

FINANCIAL ADVISORY SERVICES

# Superannuation: the Right Balance? - the cost of delay

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# EXECUTIVE SUMMARY

- This report is to be read in conjunction with the report '*Superannuation: the Right Balance?*'.
- The current picture of retirement income adequacy is that all family types meet a modest but adequate standard of living in retirement, demonstrating the impact of the compulsory 9% employer contributions when received over an entire working life. However, living standards in retirement still represent a considerable drop from pre-retirement living standards.
- The addition of a 3% employee contribution increases retirement living standards by an average of 27% across all the case lifetimes.
- The assumption in projections of the impact of employee contributions is that people begin contributing 3% at age 25. However, if this starting age is delayed, the required rate of employee contributions needed to achieve the same effect increases exponentially.
- For example, a middle income couple with two children would need to make contributions of 3.5% from age 35 in order to match the retirement outcomes attained from making 3% contributions from age 25.
- The required increase in contributions, as the starting age is pushed back, is much greater for the lower income earners.
- The impacts of compounding growth in a super fund and of differences in the length of lifetimes pre-retirement and in retirement mean that, with delays in employee contributions, future living standards in retirement decline far more quickly than the offsetting increase in living standards before retirement.

# THE COST OF DELAY

In Section 5.1 of the report '*Superannuation: the Right Balance*' we looked at the impact of supplementing the 9% employer contributions with a 3% or 6% standard employee contribution. The addition of employee contributions substantially improves retirement outcomes and the transition to retirement, while at the same time reducing pre-retirement discretionary incomes and hence living standards before retirement. The reductions in living standards before retirement appear slight compared to the gains in post-retirement income, however it should be noted that for those on lower incomes even a small outlay can be difficult.

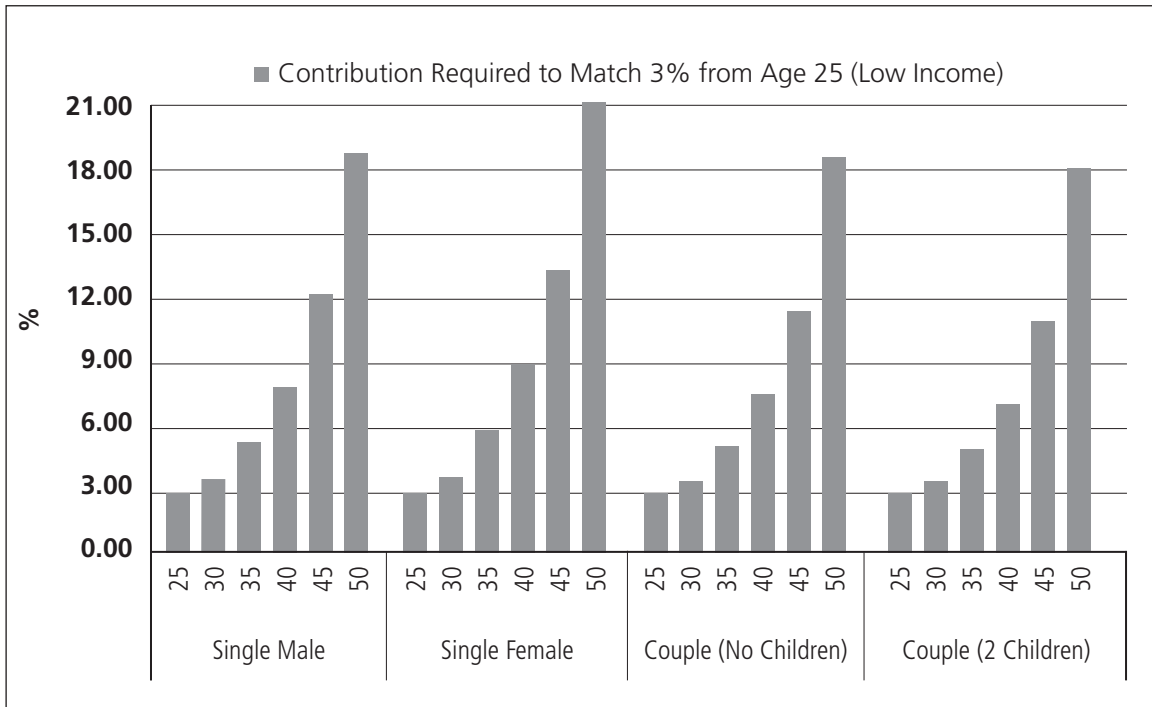
Employee contributions entail the flexibility to make or not make contributions, flexibility about how much to contribute, and flexibility about when to contribute. The assumption in the projections of the impact of employee contributions is that people begin contributing at age 25. What if they start later? Figures 1 - 5, below, illustrate, for the four different income groups, the rate of contributions that would be needed to achieve the same effect as a 3% contribution from age 25 if contributions were not made until a later age. The effects of different starting ages are also shown in Tables 1 - 4 of Appendix A to this report.

Clearly, the required rate of contribution increases exponentially as the starting age is pushed back. This is due to the foregone effects of compound fund earnings. For example, a middle income couple with two children would need to make contributions of 3.5% from age 35 in order to match the retirement outcomes attained from making 3% contributions from age 25. Starting from age 40, they would require 6.9% contributions, and from age 50, contributions of 16.4%.

The required increase in contributions, as the starting age is pushed back, is much greater for the lower income earners. For example, a low income single male would need to make a 8.1% contribution if starting at age 40, compared to 6.4% for a high income earner and 5.3% for a very high income earner. Single females on low incomes face the steepest increase to match early contributions.

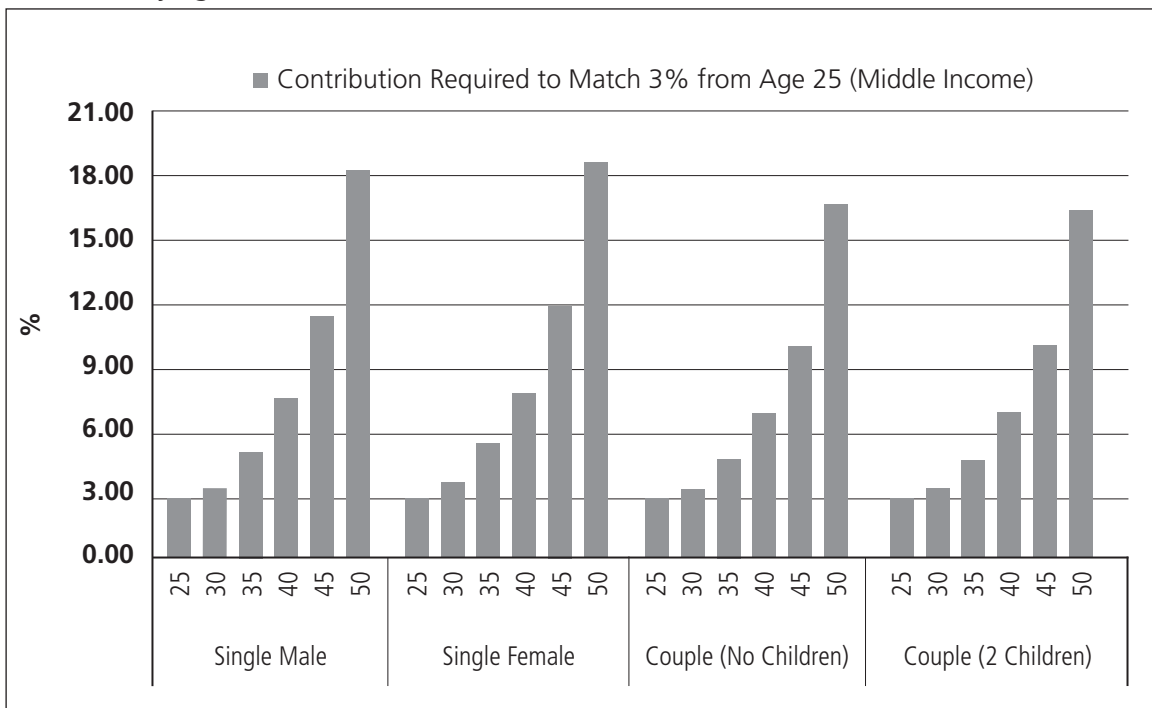
The attraction of delaying employee contributions lies, of course, in not reducing current living standards. The impacts of compounding growth in a super fund and of differences in the length of lifetimes pre-retirement and in retirement, however, mean that any delay has a far greater effect on living standards in retirement than on those over the pre-retirement years. This is illustrated, at Figure 5, for the case of a middle income family with children. With delay, future living standards in retirement decline far more quickly than the offsetting increase in living standards before retirement. Pre-retirement living standards are 0.04 index points greater if contributions are delayed until age 50, whereas in this scenario the living standard after retirement is 0.28 index points less.

Figure 1 Employee contributions required to match a 3% contribution from age 25 – by age when contributions start (low income)



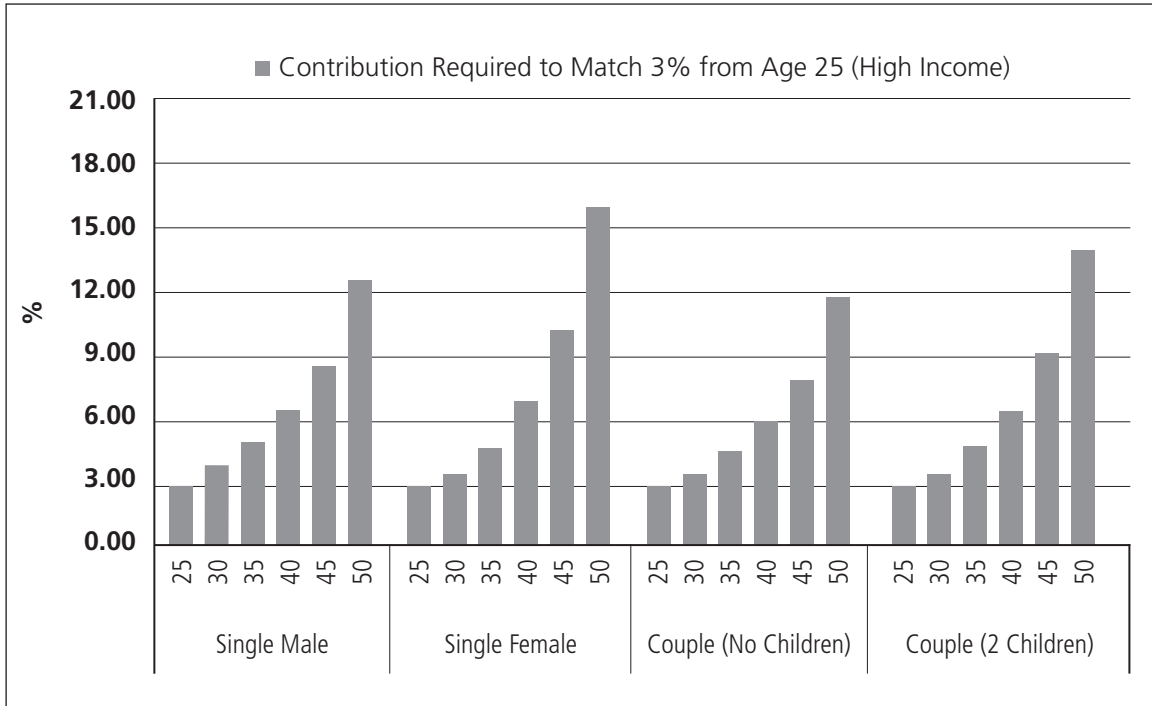
Data Source: NATSEM simulation

Figure 2 Employee contributions required to match a 3% contribution from age 25 – by age when contributions start (middle income)



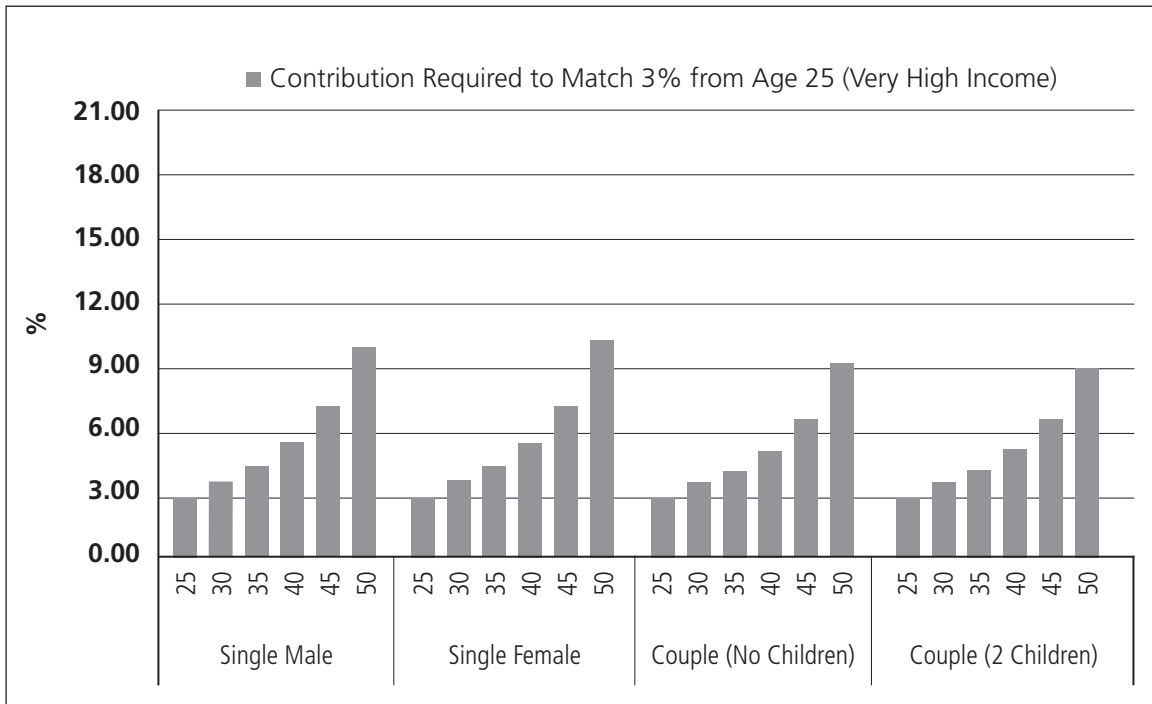
Data Source: NATSEM simulation

Figure 3 Employee contributions required to match a 3% contribution from age 25 – by age when contributions start (high income)



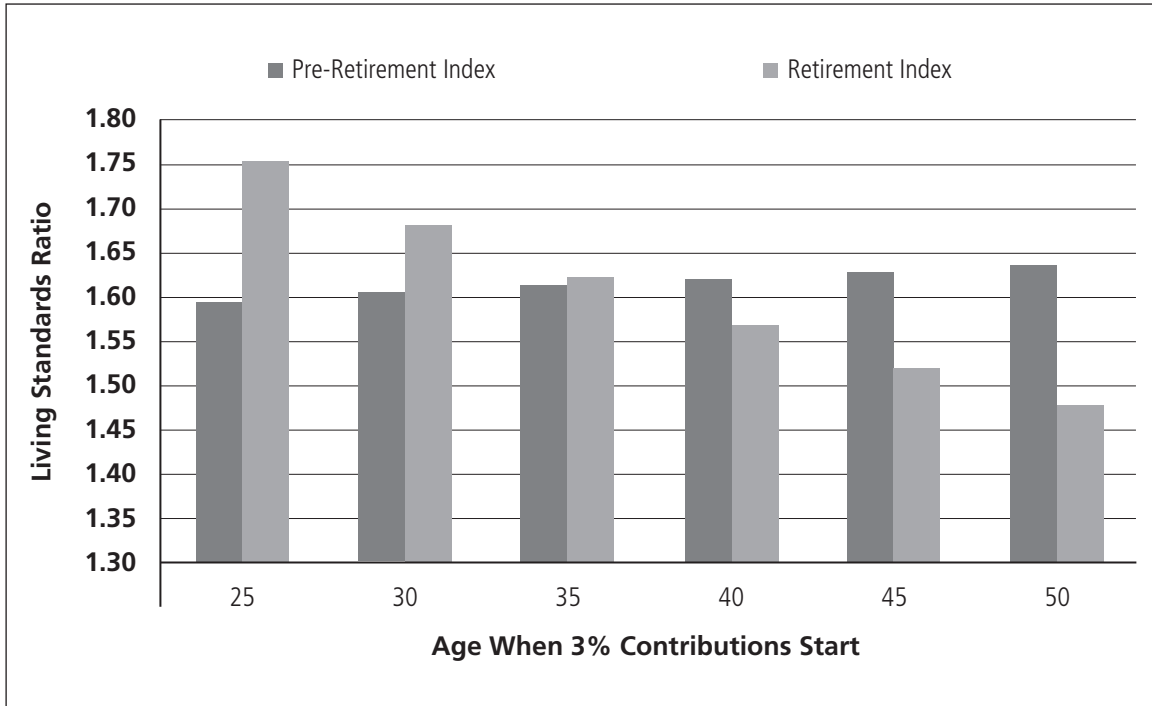
Data source: NATSEM simulation

Figure 4 Employee contributions required to match a 3% contribution from age 25 – by age when contributions start (very high income)



Data Source: NATSEM simulation

Figure 5 Pre-Retirement and Retirement Living Standards, by Age When 3% Contributions Start (Middle Income Couple with Children)



Data source: NATSEM simulation

# CONCLUSION

The addition of standard employee contributions substantially improves retirement outcomes and the transition to retirement, while at the same time reducing pre-retirement discretionary incomes and hence living standards before retirement. The assumption in the projections of the impact of standard employee contributions is that people begin contributing at age 25. If the age of starting contributions is pushed back, the rate of contributions that would be needed to achieve the same effect as a 3% contribution from age 25 increases exponentially. The attraction of delaying employee contributions lies in not reducing current living standards. However, the impacts of compounding growth in a super fund and of differences in the length of lifetimes pre-retirement and in retirement mean that any delay has a far greater effect on living standards in retirement than on those over the pre-retirement years.



# APPENDIX A: DETAILED TABLES

Table 1 The Cost of Delay in Employee Contributions – Low Income Family Types

Family Type and Age when 3% Employee Contributions Start	After-tax fund value at age 65	Living Standards Pre-Retirement	Living Standards in Retirement	Contribution to Match 3% from Age 25
<b>Single Male</b>				
25	580,634	1.57	2.28	3.00
30	538,058	1.58	2.18	3.60
35	499,231	1.59	2.10	5.40
40	464,450	1.60	2.04	8.10
45	433,872	1.61	1.98	12.30
50	406,742	1.62	1.93	19.25
<b>Single Female</b>				
25	519,041	1.33	1.87	3.00
30	478,117	1.34	1.81	3.70
35	441,477	1.35	1.76	5.90
40	409,434	1.35	1.72	8.90
45	381,418	1.36	1.69	13.45
50	356,767	1.37	1.65	21.50
<b>Couple (No Children)</b>				
25	796,907	1.79	1.68	3.00
30	743,095	1.80	1.62	3.50
35	692,250	1.81	1.56	5.15
40	644,930	1.82	1.52	7.60
45	601,299	1.83	1.48	11.60
50	560,529	1.84	1.46	18.60
<b>Couple (2 Children)</b>				
25	761,413	1.38	1.64	3.00
30	711,040	1.39	1.58	3.50
35	666,121	1.39	1.53	5.00
40	623,781	1.40	1.49	7.10
45	580,151	1.41	1.46	11.00
50	539,381	1.42	1.44	18.20

Source: NATSEM simulation

**Table 2 The Cost of Delay in Employee Contributions – Middle Income Family Types**

Family Type and Age when 3% Employee Contributions Start	After-tax fund value at age 65	Living Standards Pre-Retirement	Living Standards in Retirement	Contribution to Match 3% from Age 25
<b>Single Male</b>				
25	634,509	1.73	2.41	3.00
30	590,039	1.74	2.30	3.50
35	549,289	1.75	2.21	5.15
40	512,799	1.76	2.12	7.70
45	480,454	1.77	2.06	11.50
50	451,927	1.78	2.01	18.25
<b>Single Female</b>				
25	569,549	1.55	1.96	3.00
30	527,768	1.56	1.88	3.70
35	490,098	1.57	1.82	5.50
40	456,623	1.58	1.78	7.90
45	426,719	1.58	1.74	12.00
50	400,012	1.59	1.71	18.70
<b>Couple (No Children)</b>				
25	889558.79	2.04	1.79	3.00
30	833615.63	2.05	1.71	3.45
35	780506.62	2.06	1.64	4.90
40	730914.74	2.08	1.59	7.00
45	672158.75	1.63	1.52	10.10
50	641327.19	2.10	1.49	16.80
<b>Couple (2 Children)</b>				
25	867669.89	1.60	1.76	3.00
30	811726.73	1.61	1.68	3.50
35	764424.85	1.61	1.62	4.80
40	718440.56	1.62	1.57	6.90
45	672158.75	1.63	1.52	10.10
50	628853.01	1.64	1.48	16.40

Source: NATSEM simulation

**Table 3 The Cost of Delay in Employee Contributions – High Income Family Types**

Family Type and Age when 3% Employee Contributions Start	After-tax fund value at age 65	Living Standards Pre-Retirement	Living Standards in Retirement	Contribution to Match 3% from Age 25
<b>Single Male</b>				
25	721,230	2.37	2.63	3.00
30	671,618	2.38	2.50	3.80
35	632,214	2.40	2.40	5.05
40	605,118	2.41	2.33	6.40
45	580,265	2.43	2.27	8.60
50	557,336	2.44	2.22	12.50
<b>Single Female</b>				
25	704,212	2.05	2.23	3.00
30	657,346	2.06	2.13	3.40
35	614,103	2.07	2.04	4.80
40	574,905	2.08	1.97	6.90
45	539,883	2.10	1.90	10.20
50	508,594	2.11	1.85	16.00
<b>Couple (No Children)</b>				
25	1,049,323	2.83	1.95	3.00
30	986,839	2.85	1.86	3.50
35	933,243	2.87	1.78	4.60
40	890,802	2.88	1.72	5.90
45	849,629	2.90	1.66	8.00
50	809,384	2.92	1.61	11.80
<b>Couple (2 Children)</b>				
25	878,873	1.72	1.71	3.00
30	824,220	1.73	1.64	3.45
35	773,398	1.74	1.58	4.70
40	729,857	1.75	1.53	6.40
45	683,632	1.76	1.48	9.10
50	639,610	1.77	1.44	14.00

Source: NATSEM simulation

**Table 4 The Cost of Delay in Employee Contributions – Very High Income Family Types**

Family Type and Age when 3% Employee Contributions Start	After-tax fund value at age 65	Living Standards Pre-Retirement	Living Standards in Retirement	Contribution to Match 3% from Age 25
<b>Single Male</b>				
25	997,254	3.70	3.42	3.00
30	952,551	3.72	3.29	3.50
35	907,199	3.74	3.16	4.23
40	863,523	3.77	3.03	5.30
45	820,231	3.80	2.90	7.00
50	782,172	3.83	2.80	9.90
<b>Single Female</b>				
25	926,055	3.38	2.75	3.00
30	883,968	3.40	2.64	3.55
35	840,459	3.43	2.54	4.30
40	800,245	3.45	2.44	5.40
45	762,825	3.48	2.36	7.10
50	727,911	3.50	2.28	10.20
<b>Couple (No Children)</b>				
25	1,472,118	4.51	2.23	3.00
30	1,413,487	4.54	2.13	3.45
35	1,351,330	4.57	2.02	4.10
40	1,289,629	4.61	1.92	5.00
45	1,226,891	4.65	1.82	6.50
50	1,167,845	4.68	1.72	9.10
<b>Couple (2 Children)</b>				
25	1,450,110	3.52	2.19	3.00
30	1,391,480	3.55	2.09	3.45
35	1,329,971	3.58	1.99	4.10
40	1,271,647	3.60	1.89	4.95
45	1,208,909	3.62	1.79	6.40
50	1,149,863	3.64	1.69	9.00

Source: NATSEM simulation