

3 February 2017

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Dear Ms Halbert

## Discussion Paper: Social security means testing of retirement income streams

Challenger Limited is Australia's largest provider of annuities and seventh largest fund manager with a vision to provide Australians with financial security for retirement. Challenger welcomes this opportunity to contribute to the development of appropriate means test treatment for the new category of lifetime products and to ensure alignment of the means test treatment for all products with both the principles for appropriate means test treatment and the Government's retirement incomes policy.

There are a large number of issues raised in the *Discussion Paper: Social security means testing of retirement income streams (DP)*. This submission addresses these before providing responses to the specific questions raised in the DP.

### 1 Executive Summary

The DP follows the Government's 2016 Budget announcement that it had accepted the recommendations of the *Review of Retirement Income Streams (RRIS)* and would determine the social security treatment of the new category of lifetime products for a 1 July 2017 start date. The DP also examines the appropriateness of the means test treatment of current lifetime products.

The DP sets out six principles for the assessment of means test options; neutrality, equity, resilience, integrity, fiscal sustainability and simplicity. The DP is specific about how each principle should be interpreted.

The means test treatment of both the existing and new category of lifetime products must also recognise, be consistent with and complement the Government's announced, and in most cases legislated, wider retirement income reforms:

- The objective of superannuation;
- The Review of Retirement Income Streams (RRIS);
- Comprehensive Income Products for Retirement (CIPR);
- Reforms to the targeting of the Age Pension means test; and
- Reforms to the targeting of superannuation tax concessions.

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These reforms are designed to improve retirement income outcomes for retirees and improve the fiscal sustainability of the retirement income system. Challenger has supported all these reforms and this submission focuses on the central role that lifetime products will have in making them a success.

The DP seeks to do two things:

1. confirm that the current means test treatment of existing lifetime products is appropriate or determine a better one; and
2. determine the appropriate means test treatment for the new category of lifetime products.

This submission examines these two questions and concludes that the current means test arrangements for existing lifetime products are superior to the other options provided in the DP and are the most appropriate basis for means testing the new category of longevity products. It then proposes a set of means test arrangements to apply to deferred products in the new lifetime category that are most closely aligned to the means test treatment of existing products.

Analysis of the example provided in Chart 1 in the DP actually demonstrates that the current treatment of lifetime annuities and account-based pensions are similar in terms of income received (but not assessed through the means test). That is, it demonstrates that the current treatment of lifetime annuities is neutral and is not highly concessional.

Reduced Purchase Price (**RPP**) and deduction amounts have been the basis of means test assessment of lifetime products since 1998. Under these arrangements the costs and benefits of both the income stream and the social security treatment of lifetime products are shared. This pooling of the social security treatment is critical to appropriately means testing the insurance characteristics of lifetime products which require retirees to give up access to capital which, if they die early, funds the retirement incomes of others who live longer.

The capital access schedule for the new category of lifetime products is identical to both the current regime for means testing lifetime products and the current regime for taxing income from non-superannuation lifetime products. This will provide consistent, principles based alignment of the SIS pension rules, social security and tax treatment for lifetime products.

We propose using a more realistic measure of life expectancy to the RPP and deduction amount, being Australian population mortality with allowance for mortality improvements using the Australian Government Actuary (**AGA**) 25 year average improvement rates.

Strictly, the only social security policy change necessary to accommodate the new category of lifetime products is to determine the appropriate means test treatment in and after any deferral period. We propose that deferred products be means tested using RPP and deduction amounts that only differ from the treatment of immediate lifetime products to the extent that there is an income test exemption during deferral. This will provide a degree of neutrality in the treatment of immediate and deferred lifetime products not available under other means test options canvassed in the DP.

If lifetime products are to achieve their economic purpose of providing lifetime incomes they can only provide heavily restricted access to capital. In contrast account-based pensions allow unrestricted access to capital and result in both intended and unintended bequests. It is not possible to achieve neutral and equitable treatment with a single set of rules applying to both types of product. Analysis in this submission demonstrates that the current arrangements do provide neutral and equitable treatment but a number of the options in the DP do not.

Comparisons of the outcomes of the means test treatment of account-based pensions and lifetime products exaggerate any differences if they fail to consider lifetime products as a pooled group and if they only make selective point in time comparisons. Widespread take up of composite retirement solutions will significantly reduce the relevance of point in time comparisons between product types.

The differences in outcomes are further exaggerated by inter-product comparisons which assume the retiree will make a mutually exclusive choice allocating 100% to a lifetime product or 100% to an account-based pension. While 94% of retirement income streams are account-based, the limitations of this approach were clearly identified by the Financial System Inquiry (**FSI**) and it is now the Government's policy to facilitate retirees being offered a combination of both types of income stream in the form of a CIPR. These will both improve retirement income outcomes and make the retirement income system more fiscally sustainable.

The DP contains a full spectrum of alternatives and modifications to the current means test treatment for lifetime products. This submission, which includes independent actuarial analysis, demonstrates the extent to

which some of these alternatives result in excessive means testing of pooled lifetime products. This excessive means testing occurs where the mortality credits that are the mechanism by which pooling takes place are means tested. This creates a pooling tax that would discourage retirees from purchasing longevity protection. In contrast, account based pensions do not produce mortality credits because the remainder of the account on death leaves the superannuation system as a bequest.

Table 1 summarises analysis in this submission of the various means test alternatives canvassed in the DP, both in terms of the principles in paragraph 12 and whether those options support the Government's broader retirement income reforms.

**Table 1: Performance of options against principles and consistency with retirement policy reforms**

Alternatives	Supports retirement reforms	Neutrality	Equity	Resilience	Integrity	Fiscal sustainability	Simplicity
<b>Current Rules</b>	✓ Aligns with new pension rules.	✓ Neutral for lifetime products and ABPs on portfolio basis. Properly assesses insurance features of lifetime products.	✓ Integrates well with asset taper to ensure equity. Provides income smoothing throughout retirement.	✓ Proven to work	✓	✓ Comparable outcomes to ABPs on a portfolio (CIPR) basis. Preserves assets and income later in life for assessment.	✓ Simple and established rules proven to work.
<b>Alternative 1 – a straight line to 95/100</b>	x	x \$11,073 per \$100k** over assessment compared to ABPs.	x Penalises retirees who use assets to provide sustainable incomes	x	x	✓x Any saving theoretical as there would be no take up of lifetime products	✓x Simple but doesn't support good decisions because of over assessment
<b>Alternative 2 – a formula (reverse tax depreciation model)</b>	x	x \$29,147 per \$100k** over assessment compared to ABPs.	x Asymmetrical income test. Penalises retirees who use assets to provide sustainable incomes	x	x	✓x Any saving theoretical as there would be no take up of lifetime products	x Complicated calculation
<b>Alternative 3 – NPV or actuarial approach</b>	x	x \$9,493 per \$100k** over assessment compared to ABPs.	x Penalises retirees who use assets to provide sustainable incomes	x Theoretically resilient but compromises neutrality and equity.	x	✓x Any saving theoretical as there would be no take up of lifetime products	x Complicated calculation and requires actuarial certification
<b>Alternative 4 – Capping deduction amounts</b>	x	✓x Seemingly neutral on a product specific basis but not when assessed stochastically on a portfolio (CIPR) basis.	x Will adversely impact income smoothing when retiree reaches life expectancy	x	x Less targeted to assisting those who need support	✓	✓x More complex than current treatment

\* The Current Rules include our proposal to update the life tables used to calculate the RPP and deduction amount by using AGA life tables with 25-year improvements.

\*\* As per assumptions in EY analysis contained in Appendix A.

This submission deals with the issue of the appropriateness of the current treatment of existing products as the primary question. The analysis it contains confirms that the current means test treatment is neutral and the correct basis for means testing the new category of longevity products. It is critical to note that the alternatives that do not involve adequate sharing of the costs and benefits of the means test are neither neutral nor equitable and would undermine the Government's reforms to the retirement income system to facilitate innovative retirement solutions and their efficient distribution through CIPRs. The proposal to cap deduction amounts at life expectancy is less targeted to assisting those who need support.

On the basis of the analysis in this submission, we conclude that:

- The current means test treatment of ABPs and lifetime annuities is broadly neutral, particularly when applied to composite retirement solutions on a look through basis;
- The current means test treatment of lifetime products is the appropriate basis for means testing the new category of lifetime products which meet the capital access schedule;
- The assets test treatment of deferred lifetime products should be identical to the assets test treatment of immediate lifetime products over the life of the product and retiree;
- The income test treatment of deferred lifetime products should be effectively exempt during deferral because there is no income and identical to the income test treatment for immediate lifetime products in payment;
- The Australian life table used to determine the reduced purchase price and deduction amount should include the Australian Government Actuary's (**AGA**) 25 year mortality improvements;
- Calculations for the Superannuation Industry Supervision (**SIS**) pension rules, capital access schedule, taxation of lifetime products, and the social security treatment of lifetime products should all be aligned using the AGA 25-year improvement benchmark;
- The alternative options for the asset test treatment of existing lifetime products provided in the DP (calculating reduced purchase price and deduction amounts using a straight line to either 95 or 100 years, the formula approach for the assets test and actuarial or NPV approach) would all result in excessive means test assessments;
- These alternative means tests perform poorly in terms of the six principles in the DP; and
- These alternative means tests are not compatible with, and would undermine, the Government's broader retirement incomes reforms (in particular; the objective of superannuation, RRIS and CIPRs).
- The alternative option for income test treatment of existing lifetime products provided in the DP (capping deduction amounts at life expectancy) would discourage income tested retirees from taking more sustainable income streams and would therefore be less targeted to assisting those who need support, so should be rejected.

This submission is structured as follows:

1. Executive Summary
2. Pooling and the means test
3. Means testing of current longevity products
  - 3.1 Analysis of the neutrality of current treatment and the DP options
  - 3.2 Proposals to modify arrangements for current lifetime products:
    - 3.2.1 Definition of life expectancy
    - 3.2.2 Assessing death benefits
    - 3.2.3 Capping deduction amounts when the RPP is reduced to zero
4. Means testing the new category of longevity products
  - 4.1 Treatment of deferred products
  - 4.2 Relative neutrality of options
5. Consideration of criteria for assessing means test options.
  - 5.1 Consistency with wider retirement income policy objectives
  - 5.2 Performance of options against the 6 principles
6. Answers to the eleven questions posed in the DP

## 2 Pooling and the means test

There are essential differences between account-based pensions and lifetime products.

Account-based pensions have similar characteristics with bank deposits, managed investment schemes and shares. The assets have a value and the retiree has a right to access that value either as a future stream of income, a lump sum or a death benefit. The value of the assets to which the retiree has access at any point in time will go up or down depending on the market performance of the underlying investments and will be reduced by any payments, lump sums or death benefits. Income will cease when the account balance is reduced to zero.

The assets test treatment of account-based pensions is determined using the known asset value at a point in time. The income was previously tested after deducting a notional amount representing the return of capital, calculated by dividing the purchase price of the income stream by a measure of life expectancy, but since 2015 the asset value has been deemed.

Lifetime products are pooled and have insurance characteristics. The retiree pays a premium and is guaranteed an income stream conditional on continuing life. The policy may make provision in limited circumstances for other payments or a death benefit if the retiree dies early. Current superannuation lifetime products are required to pay either a fixed nominal rate, a fixed rate of increase, or be indexed by the CPI or an Australian Bureau of Statistics (**ABS**) wage index. The new category of lifetime products will permit deferred income, variable payments or the setting of rates against movements in the value of other assets or indexes. Apart from heavily restricted liquidity features, death benefits and surrender values, the retiree loses access to their capital.

Lifetime products do not have an account balance; they have a promised payment calculated by the product provider after allowing for costs, required regulatory capital, the expected yield on relevant assets and the life expectancy of retirees in the pool. The capital of those who die early remains in the pool to fund the incomes of those who die later. By this mechanism the costs and benefits of the income are shared amongst the retirees in the pool according to when they die. In the case of guaranteed products, if there is a shortfall it is made up by shareholder funds.

The current means test treatment of a lifetime product recognises that retirees no longer have access to the premium they have paid. For the purposes of the asset test the premium is reduced in a straight line to zero over the retiree's expected life. This represents the use of the retirees' capital in income payments.

Those who die before life expectancy don't get to enjoy all of the value of their premium, either as income or a bequest. The remainder is effectively transferred to those who live longer. These payments to surviving members of the pool are income tested. By this mechanism the costs and benefits of the means test are shared amongst the lives in the pool. Considered as individuals they are either under or over means-tested, but considered as a group on average they are means tested fairly. As discussed elsewhere in this submission the means test outcomes are fair for the pool when compared with the outcomes for account-based pensions.

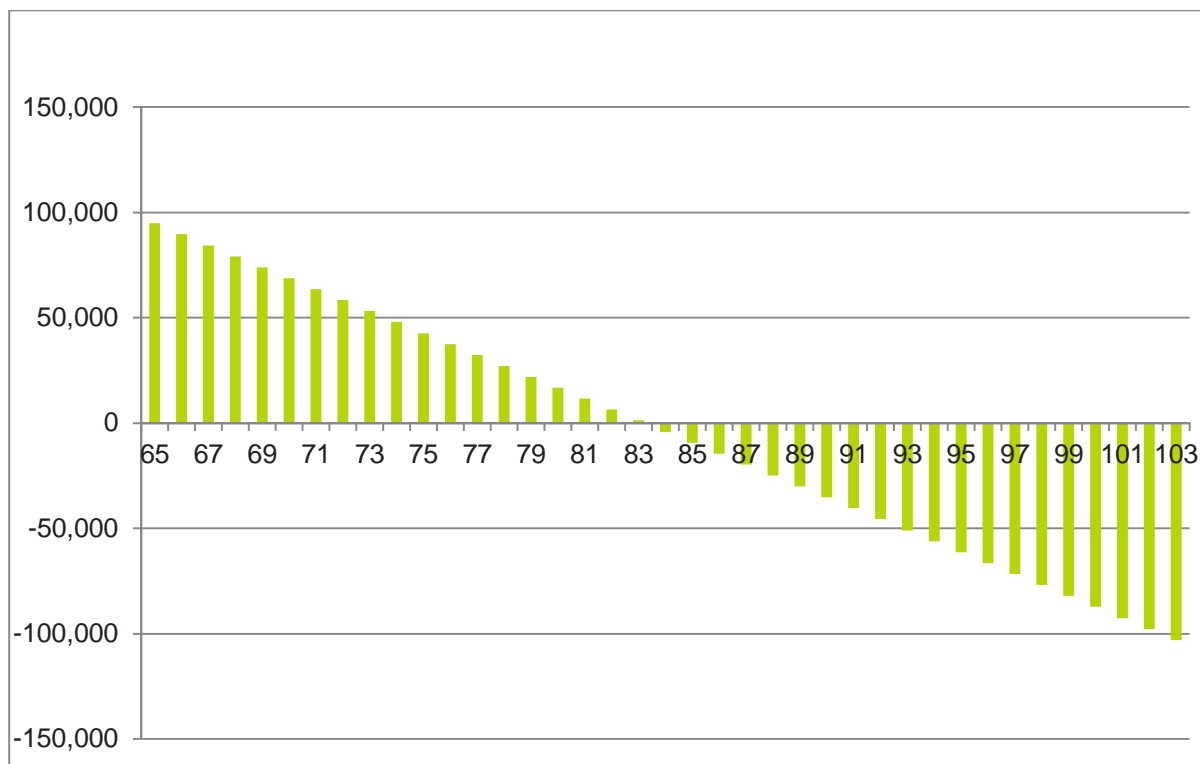
Neutrality is appropriately measured at the average. A 65-year-old male in 2017 only has a 3% chance of living to 100, and a 65-year-old female has a 6% chance. At the other extreme, 3% of males will die before age 68 and 6% of females by age 74. Considering the assets test treatment for someone who lives to age 100, as some of the options in the DP do, is looking at extreme cases that should have only a limited role in informing broader policy. The short-lived retirees will only get the benefit of 16% and 41% of their capital, respectively, but are assessed as using 100% of it for their Age Pension entitlements. This is clearly not concessional for these individuals.

### *Numerical example of pooling the costs and benefits of the means test for lifetime products*

To illustrate, a 65-year-old male has a Relevant Number (life expectancy factor) of 19.22 years. Accordingly, in relation to a lifetime product with a purchase price of \$100,000, the annual reduction in RPP will be \$5,203. If this retiree dies one year after purchase then, assuming no death benefit, \$100,000 has been paid but only \$5,203 returned. The asset testing of this \$94,797 which is ultimately "lost" (being \$100,000 - \$5,203) creates a benefit to taxpayers. If instead, the annuitant were to die 25 years after purchase of the policy, he would receive \$30,074 more capital than was assets tested, being the 5.78 years of life beyond life expectancy multiplied by the capital value ascribed to each year of life which would be a detriment to taxpayers. Chart 1 shows assets test benefits (positive) and detriments (negative) to taxpayers corresponding to the various ages of death of an annuitant.

To determine if there is an aggregate net benefit or detriment to taxpayers described above across a pool of (65 year old male) annuitants, we can multiply the excess or deficiency of asset testing by the mortality probability corresponding to each year and aggregate using present value to reflect the time value of money. There is an aggregate net benefit to taxpayers created by asset testing of \$5,803 per \$100,000 of policies purchased in excess of the capital actually returned to annuitants. If there were a death benefit of 100% of purchase price available until half life expectancy, there would instead be a net detriment to taxpayers driven by a deficiency of asset testing of \$6,800 per \$100,000. These are small numbers relative to the asset test thresholds and taper rate. The impact on age pension outlays will be \$3 per \$1,000 per fortnight under the new taper rates for annuitants receiving part pensions. Accordingly, a net assets test deficiency of \$6,800 would result in a present value of additional pension payments over the life of the annuitant of \$530 per \$100,000 of annuities held. This is a small cost to overcome the behavioural biases against taking longevity protection.

**Chart 1: Pooling of capital under current means test for longevity products**



Source: Challenger

### 3 Means testing of current longevity products

#### 3.1 Analysis of the neutrality of current treatment and the DP options

*Current means test treatment is neutral and an appropriate basis for treatment of new products*

This submission contains a range of analyses demonstrating that while the social security treatments of account-based pensions and lifetime products are different, they are neutral.

The social security settings for the new category of longevity products need to be neutral with the treatment of existing products. Because it is neutral and deals appropriately with the characteristics of these pooled longevity products, the treatment of existing lifetime products provides an appropriate basis for means testing the new category of longevity products.

*Current treatment provides alignment of income received with social security outcomes*

The current treatments ensure that social security outcomes are aligned with the income actually being received by retirees. This is particularly important for lifetime products where it is costly or not possible for a retiree to change products in response to changing market conditions. Changing products in response to such a misalignment could also result in the loss of their guarantee and longevity protection. The risk of adverse misalignment between superannuation income actually received and social security outcomes,



which could occur with other methodologies, would create a powerful disincentive for retirees to use products that provide longevity protection.

#### *Assets test rules for annuities are not concessional*

At paragraph 25 the DP says, “the assets test rules for a lifetime annuity are quite concessional compared to the treatment of other products”. However this conclusion is not supported by the example provided in Chart 1 of the DP.<sup>1</sup> Our analysis in Table 2 is based on the same assumptions used to produce Chart 1 in the DP and shows that the lifetime product and the account-based pension that are compared provide similar outcomes in terms of the proportion of income (net of capital consumed) that is non-assessable. This analysis also shows that fixed term annuities have zero non-assessable income. Non-assessable income is measured as the proportion of the total payments received by the retiree excluding return of capital that is not included in assessable income for the means test.

**Table 2: Proportion of Non-Assessable Income as a Measure of Neutrality**

		Lifetime annuity	Term annuity	Account based
<b>Total payments received</b>	A	\$244,792	\$130,000	\$293,361
<b>Total Assessable income</b>	B	\$ 63,141	\$ 30,000	\$ 94,419
<b>Consumption of Capital</b>	C	\$100,000	\$100,000	\$ 47,225
<b>Non-assessable income</b>	A-B-C	\$ 81,651	\$ 0	\$151,717
<b>Percentage of non-assessable income</b>	$\frac{(A-B-C)}{(A-C)}$	56%	0%	62%

The outcome of this type of analysis will vary with the final age, but the proportion of non-assessable income from a lifetime annuity is always smaller than the proportion of non-assessable income from an account-based income stream.

#### *Neutrality for lifetime products*

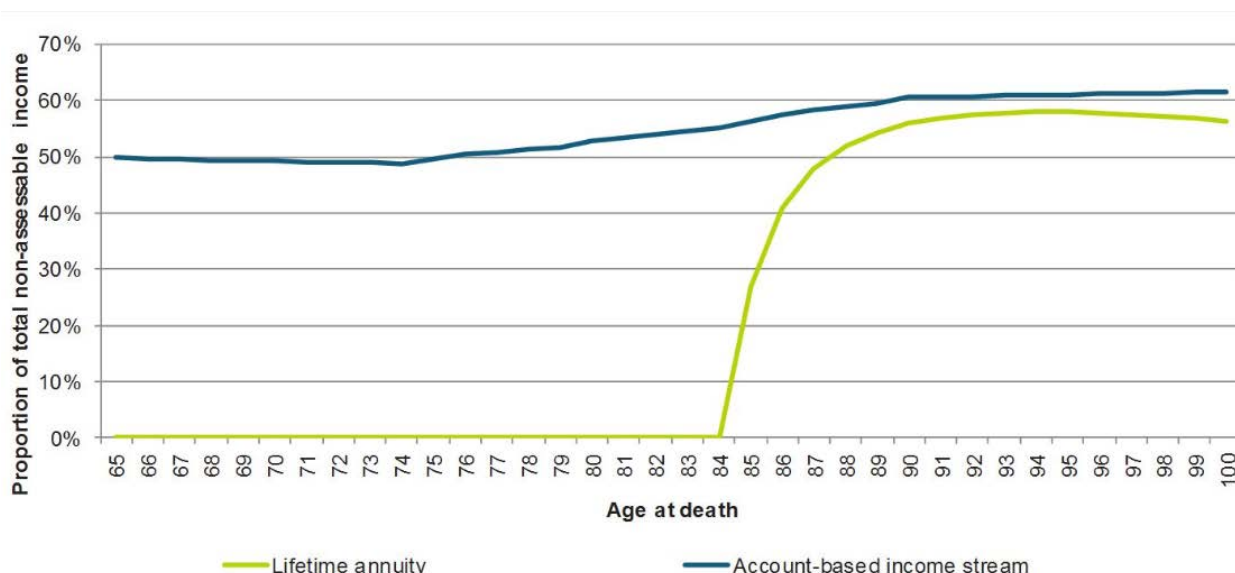
This example demonstrates the neutrality of the current treatment of pooled products. The costs and benefits of means testing are shared between those who live shorter and longer lives. If retirees do not live past age 84, they will receive less total payments than the capital they have given up. Thus their assessable income (which is positive) exceeds their total income payments (which are zero). This can be seen in Chart 2. Beyond age 84, the deduction amount continues to reduce assessable income, so the non-assessable proportion grows. The decline at later ages is a result of the nominal setting of the deduction amount against an indexed income stream.

The primary cause for the non-assessable income for the account-based pension is that the deeming rate is below the required minimum drawdown rate. The increase in the non-assessable proportion is due to both the increase in minimum payment rate by age and the fact that assumed earnings are higher result in capital appreciation. For the example given in the DP, the account-based pension provides a higher proportion of non-assessable income at all ages.

The lifetime product used by DSS in this example is a traditional annuity that provides no access to capital at any stage. If the objective of the assets test is as described in paragraph 10 of the DP, “that people with substantial assets use these to meet their day-to-day living expenses,” then the assets test treatment of a lifetime product achieves that objective and is not relatively more concessional than for an account-based pension.

<sup>1</sup> As per footnote 9 on page 8 of the DP: Lifetime income stream assumes purchase by a 65-year-old male. Payments are indexed by inflation annually (assumed to be 2.5% per annum) with the purchaser receiving a payment of \$4,272 in the first year. The term income stream makes payments for 20 years at a rate of \$6,500 a year. Withdrawals from pension are at the minimum regulation rate assuming earnings of 6.0% per annum.

**Chart 2: Proportion of non-assessable income by age at death**



Source: Challenger

#### *Comparison on a portfolio basis of means test options*

Very few retirees use all of their superannuation savings to buy only a lifetime annuity. As the leading annuity provider in Australia, Challenger promotes partial annuitisation. The balance of retirees' retirement savings is typically held in an account-based pension.

A shortcoming of the DP is that it fails to address specifically the reality that retirement portfolios that include lifetime products almost invariably also include an account-based pension. The Government's carefully considered decision to facilitate CIPRs, as recommended by the FSI, confirms that this is also a desirable policy outcome. It is therefore essential that composite retirement portfolios, and not individual income stream types, be used to test the neutrality of existing means test settings.

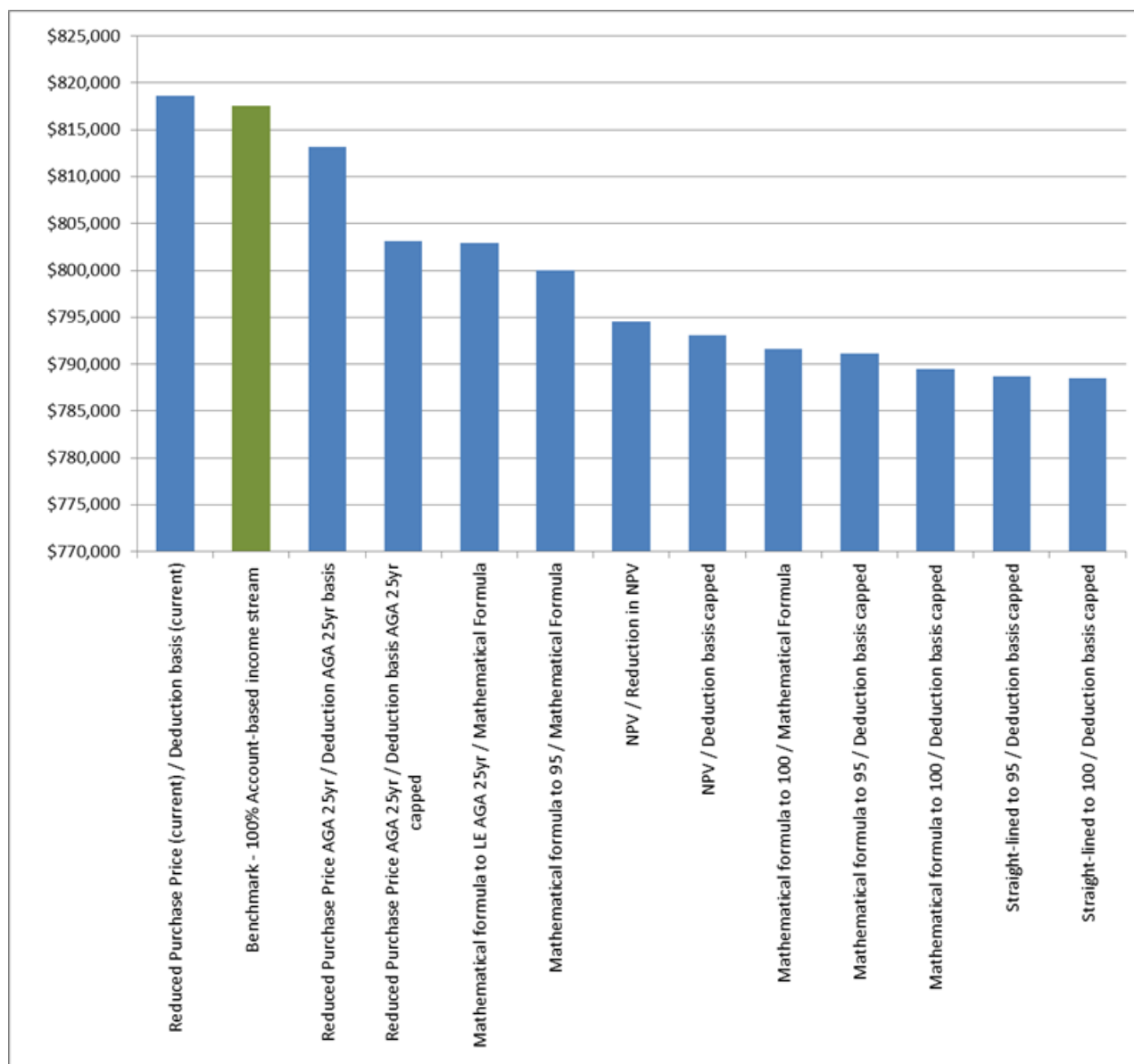
The DP says in paragraph 27 that the existing means test settings for account-based income streams are broadly appropriate. This sets a benchmark for acceptable means test outcomes with regard to neutrality. On that basis Challenger has undertaken analysis of various means testing options for composite retirement portfolios comparing them with the treatment of account-based pensions.

Our analysis is based on a portfolio allocation of 30% to an immediate lifetime product and 70% to an account-based pension. Both current and alternate means test settings have been analysed, including all options presented in paragraphs 33 to 38 of the DP.

Chart 3 illustrates the projected average cumulative Age Pension entitlements to Life Expectancy for a 65 year old homeowner couple, with \$600k in superannuation and receiving \$55,000 of income p.a.



Chart 3: Portfolio average cumulative Age Pension entitlements to Ages 93



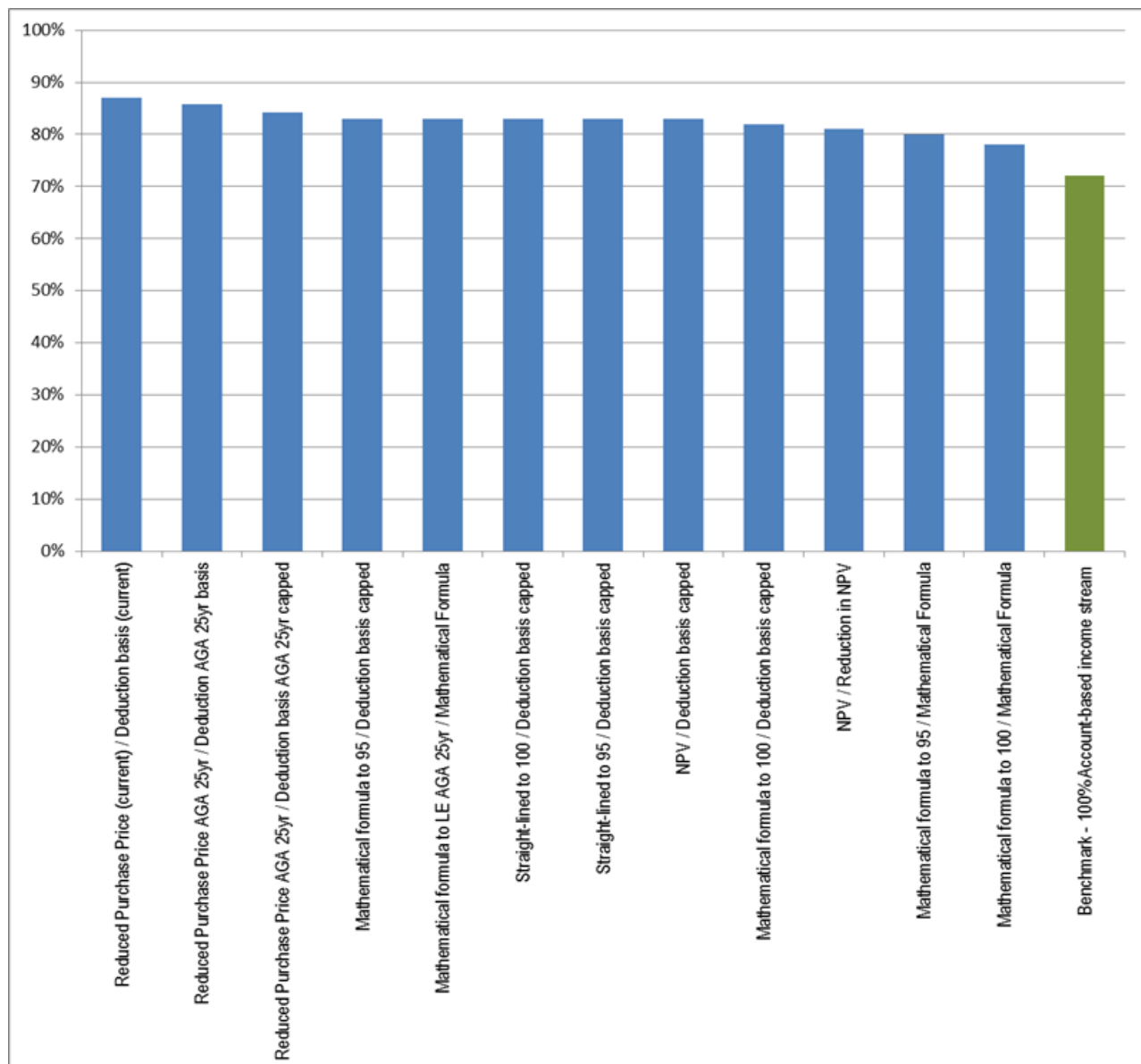
Source: Challenger

The results, based on 2000 stochastic simulations using Willis Towers Watson data, show that there is less than a \$2,000 difference in average cumulative entitlements between an account-based pension and the composite lifetime annuity/ABP portfolio using current means test treatments.

The results show that the current means test settings produce outcomes that are broadly neutral at the composite portfolio level. Neutrality could be improved slightly by using mortality improved life tables in the means test assessment process. This demonstrates the neutrality of the current policy settings for existing products. Furthermore, the proposed means test alternatives in the DP would not satisfy neutrality and create a disadvantage for composite products.

Importantly, the analysis also showed (see Chart 4) the benefit of composite portfolios in improving the sustainability of retirement incomes. Despite there being only a small difference in average cumulative Age Pension entitlements, the composite lifetime annuity/ABP portfolio provided a 12% increase in the sustainability of target retirement income to life expectancy and a 27% increase to life expectancy + 5 years. This confirms the wisdom of the Government's policy to facilitate CIPRs.

**Chart 4: Percentage of simulations where \$55k target income was sustained to LE**

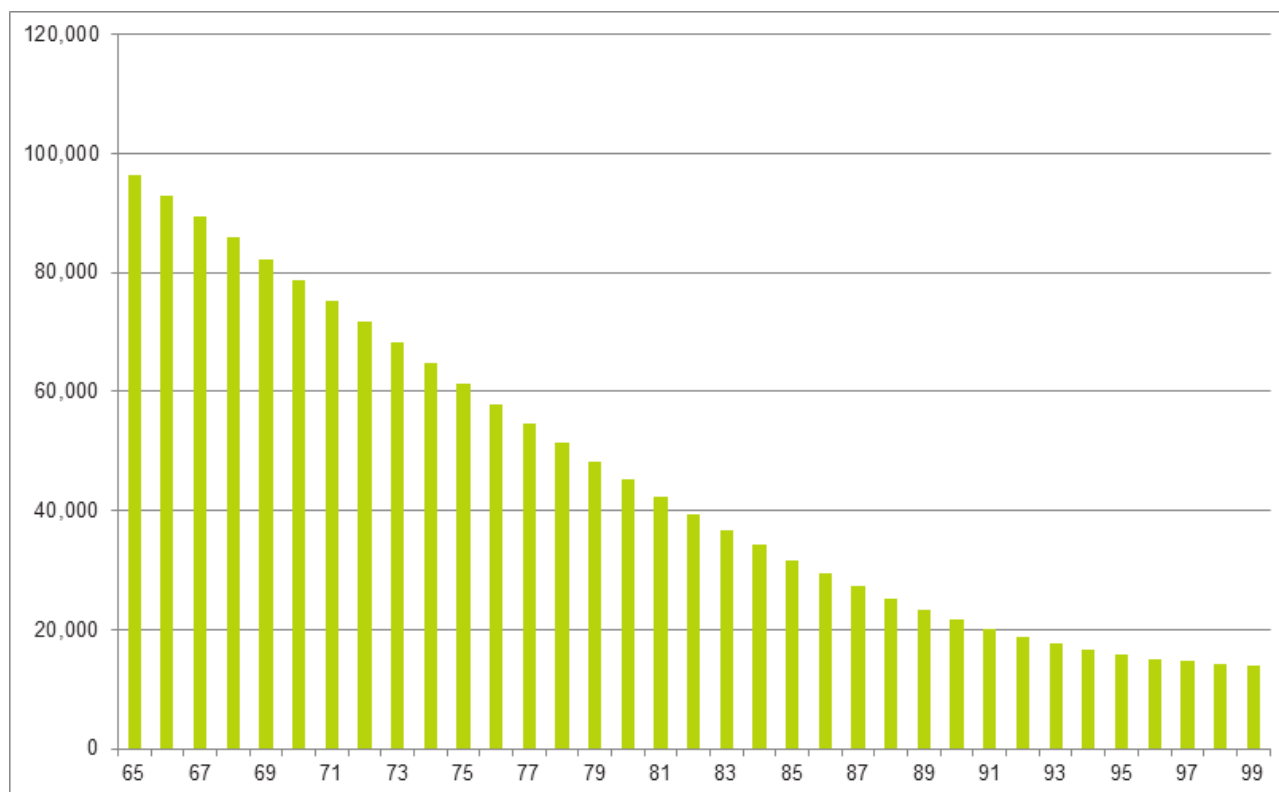


Source: Challenger

#### *Actuarial or NPV approach*

The DP canvasses using an actuarial approach to means test existing lifetime products, the new category of lifetime products and complex or hybrid products including those with additional or changing features. This would involve calculating, at each means testing date, the present value of future income stream payments multiplied by the survival probability corresponding to each payment and the present value of any other payments, relating to product features, multiplied by the probability of those payments occurring.

**Chart 5: Over-means testing under alternative 3 the actuarial (NPV) approach**



Source: Challenger

The NPV method produces higher asset values through time relative to the RPP method since the longer a policy holder survives the more likely he or she is to receive previously more distant future cash-flows. Asset values never fall to zero because there is always the chance that a surviving policy holder will receive a further payment. All policy holders will be assets tested to an extent greater than the capital notionally returned to them via reductions in assets tested amounts. All policy holders will lose some of their assets tested assets. Those policy holders who die earlier will suffer the greatest loss. These assets tested amounts beyond the capital notionally returned create a temporary benefit to taxpayers, which in expectation, evens out when income distributed to longer-living members of the pool. If this capital transfer is means tested as income then a tax is effectively being levied on pooling. We will call this a pooling tax. A pooling tax will result in means testing which is more onerous in aggregate for owners of lifetime products than for owners of account-based pensions with an equivalent economic substance. A pooling tax will create a material disincentive to retirees using either the existing or the new category of lifetime products. That would be contrary to the government's intention to provide appropriate tax and social security treatment to allow retirees to manage their longevity risk.

The present value of the assets tested, but ultimately lost, corresponding to each age of death for a 65-year-old male annuitant is shown in Chart 5. There is an aggregate net benefit to taxpayers, in present value terms, created by asset testing \$24,779 per \$100,000 of annuities purchased in excess of the capital actually returned to policy holders. This net present value (NPV) methodology is not neutral with the current means test treatments of either lifetime products or account-based pensions.

#### *Some conclusions in relation to the actuarial or NPV approach*

The NPV method also suffers from a number of practical difficulties:

- The NPV of a lifetime annuity is interest rate sensitive – that is the value will change if interest rates change. Therefore a retiree will have their pension impacted by a movement in interest rates, even though their "means" has not changed because they have no access to this different value. Their cash flows from the product have not changed. This creates an inappropriate situation which fails, probably, the equity and integrity principles.
- The NPV method will necessarily be based on assumptions, and if those assumptions are determined by each life company, then two people with the same payment profile could end up with materially different asset values. This fails the equity and integrity principles. The alternative is to have the assumptions set

by regulation, which are unlikely to be appropriate or dynamic, and which would potentially result in material changes to a person's assets immediately upon purchase of the product.

### EY Analysis

In order to assist in demonstrating these impacts, Challenger engaged Ernst & Young (EY) to analyse the costs to the retiree, in terms of age pension foregone, of the different approaches to means testing. Their report is attached as Appendix A.

In their analysis, EY considered three different product types:

1. a lifetime annuity;
2. an account-based pension (**ABP**); and
3. a “longevity pooling” product (Replicating Portfolio or **RP**) under which capital from those leaving the pool remains for the benefit of other members (mortality credits).

All three product types are assumed to have the same underlying portfolio of assets and fees. The payment amounts arising from the different product types are, however, different:

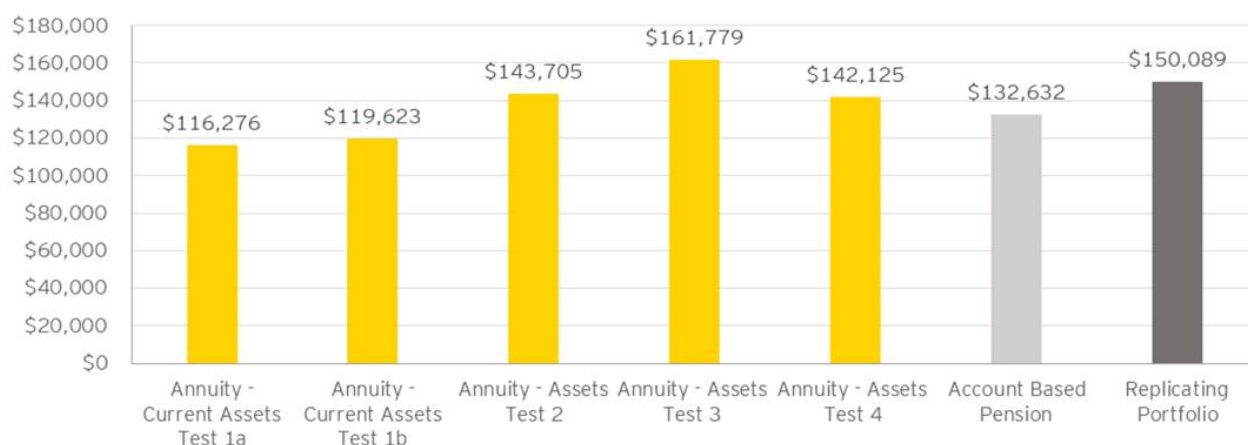
- the lifetime annuity payment amount is determined as the amount that a life company would offer, taking into account the returns on the underlying assets and its cost of capital. The payment amounts will continue for the pensioner's entire life;
- the ABP initially provides payments equal to those payable under the lifetime annuity due to the assumed conservative approach to drawdown taken by those without a guarantee, with payments ceasing when the ABP runs out; and
- the RP initially provides payments equal to those payable under the lifetime annuity due to the assumed conservative approach to drawdown that taken by those without a guarantee, with payments increasing over time as surplus develops in the pool from higher earnings than on the lifetime annuity.

Effectively:

- the ABP receives the investment return of the underlying assets net of fees;
- the RP receives the investment return of the underlying assets net of fees plus mortality credits; and
- the lifetime annuity receives the investment return of the underlying assets net of fees plus mortality credits less the cost of the guarantee.

EY's results, showing the age pension foregone as a result of the assets test across the whole projection period, are set out in Chart 6.

**Chart 6: Assets Test Age Pension Foregone (Projection Period)**



Source: EY

The columns represented are:

- Annuity Current Assets Test 1a – Current relevant number methodology which is based on life expectancy using Australian population mortality with no allowance for mortality improvements.
- Annuity Current Assets Test 1b – An alternative approach under which the “relevant number” is based on life expectancy using Australian population mortality with allowance for mortality improvements using the Australian Government Actuary 25 year average improvement rates.
- Assets test 2 – Initial purchase price is reduced over a period of 35 years on a straight line basis as per the DP example.

- Assets test 3 – Initial purchase price is reduced over a period of 35 years on an increasing scale basis as per the DP example.
- Assets test 4 – Net present value of expected future annuity payments.
- An ABP.
- The RP.

It can be seen that all the approaches proposed in the DP result in substantially higher age pension foregone for annuities compared with ABPs. This will create a material disincentive to pensioners using either the existing or the new category of lifetime products. That would be contrary to the government's policy objective to provide appropriate tax and social security treatment to allow pensioners to manage their longevity risk.

In part, this is driven by the impact of the proposed approaches applying means testing to mortality credits. This represents a pooling tax and it is inappropriate for pension outcomes to be impacted by mortality credits.

In considering the results of EY's analysis, the difference between the RP and the ABP (\$17,457) represents the age pension foregone as a result of the RP receiving mortality credits.

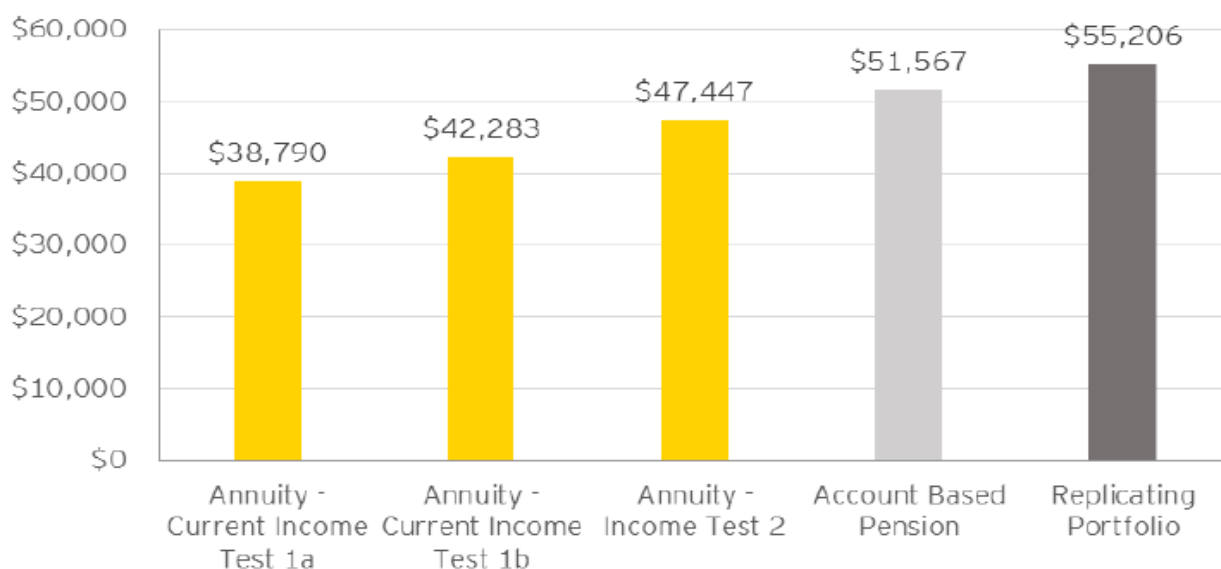
An appropriate method for the means testing of lifetime annuities should not have a pooling tax impact. In terms of EY's calculation, this would be represented by the NPV reduced by the pooling tax. Effectively this is \$142,125 less \$17,457, or \$124,668.

All the approaches proposed in the DP result in substantially higher age pension foregone than the appropriate amount as determined above. The current asset test and the alternative asset test using 25 year mortality improvements to the determine life expectancy (columns 1a and 1b above) result in a slightly lower age pension foregone than the appropriate amount above. The difference of just over \$300 p.a. when compared with Test 1b is a small amount considering that:

- it supports the broader government policy to allow pensioners to manage their longevity risk;
- the amount is spread over the entire lifetime of the pensioner; and
- the calculation is much simpler and easier to understand.

EY's results showing the age pension foregone as a result of the income test across the whole projection period, are set out in Chart 7.

**Chart 7: Income Test Age Pension Foregone (Projection Period)**



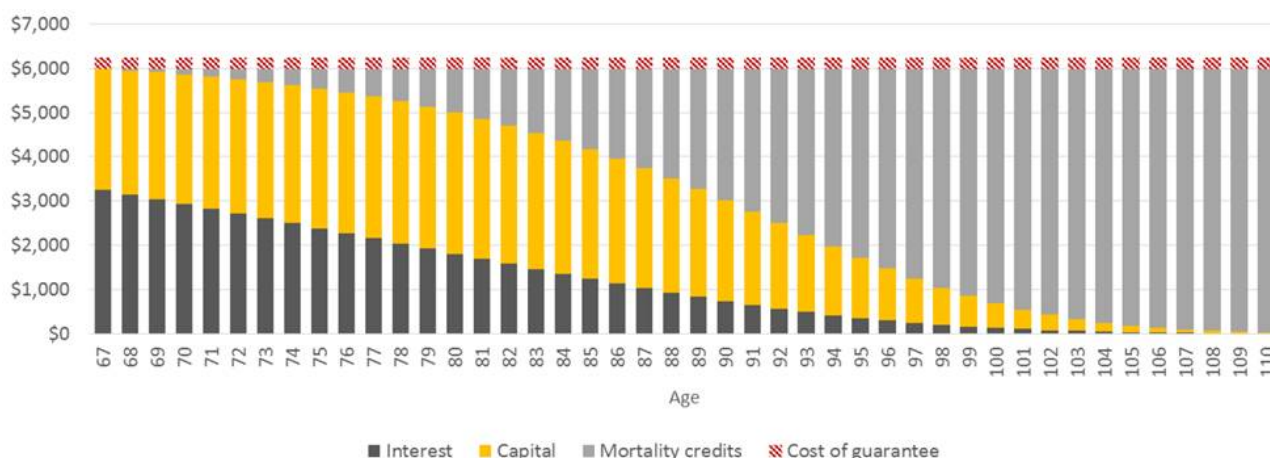
The columns represented are:

- Annuity Current Income Test 1a – Current relevant number methodology which is based on life expectancy using Australian population mortality with no allowance for mortality improvements.
- Annuity Current Income Test 1b – An alternative approach under which the “relevant number” is based on life expectancy using Australian population mortality with allowance for mortality improvements using the Australian Government Actuary 25 year average improvement rates.
- Income test 2 – Deduction amount equal to that of the current income test (1a), however only applying until a person reaches life expectancy.
- An ABP.
- The RP.

This chart shows that the age pension foregone under Income Test 2, where the deduction amount ceases when the pensioner reaches life expectancy, is not materially different from that of an ABP. This is despite the fact that the pensioner has lower expected payments arising from the lifetime annuity due to the cost of the guarantee. This is a result of the pooling tax which arises because later payments are largely funded by mortality credits as illustrated in EY Chart 8.

The difference between the current income test updated to use 25 year mortality improvements to the determine life expectancy and the alternative treatment ceasing deduction amounts at life expectancy (columns 1b and 2 above) results in a slightly higher age pension foregone. The difference is \$5,000 which is about \$300 per year.

**Chart 8: Lifetime Annuity Income Sources**



A pooling tax will create a material disincentive to pensioners using either the existing or the new category of lifetime products. Government has a policy objective to provide appropriate tax and social security treatment to allow pensioners to manage their longevity risk, and any disincentives to invest in such products will adversely impact this intent.

Further, both income test 1a (current approach) and income test 2 (deduction ceasing at life expectancy) have the same outcome for any pensioner who survives to life expectancy or less. Any concession therefore incentivises pensioners to have sustainable income throughout life, which is more fiscally sustainable. This is in contrast to an ABP, where in later life a pensioner will receive the full pension because their ABP has either run out entirely or depleted below means testing levels.

### 3.2 Proposals to modify arrangements for current lifetime products

#### 3.2.1 Modification 1 - Definition of life expectancy

The current review presents an opportunity to also revise and make more contemporary the definition of life expectancy. This should be done simultaneously for both social security and tax purposes. We suggest adopting the Australian Government Actuary's (AGA) age cohort life expectancies with 25-year improvements.

The primary purpose for doing this would be to provide more realistic guidance to retirees, advisers and superannuation funds on expected longevity. It would also update the calculation of the reduced purchase price, increasing it, and the deduction amount, reducing it. This would have a small effect on retirement income, Age Pension and tax outcomes and result in an improvement in fiscal sustainability. Using a



forward-looking measure of life expectancy would also improve the neutrality of the current means testing rules.

Alternative 1 in the DP is a proposal to adopt an RPP that reduces in a straight line to 90, 95 or 100 years.

A 65-year-old male in 2017 only has a 3% chance of living to 100, and a 65-year-old female has a 6% chance so the 95 and 100 year options are focussed not on typical retirees but extreme cases, not the appropriate life expectancy benchmark.

While a straight line to age 90 would produce reasonable outcomes for early retirees, it lacks flexibility to address the circumstances of retirees buying a lifetime product later in life, perhaps when managing an SMSF has become burdensome. Our proposal to use life tables with AGA 25-year improvements would provide similar outcomes with much greater flexibility.

### **3.2.2 Modification 3 – Assessing death benefits**

One of the outcomes of the RRIS was a policy decision to allow the new category of lifetime products to provide a death benefit with a maximum of 100% of purchase price for half life expectancy, it can then follow the remainder of the capital access schedule. The objective of this policy was to overcome the significant behavioural biases of a high proportion of retirees who might otherwise choose not to buy longevity protection. This had a known small trade off with the cost of the lifetime product.

Death benefits that conform with this rule are not susceptible to strategies to minimise means test assessments. It should also be noted that statistically a wife is likely to survive her husband and the death benefit will assist in reducing the gender imbalance that is present in superannuation balances. Another remedy is joint lifetime products and lifetime products that pay a lower residual income to a surviving spouse.

For these reasons the availability of a death benefit consistent with the capital access schedule requirements should not be subject to the means test.

All life products with a death benefit are required by APRA to have a surrender value which meets the requirements of the prudential standard on paid up and minimum surrender values (LPS360).

Means testing all death benefits, would greatly reduce demand for products with that feature. Because of the behavioural biases of many retirees that would undermine the take up of otherwise neutrally treated longevity insurance through CIPRs. That would do nothing to stem the current volume of unintended bequests from account-based pensions. In terms of performance against the simplicity principle, it would be easy for retirees to understand but it would not support good decision making because it would discourage the use of products despite them conforming with the capital access schedule.

### **3.2.3 Modification 3/Alternative 4 – Capping deduction amounts when the RPP is reduced to zero**

Modification 3/Alternative 4 ceases deduction amounts when the RPP is reduced to zero. The explanation for this proposed change is that at that point all of the capital has been handed back to the retiree. The policy rationale for deduction amounts is that the capital component of a payment should not be means tested. Notwithstanding this, deduction amounts both before and after life expectancy they still have a role as part of the pooling process in ensuring lifetime products are not excessively means tested with respect to the proportion of payments that are funded by mortality credits.

Our assessments of neutrality for this option are ambiguous. The deterministic EY analysis shows that this proposal will means test lifetime products more heavily, however not so heavily as to reverse the relative neutrality of the outcome between lifetime products and account-based pensions. Our stochastic modelling on a portfolio basis, which would capture interactions between the income and asset tests, shows a much less neutral average outcome with means test treatment favouring the account-based pension as an alternative.

However the other consequence of this proposed change is that the means test would be less targeted to assisting those who need support. It therefore performs poorly against the integrity principle and would discourage income tested retirees from taking more sustainable income streams. For that reason we would not recommend the adoption of this alternative treatment.

**Table 3: Assessing adjustments to the means testing arrangements**

Treatment	Supports reforms	Neutrality	Equity	Resilience	Integrity	Fiscal sustainability	Simplicity
Modification 1 LE plus 25 yr improvements	✓	✓	✓	✓	✓	✓	✓
Modification 3 Death benefits	x	x	x	x	x	✓x	✓x
Modification 3 (Alternative 4) Cap deductions	x	✓x	x	x	x	✓	✓x

#### 4 Means testing the new category of longevity products

##### *Consistency with capital access schedule for new longevity products*

The capital access schedule for the new category of lifetime products is identical to both the current regime for asset testing lifetime annuities and the current regime for taxing income from non-superannuation lifetime products. This provides consistent, principles based alignment of the SIS pension rules, social security and tax treatment for lifetime products. The current means test treatment of lifetime products is the appropriate basis for means testing the new category of lifetime products which meet the capital access schedule.

##### **4.1 Proposed treatment of deferred products**

We propose that these products be asset tested during the deferral period using an identical RPP methodology to that currently applied to immediate lifetime products. We propose that these products be income test exempt during the deferral period and that after the deferral period they be income tested using an identical deduction amount to that currently applied to immediate annuities with the same purchase price and purchase date. This will provide consistency between the treatment of deferred lifetime and immediate lifetime products on the assets test over the life of these products and on the income test in payment.

This treatment is consistent with the assumption used by the AGA in his report Towards More Efficient Retirement Income Products which was commissioned by the FSI. As noted by the AGA deferred products “result in a cliff shift” downwards in Age Pension entitlements “when the retiree reaches the product’s trigger age.” A social security treatment which markedly reduces income both during the deferral period and again when the deferred product starts to provide income would not be conducive to a retiree with limited assets and subject to the means test making a decision to manage their longevity risk.

If DLAs were income tested during deferral, a retiree could end up in a situation where they had received neither income nor Age Pension during that period. For example this would occur where a retiree had a composite product comprising an account based pension and a DLA and the account based pension failed before the trigger date for payment of the DLA.

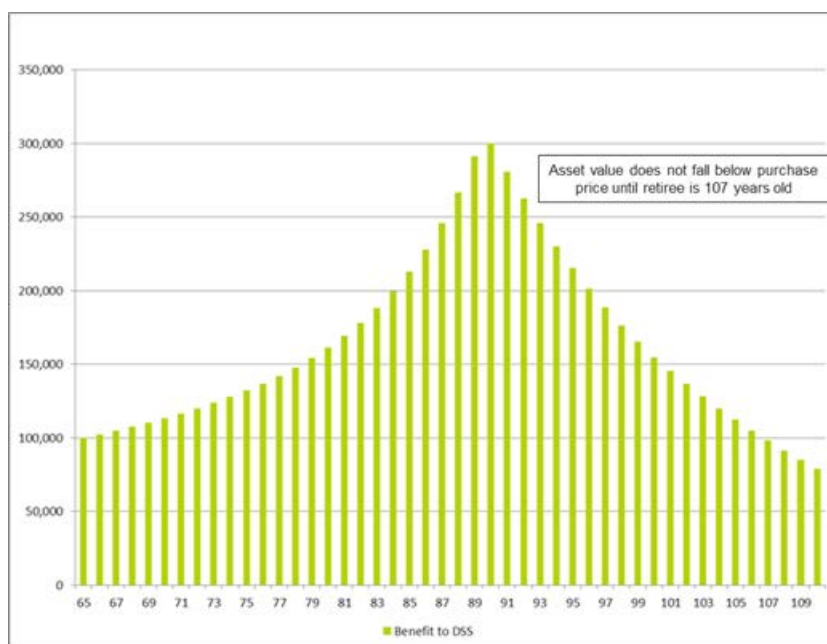
Together these arrangements recognise the pooled, or insurance, nature of deferred products and provide the same systemic sharing of the costs and benefits of the means test treatment as currently applies for retirees who purchase immediate lifetime products.

##### **4.2 Relative neutrality of means test options for deferred products**

The effect of the pooling tax resulting from the use of the NPV method is brought sharply into focus in the case of DLAs. There would be an aggregate net benefit to taxpayers in present value terms created by assets testing of \$98,309 per \$100,000 of policies purchased in excess of the capital actually returned to policy holders. This modelling does not include any death benefit. The aggregate net benefit to taxpayers would be so high because the present value of the future payment stream would grow during the deferral

period. It is necessary to conclude that this asset test treatment would render DLAs unmarketable. The NPV methods would be complex to administer and difficult for consumers to understand.

**Chart 9: Over-means testing of a DLA under alternative 1 the actuarial (NPV) approach**



Source: Challenger

## 5 Consideration of criteria for assessing means test options

### 5.1 Consistency with retirement incomes policy

The DP follows the Government's 2016 Budget announcement that it had accepted the recommendations of the RRIS and would determine the social security treatment of new category of lifetime products for a 1 July 2017 start date.

The Government obtained passage of the enabling legislation for the new category of lifetime products and it received Royal Assent in November 2016. Treasury will shortly release for consultation draft regulations providing the Superannuation Industry Supervision (**SIS**) pension rules set out in the RRIS for the new category of lifetime products. These rules provide flexibility for pooled products provided they comply with the capital access schedule. To overcome the behavioural biases of retirees, a death benefit of up to 100% of purchase price is permitted, but not required, for a period of half life expectancy.

In its October 2015 response to the FSI the Government announced that it would facilitate superannuation trustees offering CIPRs. These are intended to be composite products with account-based and lifetime components providing higher retirement incomes than an account-based pension drawn at minimum rates, better risk management and some flexibility to access capital. On 15 December 2017 the Government released a discussion paper; *Development of the framework for Comprehensive Income Products for Retirement*.

The new category of lifetime products will provide one of the building blocks for CIPRs. The policy intent is for superannuation trustees to offer their members mass customised retirement income streams which will use an element of pooling to reduce leakage from the superannuation system in the form of bequests. This reduced leakage will both increase retirement incomes and reduce Age Pension outlays over the long term. By this mechanism CIPRs will make a major contribution to achieving the Government's objective of superannuation; "to provide income in retirement to substitute or supplement the Age Pension". If this objective is to be achieved the means test treatment of longevity products must be neutral so that it does not discourage their use.

## 5.2 DSS principles for evaluating means test treatments

At paragraph 12 the DP sets out six principles for evaluating means test treatment options. We have used these principles to assess the performance of the current means test treatment of longevity products and the 4 alternative treatments presented in the DP:

- Alternative 1 - a straight line schedule to 95 or 100 years;
- Alternative 2 - a formula providing a reversal of tax depreciation;
- Alternative 3 - an actuarial or NPV (Net Present Value) approach; and
- Alternative 4 - deduction amounts capped when RPP is reduced to zero.

*Neutrality – not advantage a particular product or asset*

Paragraph 23 of the DP says, “The deeming rules are a central part of the social security income test and provide a simple and fair way to assess financial investments.” The FSI noted that 94% of retirement income streams are currently account-based. The other very large categories of financial assets held by households are bank deposits and shares. These are all assets tested on nominal value and income tested by being deemed. With the overwhelming weight of household financial assets being dealt with in the same way that effectively sets the current treatment of account-based pensions as the benchmark for assessing neutrality.

The treatment of lifetime products is the prime focus of the DP and these (having insurance features) have very different characteristics to account-based pensions, bank deposits and shares (that are investments without insurance features). Both types of product are a necessary part of the Government’s wider comprehensive retirement income policy and they need to be given neutral treatment so that they will not be either over or under used by retirees.

Elsewhere in this submission we have presented three sets of analyses that demonstrate that the current treatments of account-based pensions and lifetime products produce neutral social security outcomes particularly when they are used in combination, as is the intention of the Government’s policy to facilitate CIPRs:

1. comparing the amount of non-assessable income received by holders of each product type;
2. comparing Age Pension income received by holders of each product type; and
3. examining whether each product type is either over or under means tested, relative to the capital contributed and the income drawn.

The findings of these analyses are that the current means test treatments for account-based pensions and lifetime products are relatively neutral.

This analysis has demonstrated that a change of policy to any of Alternatives 1, 2, 3 or 4 proposed in the DP would not be neutral.

*Equity – treat people with similar means in a consistent way*

The equity principle set out in the DP is horizontal equity. All other things being equal this is akin to neutrality. However, outcomes may differ because products with different characteristics will exhibit differences in performance which will vary depending on market conditions. If products are not given neutral treatment one or other is likely to be either over or under used and any semblance of equity will be a coincidence caused by market conditions. As the assessment of equity is so closely related to neutrality the current treatment is equitable and Alternatives 1, 2, 3 and 4 are not equitable.

*Resilience – rules should apply to new products without diminishing equity or neutrality*

The definition of resilience provided in the DP is, “the rules should be able to apply to a range of products, including new products, without diminishing neutrality and equity.” Given this conditionality if a means test treatment is not neutral and equitable that treatment will not be resilient. Hence the current treatment can be assessed as resilient but Alternatives 1, 2, 3 and 4 cannot.

*Integrity – targeted to those who need most support and cannot engage in strategies to minimise means test assessments*

The predominant instruments for targeting means tested assistance to those who need most support are the assets test taper, income test and free areas. These were recently adjusted, effective 1 January 2017, and are tightly targeted to those retirees in most need.

If a means test option is not neutral it will create distortions which adversely affect the targeting of assistance. This can take two forms:

1. providing opportunities for those with more assets to arbitrage rules or exploit product features to minimise means test assessments; or
2. distorting the basis for decisions so that those who need most support select products that produce sub-optimal outcomes.

Neutral options, like the current treatment of lifetime products, support integrity. Options that are not neutral, like Alternatives 1, 2, 3 and 4 do not.

*Fiscal sustainability – have regard to the cost of the social security system*

Used by themselves ABPs perform poorly in terms of fiscal sustainability because they result in a high proportion of assets leaving the superannuation system as intended and unintended bequests. For this reason, despite their status as a benchmark for the means test, they do not perform well against the principle of fiscal sustainability. Their actual performance on fiscal sustainability is variable, depending on market performance and human behaviour.

When ABPs are used in combination with a lifetime product unintended bequests are reduced and the lifetime component improves the sustainability of the retirement solution resulting in more superannuation income and assets being available to be means tested late in life.

Two sets of modelling on different assumptions commissioned by Challenger from Access Economics for the Henry Review (2008) and Tax Forum (2011) showed that widespread partial annuitisation reduced outlays on the Age Pension and aged care substantially in the long term (about 0.2% of GDP per annum in the IGR timeline of 40 years). This modelling has not been updated to take account of current conditions in capital markets or the recent tightening of the assets test. However the potential savings are substantial.

This modelling demonstrated that the current neutral means test treatment of lifetime products should be assessed as performing well against the principle of fiscal sustainability. Fiscal sustainability will improve as the Government's recent decisions on retirement income reforms (RRIS and CIPRs) achieve a much broader take-up of composite retirement solutions which include longevity protection.

While those means test options that reduce neutrality, like Alternatives 1, 2, 3 and 4 may appear to improve fiscal sustainability by reducing the amount of Age Pension received by retirees who actually purchase lifetime products, these means test treatments will result in lower take up of lifetime products than would be the case with the current neutral treatment, and so will reduce the benefit that could be obtained by the community in the form of improved fiscal sustainability. These non-neutral treatments should therefore be rated ambiguously or negatively against this principle.

*Simplicity – rules should be easy to understand and support good decisions*

The means test treatment of account-based pensions is simple enough to be understood by most retirees. However while account-based pensions are the means test benchmark they have major shortcomings if used alone. Means test settings that discourage use of composite retirement solutions will not support good decisions because used alone account-based pensions:

- encourage risk taking by some part-pensioners who are compensated for half of any investment failure.
- discourage risk averse retirees from improving their living standards by taking a sustainable level of retirement income; and
- do not support the efficient management of longevity risk.

The mathematics of reduced purchase price and deduction amounts are simple enough to be understood by most retirees.

The current neutral treatment of lifetime products supports good decisions to take the maximum sustainable level of income in retirement and to manage the principle risks in retirement, longevity, inflation and market risk.

The non-neutral Alternatives 1, 2, 3 and 4 would discourage the use of lifetime products and so not support good decisions. The formula and actuarial approach are complex and would only be understood by the most financially literate retirees.

Table 4 summarises our assessment of the current treatments for account-based pensions and lifetime products as well as the DP options.

**Table 4: Assessment of current treatment and DP options of current products**

Treatment	Supports reforms	Neutrality	Equity	Resilience	Integrity	Fiscal sustainability	Simplicity
<b>Benchmark ABP</b>	✓	✓	✓	✓	✓	✗	✓✗
<b>Current Rules Lifetime</b>	✓	✓	✓	✓	✓	✓	✓
<b>Alternative 1 95/100</b>	✗	✗	✗	✗	✗	✓✗	✓✗
<b>Alternative 2 formula</b>	✗	✗	✗	✗	✗	✓✗	✗
<b>Alternative 3 Actuarial</b>	✗	✗	✗	✗	✗	✓✗	✗
<b>Alternative 4 Cap deductions</b>	✗	✓✗	✗	✗	✗	✓	✓

#### *Assessing the options for means testing deferred lifetime products*

The DP sets out four treatment options for means testing deferred lifetime products:

1. Nominal;
2. Real;
3. Adjusted for Earnings; and
4. Actuarial.

Option 1, the nominal approach, most closely reflects the current treatment of immediate lifetime products. We propose giving deferred products identical asset test treatment to that currently provided to immediate lifetime annuities throughout the life of the product and identical income test treatment in payment. That would provide neutral treatment for the new category of longevity products with the current treatment of lifetime annuities and with account-based pensions.

The remaining three options for means testing deferred products presented in the DP ignore pooling and also address an assumption that we have shown is false, that the current treatment of lifetime products is concessional. Instead these options treat deferred products as investments with deferred, and not uncertain, payment streams.

Options 2 and 3 (real and earnings adjusted) are only operable if there is both an assets test and an income test exemption during deferral. Both would then require asset testing on the basis of reduced purchase price from the date of the first payment to life expectancy at the date of first payment with deduction amounts using the same calculation.

Both those options would redistribute the costs and benefits of the means test treatment relative to the current treatment according to survivorship and total assets. Assets tested retirees would be divided into two groups:

1. those who died before the deferred lifetime product began to pay who would receive more income from the Age Pension; and
2. those who died after the deferred lifetime product began to pay who would then have their Age Pension income more substantially reduced.

Income tested retirees would be unaffected during deferral, but after the deferred period, would have their Age Pension income reduced by less on account of the significantly larger deduction amount.

The unambiguous winners from Options 2 and 3 would be those who expected to be income tested throughout retirement while those who expected to continue to be assets tested would be discouraged from taking the product.



These are not neutral outcomes. They also have fiscal implications resulting from paying more Age Pension to those with greater means.

Option 4, the actuarial or NPV approach, results in substantial over means testing as discussed elsewhere in this submission. Deferred lifetime products could be rendered unmarketable by this option.

These assessments are summarised in Table 5 with only Option 1, the nominal approach, performing well in terms of all the principles.

**Table 5: Assessing the options for means testing deferred lifetime products**

Treatment	Supports reforms	Neutrality	Equity	Resilience	Integrity	Fiscal sustainability	Simplicity
<b>Option 1 Nominal</b>	✓	✓	✓	✓	✓	✓	✓
<b>Option 2 Real</b>	×	×	×	×	×	✓×	×
<b>Option 3 Adjusted earnings</b>	×	×	×	×	×	✓×	×
<b>Option 4 Actuarial</b>	×	×	×	×	×	✓×	×

## 6. Response to the eleven questions in the DP

**Q1. Given the shortcomings identified above, what changes should be made to improve the means test rules for existing income stream products to ensure that they meet the policy principles of neutrality, equity, resilience, integrity, fiscal sustainability and simplicity?**

The shortcoming identified by the DP are discussed below:

- (a) The treatment of lifetime products does not reflect the nature of the product. Lifetime products are pooled and their current means test treatment outcomes which closely approximate the sharing of income on the basis of longevity.
- (b) The asset test ceases at life expectancy rather than continuing over the life of the product. This is necessary to approximate the pooling of the means test around life expectancy. The retiree doesn't hold any assets so the reduced purchase price is a notional concept. A large part of the payments made to those who live passed life expectancy are mortality credits from those who died before life expectancy. If the retirees who died early had bought account-based pensions their remaining capital on death would have been converted into bequests which would not have been means tested either. Each of these product types is currently being treated appropriately having regard to its characteristics.
- (c) Because the asset test ceases at life expectancy it can be used to shield assets from the means test. This is a pooled product so, as discussed in b above, the necessary asset testing has occurred before life expectancy. Extending assets testing beyond life expectancy would have the effect of assets testing mortality credits and so would not be neutral.
- (d) The deduction amount continues after life expectancy when all capital has been "handed back". Not means testing capital which has been paid as part of an income stream is the policy rationale for deduction amounts. What is also very important is that these deduction amounts are a component of the pooling mechanism for the means test. As the analysis in this submission demonstrates the continuation of these deduction amounts is necessary to limit the overall impact of the means test on mortality credits.
- (e) The assets test is poorly aligned with the income test. This suggests there is an asymmetry between the reduced purchase price which reduces to zero at life expectancy and deduction amounts which are derived by the same calculation but continue until death. As such it is a restatement of b and d above. However there is symmetry around life expectancy. The absence of further assets testing and the continuation of deduction amounts after life expectancy are necessary to limit the overall impact of the means test on mortality credits.
- (f) The deduction amount is nominal and declines in real value over time. This implies there is an income adequacy issue. If one were identified indexing deduction amounts would have a fiscal cost and, being a general measure applying to all part-pensioners might not be well targeted.
- (g) The treatment of lifetime products is "quite concessional" including the straight-line for the reduced purchase price. The analysis contained in this submission demonstrates that the current means test arrangements for lifetime products and account based pensions (which are the benchmark) are neutral, particularly when considered on a portfolio basis. That analysis also shows that the alternative treatments proposed in the DP which extend the straight line to 95 and 100 years or replace it with a formula or an NPV calculation increase the overall impact of the means test on mortality credits and are not neutral.
- (h) The definitions don't capture death benefits or insurance features. The definitions should not capture death benefits that are designed to overcome behavioural biases. Without them a significant proportion of the retiree population might not be persuaded to buy longevity protection. For policy purposes, the RRIS defined such death benefits by the capital access schedule.

There are no changes to policy required to address the issues raised in a-h above.

**Q2. What changes, if any, are necessary to ensure a sound foundation for new rules to assess innovative income streams?**

Maintaining the current means test treatment of lifetime products will ensure a sound foundation and is the appropriate basis for rules to assess the new category of lifetime income streams.

This submission proposes that the life tables used to determine the Relevant Number for the purposes of calculating reduced purchase price and deduction amounts should be based on life expectancy using Australian population mortality with allowance for mortality improvements using the Australian Government Actuary 25 year average improvement rates. This would give more realistic guidance to retirees, their advisers and superannuation funds on longevity. It would provide a more accurate basis for means test treatment for both the existing and new categories of longevity products .

**Q3. What approach to income and assets testing income streams during the deferral period would best meet the policy principles of neutrality, equity, resilience, integrity, fiscal sustainability and simplicity?**

The means test treatment of deferred products, which are required to meet the capital access schedule, should be consistent with the current treatment of immediate lifetime products.

The income test for deferred products should be the income received in each year minus a deduction amount. This should be a nominal amount calculated by dividing the reduced purchase price by life expectancy at date of purchase, or the date on which the deferred product becomes eligible for the pension phase earnings tax exemption, if that is a later date. Since no income is received during the deferral period there is no income to assess and no deduction amount should apply or be credited.

This has the effect of making the deferred product income test exempt during the deferral period.

The Asset test should be the reduced purchase price. The reduced purchase price should be calculated as a straight line from the purchase price to zero at life expectancy. This should be calculated at the date of purchase, or the date on which the deferred product becomes eligible for the pension phase earnings tax exemption, if that is a later date.

These are the same calculations as are currently applied for immediate lifetime products. This will provide neutrality between the treatment of immediate and deferred lifetime products bought on the same date for the same premium.

**Q4. On what basis should deferred income stream products be assessed once they have commenced providing payments?**

- (a) Which approach to establishing an assessable asset value best meets the policy principles of neutrality, equity, resilience, integrity, fiscal sustainability and simplicity?

Deferred lifetime products should be asset tested using the nominal reduced purchase price. Consistent with the treatment in deferral this should be a straight line from the purchase price to zero at life expectancy calculated at date of purchase, or the date on which the deferred product becomes eligible for the pension phase earnings tax exemption, if that is a later date. This is exactly the same calculation as is currently applied for immediate lifetime products.

- (b) How should income be assessed?

The income test for deferred products after deferral should be the nominal income received in each year minus a deduction amount. The deduction amount should be the nominal amount calculated by dividing the reduced purchase price by life expectancy at the date of purchase, or the date on which the deferred product becomes eligible for the pension phase earnings tax exemption, if that is a later date. This is exactly the same calculation as is currently applied for immediate lifetime products.

**Q5. Are there other approaches or issues regarding the assessment of income streams with a deferral period that have not been canvassed above that it is important to consider?**

The means test arrangements for deferred lifetime products described in the answers to questions 3 and 4 provide the most neutral treatment between immediate and deferred lifetime products. Because the current treatment of immediate lifetime products is neutral relative to the current treatment of account based pensions that will result in neutral treatment of deferred lifetime products relative to account based pensions.

The DP canvasses three alternative methodologies that would increase the asset value of a deferred lifetime product. These are; indexing the purchase price; adjusting the purchase price for earnings and mortality credits; and calculating the net present value of the future payments. Presumably if any of these were adopted there would be an exemption from both the income test and the assets test during deferral to offset the much heavier asset testing after payments commence.

Adjusting the value of the deferred lifetime product to include mortality credits is conceptually incorrect, treating it as a pure investment product and not as longevity insurance. This would result in a large over-valuation. Indexing the purchase price is a means of offsetting the cost of providing an asset test exemption in the deferral period. The NPV approach ignores the pooled nature of the product.

None of these methodologies can affect the income stream which the deferred lifetime product actually provides but

they would each have a material and different effect on means test outcomes.

If there is an asset test exemption in deferral then these methodologies will result in higher levels of assistance to part-Age Pensioners during deferral regardless of their assets up to the cut off point for entitlements as a result of their other means.

After deferral the different methodologies will all produce higher reduced purchase prices for those who are subject to the assets test. The higher asset value divided by a shorter life expectancy will result in larger deduction amounts and increased Age Pension entitlements for those retirees who are subject to the income test.

Relative to the income and asset test treatments described in the answers to questions 3 and 4 above, these will have redistributive effects and fiscal consequences which it would be sensible to consider before moving to a methodology which produced different social security outcomes than for an immediate lifetime product that was bought with the same premium on the same date.

These alternative arrangements introduce the possibility of a significant disconnect between the income received, which is set at the point of purchase of the deferred lifetime product, and its social security treatment, which is determined on a different basis at the trigger date when payments commence. That would add complexity and uncertainty which could be expected to discourage use of longevity protection.

**Q6. Does assessing the actuarial value of complex and hybrid income stream products provide the most suitable approach to ensuring that the rules for these products satisfy the policy principles of neutrality, equity, resilience, integrity, fiscal sustainability and simplicity?**

Given the Government's commitment to CIPRs which are a hybrid product this is not a peripheral issue. As has been demonstrated by the analysis in this submission, using an actuarial approach to means test a hybrid CIPR would result in Age Pension outcomes that are worse than if the constituent parts were assessed separately under current rules. That would result in CIPRs being means tested more harshly than a stand-alone account-based pension and so would discourage acceptance of CIPRs.

Most other hybrid and complex products will need flexibility in terms of their payments and so will need to comply with the capital access schedule. For those products the current means test arrangements for lifetime products and the arrangements for deferred lifetime products described in the answers to question 3 and 4 above should prove appropriate. If a hybrid or complex product has more substantial liquidity features they should be subject to the minimum drawdown rules.

**Q7. Would assessing these products in terms of their individual components better achieve these objectives? Are there circumstances in which this approach would be problematic?**

Means testing CIPRs and other hybrid and complex products would best be achieved on a look through basis to the individual components because it would maintain neutrality of treatment with stand-alone products.

We would not recommend providing the option of a set of rules for stand-alone products and an alternative actuarial approach for hybrid and complex products because that would create opportunities for regulatory arbitrage between one regime and the other simply by separating or combining products. That kind of activity is the opposite of what is required to achieve neutrality, efficiency and optimal retirement income and social security outcomes.

**Q8. Is there a need for a determination process to provide binding advice on the treatment of particular income stream products? Would this assist in the development of innovative retirement income products?**

There may be cases where hybrid and complex products have features which interact and where judgment is required to determine the economic substance. It is unlikely that this will be a problem where the provider has built a hybrid or complex product that conforms with the capital access schedule. Hybrid or complex products are more likely to be difficult to assess under the current regimes for both account-based pensions and lifetime products.

Those that are difficult to assess could be dealt with under a voluntary process where the product manufacturer could

seek a determination which would provide binding advice or a ruling. That would provide both certainty for the product manufacturer and specified protection for the consumer against changes in social security assessment.

**Q9. Are there other approaches or issues not canvassed above that it is important to consider?**

The DP does not give adequate recognition to the related long term issues of improving the sustainability of retirement income streams and of improving fiscal sustainability. Facilitating the private provision of longevity insurance shifts longevity risk off the Australian Government's balance sheet and onto the balance sheets of private financial institutions that are better able to manage it. In so doing it will reduce bequests and redistribute income from early in retirement to later in retirement and towards those who live longer. This realignment of retirement incomes towards the later years of retirement should be a key priority for government, both because it serves to reduce age pension expenditures, and because it increases the welfare of future retirees.

**Q10. Are there current legislated definitions relating to income stream products that create ambiguity regarding means test treatments?**

Appendix 1 to the DP describes a deferred annuity as;

- A managed investment that pays no income until it converts to a lifetime annuity at a specified date (for example at age 85).
- Regular income payments, based on value of investment at commencement date, are payable for the lifetime of the purchaser.
- Generally, access to capital is restricted or not possible.
- Under current rules, the current asset value is an assessable asset during the deferral period (until the income stream commences).
- Assessable income is determined by applying the deeming rules to the current asset value during the deferral period (until the income stream commences).

This appears to conflate three different types of products currently on the statute books with distinctly different characteristics:

- (a) A managed investment scheme, under Chapter 5C of the Corporations Act;
- (b) A deferred annuity, which is a defunct type of rollover product which was commonly offered on the introduction of the eligible termination payment regime in the mid-1980s. A deferred annuity paid a lump sum and it was never really intended it would pay an income stream. There is no provision in the Life Insurance Act and they are not a 'financial product' under Chapter 7 of the Corporations Act. The definition of 'deferred annuity' in regulation 5.01 of the Superannuation Industry (Supervision) Regulations provides inter alia, that benefits are paid from an approved deposit fund. These funds became obsolete as rollover vehicles when rollovers could be made to superannuation funds. In our experience ADFs were closed as long ago as 1990. Similarly deferred annuities have long since ceased to be offered; and
- (c) A Deferred Lifetime Annuity (DLA), which is a lifetime annuity that is bought for a premium on a date and commences to pay an income stream from a specified later date. This product does not yet exist, but has an announced start date of 1 July 2017 after SIS regulations, the principles for which are described in the RRIS, are made. The enabling legislation for this product is the Treasury Laws Amendment (Fair and Sustainable Superannuation) Act 2016, which was passed by both Houses and received Royal Assent in November last year. In a media release on 5 May 2016 the Hon Kelly O'Dwyer, Minister for Small Business and Assistant Treasurer said, "The Government has accepted the Review's recommendations" and "We will clarify how the new retirement income products will be treated under the Age Pension means test ahead of 1 July 2017."

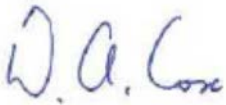
**Q11. To what extent are interactions with means testing for other social policy systems, such as residential aged care important to the development of retirement income products?**

Lifetime products will provide retirement income late in life which will supplement or replace the Age Pension. This income will be available to meet the means tested costs of aged care and to pay private health costs, giving retirees more choice and control over how their needs are met.

There is potential for a range of financial products that could help retirees more efficiently meet some of the major costs of ageing. Examples are LTCI (long term care insurance), loan products to pay RADs (Refundable Accommodation Deposits) for nursing home care, and pre-paid PHI (private health insurance) for life. All of these products require certainty in relation to their tax and means test treatments if they are to be brought to market to assist retirees to fund their own needs. They have one characteristic in common, they achieve financial efficiency by pooling and so need to be treated for tax and means test purposes as risk products.

We would appreciate an opportunity to meet to elaborate on the results of our analysis and to further our discussions with you on these matters.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'D. A. Cox'.

David Cox  
Head of Government Relations

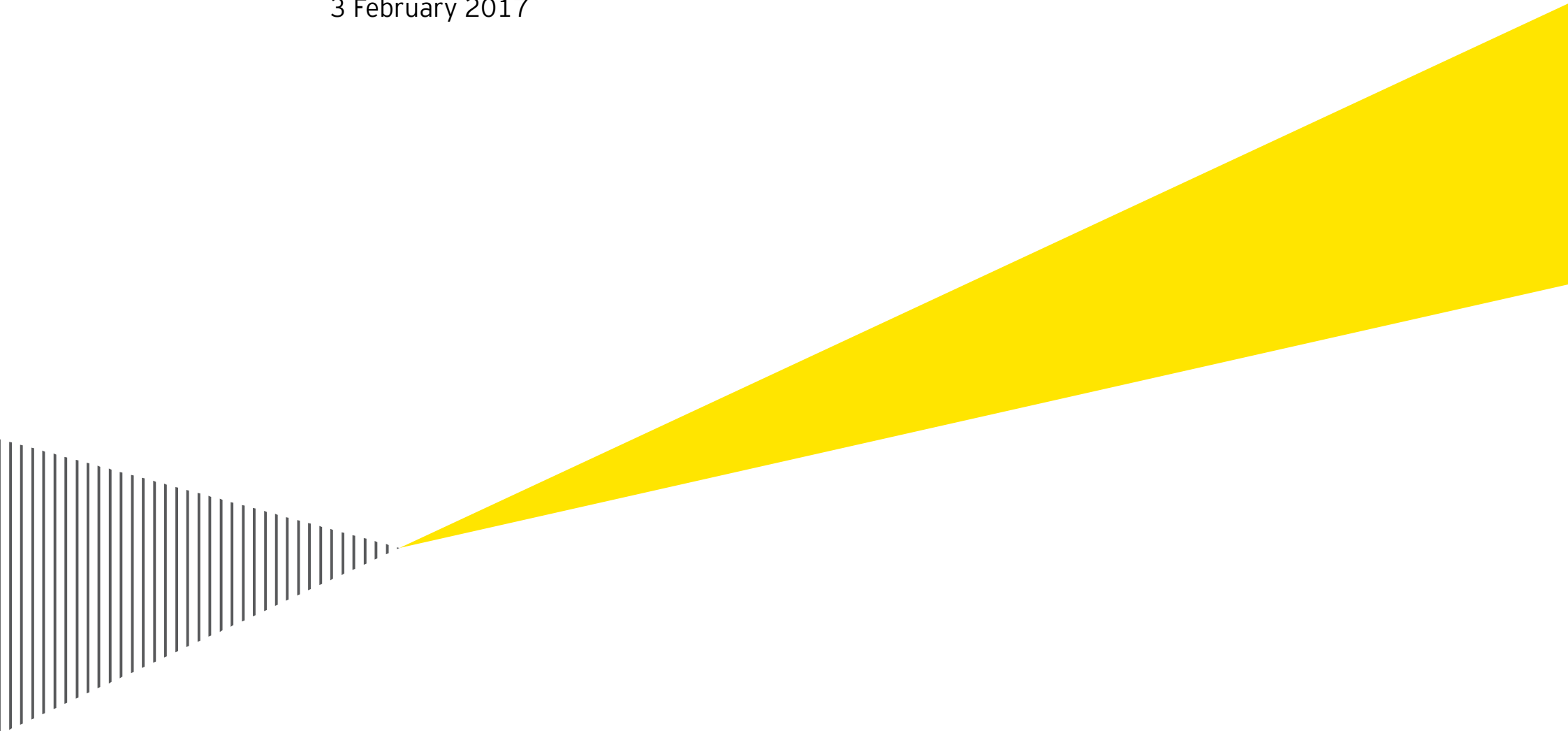


# Challenger Limited

## DSS Discussion Paper

*Social security means testing for retirement income streams*

3 February 2017



3 February 2017

David Cox  
Head of Government Relations  
Challenger Limited  
Level 2, 5 Martin Place  
Sydney, NSW 2000

*Private and confidential*

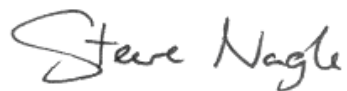
**Discussion paper support**

Dear David

Ernst & Young ('EY', 'we', or 'us') has been engaged by Challenger Limited ('Challenger' or 'you'), to prepare a report (the 'Report') in which we present the results of our quantitative analysis addressing certain aspects of the Australian Government "Social security means testing of retirement income streams" discussion paper. This report is subject to the release notice in Appendix C.

We are pleased to provide our Report in which we present the results of our model validation. If you have any questions in relation to the report, please do not hesitate to contact me on (02) 9276 9010.

Yours sincerely



Steve Nagle

Ernst & Young

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# 1. Executive Summary

## 1.1 Introduction

In December 2016, the Australian Government Department of Social Services released a discussion paper on “Social security means testing of retirement income streams” (‘the Paper’) in light of the Government’s announcement in the 2016-17 Budget that it will review current superannuation rules and regulations that may be restricting the development of new retirement income products. Challenger has engaged EY to assist with Challenger’s response to the Paper, by performing a quantitative analysis and preparing a report in relation to the current means testing impact on lifetime annuities, when compared to account-based pensions.

## 1.2 Scope

As per our Statement of Work dated 24 January 2017, we agreed to perform the following as part of our quantitative analysis:

- i. An independent actuarial investigation, through the use of deterministic case studies, into the current means testing impacts on lifetime annuities, when compared to account-based pensions. This analysis will also consider mortality credits under a replicating portfolio in an attempt to make fair comparisons between the income derived and capital returned by each product.
- ii. Extending this analysis to the proposed means testing approaches mentioned in the Paper.

## 1.3 Limitations on scope

This report is not designed to, and will not, provide any opinion. Specifically, this report is based on factual and unbiased outcomes, and does not include any viewpoints on the Paper or on Challenger’s view on the Paper.

## 2. Model Overview

As per our agreed scope, we built an independent model to examine the impact of various means testing approaches on three retirement income stream products:

- i. Immediate non-indexed lifetime annuity with 0% residual capital value
- ii. Account-based pension (ABP)
- iii. Replicating portfolio (RP) of account-based pensions designed to imitate the features of the annuity. This is a pooled account-based product designed to provide longevity protection.

To aid the comparison between the products, we have designed them such that the payment rates<sup>1</sup>, underlying earning rates and any management fees are equivalent. To achieve this, we have ignored some regulatory and/or behavioural barriers. Also, in order to investigate the impact of each means test analysed, we have applied each test individually, even though this is not the case in practice. For example, when considering the assets test, we do not also consider the income test in the same projection.

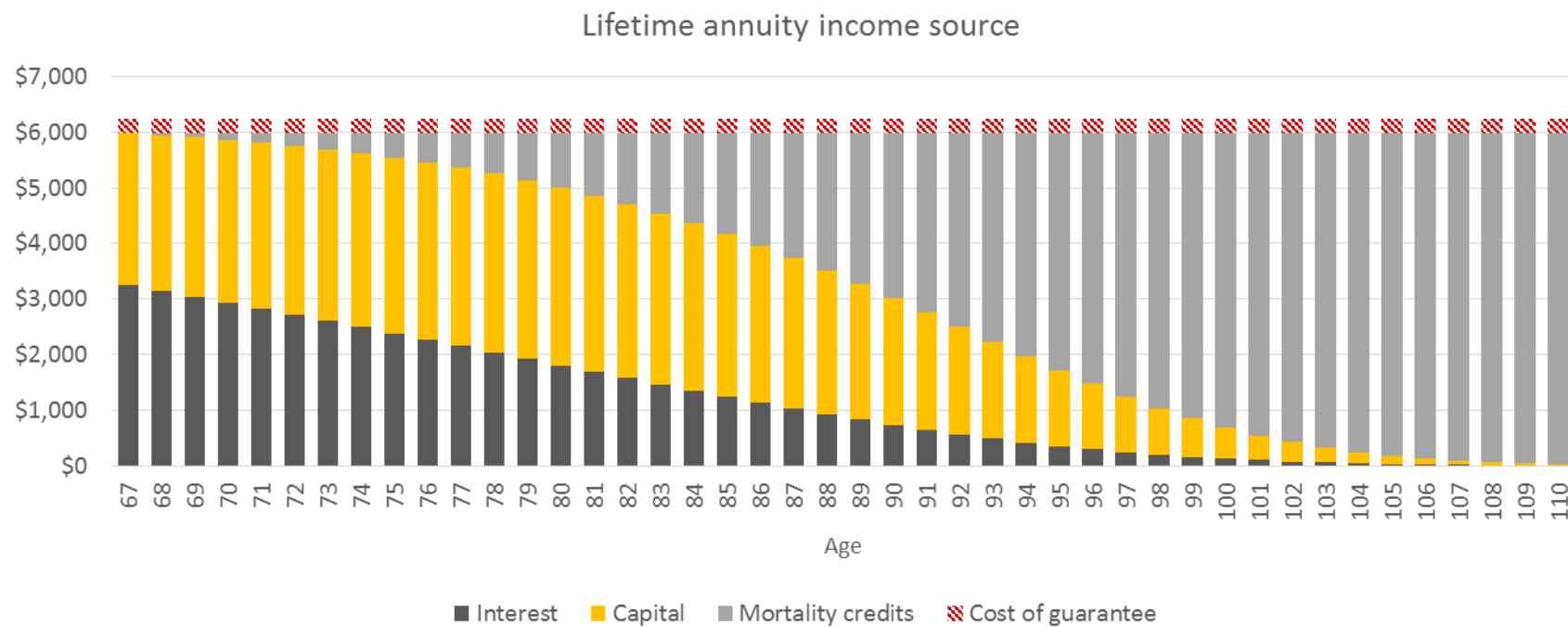
### 2.1 Lifetime annuity

The lifetime annuity modelled is a vanilla immediate annuity product that provides income payments for the retiree's lifetime after purchase. There is no residual capital value; that is, no capital is accessible upon death. We have assumed a constant payment rate determined by our pricing model. The details of this pricing are explained in the following section. The figure below shows an example of lifetime annuity payments, splitting the payments into their various income sources. Since the lifetime annuity is a pooled product, as members of the pool die, they lose their claim on any of the pool's remaining assets and these are effectively transferred to the surviving members. These capital transfers are referred to in this report as mortality credits and these are expected to increase over time for surviving members as the number of survivors reduces.

---

<sup>1</sup> With the exception of the replicating portfolio as described in Section 3.

Figure 1: The income sources associated with lifetime annuity payments<sup>2</sup>



### 2.1.1 Assets test

As per your instruction, we modelled the lifetime annuity under the alternative assets test scenarios described in Table 1 below.

<sup>2</sup> The cost of guarantee is shown for comparison in this chart but is not part of the annuity payments. See Section 3 for more detail.



**Table 1: Assets test scenarios for the lifetime annuity**

Assets test option	Assessable capital
Current assets test 1a	Current relevant number <sup>3</sup> methodology which is based on life expectancy using Australian population mortality with no allowance for mortality improvements.
Current assets test 1b	An alternative approach under which the relevant number is based on life expectancy using Australian population mortality with allowance for mortality improvements using the Australian Government Actuary 25 year average improvement rates.
Assets test 2	Initial purchase price is reduced over a period of 35 years on a straight-line basis as per the Paper's example.
Assets test 3	Initial purchase price is reduced over a period of 35 years on an increasing scale basis as per the Paper's example.
Assets test 4	Net present value of the expected future annuity payments.

To determine an individual's eligibility for the Age Pension in each projection year, the individual's assessable capital is tested against the assets test limits and taper rate as outlined in Appendix B.

## 2.1.2 Income test

We modelled the lifetime annuity product under the three income test scenarios described in Table 2 below.

**Table 2: Income test scenarios for the lifetime annuity**

Income Test	Deductible amount
Current income test 1a	Current relevant number methodology which is based on life expectancy using Australian population mortality with no allowance for mortality improvements.
Current income test 1b	An alternative approach under which the relevant number is based on life expectancy using Australian population mortality with allowance for mortality improvements using the Australian Government Actuary 25 year average improvement rates.
Income test 2	Deductible amount equal to that of the current income test (1a), however only applying until a person reaches life expectancy.

To determine an individual's eligibility for the Age Pension in each projection year, the annuity payment less the deductible amount (if any) is tested against the income test limits outlined in Appendix A.

<sup>3</sup> The relevant number is used by Centrelink to determine the deductible amount which feeds into the Age Pension calculation

## 2.2 Account-based pension (ABP)

An ABP is an individual investment account set up with superannuation benefits from which a retiree draws a regular income<sup>4</sup>. For the purpose of means testing, the ABP balance for each projection year is calculated using the following formula, where  $t$  represents years and earnings and fees are annual amounts:

$$ABP\ Balance_t = ABP\ Balance_{t-1} + Earnings - Fees - Annual\ drawdown$$

We have modelled the ABP by assuming a constant annual drawdown equivalent to the payment rate of the lifetime annuity, ignoring any minimum drawdowns specified in the SIS Regulations. Once the ABP balance runs out, the individual will rely solely on income from the Age Pension. In the case of our example retiree detailed in Section 4, this occurs at approximately age 90.

### 2.2.1 Assets test

To determine an individual's eligibility for the Age Pension in each projection year, the individual's assessable capital under the assets test is simply their account balance at the start of each projection year. This is then tested against the assets test limits and taper rate outlined in Appendix B.

### 2.2.2 Income test

To determine an individual's eligibility for the Age Pension in each projection year, the individual's deemed income is calculated by applying the account balance to the deeming rates and income test limits outlined in Appendix B.

## 2.3 Replicating portfolio (RP)

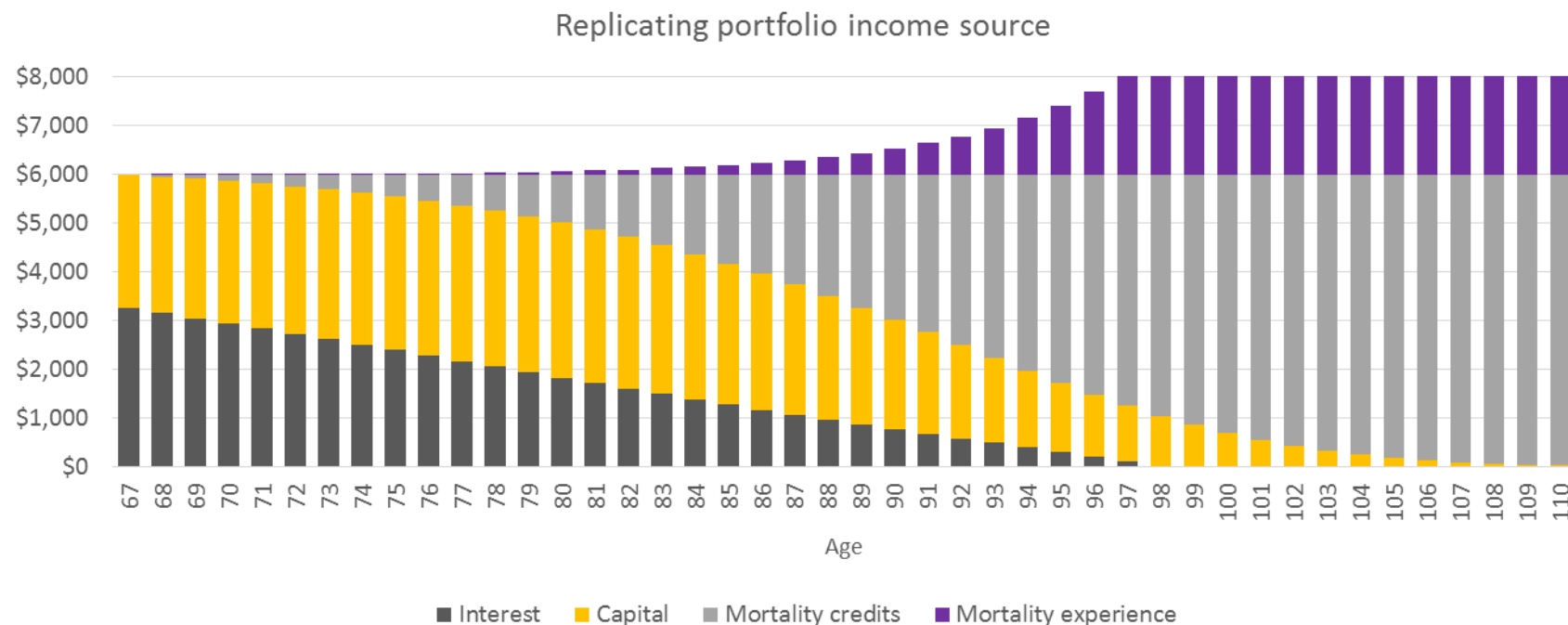
The replicating portfolio modelled is a combination of account-based pensions belonging to a pool of individuals in equal proportion. As members of the pool die, they lose their claim on any of the pool's remaining assets and there is no residual capital for their estate. Surviving members of the pool will thus be entitled to larger account balances than if they had not entered into the pooling arrangement. The additional capital amounts contributed by deceased members are also mortality credits, similar to the lifetime annuity. The diagram below shows an example of the cash flows expected to be received by an individual with one of these hypothetical products. The cash flows received are split into their various sources and it can be seen that the proportion of income funded by mortality credits increases over time as members of the pool exit. Mortality experience represents the adjustment of the payment rate to reflect actual mortality deviating from the conservative pricing assumptions<sup>5</sup>.

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<sup>4</sup> Australian Government Department of Social Services: Social security means testing of retirement income streams

<sup>5</sup> See Section 3.1

Figure 2: The income sources associated with replicating portfolio payments<sup>6</sup>



For the purposes of means testing, the RP account balance for each projection year is calculated using the following formula and is distributed equally among surviving members of the pool, where again  $t$  represents years and earnings, fees and mortality credits are annual amounts.

$$RP\ Balance_t = RP\ Balance_{t-1} + Earnings - Fees + Mortality\ credits - Annual\ drawdown$$

We have modelled the RP by assuming an annual drawdown payment equivalent to that produced by our annuity pricing model plus additional mortality credits expected to be received by an individual. The mechanism for calculating these credits is described in Section 3.1.

<sup>6</sup> The mortality experience continues to increase past age 97 but we have truncated the chart for clarity

### **2.3.1 Assets test**

To determine an individual's eligibility for the Age Pension in each projection year the individual's assessable capital under the assets test is simply the individual's share of the remaining account balance in the pool. This is then tested against the assets test limits and taper rate outlined in Appendix B.

### **2.3.2 Income test**

To determine an individual's eligibility for the Age Pension in each projection year, an individual's deemed income is calculated by applying their account balance to the deeming rates and income test limits outlined in Appendix B.

### 3. Methodology

#### 3.1 Pricing model

To determine an appropriate annual drawdown rate for each retirement income stream product described above, we started by calculating an annual, non-indexed payment rate for the lifetime annuity. We used an annuity pricing model to achieve this, making assumptions about mortality and management fees<sup>7</sup>. We also assumed that any profit margin is equal in value to the cost of capital calculated as follows:

$$\text{Capital margin} = \text{Capital held (\%)} \times \text{Expected annuity duration} \times \text{Cost of capital} \times \text{Initial pricing rate}$$

The replicating portfolio (RP) product does not have this cost of capital associated with it and can be expected, if mortality assumptions are borne out to provide greater payments. However as the mortality credit component of the payments are not guaranteed it would be prudent to set an initial payment rate based on conservative assumptions about mortality. We have therefore assumed that the RP has the same initial payment rate as the lifetime annuity, which is equivalent to assuming that future mortality would be 15% more conservative than our best estimate used to price the lifetime annuity. Then, after projecting out the number of survivors in the pool each year using the best estimate mortality, we calculated how this payment rate would be reset in future years, again assuming prospective mortality to be 15% more conservative than our best estimate. This results in a repayment rate that increases over time to reflect the releasing of the conservative mortality assumptions embedded into the calculation of the payment rate.

We assume that the account-based pension is drawn down at the same rate as the lifetime annuity until the account is exhausted.

Therefore all three products are assumed to initially pay the same income rate.

#### 3.2 Projection model

We calculated the impact of various means testing approaches on social security by determining an 'Age Pension foregone' value over a retiree's lifetime, where:

$$\text{Age Pension foregone} = \sum_{\text{projection years}} (\text{Maximum Age Pension entitlement} - \text{Expected Age Pension entitlement}) \times (\text{discount factor}^8)$$

In this formula, projection years represents the period over which we calculate the Age Pension foregone, being the whole projection period (age 110) in our analysis.

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<sup>7</sup> See Appendix A

<sup>8</sup> Each cash flow is discounted for the time value of money and survivorship

## 4. Results

We have based our quantitative analysis on an individual with the following characteristics:

Table 3: Assumed retiree profile	
Gender	Male
Age	67
Expected life	22 years
Initial investment	\$100,000
Assets outside of superannuation	\$300,000 <sup>9</sup>
Homeowner	Yes
Family situation	Single

Please refer to Appendix A for our pricing assumptions and Appendix B for the inputs used to model Age Pension entitlements. We also assumed that:

- i. An individual has fulfilled all Age Pension residency requirements
- ii. The minimum age requirement for the Age Pension is 67
- iii. The Age Pension amounts and associated means tests do not change over time

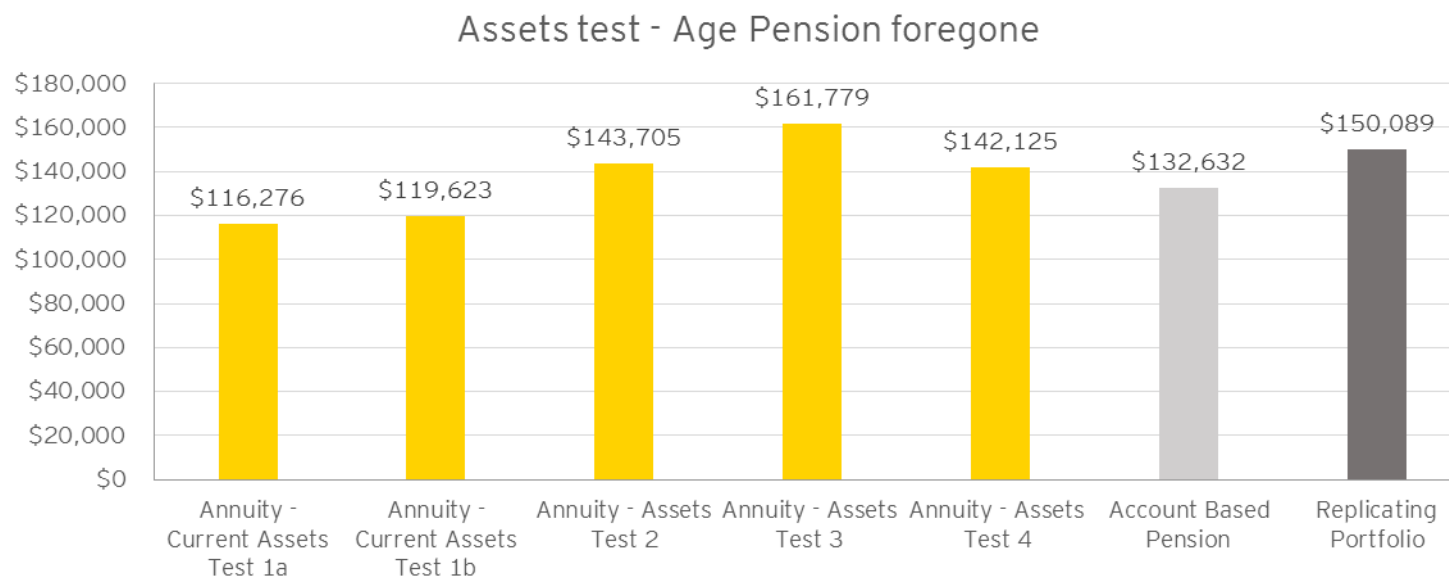
Below, we present the results of our quantitative analysis showing the value of all Age Pension payments foregone over the whole projection period discounted to reflect the time value of money and survivorship.

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<sup>9</sup> To ensure that the means tests apply for this scenario, we have assumed there is a fixed amount of deenable assets sitting outside of the superannuation system

## 4.1 Assets test

Figure 3: Age Pension foregone for various assets tests and products across the whole projection period



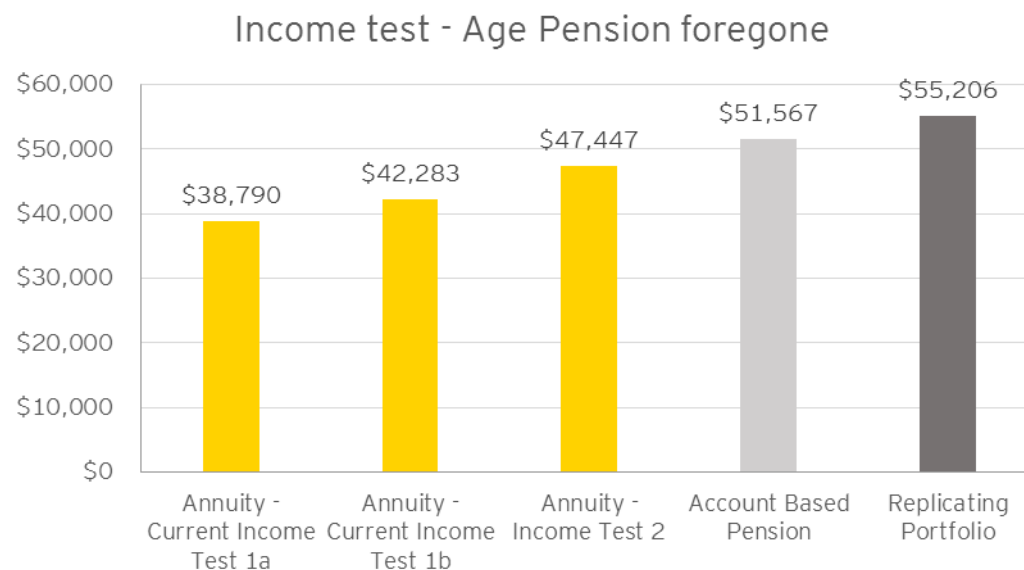
### Observations:

- i) For the lifetime annuity, the differences in methodologies used for the assets test can result in significantly different amounts of foregone Age Pension.
- ii) The difference in Age Pension foregone between the Annuity under Assets Test 4 and the Replicating Portfolio is caused by the lower payments on the annuity which result from the cost of capital.
- iii) The difference in Age Pension foregone between the Account Based Pension and the Replicating Portfolio is due to the additional capital amounts being tested under the assets test for a Replicating Portfolio contributed by mortality credits.



## 4.2 Income test

Figure 4: Age Pension foregone for various income tests and products across the whole projection period



### Observations:

- i) For the lifetime annuity, there is a difference between Age Pension foregone between Current Income Test 1a and Income Test 2. This is due to the deductible amount for Current Income Test 1a applying indefinitely, whereas for Income Test 2, the deductible amount is only applied up to life expectancy and thereafter all annuity income is assessed.
- ii) Assuming a smaller “relevant number” (as in Current Income Test 1b) results in a smaller deductible amount and therefore more Age Pension foregone.
- iii) The differences in the Age Pension foregone between the various scenarios are smaller than the differences from the assets test approaches.
- iv) All tests for the annuities result in less foregone Age Pension than the other two products.

## 5. Reliances and limitations

In preparing this report, we have relied upon the data and information (written, verbal, qualitative, quantitative or otherwise) supplied by Challenger Limited. We have relied upon the general completeness and accuracy of this data and information without independent verification.

We have not independently verified or audited the information provided to us, but we have assessed it for general reasonableness and consistency. It should be noted that if any data or other information is inaccurate or incomplete, any advice we provide may need to be revised.

Our report has been prepared for the sole use of Challenger Limited for the purposes stated in our engagement agreement and statement of work dated 21 October 2016. Our report may not be provided to, used by or relied upon by any other party without our prior written consent.

We disclaim all liability to any other party for all costs, loss, damage and liability that the other party may suffer or incur arising from or relating to or in any way connected with the contents of our report, the provision of our report to the other party or the reliance upon our report by the other party.

The work that we have performed does not constitute an audit in accordance with Australian Auditing Standards or a review made in accordance with Australian Auditing Standards applicable to review engagements and, consequently, no assurance is expressed.

In preparing this report we have assumed that only those persons who are technically competent in the areas addressed will use it. The report is designed to be read in its entirety. We are available to answer any queries and the reader should seek that advice before drawing conclusions on any matter in question.

## Appendix A Pricing assumptions

Table 4: Pricing model assumptions	
Earnings rate	3.25%
Discount rate	3.25%
Admin/management fee for all products	40 bps
Capital (economic) held to offer guaranteed	5%
Expected annuity duration	10 years
Cost of capital	8%
Mortality	Annuitant <sup>10</sup>

<sup>10</sup> You have provided us with the annuitant mortality tables to use for pricing purposes

## Appendix B Means testing and Age Pension tables

Table 5: Assets test limit		
Family situation	Assets	Reduction in pension income
Single homeowner	Up to \$250,000	None
	Over \$250,000	\$3 for each \$1,000 over \$250,000 <sup>11</sup>
Single non-homeowner	Up to \$450,000	None
	Over \$450,000	\$3 for each \$1,000 over \$450,000
Couple homeowner (each member)	Up to \$187,500	None
	Over \$187,500	\$3 for each \$1,000 over \$187,500
Couple non-homeowner (each member)	Up to \$287,500	None
	Over \$287,500	\$3 for each \$1,000 over \$287,500

Table 6: Income test limits		
Family situation	Fortnightly Income	Reduction in pension income
Single	Up to \$164	None
	Over \$164	50 cents for each dollar over \$164
Couple (each member)	Up to \$292	None
	Over \$292	50 cents for each dollar over \$292

<sup>11</sup> Commonly referred to as the assets test “taper rate”

Table 7: Deeming of income under income test		
Family situation	Financial investments	Deeming rate
Single	Up to \$49,200	1.75%
	Over \$49,200	\$861 plus 3.25% for any amount over \$49,200
Couple (each member)	Up to \$40,800	1.75%
	Over \$40,800	\$714 plus 3.25% for any amount over \$49,200

Table 8: Age Pension rates per fortnight		
Family situation	Maximum basic rate	Supplement rate
Single	\$797.90	\$601.50
Couple (each member)	\$79.20	\$59.70

## Appendix C Release notice

Ernst & Young ("**Consultant**") was engaged on the instructions of Challenger Limited ("**Client**") to present the results of our quantitative analysis addressing certain aspects of the Australian Government "Social security means testing of retirement income streams" discussion paper ("**Project**"), in accordance with the engagement agreement dated 24 January 2017 including the General Terms and Conditions ("the **Engagement Agreement**").

The results of the Consultant's work, including the assumptions and qualifications made in preparing the report, are set out in the Consultant's report dated 3 February 2017 ("**Report**"). You should read the Report in its entirety including any disclaimers and attachments. A reference to the Report includes any part of the Report. No further work has been undertaken by the Consultant since the date of the Report to update it.

Unless otherwise agreed in writing with the Consultant, access to the Report is made only on the following basis and in either accessing the Report or obtaining a copy of the Report the recipient agrees to the following terms.

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9. In the event that a recipient wishes to rely upon the Report that party must inform the Consultant and, if the Consultant so agrees, sign and return to the Consultant a standard form of the Consultant's reliance letter. A copy of the reliance letter can be obtained from the Consultant. The recipient's reliance upon the Report will be governed by the terms of that reliance letter.

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