Stott analysis and also on the view of most of the RIM Steering Committee that the income constraint on workers actually affected by the SG was such that their non-superannuation marginal saving rates were very low. In retrospect, Dr FitzGerald and Professor Harper have said that 50% should have been used. The then Treasurer's statement also used estimates which applied the 30% offset to the Government's own matching co-contributions.

Covick and Higgs (1995) estimated the extent of smoothing of household consumption from Australian National Accounts data and concluded that their offset estimate of 36.7% was probably an overestimate. Professor John Freebairn reviewed the Australian literature in November 1995 and concluded that aggregate saving would rise by between 50 and 70% of the compulsory levy (ie an offset of 30% to 50%). This conclusion corresponded to that of Gallagher at the same conference who concluded that the '*RIM Task Force believes that the use of an average saving offset for compulsory superannuation between 30% and 50% is justified and that values closer to 30% should be preferred*'.

RIM now tends to use a flat private sector offset rate of 30% or 40% on changes mediated through disposable income and a lower offset rate such as 5% or 10% on other changes which affect retirement benefits in the long term. For example, an increase in member contributions or an increase in personal income tax would be offset at 30% or 40% but an increase in superannuation contributions tax would typically be offset at 5% or 10%. In the current analysis no offset has been applied to the earnings of superannuation funds because we believe that their inherent variability combined with member myopia lead to negligible effects on non-superannuation saving.

The analysis presented in this paper uses an income decile sensitive offset which varies from 5% for the first decile to 50% for the tenth decile. This partially reflects the observed distribution of savings across income deciles for employees (see Dilnot 1990; FitzGerald and Harper 1993; Gallagher, Rothman and Brown, 1993). The saving offset factor is used to represent the marginal saving rate of a group. Since the average household saving rate is around 5%, a marginal rate varying from 5 to 50% appears conservative, in that it overestimates the offsets to private saving through superannuation and thereby decreases the national saving estimate.

In RIMGROUP's current national saving estimation methodology, the effect of the non-superannuation offset to a change in net superannuation contributions has been estimated using an accruing non-superannuation offset account which has a 33% taxation rate<sup>2</sup> and a fund earning rate of the 10 year bond rate. The offset account is decremented for job change, death, disability and retirement at the higher of the decrement rates in the base or new policy superannuation funds for each cohort in each year. This decrement rate would be a low estimate for a non-superannuation financial account without preservation. The effect of offset marginal saving rate on after tax components, the potentially higher decrements, the 1% lower pre-tax earning rate, and the higher effective tax rate on fund earnings is to substantially decrease the annual increase in offset account balance, below the original flow to the superannuation fund.

Hence for each group in each year *Private Saving* is set equal to:

Change in superannuation financial flows less

(larger private saving offset factor) \* (sum of components affecting disposable income) less

(smaller offset factor) \* (sum of other components except earnings affecting long term retirement benefits).

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<sup>2</sup> The average marginal tax rate in RIMGROUP is about 40%, so 33% reflects some concessional treatment. This factor could be decile based.

### **EXAMPLE 1. THE GOVERNMENT'S SUPERANNUATION POLICIES AGAINST A BASE WITHOUT SG CONTRIBUTIONS**

In the 1996-97 and 1997-98 Budgets the Government has announced the following superannuation and retirement income policies (see Costello and Newman, 1997):

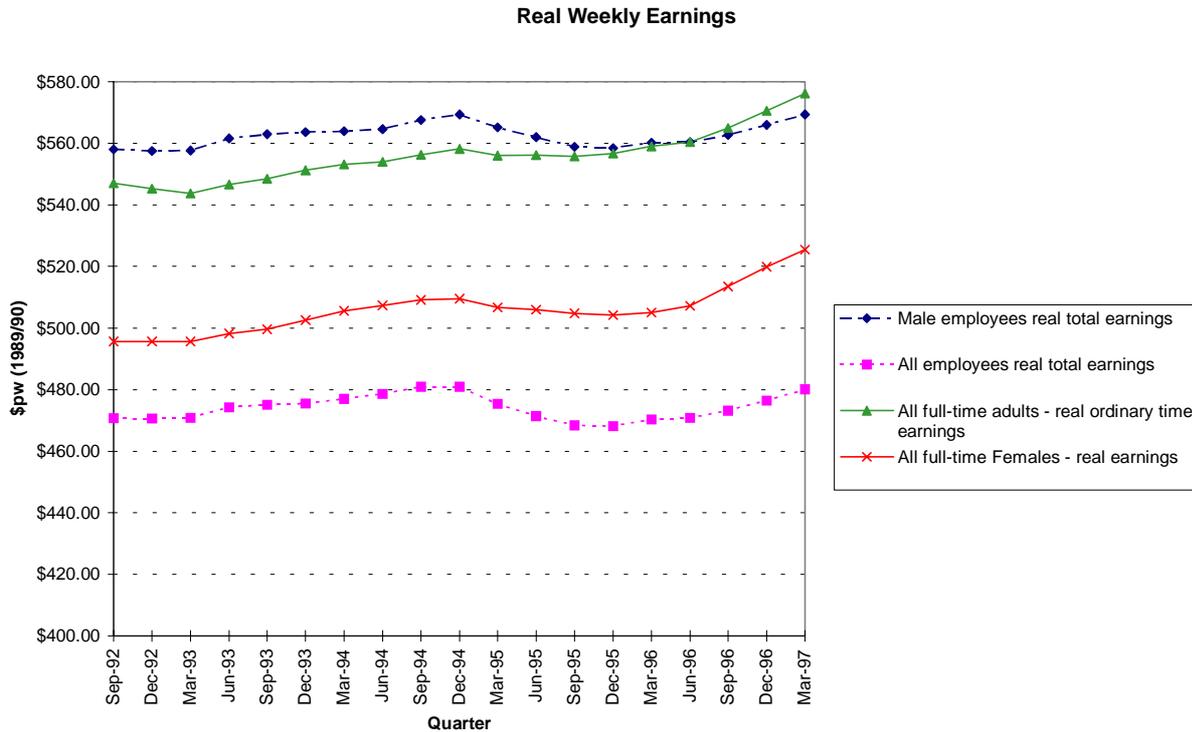
- the continuation of the Superannuation Guarantee (SG) policy with minimum employer contribution rates rising according to the schedule announced in 1992 but with opting out allowed for employees earning between \$450 and \$900 per month;
- the introduction of the savings rebate which will give a capped rebate of 15 cents per dollar of undeducted contributions while maintaining the existing income tested rebate for personal contributions;
- preservation of all new superannuation contributions and earnings from 1 July 1999 and an increase in preservation age in the longer term;
- allowing means-tested spouse contributions to superannuation along with an 18% rebate;
- the superannuation contributions surcharge on employer superannuation contributions for higher income earners;
- the introduction of retirement savings accounts (RSAs); and,
- choice of fund.

RIMGROUP has been used to project this new policy package as well as a base in which there is no Superannuation Guarantee (SG) and in which the other nominated new policies are absent. Only that portion of the saving rebate on undeducted superannuation contributions is included in the analysis.

Projecting the base scenario with no employer SG involves making assumptions about the level of wages in the absence of the SG and award superannuation. Chart 1 shows the observed increase since September Quarter 1992 in four indices of real average wages for:

- all male employees total earnings (diamond marker);
- all employees total earnings (square marker);
- all full-time adults, ordinary time earnings (triangle marker); and
- all full-time females, total earnings (St Andrew's cross marker).

**CHART 1: CHANGES IN REAL WEEKLY EARNINGS SINCE THE INTRODUCTION OF THE SG**



Both full-time indices have shown appreciable real increases since the introduction of the SG in 1992. The series for all employees show a smaller real increase largely because they reflect the change in the composition of employment from full-time to part-time. This compositional effect is fully catered for by the RIMGROUP labour force projections arising out of LFSMOD (see Bacon 1995). So the two all employees (dashed line) series are not relevant for RIMGROUP.

In the absence of the SG real wages could be assumed to rise at the same rate as productivity. Over the last five years the compound annual growth in the real ordinary time earnings of all full-time adults has been 1.2%, while that for all full-time females has been 1.3%. The compound annual growth rate in productivity (GDPA) per worker has been 1.7% and the productivity (GDPA) per hour worked has been 1.6%.<sup>3</sup> That is, real wages have risen by 70% to 80% of productivity. This suggests that the SG has not been financed only by a decrease in the growth of real wages.

For the no SG base analysis, we have **assumed** that real wages would have increased beyond what has occurred by **half** the amount of the superannuation guarantee employer contributions. This assumption means that the loss of wages can be applied directly to the groups affected by SG increases in each year, in proportion to the extent to which they may have been affected. This assumption of lower growth in real wages linked to the rising SG contributions leads to a considerable projected (and effectively assumed) drop in PAYE taxation.

The assumed drop in PAYE tax revenue has important implications for public saving. The first column of Table 1A shows the estimated income tax revenue loss coming initially from the SG and from the saving rebate from 1998-99. The introduction of the SG is projected as leading to a much

<sup>3</sup> All series have been extracted from the *ABS Timeseries Plus* database in the *DX for Windows* package.

smaller decrease in outlays. The combined effect is a large drop in the fiscal balance. On the basis of standard assumptions for RIM analysis, only half the decrease in the fiscal balance is treated as being funded by public debt. Much of this PAYE tax loss could have been made up from reduction of outlays or by revenue measures (including approaches to indexation) over the period.

In Table 1A, the change in public debt gives rise to an increase in public debt interest outlays. The projected drop in public saving as a percentage of GDP is 0.03% in 1992-93, 0.23% in 2000-01 and 0.35% of GDP in 2019-20.

Table 1B shows the corresponding changes in private saving and national saving. The SG leads to large contributions to superannuation funds, particularly for low income employees, and to significant earnings on the larger account balances.

The next column in Table 1B contains the projection of the loss of non-superannuation saving from the policies leading to increased superannuation contributions. In RIM's methodology, the non-superannuation private saving offset account is used for this projection. The loss in deposits in other financial saving come from the amount not saved because of a drop in disposable income from lower wages. The assumed marginal saving rate for the group is applied to this loss in disposable income. The loss in deposits to the non-superannuation account is therefore a fraction of the new superannuation contribution. In the current analysis, the extent of this loss in deposits is further reduced because a decile specific proportion (5 to 50%) of the saving rebate on undeducted contributions is saved in the non-superannuation account from 1999-00. The non-superannuation account does not grow as fast as a superannuation account because it has a 1% lower earning rate, earnings are taxed at 33% and because money is taken out at a faster rate than the preserved superannuation account.

This methodology could be further refined. For example, some proportion of the superannuation payouts on job change could be saved in non-superannuation. Similarly, the majority of retirement payouts are modelled as being invested and then gradually drawn down. The flows in the retirement accounts could be added into the national saving analysis directly with the probable result that options which increased superannuation would be estimated to increase national saving even more in the long-term.

The combination of strong growth in superannuation contributions which is only partly offset by reductions in other financial saving gives a significant projected rise in net private financial saving of 0.5% in 1992-93; 1.7% in 2000-01 and 3.9% in 2019-20.

TABLE 1

**NATIONAL FINANCIAL SAVING FROM COALITION SUPERANNUATION POLICIES**
**New Policy: Government Policy with No Change in Member Contributions**
**Base Policy: No Superannuation guarantee or other Policies**
**A. PUBLIC SAVING**

Financial Year	Change in Taxation Revenue \$m,nominal	Change in outlays \$m,nominal	Change in Fiscal Balance \$m,nominal	Change in Public Debt Interest \$m,nominal	Change in Public Saving \$m,nominal	Change in Public Saving as % of GDP
1992-93	-\$214		-\$214		-\$107	-0.03%
1995-96	-\$422		-\$421	-\$33	-\$244	-0.05%
1996-97	-\$474	-\$1	-\$472	-\$48	-\$284	-0.06%
1997-98	-\$871	-\$3	-\$867	-\$71	-\$505	-0.09%
1998-99	-\$1,257	-\$10	-\$1,247	-\$104	-\$728	-0.13%
1999-00	-\$1,807	-\$19	-\$1,788	-\$159	-\$1,054	-0.18%
2000-1	-\$2,461	-\$30	-\$2,430	-\$219	-\$1,435	-0.23%
2001-2	-\$2,671	-\$45	-\$2,625	-\$307	-\$1,620	-0.24%
2002-3	-\$3,135	-\$63	-\$3,071	-\$411	-\$1,946	-0.28%
2003-4	-\$3,339	-\$79	-\$3,259	-\$529	-\$2,159	-0.30%
2004-5	-\$3,531	-\$105	-\$3,426	-\$661	-\$2,374	-0.31%
2009-10	-\$4,341	-\$333	-\$4,008	-\$1,512	-\$3,516	-0.37%
2014-15	-\$4,633	-\$926	-\$3,706	-\$2,688	-\$4,541	-0.39%
2019-20	-\$4,204	-\$2,342	-\$1,862	-\$4,095	-\$5,026	-0.35%

**B. CHANGE IN PRIVATE SAVING AND NATIONAL SAVING**

Financial Year	Change in Super - annuation Flows \$m,nominal	Flows to offset and other Private Saving, \$m,nominal	Change in Private Saving \$m,nominal	Change in Private Saving as % of GDP	Change in National Saving \$m,nominal	Change in National Saving as % of GDP
1992-93	\$1,905		\$1,905	0.5%	\$1,798	0.4%
1995-96	\$4,592	-\$196	\$4,395	0.9%	\$4,151	0.9%
1996-97	\$5,142	-\$202	\$4,939	1.0%	\$4,655	0.9%
1997-98	\$5,641	-\$288	\$5,353	1.0%	\$4,847	0.9%
1998-99	\$7,128	-\$282	\$6,846	1.2%	\$6,118	1.1%
1999-00	\$8,505	-\$142	\$8,363	1.4%	\$7,309	1.2%
2000-1	\$11,017	-\$103	\$10,914	1.7%	\$9,479	1.5%
2001-2	\$12,751	-\$112	\$12,638	1.9%	\$11,017	1.7%
2002-3	\$15,867	-\$177	\$15,690	2.3%	\$13,743	2.0%
2003-4	\$17,831	-\$190	\$17,640	2.4%	\$15,481	2.1%
2004-5	\$19,860	-\$204	\$19,656	2.6%	\$17,281	2.3%
2009-10	\$30,623	-\$274	\$30,348	3.2%	\$26,831	2.8%
2014-15	\$41,473	-\$331	\$41,141	3.5%	\$36,600	3.1%
2019-20	\$55,920	-\$347	\$55,572	3.9%	\$50,545	3.6%

## **EXAMPLE 2. AN EFFECTIVE INCREASE IN MEMBER CONTRIBUTIONS OF 12% IN RESPONSE TO THE SAVING REBATE**

The saving rebate announced in the 1997-98 Budget lowers the cost of making member contributions by 15% up to a cap. Obtaining the rebate on undeducted contributions is more cost-effective than obtaining the rebate on the interest income arising from deposits into a non-superannuation account for individual savers of limited means. For example, the 15% rebate on a \$1000 member contribution is twenty times greater the 15% rebate on the 5% interest from a \$1000 deposit to a non-superannuation financial account.

In RIMGROUP, the employed population in each age, gender and income group is divided into 7 types of contributory superannuation funds (public defined benefit, public SGC, private defined benefit, private established defined contribution, private SGC, personal and self-employed).

This example assumes that the rebate leads to:

- an increase in member contributions for people in SG scheme accounts and private sector established defined contribution scheme accounts amounting to 10% of all members making personal contributions of 3% of salary after 5 years; and.
- an increase in member contributions for people in defined benefit scheme accounts amounting to 0.5% rise in member contributions as a percentage of salary after 5 years.

These changes give an effective 11.8% increase in member contributions after 5 years and an effective 11.5% increase after 20 years.

Currently, RIM estimates that 43% of employees make member contributions at an average rate of 5% of salary. The increase in member contributions in Example 2 is 11.6% by 2006-07. This is about one third of the 32.1% increase **assumed** for the former co-contribution policy by the same year. The increase assumed in Example 2 is equivalent to 50% of employees being covered at an average contribution rate of 4.8% of salary.

The national saving analysis for the Example scenario is presented in Table 2 against a base of Government policy without an increase in member contributions.

The public saving projection is presented in Table 2A. The effective 12% increase in member contributions leads to a loss in taxation revenue from the increase in the saving rebate on member contributions and from the pre-existing means tested rebate. By 2019-20 the increase in the superannuation fund earnings tax exceeds the annual cost increase in the rebate. The increase in superannuation benefits from these contributions leads to initially small reductions in social security outlays but these are appreciable by 2019-20. The change in the fiscal balance increases to a peak in 2003-4 and then decreases. Half of this cost is funded by public debt. Public debt interest outlays rise in all years of the projection and exceed the projected social security saving until around 2019-20.

Public saving is calculated as half of the change in the fiscal balance plus the change in public debt interest outlays. The total projected loss in public saving reaches a maximum value of 0.01% of GDP (one hundredth of one per cent) by 2000-01.

Table 2B presents the projections for private financial saving and national financial saving arising from the assumed increase in member contributions.

By 2002-03 member contributions and the earnings of superannuation funds have risen by \$1.17 billion per year in nominal terms. This flow exceeds the **total** projected cost of the rebate on undeducted superannuation contributions in 2002-03. **That is, a behavioural response which is about one third of that assumed for the former co-contribution policy is projected to produce member contributions exceeding the cost of the saving rebate on undeducted superannuation contributions alone.**

The increase in member contributions is partially offset by a decrease in non-superannuation financial saving. In the current analysis the increase in superannuation fund earnings has not been offset. The increase in member contributions has been offset as though other deposits are affected by the drop in disposable income from funding those contributions allowing for any rebates received. As in Example 1, the offset account has a lower drop in contributions, a lower effective earning rate and a potentially higher withdrawal rate than the superannuation account. It only partially offsets the private saving gains from making increased member contributions.

The net increase in private saving (over the base of the Government policies without an increase in member contributions) is projected to be 0.1% of GDP by 2000-01 and 0.2% of GDP by 2019-20. Because the public saving loss is negligible, this is also the increment to national financial saving.

**TABLE 2: EXAMPLE 2 - An Effective 12% increase in member contributions****NATIONAL FINANCIAL SAVING FROM GOVERNMENT SUPERANNUATION POLICIES****New Policy: Government Policy with 12% Change in Member Contributions****Base Policy: Government Policy with no Change in Member Contributions****A. PUBLIC SAVING**

Financial Year	Change in Taxation Revenue \$m,nominal	Change in outlays \$m,nominal	Change in Fiscal Balance \$m,nominal	Change in Public Debt Interest \$m,nominal	Change in Public Saving \$m,nominal	Change in Public Saving as % of GDP
1997-98					\$0	\$0
1998-99	-\$7		-\$7		-\$3	0.00%
1999-00	-\$37		-\$37		-\$19	0.00%
2000-1	-\$71		-\$71	-\$2	-\$37	-0.01%
2001-2	-\$96		-\$96	-\$5	-\$53	-0.01%
2002-3	-\$122		-\$122	-\$8	-\$69	-0.01%
2003-4	-\$122		-\$122	-\$12	-\$73	-0.01%
2004-5	-\$120	-\$1	-\$119	-\$17	-\$77	-0.01%
2009-10	-\$102	-\$7	-\$94	-\$41	-\$88	-0.01%
2014-15	-\$55	-\$31	-\$24	-\$66	-\$78	-0.01%
2019-20	\$41	-\$82	\$124	-\$81	-\$19	0.00%

**B. CHANGE IN PRIVATE SAVING AND NATIONAL SAVING**

Financial Year	Change in Super - annuation Flows \$m,nominal	Flows to offset and other Private Saving, \$m,nominal	Change in Private Saving \$m,nominal	Change in Private Saving as % of GDP	Change in National Saving \$m,nominal	Change in National Saving as % of GDP
1997-98			\$0	0.0%	\$0	0.0%
1998-99	\$171	-\$56	\$114	0.0%	\$111	0.0%
1999-00	\$374	-\$111	\$263	0.0%	\$243	0.0%
2000-1	\$605	-\$172	\$432	0.1%	\$394	0.1%
2001-2	\$868	-\$243	\$625	0.1%	\$571	0.1%
2002-3	\$1,166	-\$322	\$843	0.1%	\$773	0.1%
2003-4	\$1,271	-\$341	\$929	0.1%	\$855	0.1%
2004-5	\$1,380	-\$362	\$1,018	0.1%	\$941	0.1%
2009-10	\$1,978	-\$469	\$1,509	0.2%	\$1,420	0.1%
2014-15	\$2,634	-\$573	\$2,060	0.2%	\$1,982	0.2%
2019-20	\$3,423	-\$696	\$2,727	0.2%	\$2,708	0.2%

**EXAMPLE 3. AN EFFECTIVE INCREASE IN MEMBER CONTRIBUTIONS OF 24%  
IN RESPONSE TO THE SAVING REBATE**

Example 3 assumes that the rebate leads to:

- an increase in member contributions for people in SG schemes and private sector established defined contribution schemes amounting to 20% of all members making personal contributions of 3% of salary after 5 years; and.
- an increase in member contributions for people in defined benefit schemes amounting to 1% rise in member contributions as a percentage of salary after 5 years.

These changes give an effective 24.5% increase in member contributions after 5 years and an effective 23.9% increase after 20 years. This rise is equivalent to 57% of employees contributing at an average rate of 4.7% of salary. The rise is slightly more than double the effective rise in Example 2 because corporate defined contribution fund member contributions rates rise in this example but were not significantly affected by the rates assumed in the earlier Example. The behavioural response assumed in Example 3 is between two thirds and three quarters of that assumed for the modelling of the Labor co-contribution policy.

The national saving analysis for this scenario is presented in Table 3 against a base of Government policy without an increase in member contributions.

The public saving projection is presented in Table 3A. The increase in member contributions leads to a loss in taxation revenue from the increase in the saving rebate on member contributions and from the pre-existing means tested rebate. By 2019-20 the increase in the superannuation fund earnings tax exceeds the annual cost increase in the rebate. The increase in superannuation benefits from these contributions leads to initially small reductions in social security outlays but these are appreciable by 2019-20. The change in the fiscal balance increases to a peak in 2002-3 and then decreases. Half of this cost is funded by public debt. Public debt interest outlays rise in all years of the projection and exceed the projected social security saving until around 2019-20.

Public saving is calculated as half of the change in the fiscal balance plus the change in public debt interest outlays. The total projected loss in public saving reaches a maximum value of 0.02% of GDP (two one hundredths of one per cent) by 2001-02.

Table 3B presents the projections for private financial saving and national financial saving arising from the assumed increase in member contributions.

By 2002-03 member contributions and superannuation fund earnings have risen by \$2.42 billion per year in nominal terms. This flow exceeds the **total** projected cost of the rebate on undeducted superannuation contributions **and capital incomes** in 2002-03. **That is, a behavioural response of between two thirds and three quarters of that assumed for the former co-contribution policy, is projected to increase member contributions by more than the total cost of the saving rebate on undeducted contributions and capital income by 2002-03.**

**TABLE 3: EXAMPLE 3 - An Effective 24% Increase in Member Contributions****NATIONAL FINANCIAL SAVING FROM GOVERNMENT SUPERANNUATION POLICIES****New Policy: Government Policy with 24% Change in Member Contributions****Base Policy: Government Policy with no Change in Member Contributions****A. PUBLIC SAVING**

Financial Year	Change in Taxation Revenue \$m,nominal	Change in outlays \$m,nominal	Change in Fiscal Balance \$m,nominal	Change in Public Debt Interest \$m,nominal	Change in Public Saving \$m,nominal	Change in Public Saving as % of GDP
1997-98					\$0	0.00%
1998-99	-\$14		-\$14		-\$7	0.00%
1999-00	-\$74		-\$74	-\$1	-\$38	-0.01%
2000-1	-\$141		-\$141	-\$4	-\$75	-0.01%
2001-2	-\$195		-\$195	-\$10	-\$107	-0.02%
2002-3	-\$250		-\$250	-\$17	-\$142	-0.02%
2003-4	-\$250	-\$1	-\$249	-\$25	-\$150	-0.02%
2004-5	-\$246	-\$2	-\$244	-\$34	-\$156	-0.02%
2009-10	-\$207	-\$15	-\$192	-\$83	-\$179	-0.02%
2014-15	-\$108	-\$62	-\$46	-\$134	-\$157	-0.01%
2019-20	\$90	-\$164	\$255	-\$163	-\$36	0.00%

**B. CHANGE IN PRIVATE SAVING AND NATIONAL SAVING**

Financial Year	Change in Super - annuation Flows \$m,nominal	Flows to offset and other Private Saving, \$m,nominal	Change in Private Saving \$m,nominal	Change in Private Saving as % of GDP	Change in National Saving \$m,nominal	Change in National Saving as % of GDP
1997-98			\$0	0.0%	\$0	0.0%
1998-99	\$343	-\$113	\$230	0.0%	\$222	0.0%
1999-00	\$750	-\$223	\$527	0.1%	\$488	0.1%
2000-1	\$1,219	-\$347	\$871	0.1%	\$796	0.1%
2001-2	\$1,775	-\$499	\$1,275	0.2%	\$1,167	0.2%
2002-3	\$2,421	-\$674	\$1,746	0.3%	\$1,603	0.2%
2003-4	\$2,640	-\$715	\$1,924	0.3%	\$1,774	0.2%
2004-5	\$2,868	-\$758	\$2,109	0.3%	\$1,952	0.3%
2009-10	\$4,122	-\$984	\$3,137	0.3%	\$2,957	0.3%
2014-15	\$5,509	-\$1,208	\$4,301	0.4%	\$4,143	0.4%
2019-20	\$7,185	-\$1,470	\$5,715	0.4%	\$5,679	0.4%

The increase in member contributions is partially offset by a decrease in other financial saving. The reasons for the relative smallness of the offset have been discussed in previous examples. The net increase in private saving is projected to be 0.2% of GDP by 2001-02 and 0.045% of GDP by 2019-20.

The increment to national financial saving is projected as 0.2% of GDP by 2000-01 and 0.4% by 2019-20.

## SUMMARY

This paper is designed to give an introduction to the national saving projection methodology currently used by the RIM Task Force. Three examples of this methodology are presented. The first compares the Coalition's superannuation policy with a base with no employer Superannuation Guarantee. The second and third project the effects of possible voluntary increases in member superannuation contributions given the incentive of the saving rebate. The total projected effect on national saving against the no Superannuation Guarantee base is summarised in Table 4 below.

**TABLE 4: SUMMARY OF NATIONAL SAVING PROJECTIONS**

<b>Financial Year</b>	<b>Example 1 No increase in member conts</b>	<b>Example 2 12% increase in member conts</b>	<b>Example 3 24% increase in member conts</b>
2000-01	1.5%	1.6%	1.6%
2004-05	2.3%	2.4%	2.5%
2009-10	2.9%	3.0%	3.2%
2014-15	3.2%	3.3%	3.5%
2019-20	3.6%	3.8%	4.0%

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2. Gallagher, Phil; Rothman, George & Brown, Colin *Saving for Retirement: The Benefits of Superannuation for Individuals and the Nation*, Conference Paper 93/2
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