

PROTECTING RETIREMENT WEALTH:

A survey of Australian products

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In view of the changes to the age pension assets test thresholds set to take effect in January 2017, we examine possible features of an ideal Comprehensive Income Product for Retirement. This paper provides a survey of the long-term derivative instruments (warrants) being offered by Australian institutions to elderly Australian investors. We focus on products other than plain vanilla life annuities, and there are currently four active products, with varying guarantee terms. Early exercise is typically permissible yet subject to penalties. Benefits are mostly lump sum but can be income streams.

Retirement wealth is protected to the extent that it has put-option features. The products offering these features can be described as variable annuities with guarantees. We survey the supply side of the Australian market. Retirees of middle means are the natural customers.¹

With the assets taper rate of the age pension set to double in January 2017, homeowner couples with modest levels of assessable wealth will find that the effective level of government-provided portfolio insurance, via the age pension, increases at the margin. On the other hand, homeowner couples with assessable wealth greater than \$823,000 will lose the pension altogether. Moreover, households still in accumulation mode will tend to try harder for self-funded retirements. In these ways, the age pension will tend to become submarginal for better-off households, bringing about a rise in their demand for protected products.

Another reason to survey Australian products is to come up with suggestions for a Comprehensive Income Product for Retirement (CIPR). At present the centerpiece of the emerging designs for CIPRs is longevity insurance in the form of deferred lifetime annuities.² However, future CIPR designs may seek to incorporate some downside protection against market risk.³ More controversially, future designs may seek to accommodate estate-planning motives on the part of retirees, at least in part.

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Retirement wealth products

We are interested in Australian retirement products that guarantee against market, longevity, inflation and estate-planning risks. Variable annuities (VAs) with guarantees are obvious contenders. In 2010, US savers invested US\$1.5 trillion in VAs in the US, but only invested US\$660 billion in fixed annuities.⁴

The meaning of the term variable annuity has shifted over time. Bodie et al. (1989) defined VAs as periodic payments linked to the investment performance of an underlying portfolio. They also set out a simple algorithm whereby investment risk can be passed from the insurance company through to the policyholder. The corresponding term in Commonwealth countries used to be with-profit annuities. Life annuities were the only associated derivative instrument. The view that the defining characteristic of VAs is variability of either the account balance or the income stream drawn from it continues to have adherents. On the other hand, VAs have increasingly become associated with embedded options. Thus, Ledlie et al. (2008) define a VA as ‘a unit-linked or managed fund vehicle which offers optional guarantee benefits as a choice for the customer.’ One way to define VAs is simply to list the four main types:⁵

- *Guaranteed Minimum Death Benefits* – GMDBs guarantee a return of the principal invested upon the death of the policyholder. This product pays out the maximum of the principal invested and the amount of the underlying unit-linked account.
- *Guaranteed Minimum Accumulation Benefits* – GMABs guarantee that on specified policy anniversaries, the value of the contract will be the maximum of the principal invested and the amount of the underlying unit-linked account.
- *Guaranteed Minimum Income Benefits* – GMIBs guarantee that on the annuitisation date, a minimum income stream such as a life annuity is paid out. The guaranteed benefit may be fixed at the start of the policy, or it could be expressed as a percentage of the premiums invested, or some function of the amount of the underlying unit-linked account at the annuitisation date.
- *Guaranteed Minimum Withdrawal Benefits* – GMWBs guarantees that a minimum income stream can be regularly withdrawn for a fixed term. For example, the guarantee might provide annual withdrawals of 5 per cent of the principal invested for 20 years. There are also Lifetime Guaranteed Minimum Withdrawal Benefits where the guarantee term is the lifetime of the policyholder.

The typical pay-off profile of these product types involves upside capture potential combined with downside protection, i.e. portfolio insurance.⁶ Accordingly, the type of market risk addressed is not the overall volatility of returns, but capping downside market losses that might otherwise be unbounded. VAs of the GMDB variety do not even provide longevity insurance. Rather, GMDBs provide life insurance, its mirror image. However, the other three VA types do offer at least partial insurance against the double contingency of poor long-term returns to growth assets and a long life. There is not just a concern with capping losses; guarantees may also include uplift provisions such as ratchets (reset of the benefit base to equal the growth of the underlying unit-linked account at policy anniversaries) and roll-ups (guaranteeing the principal invested will grow at a specified minimum roll-up rate).

Matterson (2015) briefly lists the guaranteed solutions market in Australia as at December 2014. See Table 1.

TABLE 1: Guaranteed products

Organisation	Product	Active?
AMP	North	Yes
BT Financial Group	Wrap Capital Protection	Yes
Challenger	Liquid Lifetime	Yes
MetLife	RetireSafe	No
MLC	Investment Protection	Yes
OnePath	Money 4 Life	No

There are other products mentioned by Matterson (2015) that offer some protection (but not account balance protection) such as the Mercer LifeTime Plus (Pooled Longevity Solution) product.

Active products

Details of the active products in Table 1 are discussed below.

1. North, AMP

There are two types of guaranteed products: Protected Investment guarantee; and Protected Growth guarantee. Both are of the GMAB variety.

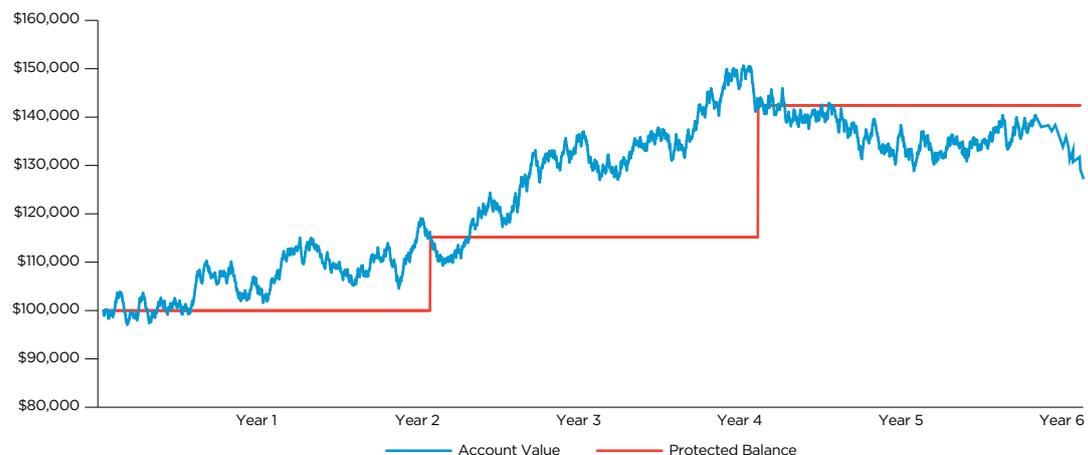
The Product Disclosure Statement of North's investment guarantee states that the guarantee applies to investments (net of upfront fees, less any withdrawal, advice fees or taxes paid) at the end of a nominated term. By terminating prior to the end of the selected term, the investment is subject to ordinary market risk; although the Protected Growth guarantee entitles the policyholder to a portion of the guarantee benefit, which varies depending on how far you are into the policy term. Six or eight-year terms are available for the Protected Investment guarantee product, and 10 or 20-year terms for the Protected Growth guarantee product.

There is an additional feature in these products that locks in growth in the account value⁷ as a result of positive investment performance, if the account value is greater than the protected balance.⁸ For the Protected Investment guarantee product, the growth is locked in every two years; it is locked in annually for the Protected Growth guarantee product.

The account value is subject to market risk and will decrease as a result of fees, management costs and withdrawals. The protected balance is not subject to market risk, and will not decrease as a result of fees and management costs, but will decrease with withdrawals. The total amount that can be received from these products at the end of the selected term will be at least equal to the protected balance.

Figure 1 illustrates the main features of the Protected Investment guarantee product.

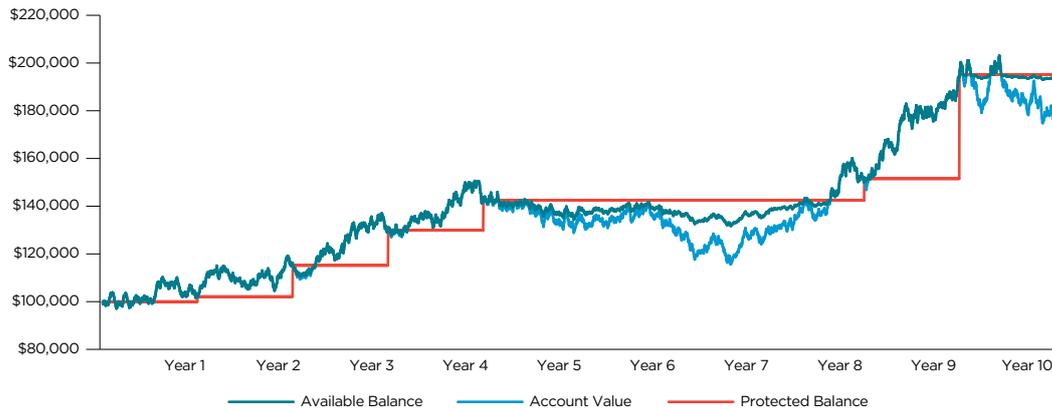
FIGURE 1: Protected Investment



The blue line indicates a simulation of the account value, while the red line illustrates the protected balance with the lock-in growth at years 2 and 4. Note that the account value fluctuates with investment performance. In this example, the initial contribution is \$100,000 and the selected term is six years. For this simulation, the policyholder will receive \$142,425 at the end of six years, even though the account value is only \$129,000. Of course, this favourable outcome is presented merely to illustrate how the product works. It is entirely possible that the relevant embedded option could finish out of the money.

Figure 2 illustrates the main features of the Protected Growth guarantee product.

FIGURE 2: Protected Growth



The green line represents the available balance, the blue line indicates a simulation of the account value and the red line illustrates the protected balance with the lock-in growth at years 1, 2, 3, 4, 8 and 9. Note that the account value fluctuates with investment performance. In this example, the initial contribution is \$100,000 and the selected term is 10 years. For this simulation, the policyholder will receive \$195,074 at the end of 10 years, even though the account value is only \$176,681. The available balance is the amount paid if the policy is terminated prior to the end of the chosen term. For example, the policy will pay out \$138,400 at the end of year 7, even though the account value is only \$129,007.

Who should consider this product? The North product offers partial longevity insurance in the sense explained earlier. In particular, its pay-off profile squares with theories of consumer behaviour whereby people want a floor rate of consumption that ratchets upwards through time, in response to rises in individual or community wealth. North could also suit investors seeking to leave a significant estate. Like all but one of the other active products, however, there is no direct protection against inflation risk. Depending on the term and investment strategy selected for the North product, the guarantee fee varies between 1.55 per cent to 2.45 per cent p.a. for the Protected Investment Guarantee and 0.8 per cent to 1.85 per cent p.a. for the Protected Growth Guarantee. For any additional investments made into the North product, an additional fee up to 7 per cent is payable.

Aligned with CIPR objectives? The North product does not offer full longevity insurance, and that is not in the spirit of the CIPR concept. Moreover, there is a tension between CIPR thinking and catering to bequest motives, as a deferred annuity requires an outlay in early retirement that depletes the resources available for an estate. By the same token, North does offer partial longevity insurance, especially its Protected Growth variant.

2. Wrap Capital Protection, BT Financial Group

Wrap Capital Protection is another GMAB product. It protects any investment in eligible managed funds, while still allowing investors to benefit from growth when the chosen funds perform well. Assuming no withdrawals are made and all distributions are reinvested, the product is designed to ensure that at the end of the selected term, the amount of the investment is at least equal to the amount invested at the start of the protection.⁹ The term of the protection can vary approximately between five and 10 years.

Basically investments are parked into two funds: the Investment Fund and the Capital Protection Fund. The combined holdings in these two funds are referred to as the Protection Portfolio. There are options on what classes of investments are available in each fund. The basic protection is provided by redeeming, from time to time during the protection term, some of the holding on the Investment Fund and investing these holdings into the Capital Protection Fund, and vice versa. This holding change is referred to as Rebalancing in the BT Capital Protection Fund Product Disclosure Statement. Rebalancing is triggered on the basis of a specified formula. In accordance with the rebalancing formula, there are two factors that will likely lead to a rebalance:

- > a significant change in the Investment Fund's performance. (The better the performance in the Investment Fund, the more funds are invested in this fund)
- > the length of time remaining in the Protection Term. (The closer to the Protection Term, the more funds are invested in the Capital Investment Fund.)

Note that in case of a severe and sudden fall in the unit price of the Investment Fund due to market movements, an extra layer of protection is provided (by Deutsche Bank) by way of a Protection Payment.

The protected account balance is the account balance of the amounts invested in the protected fund. Note that the protected account balance will move with the market. According to the BT Capital Protection Fund Product Disclosure Statement, 'This the minimum dollar value that the Protection Contract is designed to ensure your Protection Portfolio is worth at the end of your Protection Term. When your protection is initially set up, your Minimum Outcome is equal to the amount of your investment, e.g. if you invest \$10,000 from your Wrap Platform Cash Account (also called Cash Account in this PDS), your Minimum Outcome is set at \$10,000. The Minimum Outcome may not keep up with inflation, but it can increase if your Protection Portfolio increases in value during the Protection Term.' There are some circumstances when the Minimum Outcome may not be received or be reduced.

Automatic Growth Capture is a feature of the product designed to ensure that the Minimum Outcome has an opportunity to grow during the protection term, if the Protection Portfolio increases in value. Generally, every three months during the protection term, the Minimum Outcome will be automatically increased to capture 50 per cent of growth in value of the Protection Portfolio.

Who should consider this product? Wrap Capital Protection has a pay-off profile which is broadly similar to North's. Wrap's greater frequency of resets might appeal to some investors, however, Wrap's reset feature is less generous. Less protection appears to be accompanied by lower fees: there is an issuer fee of 0.5 per cent p.a. and a protection acquisition fee of 0.7 per cent p.a. of the value of each Protection Portfolio. In the event that a protection payment is made while there are unsettled units in the investment fund, there may be additional protection costs payable.

Aligned with CIPR objectives? Wrap Capital Protection and North have broadly similar pay-off profiles, so our earlier comments carry over.

3. Liquid Lifetime, Challenger

Liquid Lifetime combines GMIB and GMWB features along with a scaled-back GMDB feature. Thus, one of its components is a guaranteed annuity sold by Challenger. For an initial investment, you can receive regular payments for the rest of your lifetime, or for the rest of the lifetime of a second person. This guaranteed annuity product creates a regular cash flow for life, regardless of how long you live or how investment markets perform. As Challenger guarantees the lifetime regular payments, it bears the market risk. There is flexibility to withdraw within the first 15 years with this product. Also, you can choose full or partial indexation of the regular payments so that the annuity can help guard against the effects of inflation. A death benefit is paid in the first 15 years if there is no eligible reversionary¹⁰ nominated or surviving joint owner.¹¹

On the view that potential for capturing market upside is a defining characteristic of a VA, then Liquid Lifetime is a product that does not belong here, as all payments are essentially fixed in advance. However, potential customers may perceive some substitutability between Liquid Lifetime and the other three products, so we include it for this reason.

Who should consider this product? Liquid Lifetime has the most complete longevity insurance of all the active products. Moreover, a variant of this product offers inflation insurance. Liquid Lifetime would also alleviate the cognitive problems an investor in late retirement might experience in managing lump-sum assets weighted substantially to growth assets. On the other hand, this product sits less well with bequest motives, although there is scope for nominating a death benefit. Moreover, given the absence of mandatory annuitisation in Australia, along with our means-tested age pension, an investor in Liquid Lifetime would need to consider the effects of adverse selection on the annuity loading, along with consequences of the means tests for access to a part age pension.¹² The Challenger product does not have explicit fees. Costs of providing the annuity payments are incorporated implicitly into the annuity product.

Aligned with CIPR objectives? Among the active products, Liquid Lifetime is evidently the product most aligned with the thinking behind CIPRs.

4. Investment Protection, MLC

Investment Protection offers GMAB, GMIB, GMWB and scaled-back GMDB features, although not all within the one product. It offers two types of protection:¹³

- > Protected Capital — provides capital protection over 10 or 20 years
- > Protected Income — provides income protection over 10 years, 20 years or for life.

No matter how the market moves, the minimum amount available at the end of the term with Protected Capital or the minimum amount of income available over the term with Protected Income is known with certainty.

For the Protected Capital product, the protected capital value¹⁴ will:

- > increase in value on the anniversary date if the protected account balance is greater than the protected capital value. In this case, the protected capital value will equal the protected account balance
- > remain at the current value if the protected account balance is lower than the protected capital value.

Note that during the selected term of the product, the protected capital value and the protected account value will decrease with any withdrawals or increase with any additional investments. There are optional extras available such as a death benefit and an additional investment benefit.

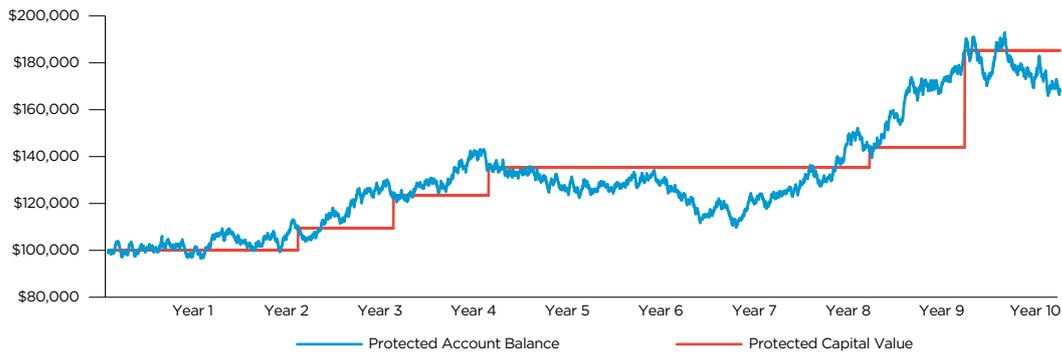
For the Protected Income product, the protected income base¹⁵ will:

- > increase in value on the anniversary date if the protected account balance is greater than the protected income base. In this case, the protected income base will equal the protected account balance
- > remain at the current level if the protected account balance is lower than the protected income base.

Note that during the year, the protected income base and the protected account balance will decrease with any withdrawals that exceed the protected income payments¹⁶ or increase with any additional investments made in the super phase. A spouse benefit is an optional extra available with this product.

Figure 3 illustrates the main features of the Protected Capital product.

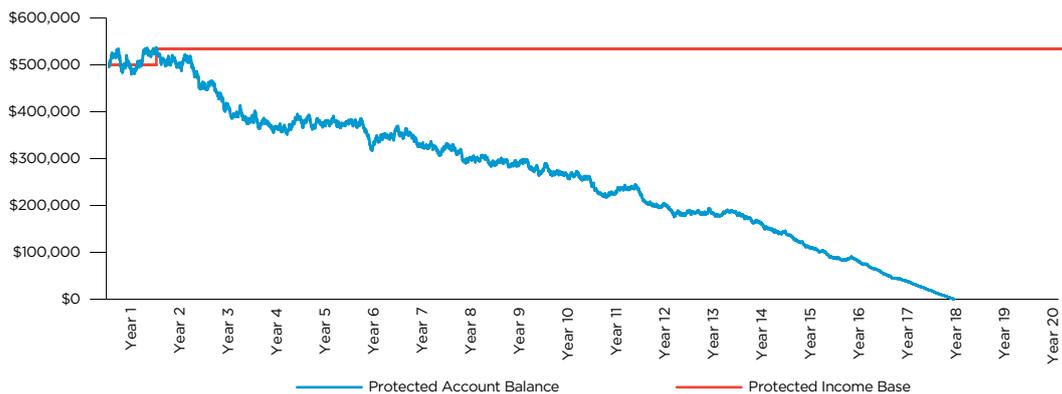
FIGURE 3: Protected Capital



The blue line indicates a simulation of the protected account balance, while the red line illustrates the protected capital value with the lock-in growth at years 2, 3, 4, 8 and 9. Note that the protected account balance fluctuates with investment performance. In this example, the initial contribution is \$100,000 and the selected term is 10 years. For this simulation, the policyholder will receive \$185,320 at the end of 10 years, even though the protected account balance is only \$167,847.

Figure 4 illustrates the main features of the Protected Income product.

FIGURE 4: Protected Income



The blue line indicates a simulation of the protected account balance, while the red line illustrates the protected income base with the lock-in growth at the end of year 1. Note that the protected account balance fluctuates with investment performance as well as decreasing as a result of the protected income payments and fees. In this example, the initial contribution is \$500,000 and the selected term is 20 years. For this simulation, the policyholder will receive \$25,000 (= 5 per cent of \$500,000) in the first year and \$26,717 (= 5 per cent of \$534,333) until the end of the policy term. The protected income base increases from \$500,000 to \$534,333 at the end of the first year due to good investment performance. After 17.75 years, the protected account balance runs out of funds but the protected income payments of \$26,717 continue to be paid to the policyholder for the remainder of the 20-year term.

Who should consider this product? The pay-off profiles of MLC Investor Protection are broadly similar to those of North and Wrap. However, MLC Investor Protection offers comparatively long terms of protection. This feature would suit investors expecting to spend a long time in retirement. Lifelong income streams are an option. The protection fee varies between 0.4 per cent to 1.75 per cent p.a. for the Protected Capital option and 0.25 per cent to 1.4 per cent p.a. for the Protected Income option. The fees for the optional extras for the MLC product are: 0.2 per cent p.a. for an additional investment benefit and 0.2 per cent p.a. for a death benefit for the Protected Capital product; and 0.1 per cent p.a. for a spouse benefit for the Protected Income product with a term of 10 or 20 years. This fee increases to 0.6 per cent p.a. if the term is for life.

Aligned with CIPR objectives? On the criterion of alignment with the thinking behind CIPRs, MLC Investor Protection ranks only behind Liquid Lifetime.

Policy issues

At odds with the current generation of CIPR designs is the fact that legacies appear to be a significant consideration for Australian retirees of middle means. An international survey by HKSB (2013) found that the average estate planned by Australian retirees was US\$501,919. That amount was the highest of all the countries surveyed. HKSB points out that the reason for our top ranking may be our low estate taxes. Indeed, estate taxes are non-existent in the case of a family home sold within two years of inheritance. Historically, of course, the family home has been our main vehicle for estate planning. However, this may change, especially in the case of inter vivos transfers for the purpose of school fees and securing a foothold in the property market for family members. Lockwood (2014) and others point out that lump-sum retirement assets can serve multiple purposes. For example, if you enjoy an unexpectedly long retirement, funds originally planned for legacies can be redirected to personal living expenses. This type of behaviour is more likely if bequests are luxury goods, which is what the data strongly suggest (Lockwood 2014). The wealth protection products surveyed here are instruments which could help with these overlapping and contingent retirement objectives.

The ideal CIPR would probably insure at least partly against estate-planning, market and inflation risks – and longevity risk. A key issue for CIPRs in Australia is the fact that the market for lifetime annuities is thin. One weakness has been the 15 per cent tax on the earnings of the statutory funds that back deferred life annuities.¹⁷ Another is the absence of a requirement that part of an individual's retirement wealth be annuitised. Finally, whereas Australia indexes the age pension to the maximum of wage and price rises, Switzerland, which has deep annuity markets, indexes first-pillar benefits to the average of their wage and price increases.¹⁸

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Notes

1. Workers with labour supply flexibility are the natural ultimate suppliers.
2. Or deferred Group Self Annuitisation. On CIPRs see e.g. *Financial System Inquiry Final Report*.
3. Of course, protecting against a market fall does not necessarily solve for longevity issues and vice versa.
4. See Horneff et al. (2013).
5. These options are required in the United States for the associated product to qualify for tax-deferral benefits enjoyed by annuities. Accordingly, American usage of the term VA has become influenced by this feature of the US tax code.
6. This definition of VAs rules out (say) term deposits, which do not have significant upside capture potential.
7. The account value is the current market value of the underlying investments.
8. The protected balance is the guaranteed amount. At the end of the specified term, if the protected balance is greater than the account value, the difference between the two amounts is added to the account value.
9. In the terminology of finance theory, BT Capital Protection offers constant-proportion portfolio insurance. See Kingston (1989) for an explanation along with a set of conditions on household preferences under which this investment strategy is optimal.
10. You can nominate a second person to receive regular payments for life after you die. Note that if the annuity is brought with money rolled over within the superannuation system, the reversionary must be your spouse (as defined by law). For most retirees the death benefit in Liquid Lifetime goes to the estate only if the retiree and spouse die before age 80. Accordingly, it is not designed around the large and intentional bequests of the kind we discuss in the concluding section.
11. For more details about this product, see the *Challenger Guaranteed Annuity (Liquid Lifetime) Product Disclosure Statement*. Note that Colonial First State (which is owned by the Commonwealth Bank of Australia) distributes Challenger and CommInsure annuity products.
12. Specifically, in early retirement the assets test could bind, whereas in late retirement the income test could bind.
13. There are a number of investment options available with this product. See *MLC MasterKey Super & Pension Fundamentals Product Disclosure Statement* for more details.
14. The protected capital value is the initial amount invested in the Protected Capital product.
15. The protected income base is the initial amount invested in the Protected Income product.
16. The protected income payment is the income you receive from the Protected Income product.
17. The 2016–17 Budget announced that from 1 July 2017 the tax exemption on earnings in the retirement phase will be extended to deferred lifetime annuities and group self-annuitisation products.
18. The Financial System Inquiry recommended that superannuation funds ‘pre-select’ (nudge?) some proportion of a retiring member’s benefit in the direction of a deferred lifetime annuity. However, there is a tension between this recommendation and the ‘suitability rule’ governing product advice; the best advice may be to use all your retirement benefit to become a homeowner, or pay down debt on your existing home, or even to trade up in the property market. The reason is of course that the means tests favour assets in the form of an owner-occupied dwelling.

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