



# Can one save \$1.6m for retirement?

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## The short answer is 'with difficulty'

- **Contributions caps are far too low**
- **Higher income contributors can only save less than lower income contributors!!**
- **What if you miss a few years' contributions?**

## The problem

Obviously one requires a good income and/or wealth to be able to save up to the government cap for an SMSF in pension mode of \$1.6m. But the new constraints on how much can be contributed makes it difficult to achieve that goal for many other reasons outlined below.

In my previous report on the super changes, I show that more like \$3.2m would be needed in pension mode to equate with the alternatives highlighted in the budget papers: a 'politician's' defined-benefits pension of \$100,000 pa; or four times the single person's Aged Pension of \$90,884 pa.

There is very little chance that anyone – including higher earners – could achieve this amount of \$3.2m within the contribution constraints so most people in the private sector are disadvantaged when compared to those politicians and public servants on their riskless, indexed pensions of \$100,000 pa or more.

In this paper I question how one might be able to accumulate \$1.6m with the new annual cap on concessional contributions and the new lifetime non-concessional contributions. The answer is that there is a good chance you won't get that far – even if in

the unlikely event you earn enough each year to contribute the maxima!

I will focus on an individual who is able to save the maximum concessional contribution of \$25,000 for each year in a savings plan. Since in most cases, 'missed contributions' cannot be made up later in life, this assumption produces savings at the upper end of what might be achieved in practice.

My hypothetical saver can choose to save for 38 years – from, say, 22 to 60 – or for 20 years from, say, 40 – 60 for people who started paying into super later in life.

I consider two types of funds in which to invest – Balanced or Capital Stable; and two tax rates: 15% or 30% for higher income earners.

### Anomalies

Of course one does not save \$25,000 pa even at the maximum contribution. After tax at 15%, the investible contribution is \$21,250, or only \$17,500 at 30%. So higher income earners contribute less at the maxima!

Except for a special case or two, a missing payment in a given year cannot be added to later payments' limits. The obvious 'gaps' case is the woman who

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takes time off to have children and help bring them up. But there is also the case of people who lose their super in a divorce case; migrate to Australia later in their working lives; who take extended leave owing to illness, further education; suffer extended unemployment or work overseas for a period, etc.

One can also contribute \$500,000 of after-tax, or non-concessional, contributions over a lifetime. Unless one inherits that sum, it is unlikely that it could be contributed at the start of the accumulation fund. I consider three scenarios for contributing this new life-time maximum: at the 'start', equal amounts over the savings period (or 'even') and at the 'end'.

Naturally, contributing \$500,000 at the start allows for a greater accumulation from more returns and re-invested returns. That sum contributed at the end has no gains from investment in the accumulation phase.

It is impossible to cover all possible scenarios – such as allowing for intermittent breaks in the middle of an employment spell and significant changes in the ability to save. Rather, I offer a few scenarios as discussion points.

### The experiments

Following my previous reports, I use the assumptions embedded in the government (ASIC) calculator called *Moneysmart*. For the Balanced option, the fund has an expected return of 8.0% pa, fees are 0.55% pa, inflation is 2.5% pa and the lifestyle assumption is 1% pa. I allow for 9% volatility but I also allow for a 1-in-4 chance in any year of a good or bad annual return with an assumption of 20% volatility.

For the Capital Stable option the fund has an expected return of 6.0% pa, fees are 0.55% pa, inflation is 2.5% pa and the lifestyle assumption is 1% pa. I allow for 7% volatility but I also allow for a 1-in-4 chance in any year of a good or bad annual return with an assumption of 15% volatility. I assumed a more conservative fund in the pension phase research (Capital Guaranteed) as that is in line with what is usually discussed within the industry.

### Twenty-year savings spell

Again I use Monte Carlo simulations to allow for the fact that market returns are uncertain. From Table 1 it can be noted that there is only one outcome above the \$1.6m cap that would be reached with a 50% chance. That is, in the unlikely event of being able to inject \$500,000 in year one; earning at a tax rate of 15% for super purposes; and investing in a balanced fund [row three, column one of the results], the

median retirement sum is only \$1,702,633. That is with one slight exception, most people will not achieve the \$1.6m goal even if their income and lifestyle is sufficient to save the cap amount or more.

And what if family circumstances or employment prevented the saver from contributing the maximum in each and every year? Obviously less would be saved.

**Table 1: Result of 20 years of savings**

Fund Injection	Tax rate	Percentile	Balanced			Capital stable		
			Start	Even	End	Start	Even	End
15%	5%		796,972	798,132	866,709	709,507	744,861	842,234
	25%		1,243,739	1,115,028	1,012,310	987,545	953,963	938,307
	50%		1,702,633	1,416,434	1,150,794	1,246,137	1,137,194	1,022,495
30%	5%		729,521	733,418	801,996	647,229	684,467	781,839
	25%		1,151,458	1,024,621	921,903	908,969	876,615	860,959
	50%		1,587,277	1,301,588	1,035,948	1,153,141	1,044,989	930,290

Note: Option refers to when the \$500,000 non-concessional amount is injected. The percentiles can be read as follows. 5% means that numbers on that row have a 5% chance of not being realised. 50% represents the median, etc.

A more conservative investor in the Capital Stable fund would accumulate about \$450,000 less (\$1,246,137). The same situations for an investor paying 30% tax in the super fund accumulate about \$100,000 less. All of these results are effectively price and wage-inflation corrected.

For savers who are not fortunate enough to be able to contribute \$500,000 at the start of the 20-year contributions period, the situation is even bleaker. A Capital Stable fund investor only finishes up with \$930,290 on 30% tax including the \$500,000 after-tax contribution at the end of the accumulation phase!

But these figures are median estimates. That is, the results in the 50% rows are the middle numbers in a ranking of all possible outcomes from the simulated returns. There is a 50% chance of finishing up with less.

If we look at the 25% rows we can see that there is a 25% chance of accumulating less than the results in that row. For example, with a balanced fund and being able to make twenty, consecutive \$25,000 annual after tax contributions (the 'even' columns) has a 25% chance of accumulating \$1,115,028 at a 15% tax rate.

I concluded in my previous reports that around \$3.2m would need to be accumulated for a 60 year old retiree to be in the same ballpark as someone earning four times the Aged Pension or a politicians' \$100,000 defined benefits pension – as budget papers cited.

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Someone who can contribute \$25,000 pa concessional and \$25,000 pa non-concessional is likely to earn a pension of around one third of the Treasurer's benchmarks! And such a person on a \$250,000 pa salary package might get around \$150,000 after tax and then retire on around the equivalent of \$30,000 pa (index-linked and reversionary) – a tiny fraction of the public servant on a similar salary while working. So let's assume now that the person contributed for 38 consecutive years.

### Thirty-eight-year savings spell

In this section, the only difference in the assumptions is that I now assume there is a continuous 38 year accumulation phase. For those fortunate to hit the ground running with \$25,000 concessional contribution from year one in employment, they still have a 50% chance of not making the \$1.6m if they pay 30% tax in super and invest in a Capital Stable fund and contribute the lump sum at the end (\$1,485,956)! How many people even with great prospects can put aside \$25,000 per annum from their income when they have possibly just left home; are paying HECS off; are saving for and buying a home, having kids etc?

**Table 2: Result of 38 years of savings**

Fund Injection	Tax rate	Percentile	Balanced			Capital stable		
			Start	Even	End	Start	Even	End
15%	5%		1,432,244	1,308,496	1,308,115	1,073,706	1,072,985	1,162,665
	25%		2,560,366	2,117,702	1,807,873	1,630,071	1,513,493	1,434,720
	50%		3,912,060	2,997,453	2,351,200	2,207,694	1,938,553	1,697,233
30%	5%		1,283,609	1,165,888	1,165,507	953,364	956,044	1,045,724
	25%		2,324,292	1,886,901	1,577,072	1,114,085	1,088,200	1,121,161
	50%		3,582,056	2,670,771	2,024,517	1,995,502	1,727,277	1,485,956

Note: Option refers to when the \$500,000 non-concessional amount is injected. The percentiles can be read as follows. 5% means that numbers on that row have a 5% chance of not being realised. 50% represents the median, etc.

But who will save the \$3.2m I concluded was the 'fair' super cap in my previous work – to be compatible with the government's analysis? There is a 50% chance of not making that grade unless you have a lazy \$500,000 at, say 22 years of age!

### Conclusions

Most people will not be able save the \$1.6m cap in super, however much they earn, unless they can contribute the annual caps for around 38 years. Missed years at the cap cannot be caught up later.

Missed years earlier in one's lifetime have a much bigger negative impact on the total accumulated because of the otherwise positive impact of a greater number of years attracting returns and the impact of reinvested returns.

The contribution caps are obviously far too low for most people to reach an amount needed to compete with the 'four times Aged Pension' or politicians' \$100,000 defined- benefits pension.

People on higher incomes paying 30% tax in super save less than those on lower incomes at the annual caps. Clearly the size of the caps should be related to the tax rate in super. That is the tax should be paid outside of super so all are on an equal footing.