Response to Treasury discussion paper "Retirement phase of superannuation"

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Sean has over 30 years' experience in the Australian superannuation industry, principally in the areas of product management and product development.

This includes having been Product Manager for annuities at Challenger Life and Colonial Life (subsequently acquired by AIA and then Resolution Life). The annuity business previously owned by Colonial Life, along with the annuity business of Challenger Life, are the only surviving annuity providers in Australia.

Sean has also held positions as Senior Product Manager at both Connelly Temple, the second provider of account-based pensions in Australia, and Oasis Asset Management (since acquired by Insignia Financial).

At Connelly Temple in the 1990's he was involved in the development of the Lifetime Allocated Pension, which combined a deferred lifetime annuity with an account-based pension to address longevity risk.

Prior to Connelly Temple, Sean worked at SBC Dominguez Barry on the first non-life company guaranteed retirement income product for superannuation in Australia, the CPI Pension.

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Improving Retirement Outcomes Through Fostering Innovation for Guaranteed Retirement Income Products

Non-guaranteed retirement income products such as account-based pensions cannot provide reduced risk and increased certainty of income to superannuants in retirement as they transfer all risk from the provider to superannuants.

Hybrid semi-guaranteed retirement income products such as almost all of those recently launched into the Australian market also cannot provide reduced risk and increased certainty of income to superannuants in retirement as they reduce longevity risk only by increasing the risk related to the amount of income received.

Only fully guaranteed retirement income products can provide reduced risk and increased certainty of income for superannuants. However, current fully guaranteed retirement income products are not attractive to superannuants, mainly because, although they eliminate risk, they provide unattractive returns and income.

The only effective way to improve the returns and income of guaranteed retirement income products so that they can be made more attractive to superannuants is to reduce or eliminate the risks for their providers / guarantors if they invest in higher returning but higher volatility assets.

This means that a way must be found for providers / guarantors to rely less, or ideally not at all, on large amounts of external capital and / or derivatives to combat the risks that providers / guarantors face as these are expensive and reduce the net of cost returns and income that can be delivered to superannuants in retirement.

The path forward is not to transfer the increased risk of guaranteed retirement income products if they invest in higher returning but higher volatility assets from superannuants to their providers / guarantors, which will make the current situation worse because if providers / guarantors are at increased risk then superannuants will get even lower income than they do now. The path forward is to work out how to reduce or eliminate risk for all parties.

This is necessary so that guaranteed retirement income products are able to be improved so as to overcome their current deficiencies that has resulted in a very low take up rate in Australia, which has in turn resulted in the exit from the market of all but two of the sixteen providers of guaranteed retirement income products that existed in 2000 and the very real prospect that one of those two remaining providers will soon exit the market.

This is also necessary so that guaranteed retirement income products, which is the only category that can do so, can encourage retired superannuants to draw down more of their super in retirement rather than maintaining their super to protect against uncertainty, which leads to higher amounts of super being left as bequests.

What Can Be Done to Increase the Appeal of Guaranteed Retirement Income Products?

If I really had to condense the fundamental problem with guaranteed retirement income products down to its essence it is that they invest in markets to provide retirement income over the long periods involved in retirement but are unable to accurately predict the returns generated by those markets into the future.

Therefore, providers of guaranteed retirement income products need to carry large amounts of capital and / or use derivatives to counter the risk that stems from not being able to predict the returns generated by those markets into the future. Doing this is expensive as the high costs of providing and carrying large amounts of capital and / or using derivatives mean that the net of cost return and income that can be delivered to superannuants will be low, hence the lack of appeal of guaranteed retirement income products.

Furthermore, if guaranteed retirement income products invest in higher returning but more volatile markets in order to capture the higher returns they generate over the long term, the exercise will be futile because the even larger amounts of capital and / or derivatives that will need to be used will mean that the net of cost return and income that can be delivered to superannuants will not change substantively compared to the net of cost return that can be delivered to superannuants from investing in lower returning and less volatile markets.

When you think about it, there are two sources of risk for conventional guaranteed retirement income products such as annuities that guarantee income in retirement and capital for the purpose of withdrawals, which they need to do if they are to attract investment as superannuants will not give up access to capital for the purpose of withdrawals even if it comes with the benefit of higher income.

The first source of risk is the risk of guaranteed income being paid when the average rate of return that has been generated by the investment pool is less than the rate of return needed for the purposes of providing the income that is guaranteed by the product, meaning that the investment pool runs the risk of eventually becoming exhausted if it continues to provide the guaranteed amount of income. This risk is increased the more likely the average rate of return that has been generated by the investment pool is to be less than the rate of return needed for the purposes of providing the income that is guaranteed by the product.

The second source of risk is the risk of guaranteed withdrawals being paid when the average rate of return that has been generated by the investment pool is less than the rate of return needed for the purposes of providing the capital upon withdrawal that is guaranteed by the product, meaning that the investment pool runs the risk of eventually becoming exhausted if it continues to provide the guaranteed amount of capital upon withdrawal. This risk is increased the more likely the average rate of return that has been generated by the investment pool is to be less than the rate of return needed for the purposes of providing the capital upon withdrawal that is guaranteed by the product.

Both of these risks are increased if guaranteed retirement income products invest in higher returning but more volatile markets in order to capture the higher returns they generate over the long term, hence the even larger amounts of capital and / or derivatives that need to be used if those markets are invested in.

Now the first source of risk can be dealt with if the average rate of return that has been generated by the investment pool if it is invested in markets can be accurately calculated so that it is not less than the rate of return needed for the purposes of providing the income that is guaranteed by the product.

Importantly, it is not necessary to be able to accurately calculate the average rate of return that will be generated by the investment pool if it is invested in markets at all times in the future.

It is only necessary to accurately calculate the minimum average rate of return that will be generated by the investment pool if it is invested in markets.

If the minimum average rate of return that will be generated by the investment pool if it is invested in markets over the long term can be accurately calculated, it can then be used to set the rate of return needed for the purposes of providing the income that is guaranteed by the product.

However, the minimum average rate of return that will be generated by the investment pool if it is invested in markets can only be accurately calculated for higher returning and more volatile markets if the minimum average rate of return is calculated over the very long term as the higher volatility of these markets mean that the minimum average rate of return cannot be accurately calculated over the short to medium term.

Fortunately, guaranteed retirement income products can be configured so that they only guarantee income over the very long term if they are configured to only guarantee income that is paid over at least life expectancy as life expectancy for people who retire these days matches the definition of the very long term.

Unfortunately, guaranteed retirement income products cannot be configured so that they only guarantee capital for the purpose of withdrawals over the very long term as superannuants invested in these products will demand access to their capital at all times if they are to invest in them. This is because they are unable to predict when in the future they will need access to their capital as unexpected needs such as emergencies can arise at any time and are therefore by definition unpredictable.

This means that providers of guaranteed retirement income products must provide unrestricted access to capital for the purpose of withdrawals if superannuants are to invest in them but, should they do what is necessary for superannuants to invest in their products, they will not be able to predict the volume or timing of withdrawals.

Guaranteed retirement income products that rely on an accurate calculation of the minimum rate of return from investing in markets and have been configured to only guarantee income that is paid over at least life expectancy will still need to have access to capital if they invest in higher returning and more volatile markets to protect the investment pool from fluctuations in returns over the short to medium term.

Fortunately, they can achieve this by diverting a portion of the higher minimum rate of return that will be generated by investing the capital provided by their superannuants in higher returning and more volatile markets into capital reserves over the long term and still be able to provide a higher rate of return and income.

If they do this, while investing in higher returning and more volatile markets will still lead to fluctuations in returns over the short to medium term, the building up of capital reserves over the long term will protect the investment pool from these short to medium term fluctuations and the investment pool will only be negatively impacted by payments that are guaranteed over the long term if the minimum rate of return cannot be accurately calculated.

In contrast, guaranteed retirement income products that guarantee income and also guarantee capital for the purpose of withdrawals will not be able to protect the investment pool from short to medium term fluctuations as the investment pool can be negatively impacted by payments that are guaranteed over the short to medium term, meaning that capital reserves can be depleted over the short to medium term before they have had a chance to build up over the long term.

That means that the only realistic chance of guaranteed retirement income products being created that guarantee higher levels of income than conventional products such as current annuities is through allowing them to safely invest in higher returning but higher volatility markets, which is only possible if they can both accurately calculate the minimum average rate of return that will be generated by the investment pool if it is invested in markets over the long term and also if they are not required to guarantee capital for the purpose of withdrawals.

It is worth noting that allowing guaranteed retirement income products to rely on the diversion of a portion of the higher minimum rate of return that will be generated by investing the capital provided by their superannuants in higher returning and more volatile markets into capital reserves over the long term rather than requiring providers / guarantors to already possess or have access to large amounts of capital of their own will improve the ability of guaranteed retirement income products to provide higher net of cost guaranteed income as capital provided by superannuants is essentially free whereas capital provided by providers / guarantors comes with a high cost.

It is also worth noting that the use of capital provided by superannuants, which is essentially free, will help to ensure that a greater number of new providers / guarantors are able to develop and launch innovative new variations on conventional guaranteed retirement income products that do not guarantee capital for the purpose of withdrawals as not all potential providers / guarantors will already possess or have access to large amounts of capital.

Alignment With the Purpose of Super

It is worth noting at this point that the purpose of Australian superannuation is to provide income in retirement.

Therefore, the aim of improving the superannuation system should be to provide more certainty over the duration or amount of income or both, which only guaranteed retirement income products can do.

It is not a worthwhile improvement for guaranteed retirement income products to provide more certainty or even maintain current levels of certainty over capital for the purpose of withdrawals as it is not the purpose of Australian superannuation to provide a tax advantaged means for the preservation of capital.

Any aim to improve the superannuation system by improving the appeal of guaranteed retirement income products can therefore only be achieved with certainty by substantially relaxing or removing entirely the requirement for these products to guarantee capital for the purpose of withdrawals.

If this is done, innovative new products can potentially be developed that improve upon the ability of existing guaranteed retirement income products to provide certainty over the duration / amount of income they provide.

Doing this will be in accordance with the purpose of Australian superannuation.

A Demonstration That It Is Possible to Increase the Appeal of Guaranteed Retirement Income Products

As proof that it is possible to increase the appeal of guaranteed retirement income products by increasing the returns and income they provide to superannuants while at the same lowering risk and the need for external capital from the provider / guarantor, consider the following risk results for a product that does exactly that.

The product relies on an accurate calculation of the minimum average rate of return generated by investing over the long term in large, liquid conventional Australian asset markets.

Realistic assumptions about withdrawals and the amount invested in different components of the overall product are made. Standard mortality tables for repayment of remaining capital upon death are used while modified mortality tables were used for the mortality basis used to calculate lifetime payments. Other very conservative assumptions, including for liquidity, are used where relevant. Fees of 0.50% p.a. have been allowed for.

The product offers retired superannuants either a regular income that is fully indexed to inflation for a fixed term of at least life expectancy or a regular income that is fully indexed to inflation for life.

Retired superannuants can also withdraw or transfer all or some of their remaining capital at any time, although the amount will not be guaranteed as only regular income payments and repayments upon death are guaranteed.

The results below are the result of actuarial calculations of the probability of a deficit or surplus of assets less liabilities within the investment pool over a 40 year period using the monthly real returns generated through investment in large, liquid conventional Australian asset markets over 40 years from 1980.

The returns that were used were not simply sequential as they occurred historically as a Monte Carlo simulation using 100,000 iterations of non-sequential combinations of the actual historical returns was used to generate the results in the table, which means that the results in the table reflect “worse than worst” cases than were actually experienced using the sequential historical results (ie. they accentuate tail risks).

The results below assume a range of potential guaranteed real rates of return, which is what determines income.

Scenario	Likelihood of Deficit	Likelihood of Surplus	Average Final Coverage Ratio	Minimum Final Coverage Ratio
4.00% guaranteed real rate	0.02%	99.98%	171.78%	67.02%
3.65% guaranteed real rate	0.01%	99.99%	184.61%	67.38%
3.00% guaranteed real rate	0.00%	100.00%	200.00%	89.65%

Note that the product only relies on internally generated capital, with excess returns diverted into reserves to protect the investment pool from fluctuations in the returns generated by the relevant markets.

Note in particular that the occurrence of deficits at the end of the period does not indicate that the assets of the investment pool are exhausted while liabilities still exist. Also note that the fact that the minimum final coverage ratio never reaches zero means that the remaining assets of the investment pool in all scenarios covered by the simulations have a possibility of increasing in value and continuing to generate returns beyond the end of the 40 period covered by the simulations.

For those who contend that future periods might not be as favourable for returns as this particular period, I would point to the results in the following table that covers the same period but uses intentionally reduced real returns that have been modified to generate a lower real return on average than the actual historical real returns.

The reduced real returns are 1.91% p.a. lower on average over the entire 40 year period, which means that the lower average real return used for the table below is only 72% of the actual average historical real return.

This was done in order to replicate the real returns generated by the relevant markets during their lowest returning decade and then apply them across the entire 40 year period. Doing this means that the results in the table below actually extend the earlier “worse than worst” case by reducing the real returns as well as using non-sequential returns to even further exaggerate the actual tail risks involved in investing in the relevant markets.

Scenario	Likelihood of Deficit	Likelihood of Surplus	Average Final Coverage Ratio	Minimum Final Coverage Ratio
4.00% guaranteed real rate	0.97%	99.03%	160.00%	66.80%
3.65% guaranteed real rate	0.37%	99.63%	168.30%	67.17%
3.00% guaranteed real rate	0.04%	99.96%	179.81%	88.50%

As can be seen, the risk of deficit does not increase to any significant extent compared to the earlier table.

Conclusion

Guaranteed retirement income products will not be appealing to superannuants unless they provide higher and more attractive returns and income than current products as well as providing unrestricted access to capital.

Guaranteed retirement income products cannot provide attractive returns and income unless they invest in higher returning assets. The problem with higher returning assets is that they also involve higher volatility.

This means that conventional guaranteed retirement income products such as annuities cannot invest in higher returning assets because their higher volatility means that the provider / guarantor of the product must either severely restrict or not allow access to capital or else the provider / guarantor must carry large amounts of capital or utilise derivatives to protect the investment pool from the higher risk such investments involve because current products must guarantee capital for the purpose of withdrawals if they provide access to capital.

Restricting or not allowing access to capital is pointless, as is investing in higher returning assets for products that are required to guarantee capital for the purpose of withdrawals. This is because the net return after allowing for the cost of the higher capital that must be carried or the increased derivatives that must be used to protect the investment pool against the increased volatility that also comes from investing in higher returning assets will be no better than can be achieved through investing in lower volatility and lower returning assets in the first place.

However, all of the problems involved with making guaranteed retirement income products more appealing to superannuants can be solved if they are not required to guarantee capital for the purpose of withdrawals but still provide unrestricted access to capital as long as the minimum average rate of return generated by investing in markets over the long term, including higher returning and higher volatility markets, can be accurately calculated.