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16 February 2018

Division Head
Department of Social Services
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Means Test Rules for Lifetime Retirement Income Streams

Dear Sir / Madam,

Please find enclosed our submission in relation to the means test rules for lifetime retirement income streams.

Our specialist retirement team have modelled the proposals and provided extensive feedback.

Should you require further information in relation to our submission, please do not hesitate to contact me on (02) 4948 3691 or adam.shultz@mine.com.au

Kind regards,

Adam Shultz
Executive Manager, Policy
Mine Super



Means Test Rules for Lifetime Retirement Income Streams

Submission by Mine Super

February 2018



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About Mine Super

Mine Wealth + Wellbeing Superannuation Fund (**Mine Super**) is a profit to members, public offer superannuation fund dedicated to serving the retirement needs of all Australians. Mine Super (formerly known as AUSCOAL Superannuation) has been delivering exceptional retirement outcomes to members for 75 years. Mine Super offers its members a comprehensive range of superannuation and pension products in addition to insurance and access to financial advice. Mine Super was awarded a Platinum rating by SuperRatings along with Chant West's Five Apples for both super and pension products in 2017. Mine Super employs over 175 staff and manages approximately \$11 billion in assets for more than 63,000 members.

Executive summary

Mine Super welcomes the opportunity to provide a submission.

The following is an outline of the key points contained within this submission:

- Mine Super contends that lifetime income stream products and associated means testing need to be considered in conjunction with existing solutions, notably account-based income streams (**ABIS**). If the proposed rules are considered in isolation, they appear to be inherently simple, fair and have a perceived bias of generosity. This is not the case.
- Mine Super's analysis indicates little rational demand for lifetime income stream products under the proposed rules.
- Without rational demand there is little foundation for product providers to develop innovative lifetime income stream products.
- Means testing rules advantage ABIS relative to lifetime income stream products. The proposals are unfair when compared to the existing treatment of ABIS. Additionally, the ABIS provides benefits with respect to residual benefits and access to capital.
- Mine Super believes that trustees would require policymakers to amend the law to make trustees only consider the income aspects of retirement and ignore residual benefits and access to capital.
- Mine Super recommends the creation of a consumer safety net in the form of a government agent who can assess and mark down the asset value of an impaired lifetime income stream product.

Introduction

The purpose of this paper is to discuss the proposed new social security means test rules for lifetime income stream products for retirement. The proposed rules are set out as follows:

- a) Asset Test: 70% of the nominal purchase price until life expectancy at purchase, and then 35% from then on;
- b) Income Test: 70% of products payments as income.

The means test rules for ABIS will remain unchanged.

We admire the simplicity of the proposed means test rules given the inherent complexity of the problem. Broadly the intention of the rules is to provide clarity, contributing to a more complete framework that supports rational demand for lifetime income stream products, and accordingly associated product development.



In the first part of our submission we find that the proposed means testing rules are broadly fair in isolation.

However, the key issue is whether any rational demand exists for utilising retirement income stream products. In the second part of our submission we attempt to improve upon actuarial present value (**APV analysis**) by using a stochastic framework that assesses the range of possible lifecycle outcomes and then we assess each possible outcome through the lens of the Member's Default Utility Function.

Our analysis suggests that there will be little rational demand for lifetime income stream products under the proposed rules. We find no motive to allocate retirement savings to lifetime income stream products. The absence of rational demand would likely inhibit product development.

The implication of this analysis is that the means testing rules advantage ABIS relative to lifetime income stream products. Regardless of whether the proposed means testing rules for lifetime income stream products are fair in isolation, they are unfavourable compared to the existing treatment of ABIS. There are many possible reasons for explaining this difference. The most likely candidates are:

1. The deeming income rules applied to ABIS;
2. Limited 'compensation' for forgoing residual benefits in lifetime income stream products.

Analysis of this important result highlights the difference in the preferences of policymakers (income focused) versus sensible preferences of trustees on behalf of default fund members (income, residual benefit and access). This same issue arose in our submission to the CIPR Consultation Paper. The only way this could be reasonably resolved for trustees would be for policymakers to legislate that a trustee should only consider the income aspects of retirement and explicitly not consider residual benefits and access to capital.

Finally, we raise two suggestions for further consideration:

1. A way in which the means testing rules could be further simplified;
2. The suggestion to create an impaired product safety net.

Our analysis progresses as follows:

1. We analyse the proposed means testing rules on a standalone basis;
2. We then consider whether an investor would rationally allocate to a lifetime income stream product of any form;
3. We consider some other relevant issues;
4. Conclusion

We are very open to engaging with the Department of Social Security (**DSS**) and happy to share our modelling.

Analysis of the proposed means testing rules

In this section we analyse the proposed means testing rules on a standalone basis.

We begin by acknowledging the simplicity of the proposed means test rules. Wherever possible we agree that simpler is better.

Table 1 provides detail of the underlying assumptions we used for modelling different retirement products, the assumptions we used are consistent with the assumptions used by the Australian Government Actuary in the Position Paper.

Table 1: Modelling assumptions for retirement products

Retirement Products	Description	Mortality	Investment	Fee	Age Pension Treatment
Account-based income stream (ABIS)	Regular income drawdown from Account-based pension (ABP) that targets a certain period. Alternatively, income drawdown at the minimum drawdown (MDD) rate if stated.	N/A	50% Risky asset + 50% Risk free		Current Age Pension Rule
Life annuity (LA)	An annuity product that provides guaranteed inflation-linked payments immediately after purchase and the payments will last until death.	Government Actuary Life Tables (ALT2010-12) + 25 years improvement rated down 3 years	Risk free rate		
Deferred life annuity (DLA)	An annuity product that provides guaranteed inflation-linked payments after a particular age is reached and the payments will last until death.				
Group self-annuitisation (GSA)	An annuity product where participants contribute funds to a pool, the product is designed to provide inflation-linked payments immediately after purchase and the payments are expected to last until death. Actual payments are not guaranteed, they depend on investment performance and mortality experience within the pool.	Same mortality assumption as LA & DLA with a closed pool of 500	Same investment mix as ABIS	No fee	Proposed Age Pension Rule discussed in the Position Paper
Deferred group self-annuitisation (DGSA)	An annuity product where participants contribute funds to a pool, the product is designed to provide inflation-linked payments after a particular age is reached and the payments are expected to last until death. Actual payments are not guaranteed, they depend on investment performance and mortality experience within the pool.				

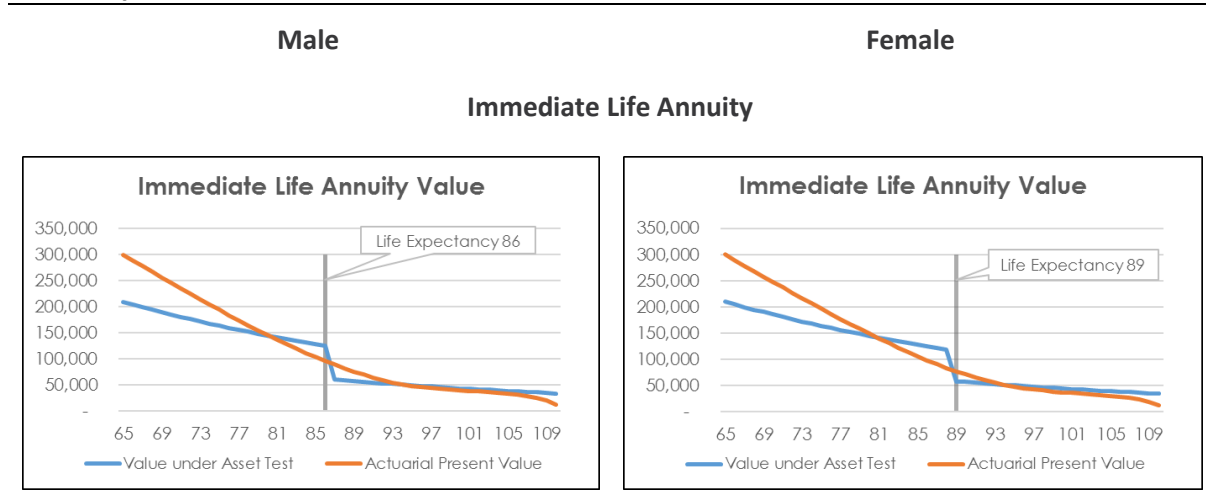
Technical analysis of the proposed rules

Neutrality is a key principle for developing the new means test rules for lifetime income products. In this section, we assess whether the proposed rules are neutral by comparing each product’s asset and income values for assessment under the proposed rules against their APVs.

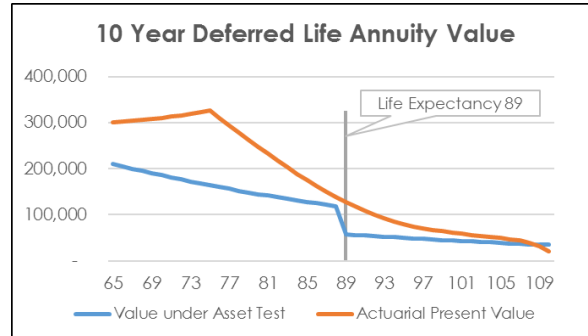
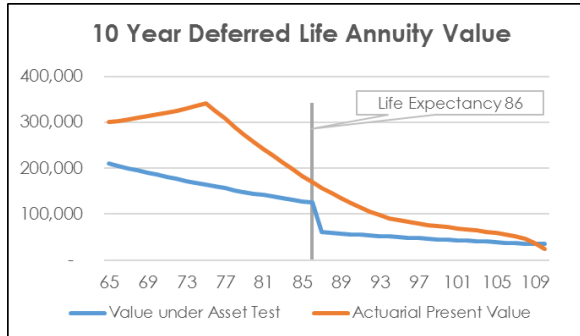
The proposed Assets Test is based on 70% of the nominal purchase price of the lifetime income products until life expectancy at purchase, and then 35% from that point on. This will be different to the APVs of the lifetime incomes calculated at different times in retirement; we are interested to consider how different.

In **Figure 1** we provide comparisons for an immediate life annuity, and 10-year and 20-year deferred life annuities, assuming a retirement balance of \$300K; we consider the case for both males and females. The lifetime average asset value of an immediate life annuity under the Asset Test is about 88% (90%) of the APVs for male (female). For a 10-year deferred life annuity, it is about 58% (62%) and for a 20-year deferred life annuity, it is about 36% (41%) for male (female). The decreasing patterns of the asset values over time under the Asset Test match better to the APV of the immediate life annuity. It does not capture the fact that APVs of deferred products increase first during the deferral period and then start to decrease after the deferred incomes kick in. This increases the gaps between the asset values assessed under the Asset Test and the APVs of any deferred products. One observation is the values assessed under the Asset Test are nearly always lower than the APVs.

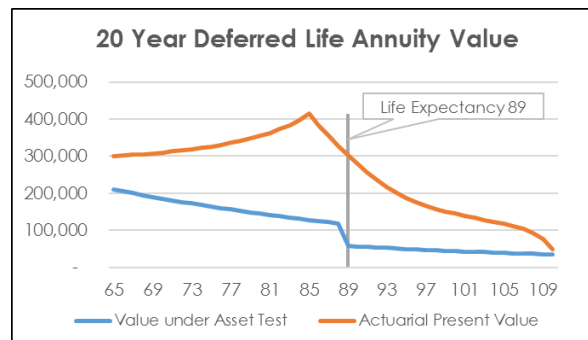
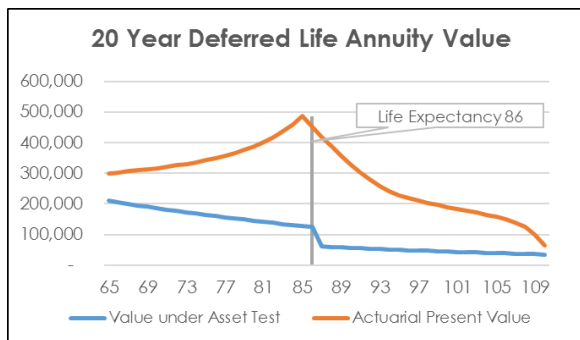
Figure 1: Lifetime annuity asset value comparison between value under the Asset Test and the actuarial present value.



10-year deferred life annuity



20-year deferred life annuity



The payments from lifetime income streams consist of return of capital, investment returns and mortality credits. The proposed Income Test only considers 70% of the product payments as income. The Position Paper, states it is to “recognise that a portion of payments are the return of a person’s original capital investment”. In effect, the mortality credits are the additional component of return and the intention is that these, in aggregate, will not be included in the Income Test. To assess the relevance of 70% as the chosen level, we compare the APVs of the income that comes from sources other than mortality credit versus the 70% level. We consider the same product group that was used in the previous example. **Figure 2** outlines the average lifetime income sources. Payments sourced from capital and investment return components contribute about 78% (81%) of the immediate life annuity incomes for males (females). Note that we assume life annuities are priced based on 0% real risk-free rate, resulting in income from investment return components being 0%. For a 10-year deferred life annuity, the number is about 65% (70%) and for a 20-year deferred life annuity, it is about 42% (50%) for males (females). The longer the deferral period, the greater the amount of mortality credits accumulated and paid out as higher proportions of incomes. The 70% Income Test number only matches closely to the 10-year deferred lifetime income streams products.

Figure 2: Lifetime annuity income decomposition into each component as percentage (shown in the brackets).



We cannot conclude whether the proposed rules are appropriate or not from the results of our technical analysis above. This is because when we consider a range of different lifetime products, the “fair” percentage numbers vary for both the Asset Test and the Income Test. If the means test rules are to be designed to reflect 100% neutrality, then customised rules are needed for individual products. This would then violate the simplicity principle and become too costly to administer for the social security system.

Proposed rules versus current rules for immediate life annuities

There are existing means test rules for immediate life annuities and these current rules will still apply for existing purchased contracts. We therefore undertake a comparison between the Age Pension outcomes assessed under the proposed rules and the current rules. Our results are presented in **Figure 3**.

One observation is that the proposed rules seem to produce more consistent Age Pension outcomes over time. In terms of APVs (see **Table 2**), the proposed rules provide higher Age Pension outcomes for middle to higher balance members but lower outcomes for low and very high balance members.

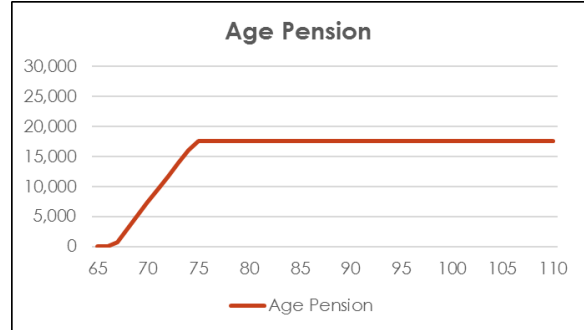
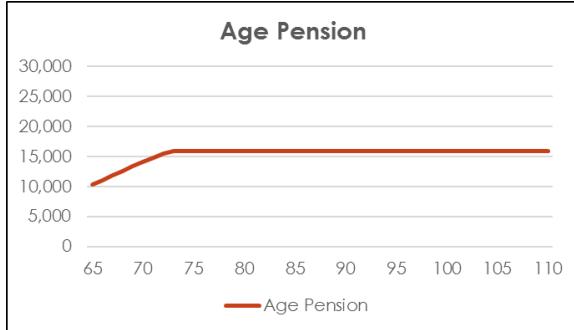
The current rule assumes return of capital before life expectancy. In fact, capital is returned over a longer period. As shown in **Figure 2** discussed earlier, at life expectancy only about 84% (88%) of the capital has been returned if the member is male (female). **Figure 4** also shows a comparison between the asset value under the proposed Asset Test, the current Asset Test and the APVs. The proposed Asset Test appears to better reflect the true asset value of the products. As a result, the proposed rule seems to be more neutral.

Figure 3: Age Pension entitlements assessment under the proposed rules and the current rules for immediate LA for a male homeowner with different balance levels.

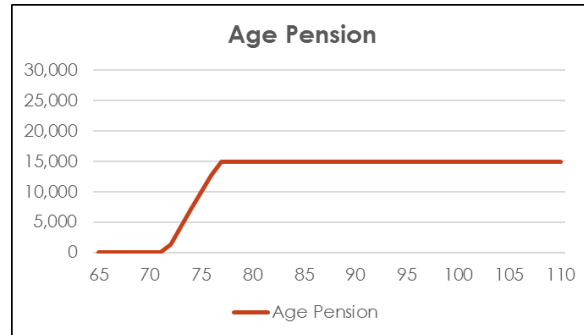
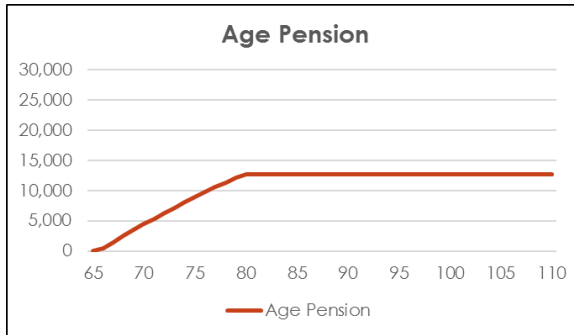




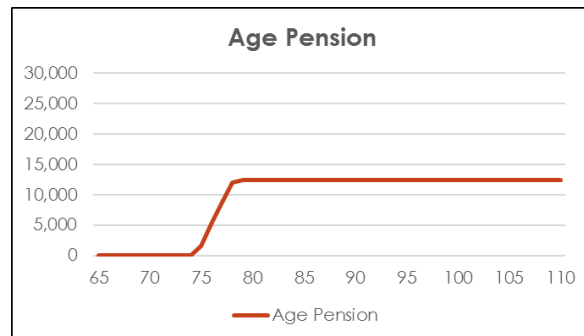
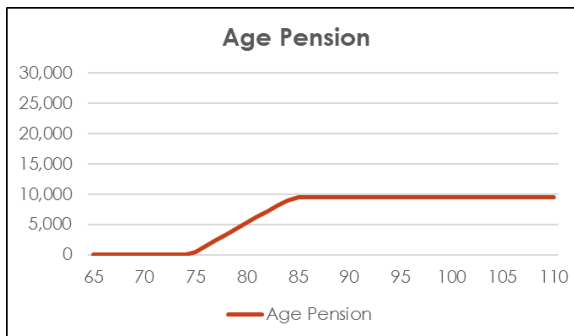
\$600K



\$800K



\$1M



\$1.6M

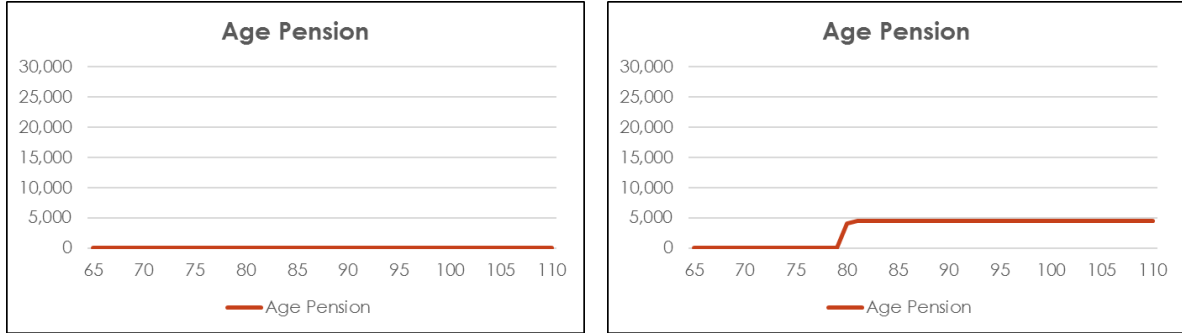
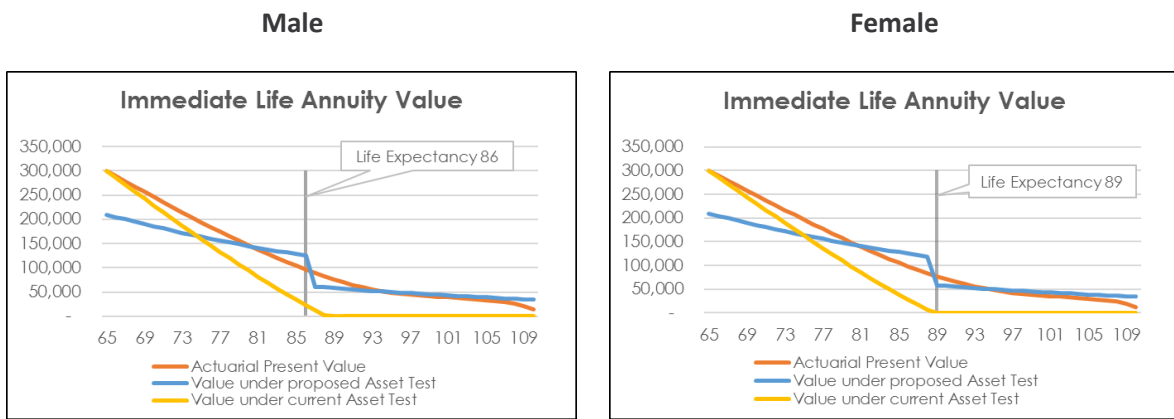


Table 2: Age Pension entitlements assessment under the proposed rules and the current rules for immediate LA for a male homeowner with different balance levels.

Retirement Balance	APV of Age Pension (the proposed rules)	APV of Age Pension (the current rules)	Welfare Difference
\$300K	\$454	\$470K	-\$16K
\$400K	\$419K	\$417K	\$2K
\$600K	\$326	\$282K	\$44K
\$800K	\$186K	\$192K	-\$6K
\$1M	\$80K	\$135K	-\$55K
\$1.6M	0	\$37K	-\$37K

Figure 4: Immediate life annuity asset value comparison between value under the proposed Asset Test, the current Asset Test and the actuarial present value.





Summary - technical analysis of the proposed rules

We undertook technical analysis of the proposed means testing rules for lifetime income streams from a standalone perspective. Overall, we find the rules are simple and inherently fair with a bias to being generous.

In isolation this would suggest a positive environment for rational uptake in lifetime income stream products. However, we cannot address this question until we consider how the products and associated means testing are considered in conjunction with existing solutions, notably the ABIS.

Assessing rational demand for lifetime income stream products

In this section we estimate the rational demand for lifetime income streams. We do this through the lens of a trustee acting on behalf of default members. The trustee has access to a large range of lifetime income stream products and the ABIS; the trustee considers combinations of products. We include Age Pension entitlements into our modelling.

We assess outcomes against the base case of the ABIS following minimum drawdown rules.

The Position Paper provides modelling results based on seven retirement strategies. They are:

- 1) **ABIS (MDD)**: Account-based income streams drawn down based on the minimum drawdown rule.
- 2) **100% LA**: 100% of member's balance is used to purchase lifetime annuities at retirement.
- 3) **30% LA / 70% ABIS (MDD)**: A 30/70 split between strategy (2) and (1).
- 4) **100% GSA**: 100% of member's balance is used to purchase group-self annuitisation product at retirement.
- 5) **50% GSA / 50% ABIS (MDD)**: A 50/50 split between strategy (4) and (1).
- 6) **30% DLA / 70% ABIS**: 30% of member's balance is used to purchase a 20-year deferred lifetime annuity and the remaining 70% are drawn down in a way to provide real constant income streams for the first 20 years in retirement.
- 7) **20% DGSA / 80% ABIS**: 20% of member's balance is used to purchase a 20-year deferred group-self annuitisation product and the remaining 80% are drawn down in a way to provide real constant income streams for the first 20 years in retirement.

Note that strategy (3) and (5) are “the stack” structure and (6) and (7) are “the cut” structure discussed in the Treasury's CIPRs Discussion Paper. We believe the seven strategies provide a good coverage of the different retirement solution designs that involve lifetime income products.

Assessing average outcomes

We consider a single male homeowner with a balance of \$300K at retirement. Assuming he has the options to invest in the seven strategies, the proposed Age Pension rules will interact differently depending on the product structures (see **Figure A1** in **Appendix**). **Table 3** shows the APVs of Age Pension, mortality credit component of incomes, total income and residual benefit he will receive under each of the seven strategies. Residual benefit recognises the account-based pension balance available for bequest.

For this member, we compare the reduction in Age Pension entitlements and the gain in mortality credits when he invests in lifetime income products. For example, by investing 100% LA instead of ABIS minimum drawdown (**MDD**), he will receive \$40K lower in Age Pension under the proposed rules.

The increase in lifetime incomes due to mortality credit is valued at about \$67K. As a result, the value add to this member's retirement income is about \$27K, 9% of this starting balance. However, by investing 100% in LA, he also foregoes a residual benefit of \$107K.

100% allocation to LA and GSA provide the largest Age Pension reductions due to the largest income uplift that mainly comes from mortality credits. Combinations of LA or GSA with ABIS (MDD) results somewhere in between. Strategies involving deferred lifetime products provide significant uplift in incomes from mortality credits with minimal reduction in Age Pension as the ABIS is designed to draw down to zero at the end of the deferral period. It seems that for all six strategies, the member will be about 5% to 15% better off under the proposed rules if we focus on incomes. However, for all six strategies the loss in expected residual benefit will be sizable.

Table 3: Average outcomes for a male homeowner single with \$300K in superannuation and no other assessable assets

Retirement Balance	APV of Age Pension (proposed rule)	Age Pension Difference with ABIS (MDD)	APV of Mortality Credit	Value of using Lifetime Income Product	APV of Total Income	APV of Residual Benefit	Residual Benefit Difference with ABIS (MDD)
ABIS (MDD)	\$494K	-	0	-	\$724K	\$107K	-
100% LA	\$454K	-\$40K	\$67K	\$27K (9%)	\$754K	0	-\$107K
30% LA / 70% ABIS (MDD)	\$490K	-\$4K	\$20K	\$16K (5%)	\$741K	\$75K	-\$32K
100% GSA	\$444K	-\$50K	\$74K	\$24K (8%)	\$775K	0	-\$107K
50% GSA / 50% ABIS (MDD)	\$477K	-\$17K	\$37K	\$20K (7%)	\$757K	\$53K	-\$54K
30% DLA / 70% ABIS	\$487	-\$7K	\$53K	\$46K (15%)	\$773K	\$34K	-\$73K
20% DGSA / 80% ABIS	\$489	-\$5K	\$43K	\$38K (13%)	\$786K	\$38K	-\$69K

We have undertaken the same analysis for the scenarios of other members discussed in the Position Paper. The results are shown in **Table A1 to A5** in the **Appendix**. Age Pension entitlements are most important for members with lower balances since they are a significant part of their retirement incomes. As a result, we extend the scenarios to include lower balances in **Table A6** and **A7**. We also include results for females in **Table A8**.

We observed that, members with higher balances, for example single homeowners with \$600K (see **Table A2**), and couple homeowners with \$400K each (see **Table A4**) are likely to receive higher Age Pension when investing in lifetime income products compared to ABIS (MDD). This contrasts with the cases where members have middle (\$300k) balances (see **Table 3**). Their incomes would receive the highest boost from both increase in Age Pension and mortality credits.



We also observed that, members with lower balances, for example single non-homeowner with \$100K (see **Table A6**), would not be impacted by the proposed rule as they are likely to receive full Age Pension regardless to their retirement strategies.

Beyond the nuanced findings associated with each member's situation, the overarching finding is that all members, regardless of situation, improve their expected incomes by incorporating a lifetime income product. However, this comes at the expense of a reduced residual benefit at death. If we consider residual benefits, it is clear that the APVs of any increased retirement incomes including Age Pension are more than offset by the reduction in the APVs of residual benefit. Inherent in this calculation is the assumption that a \$1 uplift in income is equivalent to a \$1 uplift in residual benefit. Such an assumption is not consistent with the existing spirit of superannuation to support retirement incomes.

This is one of a range of concerns which need to be considered and incorporated into a more advanced rational decision-making framework:

1. The trade-off between income and residual benefit;
2. The value placed on access to capital through life;
3. The need to model stochastically, to capture the distribution of possible lifetime experiences.

The Member's Default Utility Function

Member's Default Utility Function (MDUF)¹ represents an attempt to quantify a sensible set of preferences for a trustee to assume on behalf of default fund members, members they know little about. It is a highly credible metric developed by a panel of academics and industry professionals. The work represents 18 months of work by 14 people. The work is free for all to access (AIST and ASFA are custodians of this work; papers, models and presentation materials can be found on their respective websites).

In developing MDUF we ignore behavioural biases which may exist as a view was taken that it is potentially dangerous for a trustee to cater to behavioural biases, some of which may be irrational and threaten a sustainable retirement outcome.

MDUF reflects five preferences of a retiree that we believe are appropriate for a trustee to assume on behalf of a default fund member:

1. Members prefer higher than lower income;
2. Members prefer smoother than volatile income;
3. Members do not want to outlive their retirement savings;
4. Members place some value on residual benefit at death; and
5. Members are economically risk averse.

These preferences are then mathematically represented via a metric known as a utility function. MDUF is parameterised, establishing a sensible trade-off between the preferences.

¹ Member's Default Utility Function (MDUF) is an open-architecture metric to assist the industry to design retirement outcome solutions. The related materials can be accessed through AIST website via [http://www.aist.asn.au/policy/member%E2%80%99s-default-utility-function-\(mduf\).aspx](http://www.aist.asn.au/policy/member%E2%80%99s-default-utility-function-(mduf).aspx) and ASFA website via <http://membersdefaultutilityfunction.com.au/>

Of the five preferences detailed above it is the residual benefit preference which generated greatest debate amongst panel members. In the end the panel agreed that placing some value on any residual benefit was appropriate for several reasons including the following:

1. There is a distinct risk of dying early in retirement. Assuming one were to retire today at age 65 (according to current life tables): then for a male (female) there is a 1.1% (0.6%) chance of dying in the first year of retirement and a 15.6% (9.9%) chance of dying in the first decade of retirement. In these cases, we believe that it would be inappropriate for a trustee to design a post-retirement solution which places no value on any residual benefit;
2. The superannuation system is designed around the individual, not the household, yet over 65% of people retire with a partner. For households with a significant income difference between the two partners the residual account value provides the retirement outcome for the surviving (low income) partner;
3. Empirical research suggests that people do place value on the bequest aspect associated with a residual benefit;
4. Residual benefit acts as a reserve pool for many life events related to aged care, healthcare, travelling and family.

Of the three challenges outlined at the end of the previous section:

1. MDUF establishes a trade-off between income and residual benefit (the residual benefit is always valued less than the income it could generate);
2. MDUF does not capture access to capital – though this is partly captured through the residual benefit motive (though not explicitly and not effectively for certain lifetime income products). There is little empirical evidence to help scale this preference and little accepted academic frameworks for modelling it;
3. The use of a utility framework encourages the use of stochastic modelling, typically a lifetime simulation framework. MDUF will heavily punish the small possibility of a poor retirement outcome.

It is a much more powerful measure than the actuarial present values and we believe it can be used to assess the rational demand for different product types.

We define the following MDUF related measures used in the paper:

- **Risk-Adjusted Income (\$)**: the constant level of consumption which delivers an equivalent level of consumption utility². This measure focuses on the income component only.
- **Risk-Adjusted Residual Benefit (\$)**: the constant level of residual benefit which delivers an equivalent level of residual benefit utility³. This measure focuses on the residual benefit component only.
- **MDUF Score**: the constant level of consumption (considering the trade-off against residual benefit) which delivers an equivalent level of expected utility. This is the overall measure that

² Consumption utility is the expected utility with the residual benefit component set to zero.

³ Residual benefit utility is the expected utility with the consumption component set to zero.



considers both income and residual benefit. The MDUF Score is equivalent to the Risk-Adjusted Income when the residual-benefit motive is zero.

- **Welfare Gain (\$)**: the additional initial wealth required for an inferior solution to achieve the same expected utility as a superior solution. In this case, we use the ABP with MDD rule as the base solution. A negative welfare gain which is effectively the welfare loss of the solution compared against ABP with MDD rule.

We model the seven post-retirement strategies, simulating the range of lifetime outcomes and considering the utility using MDUF v1 of each experience. We continue with our case study of a single male, homeowner, with a retirement balance of \$300K. **Table 4** shows that investing in any of the six strategies with lifetime products detract value for the member. Strategies such as 100% GSA and 20% DGSA / 80% ABIS that provide no access to account values for some periods will automatically be rated down (because there is the possibility of a zero-residual benefit). They only add value when we remove the residual benefit motive and focus only on incomes. We also consider a higher balance member with \$600K (see **Table A9** in **Appendix**). The results are consistent except for the case of 30% DLA / 70% ABIS, it does not even add value on the income side.

The results demonstrate that under the proposed rules, members, or trustees designing default solutions on behalf of trustees, would not rationally purchase lifetime income streams. Accordingly, there appears little foundation for product providers to develop innovative income stream products (though there is a case that there will be some members with preferences different to MDUF who may rationally choose lifetime income solutions).

Table 4: MDUF assessments of outcomes for a male homeowner single with \$300K in superannuation and no other assessable assets. Assuming the member's strength of residual benefit motive is the same level as specified by MDUF v1.

Retirement Balance	Risk-Adjusted Income	Risk-Adjusted Residual Benefit	MDUF Score	Welfare Gain (with residual benefit motive)	Welfare Gain (no residual benefit motive)
ABIS (MDD)	\$31,998	\$33,050	8,637	-	-
100% LA	\$34,308	\$20,663 ⁴	5,400	-\$87K	\$51K
30% LA / 70% ABIS (MDD)	\$33,451	\$30,148	7,878	-\$20K	\$32K
100% GSA	\$34,719	\$0	0	-\$232K	\$60K
50% GSA / 50% ABIS (MDD)	\$33,906	\$26,732	6,986	-\$44K	\$42K
30% DLA / 70% ABIS	\$34,433	\$20,013	5,230	-\$92K	\$54K
20% DGSA / 80% ABIS	\$34,984	\$0	0	-\$232K	\$66K

Can we engineer a 'better' solution which may result in demand for lifetime income products? Consider the same member again (single, male, homeowner, balance of \$300K), but use an alternative retirement product with 12% DGSA and some in-built death benefits (and accordingly, lower income) and 88% ABIS. This solution follows the "the wrap" structure discussed in Treasury's CIPRs Consultation Paper (see **Figure 5**). On a product-only basis, ignoring Age Pension, this solution allows members to be better off from the perspectives of both income and residual benefit compared to ABIS (MDD). However, Table 5 demonstrates that after including Age Pension the better-designed strategy

⁴ Note that in Table 3 despite 100% LA assumes no access to capital throughout retirement similar to 100% GSA, the risk-adjusted residual benefit for the \$300K member is still positive. This is a result of Age Pension. In the MDUF metric, we added an explicit floor for the residual benefit every year to be equal to the member's Age Pension entitlement for that year. This is because the nature of the means tested rules, incomes can never go below the Age Pension entitlement level but residual benefit can be zero. Under the utility framework, the penalty placed on residual benefit shortfall becomes much higher than income shortfall. This would change the intended trade-off between income and residual benefit reflected through the strength of residual benefit motive parameter. With life annuities, incomes are guaranteed so Age Pension entitlements are consistent over time. With GSA, incomes move up and down as a result of investment and mortality experience. If there is a scenario where income received from GSA at one point increases to a level where the member would not receive any Age Pension for that year, then the floor for residual benefit becomes zero. This is heavily penalised for member with residual benefit motive. If we look at the higher balance member with \$600K in Table A9, risk-adjusted residual benefit for 100% LA is also zero because of low Age Pension entitlements at the start of retirement.

still fails to add value relative to the ABIS base case. In summary we cannot devise a blended solution which improves expected utility for our members and so rationally it is difficult to identify support for using retirement income stream solutions.

Summary - assessing rational demand for lifetime income stream products

In this section we considered whether there is a role for retirement income stream products in a rational post-retirement solution.

Initially we undertook APV analysis and found that retirement income stream products raised income, but the outcome was lower once residual benefits were incorporated.

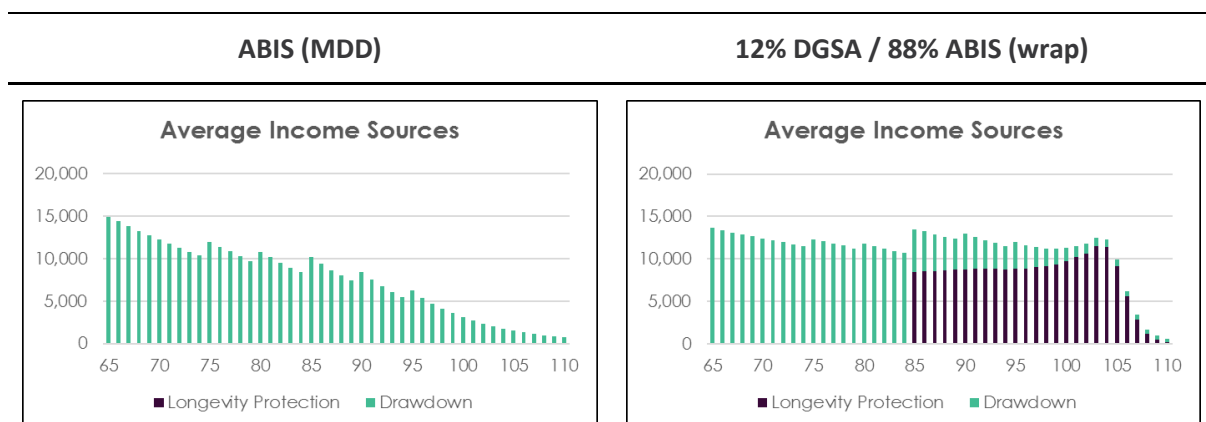
We identified the shortcomings of such analysis, namely the need for a more considered set of preferences and a stochastic testing framework. Using MDUF v1 we were able to assess whether rational demand exists for retirement income stream products. We found that there was no demand, even when we engineered a ‘better’ solution.

The implication of this analysis is that the means testing rules advantage ABIS relative to lifetime income stream products. Regardless of whether the proposed means testing rules for lifetime income stream products are fair in isolation, they are not fair when compared to the existing treatment of ABIS. There are many possible reasons for explaining this difference. The most likely candidates are:

1. The deeming income rules applied to ABIS;
2. Limited ‘compensation’ for forgoing residual benefits in lifetime income stream products.

Analysis of the result also highlights the difference in the preferences of policymakers (income focused) versus sensible preferences of trustees on behalf of default fund members (income, residual benefit and access). This same issue arose through our submission to the CIPR Consultation Paper. The only way this could be reasonably resolved for trustees would be for policymakers to state in law that a trustee should only consider the income aspects of retirement and not consider residual benefits and access to capital.

Figure 5: Outcomes without Age Pension for a male homeowner single with \$300K in superannuation and no other assessable assets. Comparing ABIS (MDD) against a better designed retirement product with 12% DGSA and 88% ABIS under “the wrap” structure.



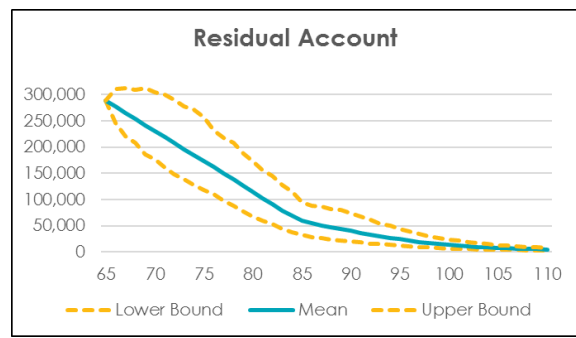
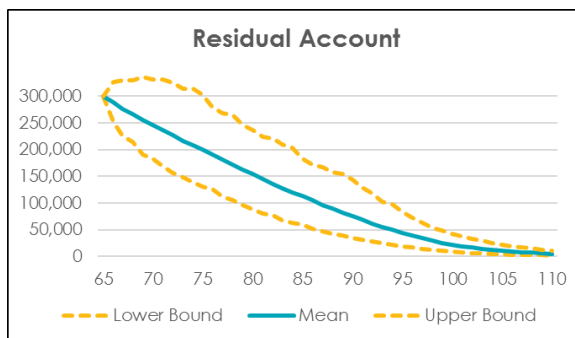
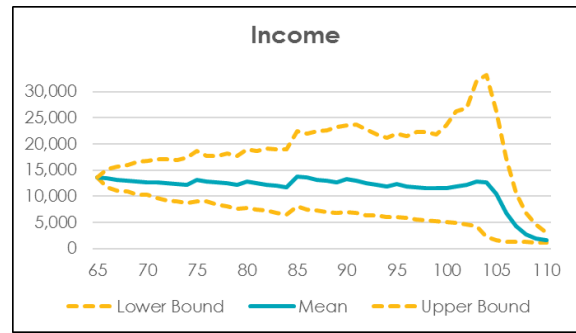
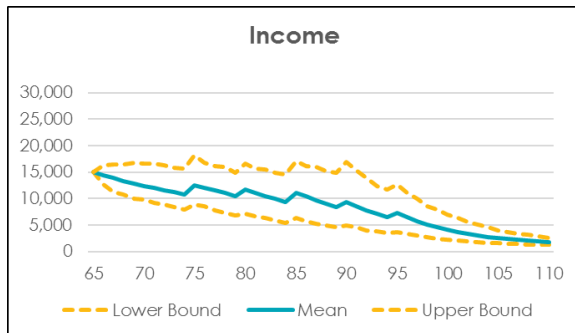


Table 5: MDUF assessments of outcomes for a male homeowner single with \$300K in superannuation and no other assessable assets. Comparing ABIS (MDD) against a better designed retirement product with 12% DGSA and 88% ABIS under “the wrap” structure. Assuming the member’s strength of residual benefit motive is the same level as specified by MDUF v1.

Retirement Balance	Risk-Adjusted Income	Risk-Adjusted Residual Benefit	MDUF Score	Welfare Gain
Without Age Pension				
ABIS (MDD)	\$4,780	\$6,647	1,737	-
12% DGSA / 88% ABIS (wrap)	\$4,862	\$10,471	2,731	\$27K
With Age Pension				
ABIS (MDD)	\$31,998	\$33,050	8,637	-
12% DGSA / 88% ABIS (wrap)	\$33,662	\$27,368	7,152	-\$40K



Other issues

In this section we consider two other issues which we would like to draw to attention.

Simplification of the means test rules

Simplicity is important and we believe the proposed rules achieve that objective. The one area of complexity is the Assets Test step-down being linked to life expectancy at purchase. This requirement complicates the process as every time a member purchases a lifetime product, their life expectancies at the time of purchase will need to be recorded. This would be even more complicated for members that purchase multiple products at different times. Complexity adds system cost.

A possible further simplification is to completely remove the step down in the assets test assessment (i.e. leave it at 70% for life). This suggestion (not necessarily a recommendation) is based on our analysis that the concession does not play a material role in determining the Age Pension entitlement for members.

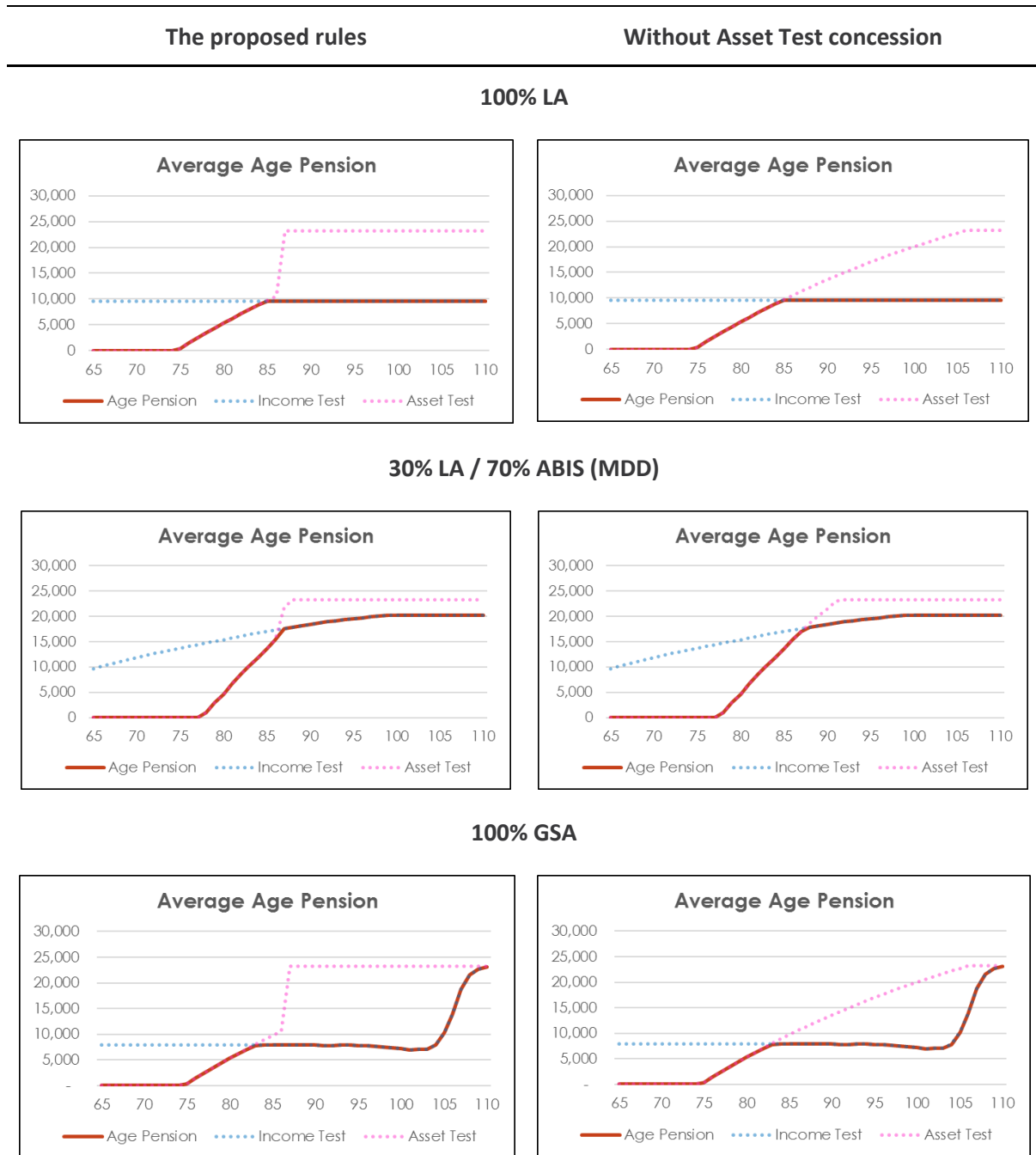
We first look at middle balance members. **Figure A1** in **Appendix** (left panel) shows that for a single male homeowner with \$300K, his Age Pension entitlements throughout retirement are all driven by the Income Test. The outcome is independent of the Asset Test, hence life expectancy.

Lower balance members are not affected by the design of means test rules because they are likely to receive full Age Pension regardless. As a result, the Asset Test concession does not impact them either.

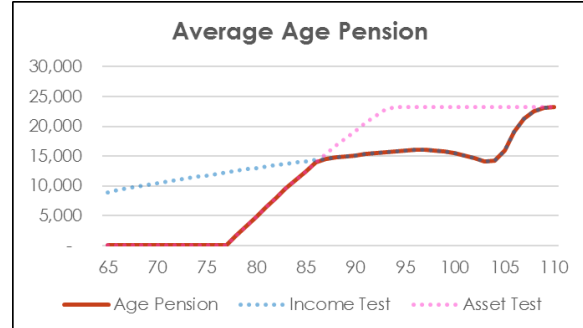
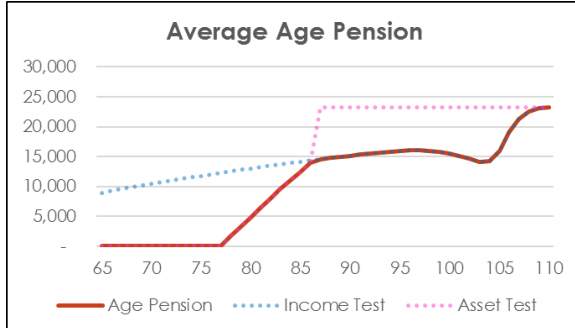
The proposed rules have greater impacts on higher balance members. Consider a single male homeowner with \$600K (**Figure A2** in **Appendix**), the switch from asset test binding to income test binding always happens before his life expectancy which is 21 years (age of 86). As a result, the Asset Test concession would not have an impact on him either.

We increase the balance level and consider a single male homeowner with \$1M (**Figure A3** in **Appendix**). Now you can see that the switch from asset test binding to income test binding occurs around life expectancy. We then further investigate the impacts of the Asset Test concession at life expectancy to overall Age Pension entitlement by removing it completely. **Figure 6** shows the comparisons across all six strategies that involve lifetime products. By removing the concession, the Age Pension calculated under the Asset Test decreases, but it does not affect the overall Age Pension received since Income Test is binding.

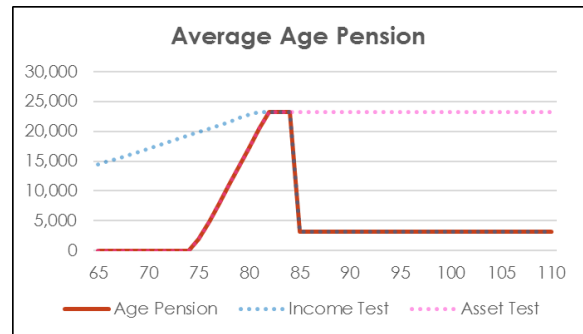
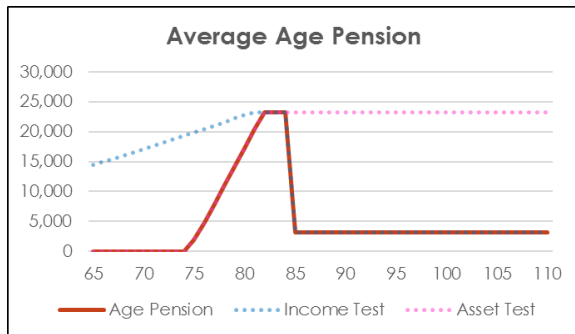
Figure 6: Age Pension entitlements assessment for a male homeowner single with \$1M in superannuation and no other assessable assets



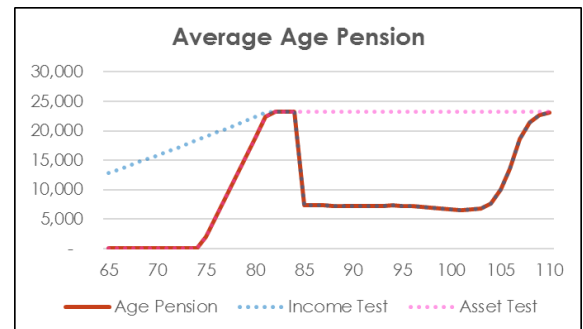
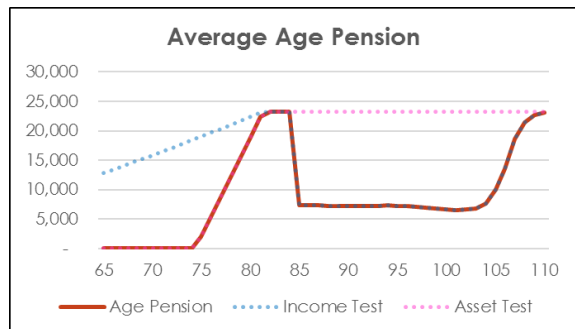
50% GSA / 50% ABIS (MDD)



30% DLA / 70% ABIS



20% DGSA / 80% ABIS



To test the boundary condition, we further increase the balance level to \$1.6M which is the transfer balance cap to test the validity of the statement. **Figure A4** in **Appendix** shows that the Asset Test concession at life expectancy does affect the Age Pension entitlements for strategies that involve a portion allocated to immediate LA and GSA (strategy (3), (4) and (5)). The removal of the concession results in reductions of Age Pension valued at about \$1K to \$14K for the members depend on the strategy. This is about 0.06% to 0.88% of the member's \$1.6M balance.

We believe that there is a case with the Asset Test to consider materiality versus simplicity.

Impaired product safety net

Lifetime income stream products may experience failure. Life annuity providers can default (despite capital requirements) while GSAs and DGSAs can experience impairment due to factors such as the mortality experience of the pool and market returns.

Impairment would mean that the lifetime income stream product may pay little or no income from a particular point onwards. In such a circumstance for low balance members the Asset Test would become binding, and the member would not be affected. A higher Age Pension payment may result, but it may still be lower than a fair level as it is bound by the Asset Test and the asset value of the product is impaired.

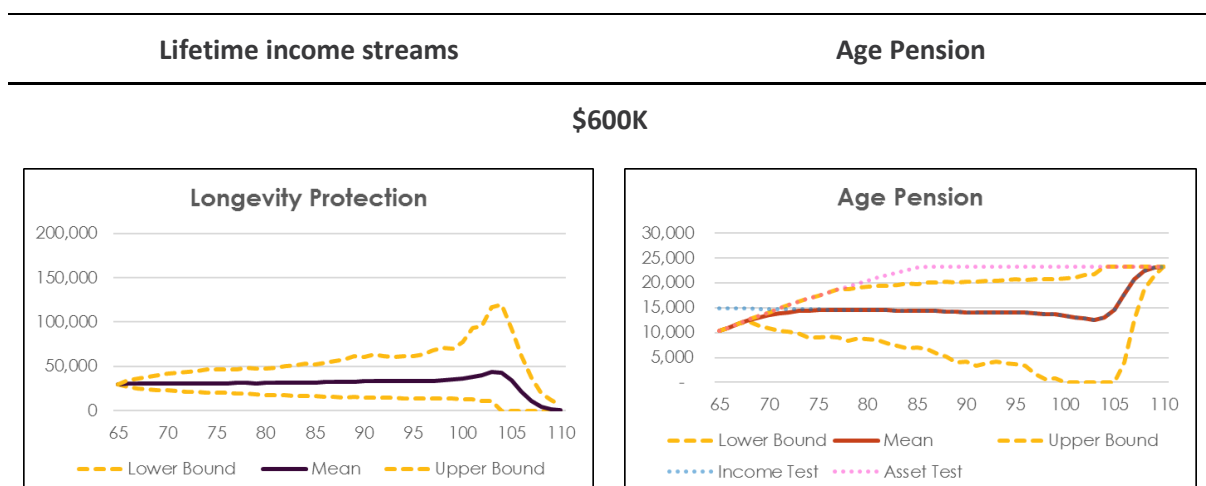
However, there are cases where a member can be affected more adversely. To illustrate our concerns **Figure 7** shows the range of lifetime incomes and Age Pension a male homeowner with different balances would receive if he invests 100% into an immediate GSA.

As shown in the previous analysis, members with relatively higher balances are likely to experience a period where the Asset Test is the binding test. For a balance of \$600K, the Asset Test binding period is the first 6 years in retirement. During this period product impairment would mean impaired income and potentially no or only a partial uplift in Age Pension. We believe this violates the equity principle for developing the mean test rules. The Asset Test binding period is longer for higher balance members. For a balance of \$800K it is about 12 years and for \$1M it is about 17 years.

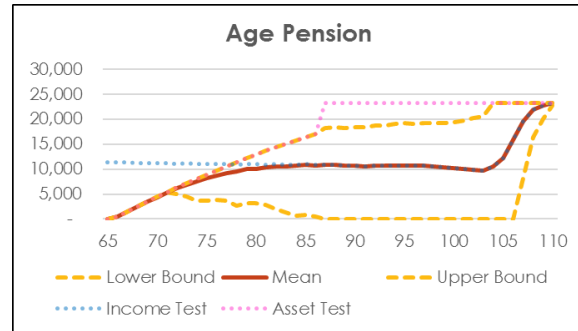
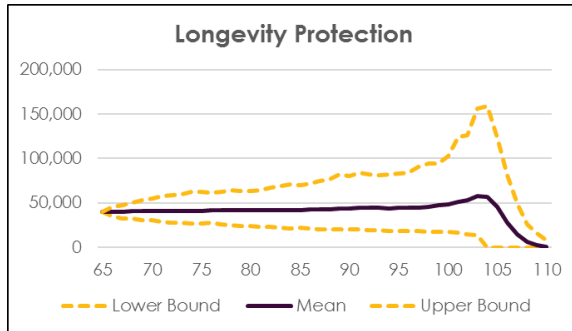
We recommend the development of consumer protection safeguards. This is particularly relevant if lifetime income stream products were incorporated into defaults (whereby the member may be more likely to have low financial literacy and place their faith in the trustee of the super fund).

Implementation of consumer protection safeguards could take the form of a government agent assessing the request of a product issuer, super fund trustee, or individual, to determine if a lifetime income stream product is impaired. If it is ruled to be impaired then the value of the product could be reduced by an appropriate amount, to be determined by the agency, thereby improving the Asset Test aspects of the Age Pension means tests.

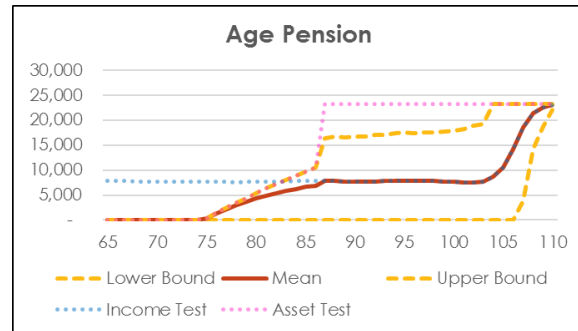
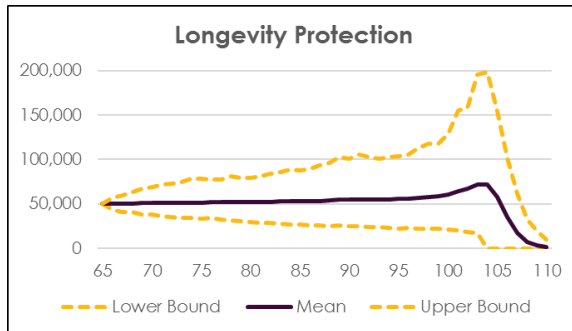
Figure 7: Age Pension entitlements assessment for immediate GSA for a male homeowner with different balance levels.



\$800K



\$1M



Summary – other issues

In this Section we discuss two topics:

1. The potential for further simplification of the Age Pension assessment tests for retirement income stream products. This simply involves a flat rather than stepped Asset Test.
2. The suggestion to create an impaired product safety net.

Mine Super believe both topics are worthy of further consideration. In addition we note that the two have an interaction which we have not detailed in this paper.

Conclusion

Mine Super admires the simplicity of the proposed means test rules given the inherent complexity of the problem. Broadly the intention of the rules is to provide clarity, contribute to a more complete framework that supports rational demand for lifetime income stream products and product development.

In the first part of this paper we find that the proposed means testing rules are broadly fair in isolation.

However, the key issue is whether any rational demand exists for utilising retirement income stream products. In the second part of this paper we attempt to improve upon APV analysis. We undertake this through using a stochastic framework that assesses the range of possible lifecycle outcomes and then assessing each possible outcome through the lens of the MDUF.



Our analysis suggests that there will be little rational demand for lifetime income stream products under the proposed rules. We find no motive to allocate retirement savings to lifetime income stream products. The absence of rational demand would likely inhibit product development.

The implication of this analysis is that the means testing rules advantage ABIS relative to lifetime income stream products. Regardless of whether the proposed means testing rules for lifetime income stream products are fair in isolation, they are unfavourable compared to the existing treatment of ABIS. There are many possible reasons for explaining this difference. The most likely candidates are:

1. The deeming income rules applied to ABIS;
2. Limited 'compensation' for forgoing residual benefits in lifetime income stream products.

Analysis highlights the difference in the preferences of policymakers (income focused) versus sensible preferences of trustees on behalf of default fund members (income, residual benefit and access). This same issue arose in our submission to the CIPR Consultation Paper. The only way this could be reasonably resolved for trustees would be for policymakers to legislate that a trustee should only consider the income aspects of retirement and explicitly not consider residual benefits and access to capital.

Finally, we raise two suggestions for further consideration:

1. A way in which the means testing rules could be further simplified;
2. The suggestion to create an impaired product safety net.

We hope this response would help inform the DSS with future decisions. The team at Mine Super are happy to share our modelling.

Appendix

Table A1: Average outcomes for a male homeowner single with \$400K in superannuation and no other assessable assets.

Retirement Balance	APV of Age Pension (proposed rule)	Age Pension Difference with ABIS (MDD)	APV of Mortality Credit	Net Value of using Lifetime Income Product	APV of Total Income	APV of Residual Benefit	Residual Benefit Difference with ABIS (MDD)
ABIS (MDD)	\$446K	-	0	-	\$752K	\$142K	-
100% LA	\$419K	-\$27K	\$89K	\$72K (18%)	\$819K	0	-\$142K
30% LA / 70% ABIS (MDD)	\$450K	\$4K	\$27K	\$31K (8%)	\$785K	\$100K	-\$42K
100% GSA	\$405K	-\$41K	\$98K	\$57K (14%)	\$846K	0	-\$142K
50% GSA / 50% ABIS (MDD)	\$442K	-\$4K	\$49K	\$45K (11%)	\$816K	\$71K	-\$71K
30% DLA / 70% ABIS	\$444K	-\$2K	\$70K	\$68K (17%)	\$825K	\$45K	-\$97K
20% DGSA / 80% ABIS	\$446K	0	\$57K	\$57K (14%)	\$842K	\$51K	-\$91K

Table A2: Average outcomes for a male homeowner single with \$600K in superannuation and no other assessable assets.

Retirement Balance	APV of Age Pension (proposed rule)	Age Pension Difference with ABIS (MDD)	APV of Mortality Credit	Net Value of using Lifetime Income Product	APV of Total Income	APV of Residual Benefit	Residual Benefit Difference with ABIS (MDD)
ABIS (MDD)	\$294K	-	0	-	\$754K	\$213K	-
100% LA	\$326K	\$32K	\$133K	\$165K (28%)	\$926K	0	-\$213K
30% LA / 70% ABIS (MDD)	\$307K	\$13K	\$49K	\$62K (10%)	\$809K	\$149K	-\$64K
100% GSA	\$312K	\$18K	\$147K	\$165K (28%)	\$973K	0	-\$213K
50% GSA / 50% ABIS (MDD)	\$311K	\$17K	\$74K	\$91K (15%)	\$872K	\$107K	-\$106K
30% DLA / 70% ABIS	\$308K	\$14K	\$105K	\$119K (20%)	\$879K	\$67K	-\$146K
20% DGSA / 80% ABIS	\$314K	\$20K	\$86K	\$106K (18%)	\$908K	\$77K	-\$136K

Table A3: Average outcomes for a male homeowner couple with \$200K each in superannuation and no other assessable assets.

Retirement Balance	APV of Age Pension (proposed rule)	Age Pension Difference with ABIS (MDD)	APV of Mortality Credit	Net Value of using Lifetime Income Product	APV of Total Income	APV of Residual Benefit	Residual Benefit Difference with ABIS (MDD)
ABIS (MDD)	\$381K	-	0	-	\$534K	\$71K	-
100% LA	\$358K	-\$23K	\$44K	\$21K (11%)	\$558K	0	-\$71K
30% LA / 70% ABIS (MDD)	\$380K	-\$1K	\$13K	\$12K (6%)	\$547K	\$50K	-\$21K
100% GSA	\$351K	-\$30K	\$49K	\$19K (10%)	\$571K	0	-\$71K
50% GSA / 50% ABIS (MDD)	\$374K	-\$7K	\$25K	\$18K (9%)	\$561K	\$36K	-\$35K
30% DLA / 70% ABIS	\$374K	-\$7K	\$35K	\$28K (14%)	\$564K	\$22K	-\$49K
20% DGSA / 80% ABIS	\$377K	-\$4K	\$29K	\$25K (13%)	\$575K	\$26K	-\$45K



Table A4: Average outcomes for a male homeowner couple with \$400K each in superannuation and no other assessable assets.

Retirement Balance	APV of Age Pension (proposed rule)	Age Pension Difference with ABIS (MDD)	APV of Mortality Credit	Net Value of using Lifetime Income Product	APV of Total Income	APV of Residual Benefit	Residual Benefit Difference with ABIS (MDD)
ABIS (MDD)	\$263K	-	0	-	\$569K	\$142K	-
100% LA	\$281K	\$18K	\$89K	\$107K (27%)	\$681K	0	-\$142K
30% LA / 70% ABIS (MDD)	\$275K	\$12K	\$27K	\$39K (10%)	\$610K	\$100K	-\$42K
100% GSA	\$269K	\$6K	\$98K	\$104K (26%)	\$710K	0	-\$142K
50% GSA / 50% ABIS (MDD)	\$276K	\$13K	\$49K	\$62K (16%)	\$650K	\$71K	-\$71K
30% DLA / 70% ABIS	\$271K	\$8K	\$70K	\$78K (20%)	\$652K	\$45K	-\$97K
20% DGSA / 80% ABIS	\$275K	\$12K	\$57K	\$69K (17%)	\$671K	\$51K	-\$91K



Table A5: Average outcomes for a male non-homeowner single with \$400K in superannuation and no other assessable assets.

Retirement Balance	APV of Age Pension (proposed rule)	Age Pension Difference with ABIS (MDD)	APV of Mortality Credit	Net Value of using Lifetime Income Product	APV of Total Income	APV of Residual Benefit	Residual Benefit Difference with ABIS (MDD)
ABIS (MDD)	\$478K	-	0	-	\$784K	\$142K	-
100% LA	\$419K	-\$59K	\$89K	\$30K (8%)	\$819K	0	-\$142K
30% LA / 70% ABIS (MDD)	\$466K	-\$12K	\$27K	\$15K (4%)	\$801K	\$100K	-\$42K
100% GSA	\$405	-\$73K	\$98	\$25K (6%)	\$846K	0	-\$142K
50% GSA / 50% ABIS (MDD)	\$447K	-\$31K	\$49K	\$18K (5%)	\$821K	\$71K	-\$71K
30% DLA / 70% ABIS	\$470K	-\$8K	\$70K	\$62K (16%)	\$851K	\$45K	-\$97K
20% DGSA / 80% ABIS	\$472K	-\$6K	\$57K	\$51K (13%)	\$868K	\$51K	-\$91K



Table A6: Average outcomes for a male homeowner single with \$100K in superannuation and no other assessable assets.

Retirement Balance	APV of Age Pension (proposed rule)	Age Pension Difference with ABIS (MDD)	APV of Mortality Credit	Net Value of using Lifetime Income Product	APV of Total Income	APV of Residual Benefit	Residual Benefit Difference with ABIS (MDD)
ABIS (MDD)	\$511K	-	0	-	\$588K	\$36K	-
100% LA	\$511K	-	\$22K	\$22K (22%)	\$611K	0	-\$36K
30% LA / 70% ABIS (MDD)	\$511K	-	\$7K	\$7K (7%)	\$595K	\$25K	-\$11K
100% GSA	\$511K	-	\$25K	\$25K (25%)	\$621K	0	-\$36K
50% GSA / 50% ABIS (MDD)	\$511K	-	\$12K	\$12K (12%)	\$604K	\$18K	-\$18K
30% DLA / 70% ABIS	\$511K	-	\$18K	\$18K (18%)	\$606K	\$11K	-\$25K
20% DGSA / 80% ABIS	\$511K	-	\$14K	\$14K (14%)	\$610K	\$13K	-\$23K

Table A7: Average outcomes for a male non-homeowner single with \$300K in superannuation and no other assessable assets.

Retirement Balance	APV of Age Pension (proposed rule)	Age Pension Difference with ABIS (MDD)	APV of Mortality Credit	Net Value of using Lifetime Income Product	APV of Total Income	APV of Residual Benefit	Residual Benefit Difference with ABIS (MDD)
ABIS (MDD)	\$496K	-	0	-	\$726K	\$107K	-
100% LA	\$454K	-\$42K	\$67K	\$25K (8%)	\$754K	0	-\$107K
30% LA / 70% ABIS (MDD)	\$490K	-\$6K	\$20K	\$14K (5%)	\$741K	\$75K	-\$32K
100% GSA	\$444K	-\$52K	\$74K	\$22K (7%)	\$775K	0	-\$107K
50% GSA / 50% ABIS (MDD)	\$477K	-\$19K	\$37K	\$18K (6%)	\$757K	\$53K	-\$54K
30% DLA / 70% ABIS	\$487K	-\$9K	\$53K	\$44K (15%)	\$773K	\$34K	-\$73K
20% DGSA / 80% ABIS	\$490K	-\$6K	\$43K	\$37K (12%)	\$787K	\$38K	-\$69K

Table A8: Average outcomes for a female non-homeowner single with \$300K in superannuation and no other assessable assets.

Retirement Balance	APV of Age Pension (proposed rule)	Age Pension Difference with ABIS (MDD)	APV of Mortality Credit	Net Value of using Lifetime Income Product	APV of Total Income	APV of Residual Benefit	Residual Benefit Difference with ABIS (MDD)
ABIS (MDD)	\$552K	-	0	-	\$800K	\$89K	-
100% LA	\$516K	-\$36K	\$57K	\$21K (7%)	\$816K	0	-\$89K
30% LA / 70% ABIS (MDD)	\$548K	-\$4K	\$17K	\$13K (4%)	\$812K	\$62K	-\$27K
100% GSA	\$504K	-\$48K	\$64K	\$16K (5%)	\$837K	0	-\$89K
50% GSA / 50% ABIS (MDD)	\$536K	-\$16K	\$32K	\$16K (5%)	\$827K	\$45K	-\$44K
30% DLA / 70% ABIS	\$547K	-\$5K	\$45K	\$40K (13%)	\$843K	\$23K	-\$66K
20% DGSA / 80% ABIS	\$550K	-\$2K	\$37K	\$35K (12%)	\$859K	\$26K	-\$63K



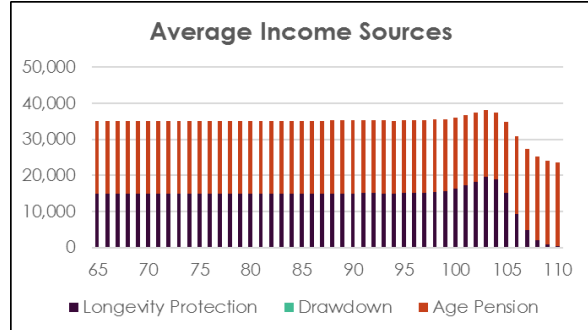
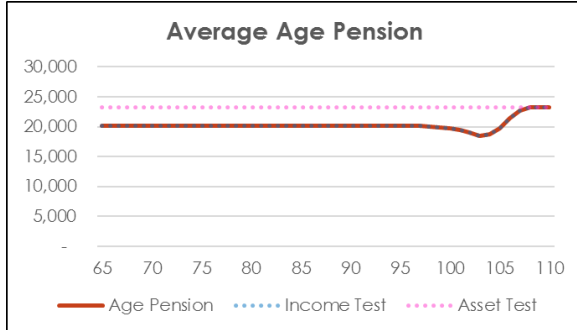
Table A9: MDUF assessments of outcomes for a male homeowner single with \$600K in superannuation and no other assessable assets. Assuming the member’s strength of residual benefit motive is the same level as specified by MDUF v1.

Retirement Balance	Risk-Adjusted Income	Risk-Adjusted Residual Benefit	MDUF Score	Welfare Gain (with residual benefit motive)	Welfare Gain (no residual benefit motive)
ABIS (MDD)	\$32,355	\$41,153	10,754	-	-
100% LA	\$34,340	\$0	0	-\$289K	\$44K
30% LA / 70% ABIS (MDD)	\$34,762	\$35,405	9,252	-\$40K	\$53K
100% GSA	\$42,029	\$0	0	-\$289K	\$217K
50% GSA / 50% ABIS (MDD)	\$37,846	\$29,069	7,596	-\$85K	\$121K
30% DLA / 70% ABIS	\$31,207	\$12,911	3,374	-\$198K	-\$25K
20% DGSA / 80% ABIS	\$34,086	\$0	0	-\$289K	\$38K

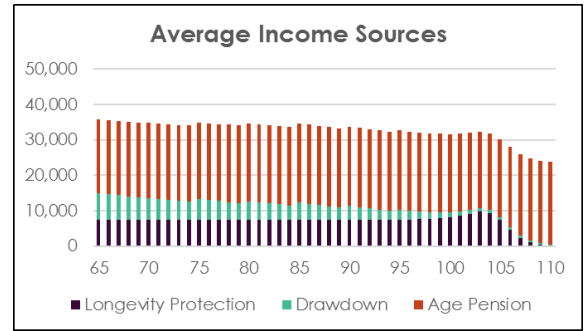
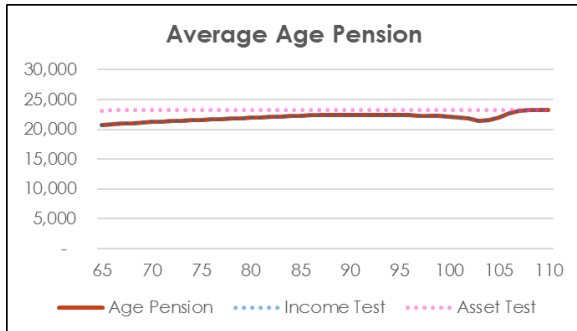
Figure A1: Average outcomes for a male homeowner single with \$300K in superannuation and no other assessable assets



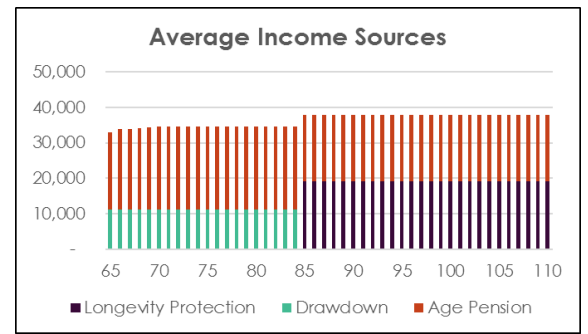
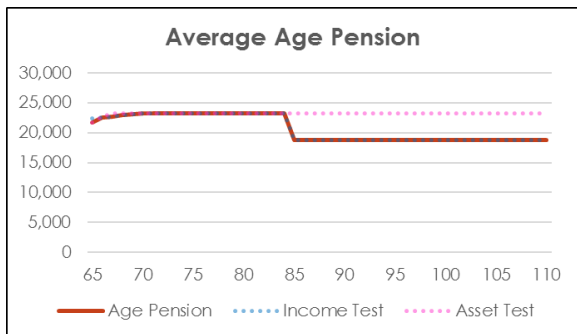
100% GSA



50% GSA / 50% ABIS (MDD)



30% DLA / 70% ABIS



20% DGSA / 80% ABIS

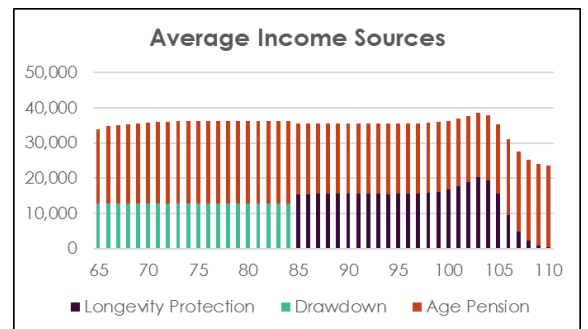
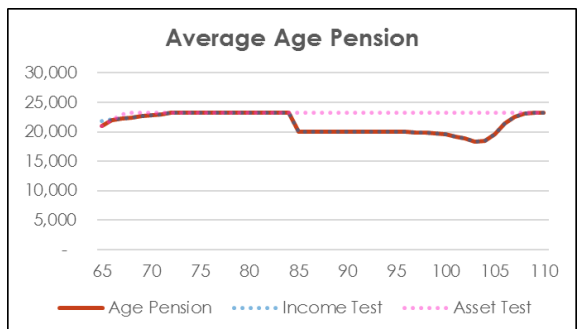
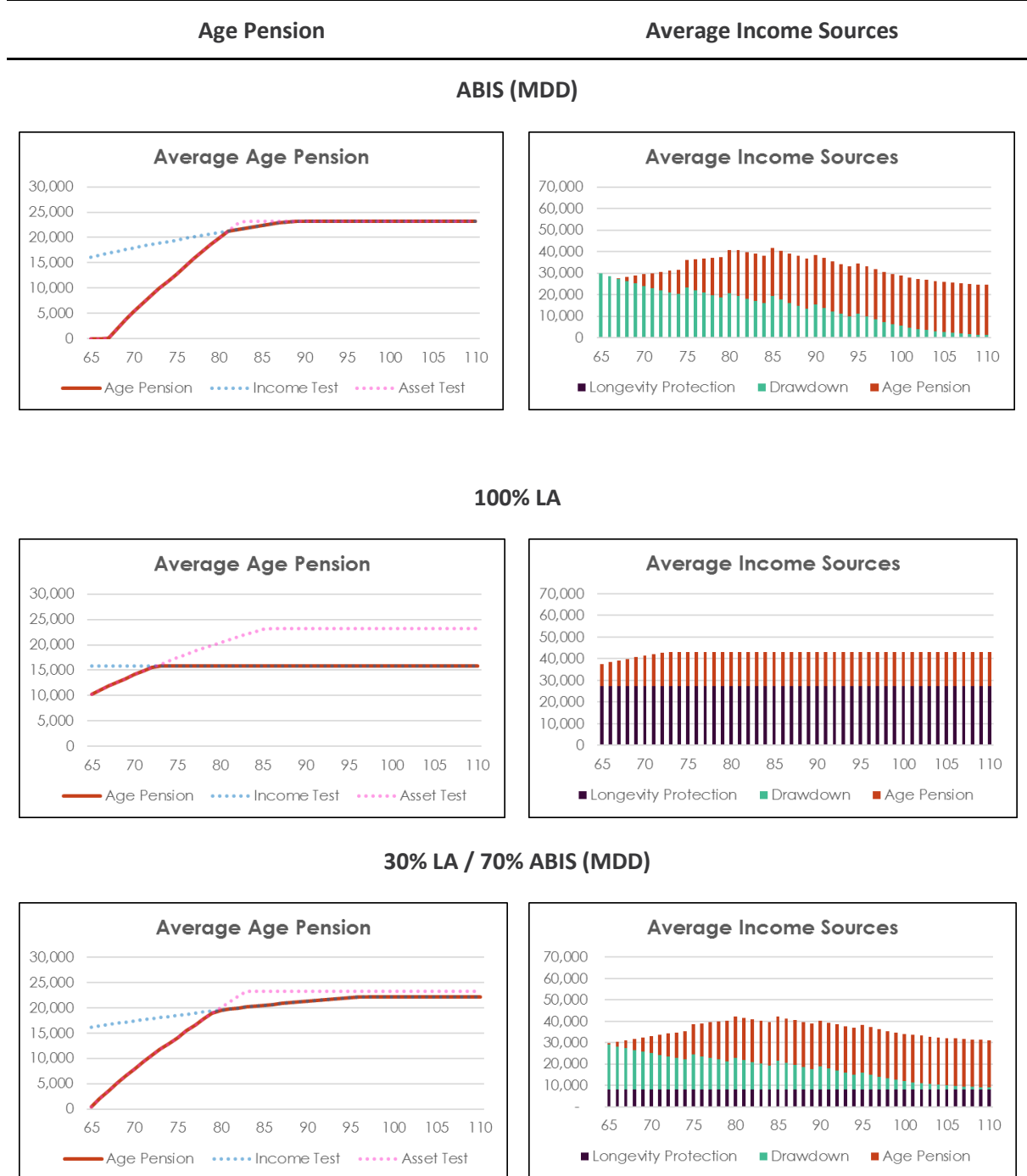
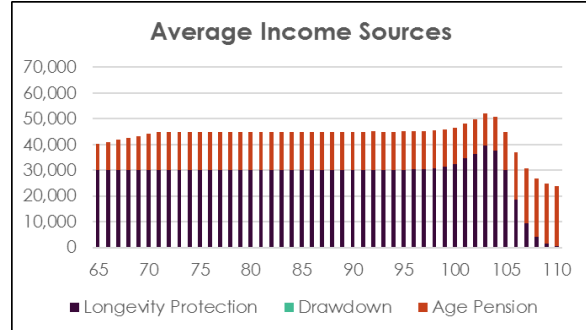
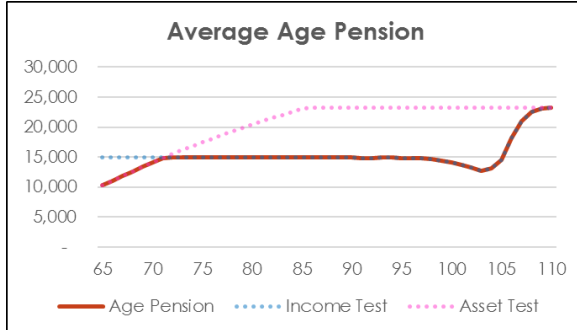


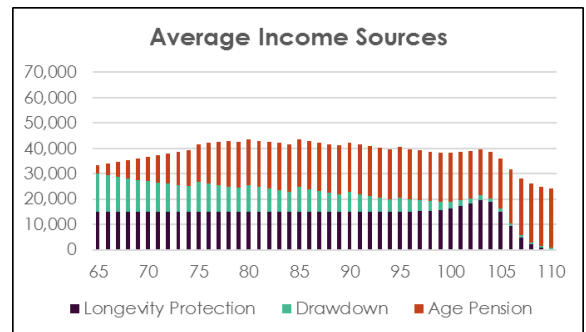
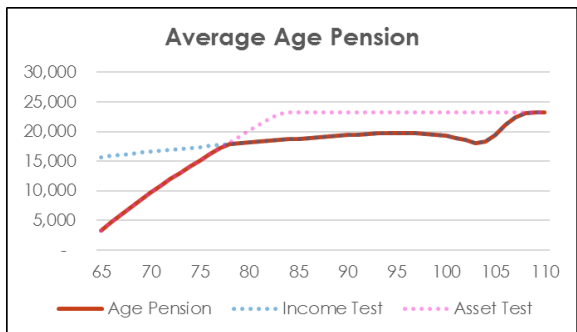
Figure A2: Average outcomes for a male homeowner single with \$600K in superannuation and no other assessable assets



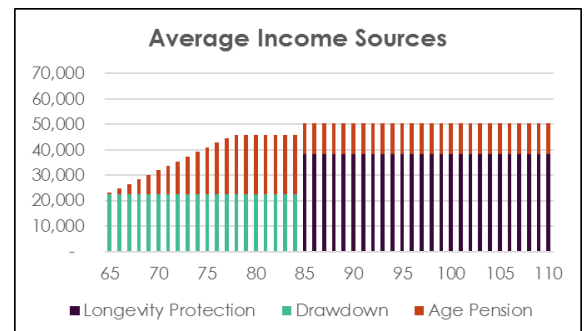
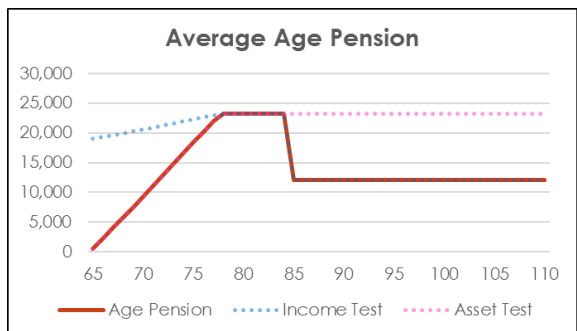
100% GSA



50% GSA / 50% ABIS (MDD)



30% DLA / 70% ABIS



20% DGSA / 80% ABIS

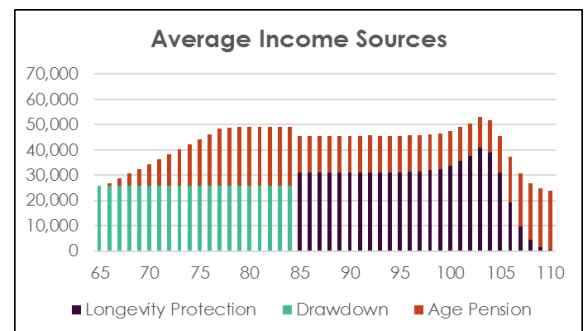
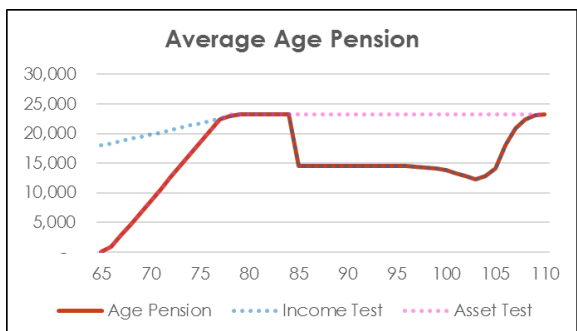
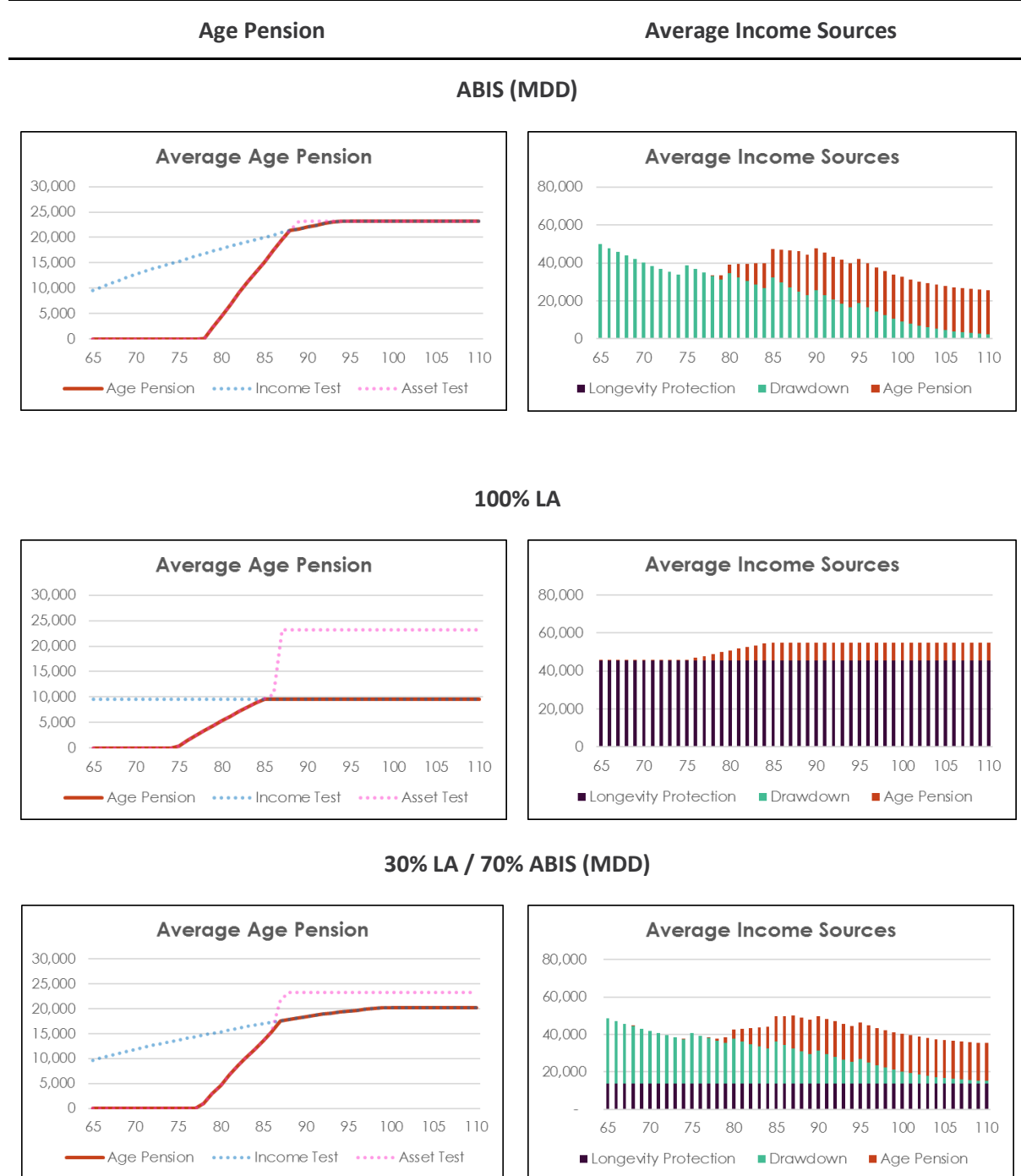
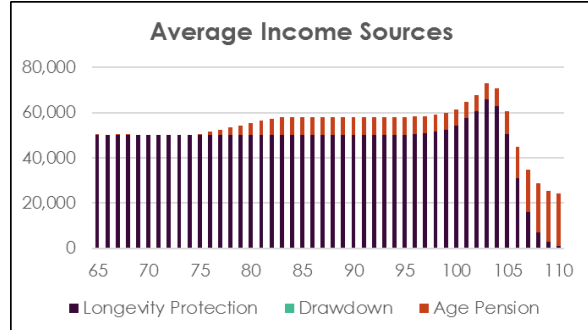
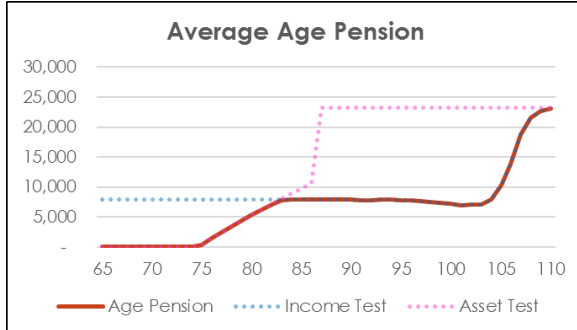


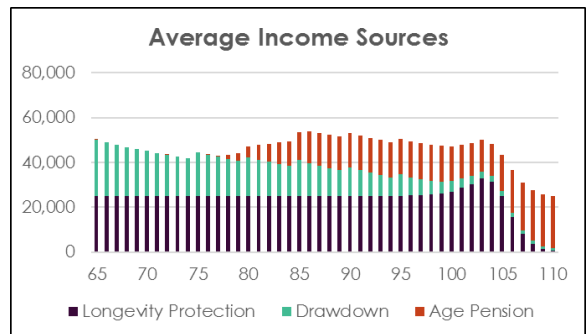
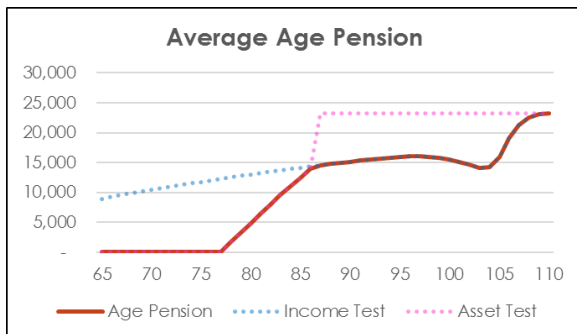
Figure A3: Average outcomes for a male homeowner single with \$1M in superannuation and no other assessable assets



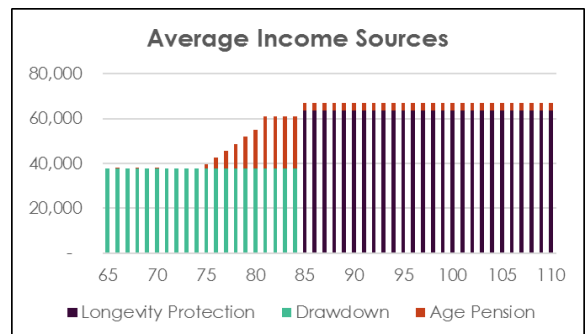
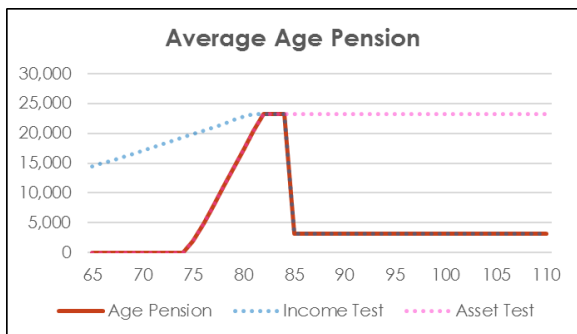
100% GSA



50% GSA / 50% ABIS (MDD)



30% DLA / 70% ABIS



20% DGSA / 80% ABIS

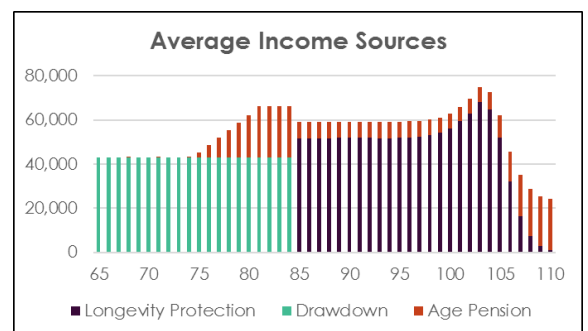
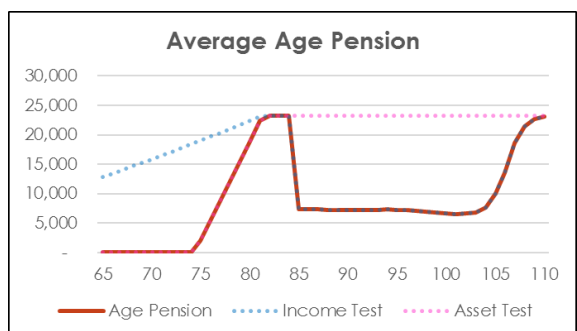
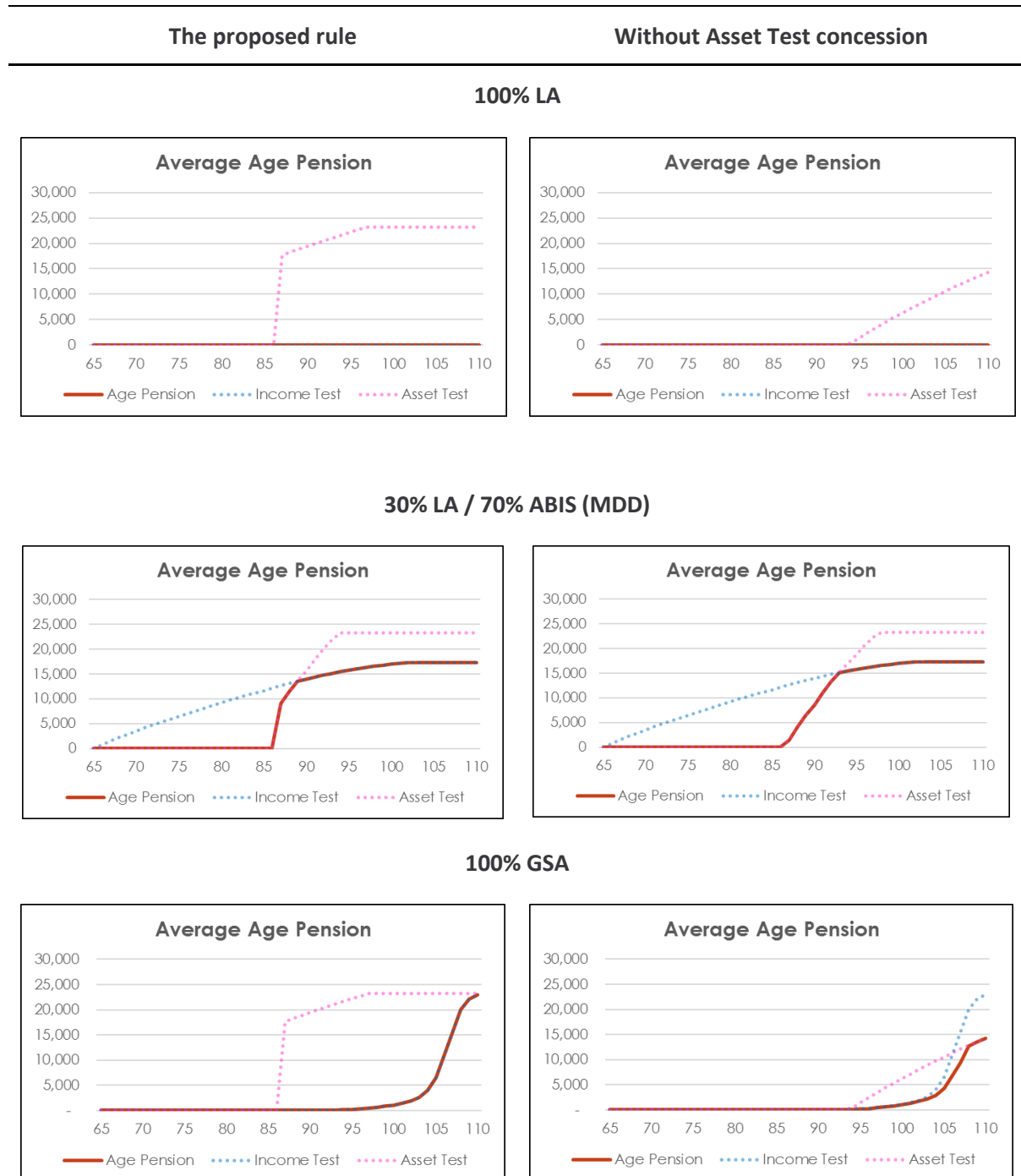
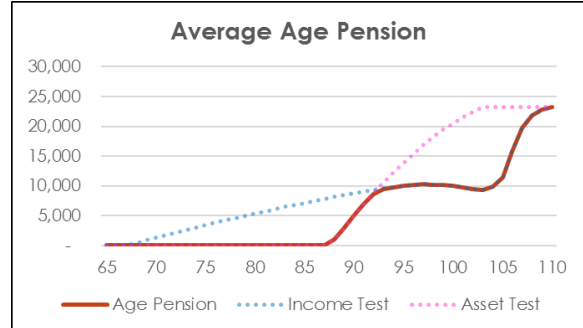
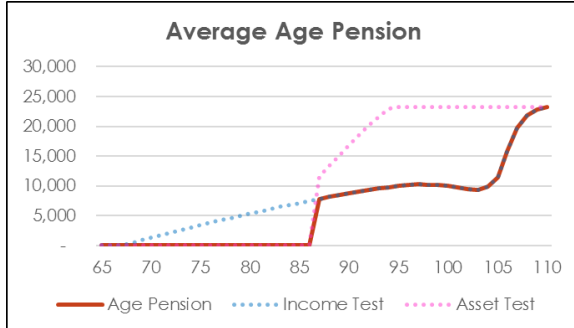


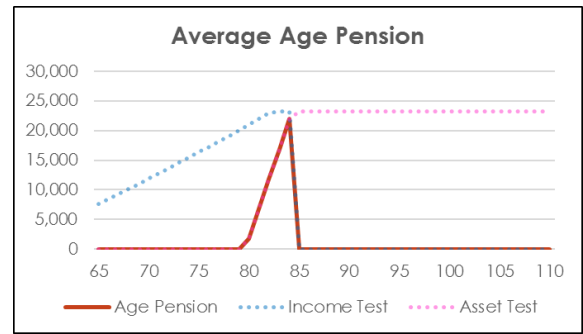
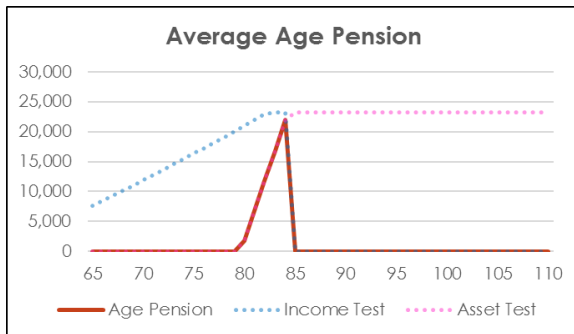
Figure A4: Age Pension entitlements assessment for a male homeowner single with \$1.6M in superannuation and no other assessable assets



50% GSA / 50% ABIS (MDD)



30% DLA / 70% ABIS



20% DGSA / 80% ABIS

