Retirement
A new frontier of the over 80s market

Jules Gribble and Cary Helenius

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Cary Helenius is a Director of Lifetime Income Pty Ltd, based in Melbourne, Australia.

Jules Gribble is a Senior Policy Advisor at the International Association of Insurance Supervisors (IAIS). Views, opinions and conclusions expressed in this paper are his and not those of his employer.

Correspondence: cary.helenius@lifetime-income.com.au

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Abstract

Globally, the population is aging. The over age 65 group (the traditional fixed age for 'retirement') is growing rapidly, both in absolute terms and relative to the population. This group's wealth is also growing rapidly. Yet the concept of retirement, that seems so well entrenched in our minds, is very recent and continues to evolve. A major challenge for policy makers and providers is managing the decumulation phase of defined contribution retirement funds efficiently while addressing longevity risk.

Debates around retirement incomes and provision for sustainable and dignified living after retirement typically focus on the provision of retirement income streams. They presume retirees are healthy, interested, wealthy, and confident to make 'sensible' decisions. These assumptions become increasing less valid as people age. The Australian Bureau of Statistics projects that dementia will become the leading cause of death in Australia within 5 years. Australia is not atypical of developed countries. As anyone who knows about dealing with someone with dementia, putting money into their account does not help them as they may not be capable of accessing it, spending it or spending it wisely.

The over age 80 group (representing an age where retirees begin moving into the passive phase of retirement) is growing quickly, in absolute terms, relative to both the population and the population over 65. This group's size and wealth suggest it is a viable commercial market in its own right. However, there seems little evidence commercial insurers (life and health) or broader based superannuation service providers recognise this market or its needs. These needs differ from those of the more active over 65 'entering retirement' market.

This paper provides an approach to assess the over 80s market and develop suitable products and services that can be provided sustainably while addressing the needs of those retirees as they age and may have diminishing capacity. It has global relevance.

Key words: Retirement, pension, superannuation, over 80s, over 80s market, active retirement, passive retirement, services, decumulation, longevity, sustainability

1 Context

We are all familiar with the marketing notion of coming to the end of a working life and then entering an idyllic long period of 'retirement' in which we can do what we want and will be happy and contented. Particularly in countries where retirement is intended to be supported by defined contribution (DC) savings, this ideal notion is useful to encourage increased retirement savings. In countries where the focus is more on defined benefit (DB) plans, especially when they are provided by governments, this notion may remain useful to encourage additional savings. The realities are perhaps not that rosy.

There is a wide range of approaches to funding for retirement globally. A simple way of looking at this is to examine the split between DC and DB approaches. Recent Willis Towers Watson surveys, WTW 2016 and WTW 2017, give insight. The growth in DC assets is more than twice that of DB assets in line with an established trend.

A core challenge with DC systems is the management of the risk transferred to individuals inherent in the use of DB systems. Many people are not willing or equipped to deal with this challenge.

In most countries both DC and DB plans exist, but the balance between them varies greatly. Australia is, effectively, almost entirely focussed on DC plans. The US also has more DC than DB assets. Other countries, such as Japan, Canada and the Netherlands, are primarily focussed on DB.

According to WTW 2017, Australia has the fourth largest pool of pension assets in the world, after the US, UK and Japan. This Australian pool, at end of 2016, is reported to be almost $US 1.6 billion and nearly 130% of GDP. With compulsory contribution in place for all employees, the Australian pool of pension assets will continue to grow into the future.

1.1 Focus of this paper

We build on our knowledge of the Australian system and so take an Australian perspective.

Our focus is on the decumulation of DC accumulation after retirement. Within that, our focus is on the over 80s market.

The issues we raise and the approach we put forward are globally applicable.

1.1.1 Decumulation

We focus on the challenges of decumulation of pension (superannuation in Australia) savings in retirement, that is, the effective and efficient use of funds already accumulated. We believe that the decumulation of superannuation savings in a DC environment has not yet been adequately addressed anywhere in the world.

We recognise that accumulating funds for retirement, especially in a DC environment, is important and has many challenges to address. This aspect of retirement is being reasonably addressed by the superannuation system in Australia and in many other countries. In this paper, we assume the 'wealth creation component' for retirement has been a success, so we assume individuals have accumulated some wealth to bring into retirement.

1.1.2 Over 80s

We focus on the over 80s market. The key issues facing retirement management and retirees are leveraged for this market. We consider that the over 80s market is viable and growing, but not well understood and not catered to within the pension (superannuation) systems. The United Nations, UN 2017, reports that globally, in 2015 there were 125 million people aged over 80. UN 2017 projects there will be about 425 million people aged over 80 in 2050. This represents a more than threefold increase. This compares to a one third increase in the total world population, which moves from 7.4 billion to 9.8 billion. The over 80s need to be acknowledged and addressed for the benefit of both individual retirees and society more broadly.

When considering this segment, there are more aspects to managing retirement to be considered than just securing income streams. The ultimate objective is to support and optimise quality of life in retirement. The over 80s are typically in the passive or frail stages of retirement with substantial proportions suffering various degrees of physical impairment and mental decline and requiring support services, and many having limited capacity to organise and implement these services by themselves.

The delivery of income to this segment for their remaining lifetimes is an important part of maintaining quality of life, but it is a means to an end, not an end in itself. It provides the financial means to secure support for daily living requirements and services. It is therefore a key part of a holistic solution. Typically, the focus on income is on regular and consistent income streams. This is narrow as in some instances lump sum income may also be needed.

We use 'services' in a broad sense. We include goods which are things that are usually tangible and returnable. We also include services which the activities provided by others and or typically not tangible and cannot be returned. The assumption is that consuming goods and services provides utility, satisfaction or benefit of some form, to the recipient. We also include in services things that may be abstract and not paid for, such as friendship, respect and ambience.

1.1.3 Quality of life

We suggest that some of the entrenched paradigms of discussion of retirement need to be reviewed and broadened. They need to be realigned to support the goal of achieving a good quality of life in retirement. They need to be widened to support holistic solutions that address successfully living in retirement and manage a wide range of risks in an integrated way.

Quality of life is the degree to which an individual is healthy, comfortable, and able to participate in or enjoy life events. This is subjective and personal. It covers both the internal experience an individual has in their life and the external living conditions individuals experience. Expectations and opportunities, especially regarding external living conditions, may have strong cultural, generational and experiential influences. There may be considerable variation both between and within countries. They also change over time both for individuals, as their needs change, and in terms of community expectations. Changes of individuals needs may be immediate or gradual. However, they are inevitable, irreversible and may be dramatic for retirees. Community expectations may change more slowly, but are also inevitable. For example, in Australia, the desirability of home ownership, historically and currently, is strong. If housing affordability continues to decline and the world becomes more cosmopolitan and integrated and people more mobile, then this desire may decline over coming generations.

The access to and use of services are important for supporting a good quality of life in retirement. The provision of services is therefore also a means to an end, not an end in itself. The end is the maximising the quality of life in retirement, and services are a key part of a holistic solution. Achieving a good quality of life in retirement is enabled by the availability and implementation of services, which in turn is enabled by income to pay for these services.

1.2 Retirement

1.2.1 Retirement is new

The idea of retirement is strongly linked to the concept of paid work as it is often portrayed as the start of life 'after work'. For many who work part time or in unpaid work, this is an exclusive view. It is also a traditionally male perspective, although this is changing.

The idea of retirement, in general, is recent. In some specific professions, particularly the military, the concept has a longer history. For the general population the idea of stopping working and being economically productive, and then being able to enjoy the benefits accrued from having worked, is relatively new. A widely available state payment for males who reached a certain age was first introduced in Germany in the 1880s by then Chancellor Bismarck. This started from age 70, but was later reduced to age 65. Subsequently retirement at age 65 has become entrenched in the public mind and in legislation. Retiring a fixed age, even if that is moving a bit, leverages the impact of increasing longevity. There is now some movement around this in recognition of increased life expectancies and not making retirement mandatory based on age.

Historically, a rationale for retirement was for older employees to make way for younger employees. Additionally, arguments have been made suggesting some diminution of capacity and flexibility as employees age. In some cases, particularly with more manual tasks, there is also an argument that employees may physically 'wear out' as they age. Where economies are becoming more knowledge based, professional and managerially the focus moves away from physical tasks and toward intellectual tasks. These factors, combined with increasing longevity, the aging population and less hierarchical working structures, reduce the appropriateness of thinking of a fixed age for retirement.

1.2.2 Retirement is evolving

The nature of retirement is changing from being an abrupt halt to becoming a staged process over time, or in some cases, having no intention to retire at all. In a number of countries, including Australia, there is growing recognition that the experience of older employees is a valuable asset and efforts are being made to encourage its sharing and ongoing use. Changes in the nature of retirement are also closely linked to changes in the nature of work.

A shorthand for when retirement starts, is the age of 65. It is convenient and indicative. We recognise there is some variation around this, particularly in some occupations, and globally. We also note that there is a trend to gradually increase the age of retirement at least from the perspective of availability of benefits. This partly offsets the leveraged impact of longevity increase in life after retirement. Such changes can be politically and socially difficult to achieve.

The nature of work in the future may be very different to its nature in the past (for example, the rise of the so-called 'gig' economy). These changes in the nature of work may significantly impact the capacity of workers (informal, self-employed or employed) to save for their retirement. Such changes may then drive a major rethink of the meaning and accessibility of retirement, taking broad interpretation of the concept, in the future. A high-level discussion of some of these longer term major issues is in` the WEF white paper, WEF 2017.

1.2.3 Phases of retirement

Retirement is often split into three phases:

- **Active.** This is the initial phase of retirement, when retirees are likely to be active and fully capable. In many cases they can pursue new interests. Unsurprisingly, when retirement is portrayed in a promotional or marketing context, this is the phase concentrated on. As a simple rule of thumb, this phase can last from retirement to around 80.
- **Passive.** This phase follows the active phase and is when retirees gradually slow down. They may have increasing physical limitations and may also experience cognitive limitations. The transition between active and passives phases is usually gradual and will vary between individuals. It may also be hard to detect as it is gradual, and people often develop coping mechanisms to deal with slowly increasing impairments. This may only be identified in hindsight.
- **Frail.** This is often thought of as the later years of life, when more serious physical or mental decline occurs.

Retirees' needs and capabilities change considerably as they move from the active to passive phases of retirement. We focus on the period of passive and frail retirement, following the active phase. A shorthand that emphasises this is using 'over 80s' in the title.

1.2.4 Assumptions that may be invalid

Discussion of retirement, particularly at a policy or business level, typically presumes retirees are healthy, wealthy, capable and confident and interested to make 'sensible' decisions for themselves. These assumptions become increasing less valid as people age.

Anyone who has dealt with someone with serious dementia knows that putting money into an account for them is unlikely to benefit them as they are unlikely to be capable of accessing it, spending it, or spending it wisely.

We believe the over 80s market for retirement and retirement services has not been properly recognised as a market with its own needs and drivers. We also consider that this market is large enough to be viable in its own right.

1.3 Scale of the retirement challenge

A typical view of retirement is that it begins at age 65 and continues for the rest of a person's life. The starting age may vary by country and by occupation.

UN 2017 makes the scale of the coming challenge clear. Countries chosen are indicative. Cumulatively, they represent over 50% of the world's population, as reflected by United Nations figures as at 1 July 2017.

Number are taken at age 60 as the UN 2017 data does not provide life expectancies at age 65. However, the trends, in term of rate of increase, evident in the following tables are typically stronger as age increases, so the trends at age 60 provide clear insight into the trends at 65

In the following tables, numbers are rounded to two significant digits as the key take-aways are trends not specifics.

1.3.1 Numbers of retirees

Table 1.3.1: Number of individuals aged over 60

	1950	2020	2100
Global	0.1 b	1.1 b	3.1 b
Australia	1.0 m	5.6 m	15 m
Brazil	2.6m	30 m	75 m
China	41 m	250 m	390 m
India	20 m	140 m	490 m
Indonesia	4.3 m	26 m	91 m
Japan	6.3 m	43 m	35 m
Nigeria	1.9 m	9.3 m	128 m

	1950	2020	2100
Switzerland	0.6 m	2.2 m	4.0 m
United Kingdom	7.9 m	17 m	29 m
United States	20 m	76 m	150 m

We do not analyse the drivers of results reported in specific countries, but recognise they may vary. All countries except Japan have increasing populations projected to 2100. There will be many more older people, as represented by the over 60 numbers, both in absolute terms and as a proportion of the population, as we move into the future.

The global numbers increase by a factor of almost 3 from 2020 to 2100. With the exceptions of China and Japan, the numbers in the remaining countries increase by a factor of approximately two or more. The increase numbers in 'developed' countries compared to other countries is strong, with a factor about 2 (Australia is an exception with a factor of nearly 3). The higher factors in more developing counties is also striking.

1.3.2 Proportion of retirees

As the total population is also increasing, the relative increase rather than the absolute increase in numbers, is key to understanding impacts.

Table 1.3.2: Proportion of population aged over 60

	1950	2015	2100
Global	8%	14%	28%
Australia	13%	22%	35%
Brazil	5%	14%	39%
China	7%	18%	38%
India	5%	10%	32%
Indonesia	6%	10%	30%
Japan	8%	34%	41%
Nigeria	5%	5%	16%
Switzerland	14%	25%	38%
United Kingdom	6%	25%	36%
United States	12%	23%	33%

The increase in the percentage of the population aged over 60 is striking. The approximate doubling from 1950 to 2015, repeated from 2015 to 2100, indicates a major change of population structure in many countries. This change is acknowledged, and will continue, but still has a long way to go. Except for Nigeria, all countries in the table have a higher percentage in 2100 than the global outcome, with Japan being the highest.

The proportion of people aged over 60 cannot increase without limit, as enough people need to be born and progress through their live until age 60 to sustain the post 60 population numbers. This suggests we are in a transition period from 1950 to a future, post-2100, steadier state.

The tables above also clearly demonstrate that the aging of the population is not restricted to particular countries or groups of countries. Different countries have different approaches and resources to apply to this challenge, but it is a global challenge.

1.3.3 Life expectancy of retirees

A second factor driving the scale of the challenge is the increase in life expectancy at older ages. Data from UN 2017 again provides a view.

Table 1.3.3: Life expectancy (combined male and female) at age 60 (years)

	1950-1955	2015-2020	2095-2100
Global	~14	~ 20	~ 25
Australia	17	26	34
Brazil	15	22	34
China	11	20	29
India	12	18	24
Indonesia	13	17	23
Japan	16	26	35
Nigeria	11	14	20
Switzerland	17	26	34
United Kingdom	17	24	33
United States	17	24	31

The life expectancy at age 60 globally, and in individual countries, is projected to approximately double from 1950 to 2100. With some exceptions, the overall consistency of the numbers in the table is notable.

1.3.4 Expectations of retirees

A third factor driving the scale of the challenge is that of increased expectations. In the so-called more developed countries, the 'baby boomers' are now entering their retirement. They generate a bulge in numbers, compounded by increasing life expectancy. They also have high expectations of continuing to enjoy active and full lives. These higher expectations are another compounding factor in assessing the scale of the challenge. The numbers and extent of disposable income make these baby boomers an influential group in terms of politics and consumer spending.

In summary, the scale of the retirement challenge is driven by three compounding factors:

- Numbers and the increasing proportion of the population who are retirees
- Increasing life expectancy in retirement, and
- Increasing expectations of retirees.

1.3.5 Funding

If retirees are self-funded, their increasing proportion in the population may be of lesser importance as no intergenerational transfer is needed. Then the question of adequacy of accumulated savings for retirement, at the individual level, becomes important. A DC approach to asset risk management, longevity and interest rate environment passes the risks of assessing and achieving adequacy of wealth to retire with over to individuals. Many individuals are not well equipped to understand or manage these risks.

If retirement is fully funded, by individuals or corporations (employee pension plans), on a defined benefit basis, then the issue of intergenerational transfer is mitigated, subject to the fund remaining solvent and supported by its sponsor. For benefits that are state funded and so may be financed on a 'pay-as-you-go' basis, the issue of intergenerational transfer is of increasing importance. As governments almost universally provide Pillar 1 benefits, focused on poverty alleviation, and these benefits are typically provided on a pay-as-you-go basis, the question of intergenerational wealth transfer is always present to some extent. The issue of intergenerational wealth transfer in retirement may be more important elsewhere than in Australia with its strong predominance of a DC approach, which inherently is a 'pay-for-yourself' approach.

2 Managing retirement

Managing retirement is a more complex challenge than that of accumulating wealth to support it. To date, it has also received less attention.

The focus of accumulating wealth for retirement is clear. It is financial. While there is a complex industry providing advice and multiple approaches, this does not change the basic objective. In contrast, in retirement, the ultimate focus is on a good quality of life, which may be viewed differently by different people. This requires a much broader and holistic focus than only a financial one. As noted above the financial income enables the use of services which then support a good a quality of life.

2.1 Types of income

From a financial point of view, retirees have four income needs to manage to support quality of life in retirement:

- Regular income streams for necessary, ongoing and predictable things
- Lump sums for necessary things. These needs may be infrequent and unpredictable. For example, needing to enter aged care facilities or requiring health care.
- Regular income streams for discretionary things. These income streams may be seen as being important to improving quality of life, and
- Lump sums for discretionary things. These may be infrequent, but retirees may have more control over timing and size. For example, buying a new car.

2.2 Multiple interacting aspects

Many things happen, some are entirely within our control and by our choice, some are partially within our control or choice, and some over which we have no control or choice. From the perspective of managing retirement, the focus is on mitigating adverse risks and the consequences of adverse risk events. At the individual level, serious adverse risk events have the characteristics of losses deep in the tail of a loss distribution. They happen rarely and have large consequences.

Many aspects of life need to be managed or dealt with as they arise:

- Day-to-day living, including for example, transport, shopping and so on
- Financial support and planning
- Accommodation, particularly if the retiree owns the house they live in as this then includes maintenance and upkeep
- Completing the activities of daily living

- Health care, short- and long-term, including care for chronic conditions and, eventually, palliative care
- The impacts of physical disabilities and/or intellectual decline, and
- Community engagement and integration. This may be important from the perspective of personal well-being and supporting a good quality of life.

There may be links and interactions between these aspects and current events may impact future options, flexibility, and capacity. The approaches taken to deal with the management of retirement, and the guidance provided to retirees, needs to be holistic, integrated and include a long-term perspective.

From a wider perspective there are further matters to consider.

2.3 Preparedness and engagement

Some of the conclusions of a recent joint investigation by three actuarial bodies on readiness for retirement, Readiness 2017, were:

> *1 ….* [There are] *many planning not to retire at all, most planning to retire gradually rather than fully, many planning to retire at older ages, and relatively few expecting a comfortable lifestyle in retirement.*
>
> *2 Respondents on average are best prepared with respect to taking action to save, acquiring information, and in planning to return to work if retirement assets drop in value. That the dominant plan for a potential drop in the value of retirement assets is a return to work may prove unrealistic if age or health prevent such a return when needed.*
>
> *4 Respondents on average are least prepared with respect to knowing how much they will need when they retire, how long their money will last, and preparing for the risks associated with longevity, chronic ill health, and being forced to stop work unexpectedly early.*
>
> *5 The relatively low percentages of middle-aged (for purposes of this survey, ages 34-54) and middle-income (for purposes of this survey, above the bottom 40% and below the top 20%) respondents in all three countries who are prepared to retire or for the risks of retirement are particularly noteworthy.*
>
> *7 Women reveal less preparation than do men in all three countries on most questions.*

Readiness 2017 continues with

> *… certain policy initiatives suggested by the results are appropriate to and needed in all three countries [Australia, United Kingdom, and United States]:*
>
> *Financial education: The results clearly indicate a need for more education related to financial literacy and retirement planning. … The education required should aim to establish a comprehensive understanding of the relationships linking accumulated*

> *retirement funds, a retirement-age goal, and the risks associated with making retirement assets last a lifetime. …*
>
> *Default options: The results clearly indicate widespread lack of preparation, even when information is sought and some savings are reported. Understanding and managing retirement risks can be extremely complex, and adequate preparation may challenge the ability of many, regardless of the amount of education provided. Incorporating default enrolment into private plans, and making the defaults as appropriate as possible to the situation of the broad majority, would help compensate for the limited attention that most people give to planning for the future. Limited preparation for longevity risk amplifies the need to consider default options that emphasize lifetime income rather than lump-sum distributions during retirement. …*

The lack of preparedness and lack of engagement reported is concerning, but consistent with informal and anecdotal input.

This lack of preparedness is also supported by the findings in Agnew et al 2013. This also establishes a correlation between financial literacy and planning for retirement and showed some support for financial literacy leading to retirement planning. However, Australian results were similar to those from other countries. This may be somewhat surprising as Australia has had mandatory retirement savings, which presumes individuals involvement, choice and decision making with respect to their superannuation savings, and has been in place since 1990.

Readiness 2017 also states (page 29):

> *In all three countries, the failure by the majority of respondents to adequately prepare for retirement may be the result, in part, of common behavioural decision-making dynamics, well documented in the literature.[35] Among the most relevant universal traits might be: ambiguity aversion, which leads people to avoid making decisions when they do not have sufficient information; status quo bias, which leads people to continue doing what they have been doing even when they think they could probably do better; and procrastination, which leads people to struggle with the conflict between what Thaler and Shefrin describe as '"the far-sighted planner" and "the myopic doer."[36]*

This highlights the importance of understanding people's behaviours and decisions making dynamics. It should be acknowledged this may not be fully rationale in a mathematical sense, but they are very real nonetheless.

Lefevre and Chapman 2017 describes recent OECD work and outlines the basic characteristics and concepts associated with behavioural economics. Their focus is on behavioural finance insights and their aim is to help improving financial consumer protection from a supervisory, regulatory and policy-making perspective.

2.4 Longevity

One aspect of longevity is the challenge of mortality improvement. Another is addressing the deep-seated fear of many people of outliving their funds and the suboptimal behaviours this may lead to.

Longevity risk to individuals' needs to be addressed by pooling so that mortality experience can be managed. We know that as the size of a portfolio of risks increases, the management of diversifiable risk becomes more efficient and effective. Indeed, this is a cornerstone of the existence of the insurance industry. But we do not believe traditional annuities and pensions provide an optimal solution.

The lack of awareness of longevity is highlighted in Retirement 2017 (page 42):

> *The most concerning result once we examine the income breakdown of results is how pervasive is the lack of knowledge of how long retirement assets will last. The most knowledgeable cohort, higher-income respondents in Australia, barely show a majority knowing, and in every other cohort at all income levels across all three countries, less than half of respondents know. This might be particularly concerning for middle-income respondents who are likely to be in a position to take steps to improve the longevity of their assets if they were aware of the need.*

2.5 Risks

Decumulation is not about wealth creation, it is about wealth management.

The risks faced in the decumulation phase differ from those faced in the accumulation phase. For example, financially, sequencing risk is a decumulation risk. A differing set of risks suggests that differing skills and forms of advice may be needed. A traditional financial planning approach that focuses on accumulation may not be fully appropriate.

Decumulation also suggests the 'run-down' of funds. As the fund balance becomes lower it requires more careful management, and this becomes particularly relevant for the retirees in the passive and frail phases of retirement, when they are likely to be less capable, and less able of doing this management and make investment choices.

Effectively addressing these risks may need paradigm shifts for all parties, individuals, financial advisors, product providers and governments in their policy setting and service delivery.

2.6 Advice and support

Financial planning in the accumulation phase assumes of competency of those involved. Interactions are thus typical between two parties, the person receiving advice and the financial planner or advisor providing the advice.

In retirement, especially in later retirement, the assumption of competency of the elderly retiree may not remain valid. Decision making and interactions with financial planners or advisors may become more complex and should involve additional parties.

It also raises the issue of retirees not being fully competent to make decisions and so need others to support them. This raises important questions about duties and obligations, the role of fiduciaries and trustees, and other interested parties (family in particular). A recent Australian government discussion paper, ALRC 2016, highlights the risk of 'elder abuse' in the context of superannuation.

2.7 Stay at home

There is an established view, supported by government policy, that retirees prefer remaining in their own home throughout their lifetimes, including during the frail stage of life. Australian press reports suggested the proportion with this view is over 90 percent. In addition, the supply of residential places within 'retirement homes' is limited. In Australia, the government has been providing increased funding towards 'stay-at-home' packages for the elderly. We expect this trend of increasing government support and policy supporting retirees staying in their homes to continue.

Modifications of the home to cater for declining mobility, or the provision of services such as meals, or house cleaning, or personal care are usually more economic than the cost of providing a permanent residential place in a retirement home.

This also flags the importance of a retiree's home as potential source of wealth and income. Currently, almost 80% of Australians aged over 65 live in their own home. See APL 2017. Home ownership rates may decline in the future, but declines will be slow to come through.

There are also important non-financial aspects of retirees' desire to stay in their own homes to consider. These include independence, living in a familiar community and, perhaps, closeness to family. This is consistent with the WHO strategic perspective, WHO 20O2, which the Australian government has adopted and continues to follow.

2.8 Social services

Retirees often have access to a wide range of social services provided by governments. This is an integral part of a social contract between an individual and society at large. The boundaries between the services provided and those considered to be an individual responsibility can be unclear, subject to debate, and evolve over time. Interactions with these service providers can be complex and difficult. For example, there may be criteria and bureaucratic processes to be satisfied to allow access to government supported services. These criteria and processes may change over time and vary between programs.

In Australia many social services relevant to retirees are targeted toward those considered to be more in need. This is in line with the Pillar 1 approach based on World Bank criteria.

However, this introduces the need for assessment and tests as to whether retirees are eligible to receive benefits.

Retirees often do not have a full awareness of the scope or access requirements of all these services. This may increase the importance of advice from financial planners or similar experts.

3 Holistically managing retirement

There are multiple factors compounding the challenge of managing retirement.

The numerical scale of the challenge is only one of many aspects to consider in an integrated approach to retirement outcomes.

Retirement is a 'multi-faceted social contract between society and retirees'. There is a saying that it 'takes a village to raise a child'. We believe it takes a holistic approach by society to look after its elderly in retirement.

The undeniable characteristics of aging, as retirees move from the active phase of retirement through to the passive and frail phases, are that people will go through various degrees of physical and mental decline. Retirement products, especially those focused on the over 80s market in which retirees are becoming increasingly passive and then frail, need to cater for the characteristics of this target market. However, to date, retirement income products have been focussed on the active phase of retirement, with an implicit assumption that they are suitable for the retirees' entire lifetime.

3.1 System principles

A retirement system, and products, need to be designed to reflect three key principles:

- Provide dignity and respect (quality of life) for retirees as they age
- Appropriately share the responsibilities between all the stakeholders as this aging occurs, - the government, the community and the individual. This presumes a clear understanding of the issues, so they can be properly considered, and
- Be sustainable over time, be robust and deliver its promises to aging retirees

These principles provide some criteria to assess the effectiveness of new proposals and proposed changes to the superannuation and retirement systems.

3.2 Stakeholders

A successful retirement system also needs to meet the reasonable needs of all it key stakeholders. There are several key groups of stakeholders to consider:

- The retiree
- Product and service providers
- Distributors
- Regulators and supervisors, and
- Government and community

Within the retirement system, a successful, sustainable retirement product needs to address, or at least dovetail into other ways to address all relevant issues including those identified in Section 2. See Gribble and Helenius 2016.

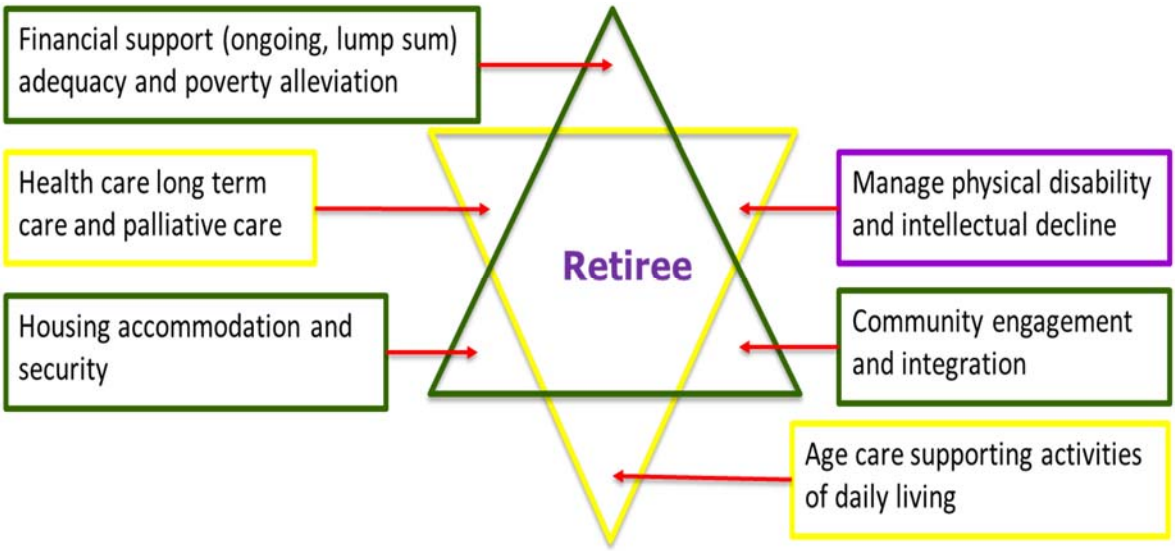
An approach to assessing the success and sustainability of a product is to develop a list of criteria against which the interests of each of the five key stakeholders above can be measured. These criteria have different levels of importance for each stakeholder. If a product does not meet a criterion for a stakeholder, then this flags a weakness and a threat to long-term success. We use the word 'product' here is a broad sense, so that it covers not only the provision of financial products but also the provision of services.

We note the 'weakest link rule'. Chains break at their weakest link, whether or not that link is seen as 'interesting' or 'popular'. When a chain breaks, it fails its fundamental purpose of linking its two end points. The success of a process or approach is limited to strength of its weakest link. Developing 'solutions' that focus on individual links in a chain, without recognising the purpose of the chain as a whole, may be doomed to suffer from the weakest link rule when a link not considered fails. If any one of the stakeholders noted above is uncomfortable with a product then it is likely to fail.

Delivering a holistic, integrated retirement system and supporting retirement products that meet the needs of all stakeholders provides solutions where the benefits are greater than the sum of each of the individual components.

We summarise this multi-faceted challenge and the need for a holistic approach, from the retiree perspective, in the following figure.

Figure 3.1: Holistic approach to retirement from the retiree perspective



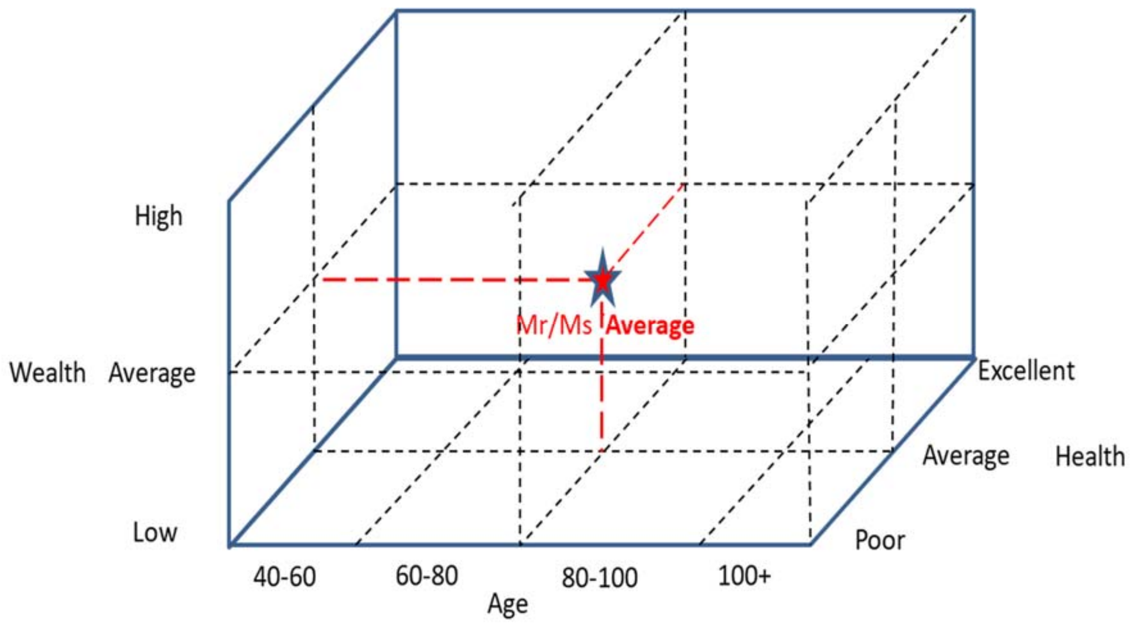
4 Retiree markets

There are multiple retiree markets to consider. We put some structure on it by considering three dimensions - wealth, health and age. We then assess how the various segments are supported in retirement. While we reflect on the Australian perspective, we suggest this structure and analysis is widely applicable. See Gribble and Helenius 2017.

4.1 Mr/Ms Average

The current range of retirement products, and retirement systems, and discussions about them, are typically built around Mr and Mrs Average. The systems place a great burden of organisation of affairs and financial saving on these 'average' people. They are usually assumed to live to age around 85 and be capable, willing and able to organise their own affairs throughout their lives. They are placed at the centre of the structure.

Figure 4.1 Retiree markets. Mr/Ms Average



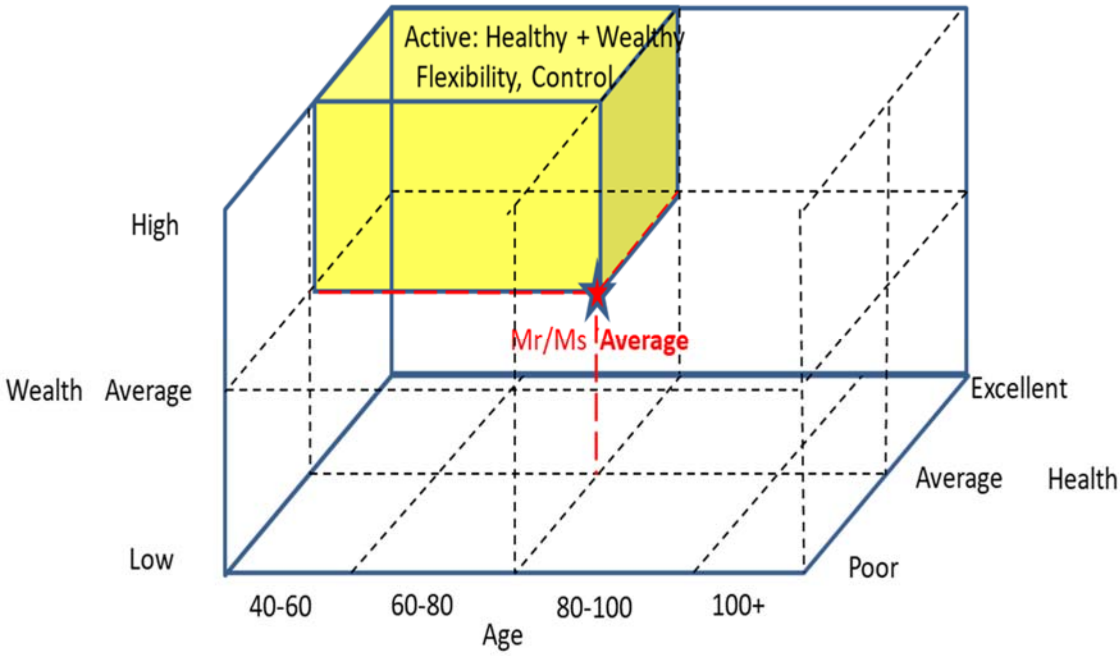
4.2 The current paradigm

Averages conceal a lot of information as their role is to summarise, rather than to provide insight into the underlying variability. Few of us are average in all respects and even fewer of us like think we are average in all respects. So, while the hypothetical behaviour of Mr/Ms Average may be indicative of group outcomes, and useful in that high-level regard, they tell us little about variability. It is therefore dangerous to make sweeping assertions, or decisions, based on only an analysis of Mr/Ms Average. The variability, especially when there may be adverse outcomes for some, needs to be understood and reflected in wiser policy decisions.

This is not to suggest that only outcomes, or changes, with no adverse impacts should be considered. This is unlikely and, if sought, is a paralysing constraint. It is, however, to suggest that adverse outcomes for small groups should be recognised and managed, and not be ignored.

Current debates around retirement presume that retirees are healthy, wealthy, capable and interested in managing their own affairs in retirement. This is a naturally optimistic view that is hard to gainsay without being cast in a negative light. It is, however, also myopic and limiting. It represents only a portion of the full spectrum of outcomes and circumstances implied by Figure 4.1. It is represented by the yellow cube in the upper left back quadrant of in the following Figure.

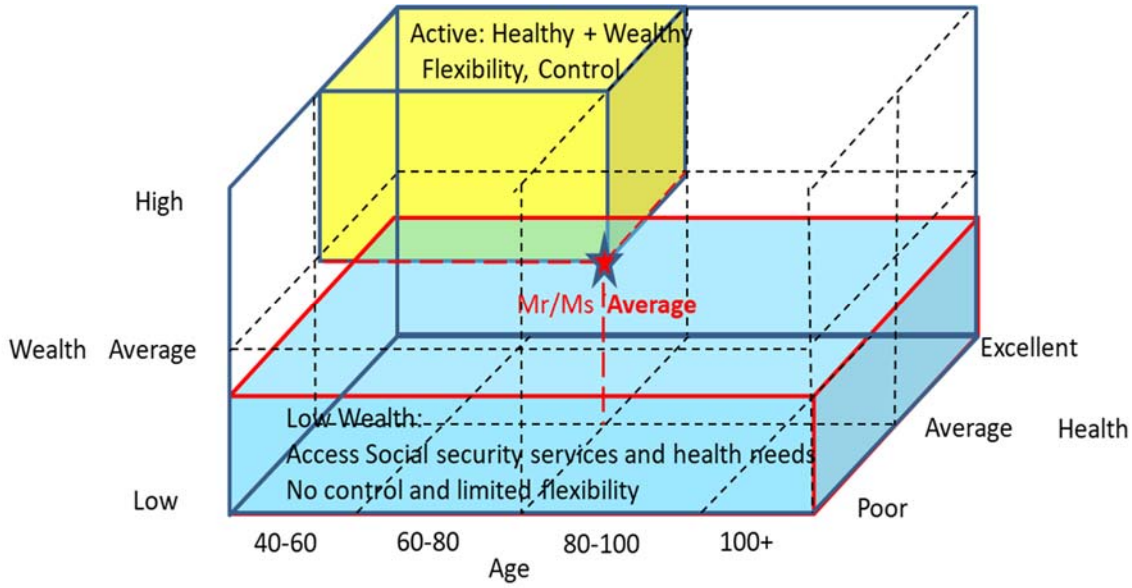
Figure 4.2 The common paradigm of the discussion



4.3 Lower wealth

We now consider all the remaining 'white space' in Figure 4.2. There are many whose circumstances put them in this space. Some have lower wealth (including superannuation balances) than the average. In many cases they may be eligible for a level of government support. This group is important and may be quite large in terms of numbers, so it should not be ignored or marginalised in the broad debate about the quality of life in retirement. This group is identified by the blue flattened cuboid on the bottom of the next figure. The discussions around this group and their social support are not our focus.

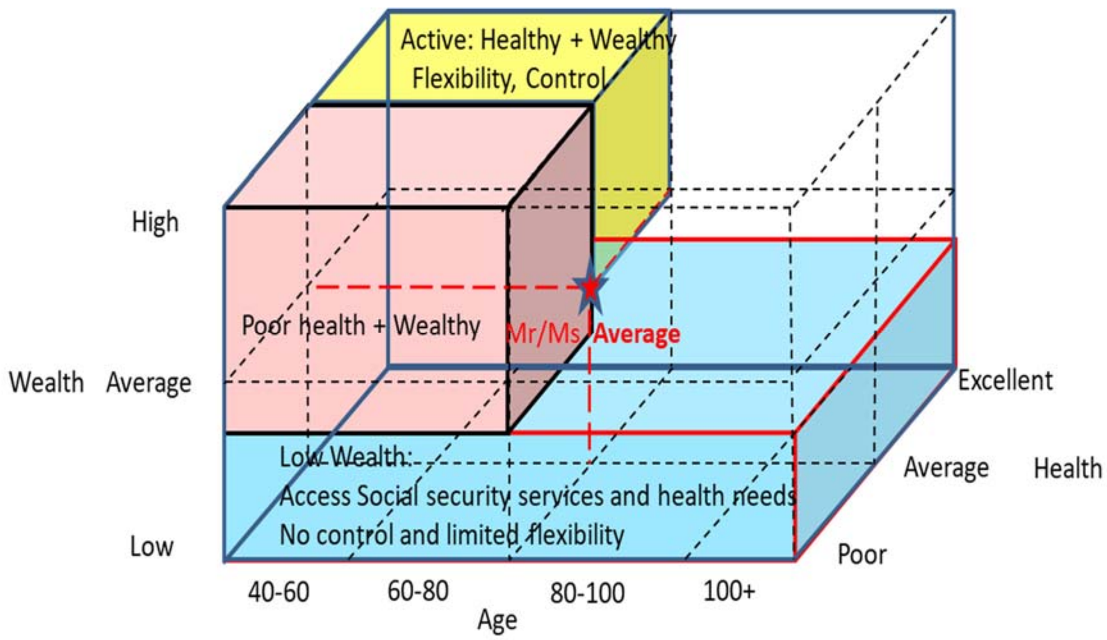
Figure 4.3 A reality of the range of wealth and health distribution



4.4 Health

There is a significant group in the population who are not in good health, both before and after 'retirement'. They have their own special needs and should be given due consideration. This group is important and may be quite large in terms of numbers, so it should not be ignored or marginalised in the broader debate. Not least as some of them may live to older ages and, in particular, into retirement. They are identified by the pink cube in the front upper left quadrant in the next figure. This group and its needs are not our focus.

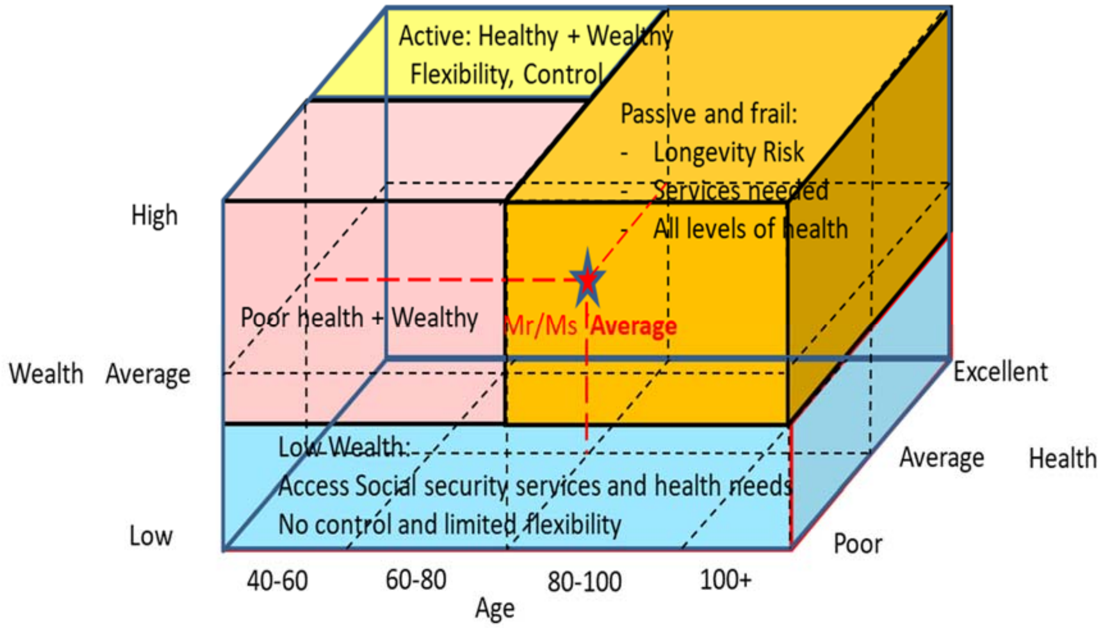
Figure 4.4 Not everyone is healthy



4.5 Over 80s

Our focus is on the remaining white space in the upper right quadrants. This the group who have assets but are moving into the passive and frail (ultimately) phases of their retirement. They are identified by the orange cube in the upper rights quadrants in the next figure. This gives us the full picture of:

Figure 4.5 As we age and move into the Over 80s group



We recognise that, over time, an individual's path in the cube in the above figure may not be linear or progress as expected. However, the structure remains useful since an individual's path, even if erratic, can still be traced within it. We note its relative size in the figure.

5 Paradigm shifts

To approach the issues associated with aging populations in retirement, particularly the over 80s who are typically in the passive phase of retirement, requires paradigm shifts in thinking.

We suggest there are some core paradigm shifts needed. Collectively, they represent a significant change and broadening of perspective.

5.1 Expanded view of the retirement system and over 80s market

The discussion on retirement appears to often be simplified to focus on Mr/Ms Average. Few people are average and focussing on averages ignores the range of different needs to be met and the range of approaches that may be taken. Thinking in terms of averages may be a useful tool for communication, as it simplifies messages, but it may not be a good tool for developing inclusive, flexible and holistic solutions for individual retiree requirements.

We suggest the current typical approach of looking at retirement, particularly its financial aspects through the lens of superannuation, needs to realigned. The focus needs to be shifted to looking at needs of retirees, many of whom have financial support coming from the superannuation system, and not just focus on superannuation fund members. It is not necessary that all solutions must come through the superannuation system or be funded by superannuation accumulations (albeit they are tax advantaged), as the total wealth of the retiree can potentially be utilised towards retirement funding, regardless of its source.

The Australian superannuation system is very focussed on the individual and presumes those individuals have had paid employment positions. Although future demographics may change, it remains the case that most retirees, particularly at the beginning of their retirement are part of a couple. This should be considered, as should how those people who have contributed to society in other ways than paid work can be recognised and included.

As we have highlighted already, catering for needs throughout retirement requires more than simply securing regular income streams.

The Australian government provides a safety net for those who do not have financial security. It provides this segment with access to a broader range of services through government funded social security financial and basic health requirements. However, the current system does not adequately cater for those who are in poor health and with above average wealth. Nor does it cater to those who live beyond age 80, with reasonable wealth, that is the elderly self-funded retirees. We are not proposing that the government role should necessarily be expanded, rather highlight the need for issue to be addressed. We also acknowledge the inherent arbitrage issues that will need to be managed at the interface between government support services and retiree supported services.

We believe that retirement systems, and retirement products, need to take a broader perspective. They should cater for the characteristics of passive and frail aging as almost everyone, regardless of wealth, will suffer some level of physical and mental decline during the later stages of retirement.

The characteristics of the over 80s market are very different to the characteristics of the active retirees entering retirement, who remain largely healthy, capable and interested in managing their own affairs. The proportion of passive and frail retirees amongst the over 80's needing support and services, regardless of wealth, due to physical impairments and mental decline is substantial.

5.2 Changing the target to focus on quality of life

We propose that the focus of retirement should be on quality of life. This is a paradigm shift from a focus on providing income and income streams and turns the standard view (and so debates) of focussing on income streams on its head. Income streams (primarily but not only) enable the provision of services which in turn support quality of life, but these services also need to be implemented. Income streams and services are the means to the end of improved quality of life, but they are now not the end in themselves. Anyone who has had experience of dealing with someone with serious dementia, knows that putting money into their bank account is unlikely to provide them with direct benefit. To date, the discussion has often been simplified (and sanitised) by focussing on income streams and convenient assumptions about retirees and their capabilities. We suggest that this is only part of what should be a broader and more integrated discussion.

We have also highlighted that the typical underlying assumptions in superannuation discussions, that retirees are healthy, wealthy, capable and interested in their retirement from a financial perspective, should face the reality that this is not always the case. As retirees age the validity of these assumptions clearly declines and so are very questionable when considering the over 80s market. We are not proposing that all retirees over 80 are unhealthy, unwealthy, incapable and disinterested. However, on average, the trend is in that direction and increases with age. It is tempting to assume that retirees entering active retirement are able to make their own decisions and address managing their retirement unassisted. However, the evidence regarding the lack of financial literacy, lack of preparedness for retirement, and unwillingness to confront the range of issues arising on and during retirement for many retirees is strong. Even when entering retirement, presuming capacity and interest to manage retirement is questionable.

To deliver solutions to address these issues requires that the problem is approached from the opposite perspective. Solutions need to follow from initially considering 'what is required to deliver a good quality of life of retirement' and how this is delivered. This is increasingly relevant as retirees age and so particularly for the over 80s market which includes passive and frail retirees. That is, we should consider what is required to deliver a quality, and dignity, of life when retirees are no longer capable of making financial decisions and resolving other issues associated with personal care. We can then go back to determine what level of income is required to deliver this outcome, and hence what accumulation benefit is required to fund this retirement program, and how this program will be implemented to deliver the services to the retiree. If funds are insufficient this naturally leads to considering priorities and interactions with government sources of support. As retirees age, more assistance with these challenges may be needed.

5.3 Fiduciary role

For over 80s we need to confront the impact of declining physical health and intellectual decline. We are not suggesting the all retirees over 80 will suffer material declines that will adversely affect their quality of life, but many will.

We believe there is an integral role for a 'fiduciary' to act on behalf of the retiree to ensure the program of services is delivered to the retiree, when they are not capable of organising and implementing their own care. To allow the fiduciary to act in the interests of the retiree in their passive and frail stages, it requires that when the retiree is in the active phase of retirement, they make the decisions over their preferred long-term retirement arrangements through a 'living will'. The fiduciary then becomes responsible for acting out those wishes in a similar fashion to an executor of a deceased estate.

With the increase in numbers of over 80s there is a need for mass-market and system solutions, not just a collection of individual solutions. Legal structures and obligations, such as for trustees, may need to change to facilitate this. We also suggest that this implies that the fiduciary role is better carried out by entities rather than individuals to ensure the fiduciaries remain competent, accountable and in place. Perhaps most importantly, this also supports confidence that the fiduciaries continue to act in the best interest of the retiree throughout the retiree's life. Finally, at a societal level this should be a more efficient approach as it allows the development of expertise that can be shared and provides support to those who may not have family available to support them.

We acknowledge that there may be significant behavioural and emotional issues to manage for such a process to work. While it may be entirely sensible and rational in theory, success requires that those involved accept the process and work with it. Both the behavioural and rational aspects of products need to be considered.

5.4 Changing from wealth accumulation to wealth management

The current approach to retirement is all about 'wealth creation' during the 'accumulate' phase, with an aim of producing a regular 'indexed' income in retirement. The approach has been relatively successful in delivering accumulated lump sum benefits, particularly in Australia. However, in the decumulation phase there has not been a holistic, comprehensive solution that provides lifetime financial security combined with lifetime access to the services required to deliver the needs and wants of retirees as they move from the active phase of retirement into the 'passive and frail' phases.

This is a paradigm shift when consideration is given to the retirees needs throughout the entire retirement period and perhaps applies even more strongly in the over 80s market. A different and wider set of risks apply after retirement than before it. This suggest that different approaches and techniques may be needed to manage these new risks. In particular, it suggests that an accumulation perspective may become inappropriate and narrow in retirement. This applies to both retirees and their advisors. It is not clear the need for this change in perspective is widely appreciated.

The challenge is to manage the regular (and perhaps some additional irregular) payments from a retiree's funds in contrast to accumulating funds for future use. We have noted earlier the issue of sequencing risk. This risk is only relevant after retirement starts. However, it can be material in adverse investment conditions.

As retirees age, the time horizon in which adverse investment outcomes can be redressed shortens. This risk may be compounded as retirees move into the passive phase of retirement as they may also have reduced capacity to make the relevant financial decisions. A common response of those nearing retirement to the possibility of inadequate funding is along the lines of 'I will go out and get some work'. We suggest that in reality this 'plan' has a decreasing likelihood of success for active retirees and may be close to impossible for passive retirees (and that is before diminished capabilities are considered). These reductions in remaining lifetime and capacity are also risks that are only relevant after retirement starts.

We also note that we are not advocating automatically taking a conservative investment strategy on retirement. A benefit of a conservative strategy should be reduced volatility in outcomes. This can provide comfort and increase the ability to plan into the future with confidence. However, it contains an aspect of (investment) risk avoidance though adopting a conservative approach. It may not address matters like inflation protection in the future. The reason sequencing risk can be a major concern is that the size of the funds a retiree manages are largest in the years immediately following retirement. A changing balance between growth and security may be most appropriate over the retirement period. This highlights the wealth management aspect of retirement. We acknowledge that if the challenge is taken as minimising downside effects for retirees who are not receiving advice, then the benefits of a 'set and forget' conservative post retirement strategy may be enhanced.

We are all also aware of the need to manage longevity, both in terms of the uncertain time period before the death of an individual retiree and the ongoing mortality improvement that continues to be experienced across all retirees. Even if mortality improvement slows (and there is some recent evidence suggesting this may be the case, particularly in the developed countries, including Australia) or ceases, the key risk for the individual retirees is not knowing when they we will die is a major challenge. Individuals are either alive or dead, and statistical measures such as averages and average expected lifetimes are not directly relevant. Statistical measures are valuable when managing groups, but less so to the individuals in that group. As we discuss later, longevity can only be efficiently managed by pooling. This risk is only relevant after retirement starts.

These risks also pose serious challenges for those managing retirement funds on behalf of retirees. Often these people are in a trustee or fiduciary position (either formally or informally) and charged with protecting the interests of the retirees. In case where they need to make decisions and set policy on behalf of retirees, they need to balance competing risks and act on the overall best interests of the group retirees. This can be challenging and may carry the risk of action or litigation by individual retirees (or more likely their beneficiaries or other relatives) who may feel their individual interests have not been 'properly' addressed. This risk may be exacerbated by the likelihood that such concerns only arise after the event when options for remedial action, if warranted, become limited. While this risk also needs to be managed in the accumulation phase, it is heightened in the decumulation phase.

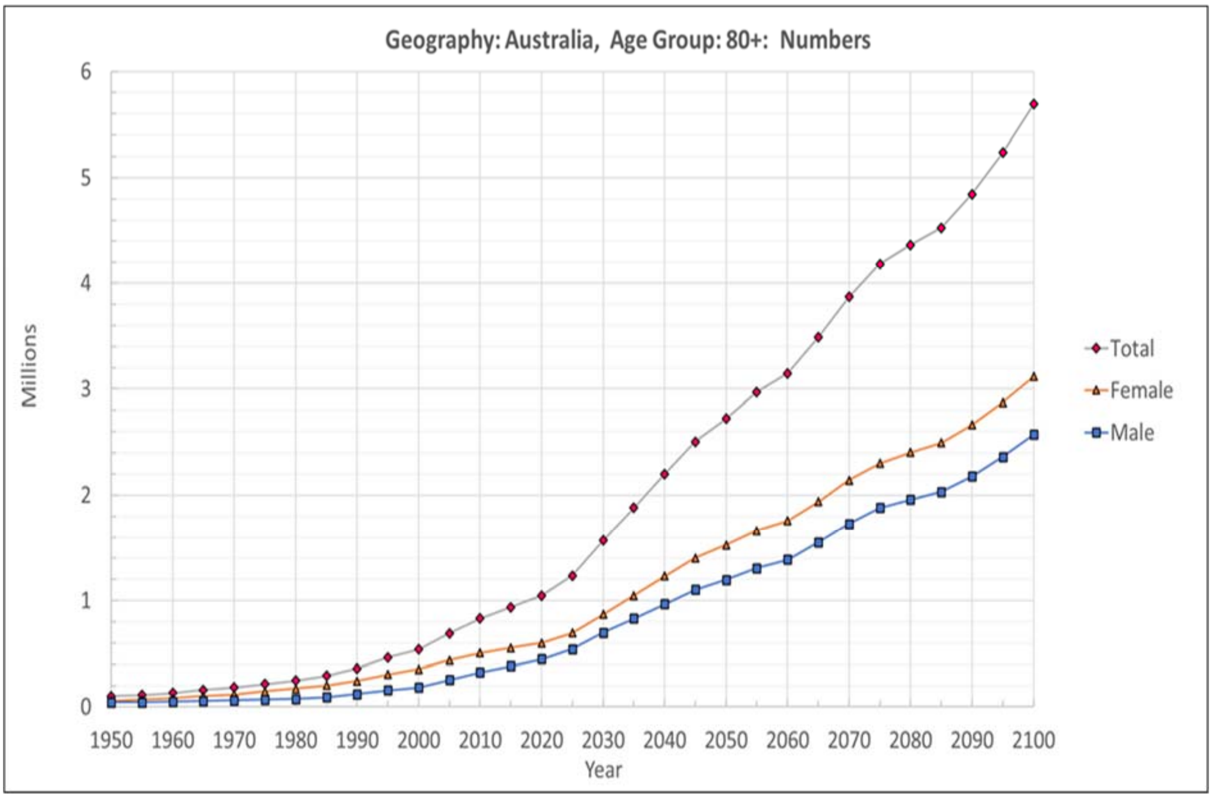
6 Size and growth of the Australian over 80s market

We have highlighted the global retirement challenge in terms of growing numbers and proportion of people aged over 60.

Now we focus more specifically on the Australian market place and on the over 80s group. Similar outcomes and patterns are reflected in most developed countries. As before, the data is taken from UN 2017.

6.1 Numbers of people

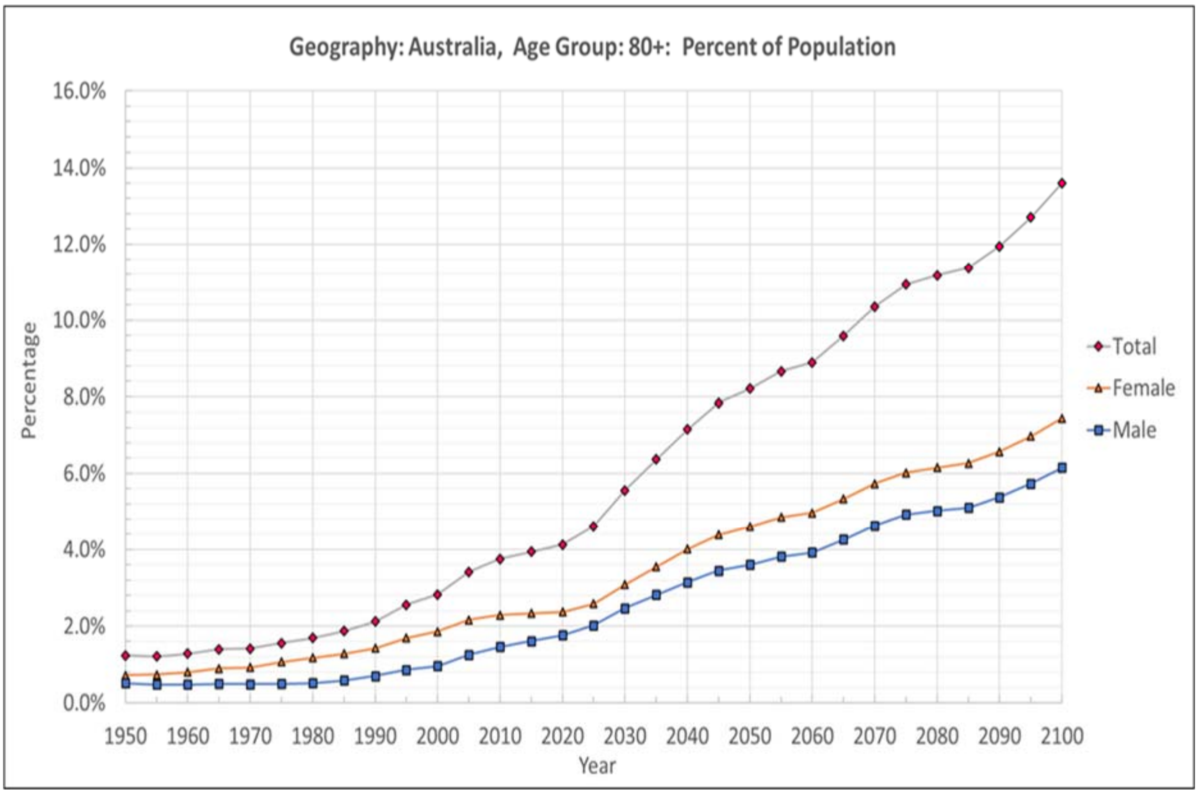
Figure 6.1 Australian growth in number of over 80s



These charts highlight the rapid emergence of the over 80s market segment in terms of population numbers from the 1950's through to the estimated number in 2050. Whilst females make up the majority of the population, it should be noted that the male population increases as a proportion of the total population of over 80s over time.

6.2 Proportions of the population

Figure 6.2 Australian growth in proportion of total population of over 80s



This figure shows the growth of the older population by showing the over 80s segment as a percentage of the total population. The projections highlight that the over 80s are expected move from about 4% today to almost 14% of the population at the turn of the next century

This growth can be summarised as follows. The ratios reflect the factor by which 2050 results exceed 2015 outcomes. The impact of the aging population, both absolutely and proportionately, as time passes, is clear.

Table 6.3 Summary of growth of over 80s market to 2050 in Australia

	Number (m)			% total population		
Age	2015	2050	Ratio	2015	2050	Ratio
65+	3.6	7.5	2.1	15.0	22.5	1.5
80+	0.9	2.7	2.9	3.9	8.2	2.1
90+	0.2	0.7	3.9	0.7	2.0	2.8

The over 80s market is expected to more than double from less than 4% of the population to more than 8% of the population over the next 35 years. In addition, the over 90s segment is expected to triple to almost 2% of the population in that time. The over 80s is already a viable market segment although currently this segment is not well covered by superannuation funds.

For context we also give the following tables:

Table 6.4 Summary of growth of over 80s market to 2050 globally

	Number (m)			% total population		
Age	2015	2050	Ratio	2015	2050	Ratio
65+	610	1,550	2.5	8.3	15.8	1.9
80+	125	425	3.4	1.7	4.4	2.5
90+	17	77	4.6	0.23	0.8	3.4

The growth of the over 80s group in terms of numbers is strong in Australia and stronger globally.

6.3 Compounded by wealth increase

In Australia the growth in numbers of the over 80s market will be positively compounded by the increased in wealth, over time, of its entrants. This reflects the maturing of the superannuation system in Australia and the increasing length of time, and increasing level of contributions, that retirees have been accumulating superannuation savings.

This compounding growth in wealth in the over 80's market, over time, will be driven by the increasing proportion of Australians who enter their retirement years with superannuation, and with increasing sizes of their superannuation balances, at retirement. See, for example, ASFA 2017 to see the increase in balances on retirement and ABS 2017 to show the increasing superannuation coverage, both in individual value and in the proportion of the population covered, as the system continues to mature. This 'bubble' will flow through to the over 80s market.

7 The declining competence of the over 80s

Earlier we noted the assumptions that typically frame discussion around retirement, especially in a personal financial context. These assumptions were summarised as healthy, wealthy, capable, and interested.

The section shows that the healthy, capable and interested assumptions become increasingly invalid as retirees age, particularly once they enter the passive phase, say over 80.

These retirees, even if they are wealthy, will often need assistance. Typically, such assistance is provided by family and is focused on the individual retiree and requires each family to go through its own learning process to deal with the issues. The changing nature of families in many parts of the world, including Australia, suggests the need for a more sustainable solution. We suggest that one such solution is incorporating an independent fiduciary into the retirement management process. Currently, bespoke solutions can and are being put in place for wealthier retirees when needed.

We highlight the need for a more mass-market, efficient and low-cost approach. This is due to the numbers of retirees who may need this support to ensure that the services they need to enjoy a good quality of life are in place for them.

7.1 Health care

Australia's universal health care system is primarily funded by Medicare, which funds a large part of the cost of health services, including those in public hospitals. Medicare is augmented by a private health insurance industry and there are government incentives to take out private health insurance. About half of all Australians have some form of private patient hospital cover and/or some form of general treatment cover. The health care system in Australia is well regarded.

It is well accepted that the utilisation and costs of health care increase with age. Many retirees worry about their financial capacity to support their future health care costs.

For the over 80s these concerns are more immediate than for younger more active retirees.

7.2 Physical disability

Some disability statistics from the Australian Network on Disability, ANB 2018, shows the extent to which disabilities are present in the Australian community. It defines disability broadly as: *' … any condition that restricts a person's mental, sensory or mobility functions. It may be caused by accident, trauma, genetics or disease. A disability may be temporary or permanent, total or partial, lifelong or acquired, visible or invisible'*.

This demonstrates, at a summary level, the breadth of types of disability and their prevalence. See also ABS 2016b.

Some demographics include:

- Over four million, or one in five, people in Australia have some form of disability. The proportions are very similar for males and females
- 2.1 million Australians of working age (15 – 64 years) have a disability
- Over one third of Australia's almost 9 million households include a person with disability
- The likelihood of living with disability increases with age. Two in five people with disability are 65 years or older
- 3 million Australians live with depression or anxiety
- 1.8 million, just over half, of Australians aged 65 and over have a disability, compared to one in eight (12.5 %) aged under 65
- Almost 40% of those aged over 65 need some form of assistance with everyday activities (almost half of the women and a third of the males)
- At age 85, more than 80%, 8 out 10, people needed assistance compared to less than 30%, 3 out 10, people aged 60-69
- After age 90, three quarters of women and two thirds of males have profound or severe core-activity limitation
- 45% of Australians aged 16–85 years, experience a mental health condition during their lifetime

These striking statistics are current and illustrate that significant proportions of the population need assistance with all aspects of daily life, and highlight the reality of physical deterioration in the passive and frail retiree segments. The proportions of population being impacted rise significantly in the over 80's market and in the future this will be compounded by the aging population and rapid growth in numbers of the over 80's segment.

7.3 Intellectual decline

Intellectual decline and memory loss are critical issues and incidence increases with age. Whilst there is some academic debate, it is commonly regarded that there are three categories of cognition:

- Normal
- Mild cognitive impairment (MCI). This refers to refers to cognitive decline from a previous level of functioning, either in terms of memory or other cognitive functions and
- Dementia. This is a general term for a decline in mental ability severe enough to interfere with daily life. It is caused by brain disease or injury and marked by

memory disorders, personality changes, and impaired reasoning. Alzheimer's is the most common type of dementia

A report released by the National Seniors Australia, NSA2017, stated;

> *"Many aspects of financial management at older age assume good cognitive health. There are many decisions to be made about investments, superannuation, housing options, pension eligibility and tax implications.*
>
> *The decumulation phase is often more complex than the accumulation phase because without income replacement decisions can have long term consequences. A decline in cognitive health may have serious implications in terms of financial losses but also leave them more vulnerable to financial abuse. The relationship between financial decision making and cognitive decline is yet to be fully explored."*

7.3.1 Dementia

The rates and incidence of dementia are reasonably well researched globally, and it has been demonstrated that incidence and prevalence of dementia increases with age, although age is not considered a cause of dementia.

Statistics reported by Dementia Australia, DA 2018, suggest:

- In 2018, there are an estimated 425,000 Australians living with dementia (190,000 (45%) males and 235,000 (55%) females)
- Without a medical breakthrough, the number of people with dementia is expected to increase to over half a million by 2025 and about 1.1 million by 2056
- Three in ten people over the age of 85 and almost one in ten people over 65 have dementia

By combining the ABS population statistics, ABS 2018, with the DA 2018 numbers and Australian Institute of Health and Welfare, AIHW 2016, proportions we can estimate that the prevalence of dementia is around 25% of the population aged over 85.

Table 7.3.1: Estimated dementia prevalence in population over 85 in Australia

	Total	Women	Men	Source
Total population number with Dementia	425,416	234,049	191,367	DA 2018
Percentage with dementia over age 85	29%	33%	24%	AIHW 2016
Population over age 85 with dementia	123,164	77,236	45,928	
Total population aged over 85	494,319	307,962	186,357	ABS 2018
Estimated dementia prevalence	24.9%	25.1%	24.6%	

ABS 2017b makes it clear that dementia is a disease of the older population. Around 70 percent of all dementia deaths occurred in those 85 years of age and over and roughly another quarter occurred among people aged 75 to 84. More women die from dementia than men, by a factor of about 1.2. ABS 2017b also notes that deaths from dementia mostly occur because of complicating factors. In Australia in 2015 the number of people dying from dementia was equalled by number dying with dementia (but dying from other underlying causes). Combined, these deaths accounted for about 16% of all deaths in 2015. That is, dementia played a role in about one in every six deaths in Australia.

7.3.2 Mild cognitive impairment

Reduced intellectual capacity can also be caused by MCI, in addition to dementia. In the context of the over 80s market, the prevalence of MCI is an important consideration, especially when it comes to managing abstract cognitive things like financial matters.

However, there is much less uniformity in definitions and assessment of MCI globally. It is recognised that people who have been diagnosed with MCI have a significantly increased chance of developing dementia, by comparison to the general population. However, MCI and dementia are separate things. While MCI can develop into dementia, it doesn't always progress, and it can also be reversible to normal cognition.

There is little statistical analysis in Australia and globally with respect to MCI. We draw on MCI 2015, which sought to harmonise several studies of MCI. At a summary level several outcomes were identified:

- Results were not affected by gender
- Prevalence rates increase with age. Results for three different measures are reported:
    - The rate of subjective memory complaints increased from just of 25% for ages 60-69 to nearly 40% for ages 80-89
    - The rates of functional independence decreased from 98% for ages 60-69 to just under 85% for ages 80-89.
    - The rates of objective cognitive impairment increased from about 20% for ages 60-69 to 25% for ages 80-89
- There is an increased prevalence as levels of education decline

The cognition categories form a continuum with the severity of intellectual decline progressing across each of the categories, so a high level of MCI is not easily distinguished from the early stages of dementia. However, a low level of MCI may not be significant impediment to carrying on a good life. Also, there are varying degrees of dementia.

This suggests that in the over 80s segment the prevalence of individuals with either MCI or dementia is substantial and may be in the order of 50% or more.

The intellectual decline, memory impairment and cognitive abilities are more severe, and common, in the over 80s age category. This also is occurring at a critical time in the decumulation phase of a retiree which requires the most careful management of any financial assets.

This supports the need for a paradigm shift in thinking and approaches in dealing with this market segment.

7.4 'Unhealthy' life expectancy

We have highlighted some of the characteristics of physical and mental decline amongst the retiring population. A high-level sense of the duration of these issues is useful to provide context.

The World Health Organisation (WHO) determines 'healthy life expectancy' (HLE). The WHO defines HLE as the average number of years that a person can expect to live in "full health" by reducing it for years lived in less than full health due to disease and/or injury. We note that dementia is included as a disease. Nine of the goals of the UN's Agenda for Sustainable Development 2030 are ageing and health related and the WHO has recently completed a major project, Global Health Estimates 2015, which give globally comparable data on mortality, including LE and HLE at birth and age 60, by gender and country. See WHO 2017, WHO 2017b and WHO 2017c and the associated websites.

The HLE is lower than the average life expectancy LE. The difference, LE – HLE, estimates the number of years, on average, spent alive but not in full health. Results at age 60 give insights into the average summary health status of the older population. This provides an indication of the period of time over which an individual loses at least some capacity to care for themselves, and the period of time in which a living will is likely to have its effect.

The ratio (LE – HLE) / LE provides a useful comparative statistic which estimates the proportion of life expectancy that is expected to be unhealthy, and provides a comparison across countries. Typically, between one fifth and one quarter of a retiree's life after age 60 will be 'unhealthy'. As health services use and costs rise with age, it follows that the majority of this time occurs in the years before the death of the retiree. For male and females the outcome is about 25% and the country variation seems to generally be between 20% and 25% with few exceptions.

Older females, although they have larger LEs, also typically also have a slightly greater proportion of their lives as unhealthy compared to males. In absolute values, LE-HLE commonly increases from 2000 to 2015. In Australia the (LE – HLE) / LE ratio has also increased from 2000 to 2015. In Australia the LEs are increasing quicker than their corresponding HLEs.

Table 7.4.1: WHO results for Australia

Age 60	2015			2000		
	All	Male	Female	All	Male	Female
(LE - HLE) / LE	23.1%	22.5%	23.5%	22.3%	22.0%	23.0%
LE - HLE (years)	5.9	5.4	6.3	5.1	4.6	5.7
HLE (years)	19.6	18.6	20.5	17.8	16.3	19.1
LE (years)	25.5	24.0	26.8	22.9	20.9	24.8

To give context we also have taken some of the indicative countries noted previously. The results are strikingly consistent between countries and regions and move slowly over time.

Table 7.4.2: WHO results for World

Age 60	2015			2000		
	All	Male	Female	All	Male	Female
(LE - HLE) / LE	22.5%	21.7%	22.6%	23.0%	22.2%	23.8%
LE - HLE (years)	4.6	4.1	4.9	4.3	3.8	4.8
HLE (years)	15.8	14.8	16.8	14.4	13.3	15.4
LE (years)	20.4	18.9	21.7	18.7	17.1	20.2

Table 7.4.3: WHO results for Japan

Age 60	2015			2000		
	All	Male	Female	All	Male	Female
(LE - HLE) / LE	19.2%	19.2%	19.5%	19.4%	19.2%	19.8%
LE - HLE (years)	5.0	4.5	5.6	4.7	4.1	5.3
HLE (years)	21.1	18.9	23.1	19.5	17.3	21.5
LE (years)	26.1	23.4	28.7	24.2	21.4	26.8

Table 7.4.4: WHO results for Nigeria

Age 60	2015			2000		
	All	Male	Female	All	Male	Female
(LE - HLE) / LE	25.4%	25.9%	25.5%	26.9%	28.0%	27.0%
LE - HLE (years)	3.6	3.6	3.7	3.6	3.7	3.7
HLE (years)	10.6	10.3	10.8	9.8	9.5	10.0
LE (years)	14.2	13.9	14.5	13.4	13.2	13.7

7.5 Aged care

7.5.1 Aged Care - At home

Aged care is distinct from health care. Aged care deals with overcoming limitations due to aging and declining capacity. Health care, on the other hand, deals with managing disease and hospital related matters.

Providing retirees with services to support their continuing to live at home, with partners, and managing other limitations due to aging 'in situ' is considered both economically efficient and socially beneficial for both retirees and their community.

As retirees age and move through their passive phase of retirement, the availability of services to support them remaining in their own homes becomes increasingly important and desirable. Products that provide services thus become increasingly important and viable.

7.5.2 Aged Care Facilities - Retirement and nursing homes

There are not sufficient residential aged care facilities in Australia , and there is also substantial evidence to suggest that people have a better quality of life if they can remain in their own homes for longer. The Australian government is acknowledging this by providing increased funding for 'home care' packages.

However, when the need for residential aged care becomes unavoidable the current system is complex for retirees, and the demand for places is high. Limited supply causes cost pressures for retirees to gain access to these places.

There are also government legislated fee schedules that universally apply for basic levels of care.

There are significant fees/deposits required to enter a retirement village, so there are significant financial aspects for retirees to address when this form of accommodation is considered or required. The financial aspect of retirement that considers the 'Lump sums for necessary things.' aspect of retirement planning and flexibility is relevant in this context.

These issues all arise, and must be navigated, when the retiree in the frail phase of life is suffering from severe cognitive decline and/or disability. If the retiree has a spouse of similar age, there is also a strong possibility that they may also have varying degrees of cognitive decline, and/or disability which limits their capacity to organise and implement the required services. At present, this organisation is often left to younger family members or relatives which can often cause significant stress for all participants in the process. This highlights the potential need for independent fiduciaries to assist and provide expertise to support this navigation through complex processes at a time of family stress.

7.6 Housing

In Australia there remains a high level of home ownership, and the home remains a substantial source of wealth for retirees.

According to the ABS 2016c:

> *"Many older Australians have accumulated assets, such as their own homes and savings, which can be used to support their living into retirement. In 2015, 71.7% of older people living in households reported owning their own homes outright, compared with 9.5% who had a mortgage. Of the remaining 18.6% of older people, 12.4% reported that they rented their home, and 6.2% reported that they lived rent free or had other housing arrangements that were outside these categories, such as life tenure and shared equity schemes."*

The Australian government is proposing initiatives to allow 'government funded pensioners' to access equity in their own homes and receive higher levels of income to encourage older retirees to stay in their homes. See ABP 2018. However, reverse mortgages amongst the general community have not been highly successful to date, with industry statistics prepared by IBIS World suggesting the industry has declined in Australia over the past 5 years. See RMP 2017.

The use of home equity we believe is a valuable asset suited to 'lump sum' critical capital requirements, such as the refundable deposits used to fund permanent residential care places. However, it is often difficult, or not possible for other people (family or relatives) that do not have title to the property to make use of this capital on behalf of the retiree when the retiree themselves is in the passive, or frail phase and suffering cognitive decline or disability. It is also an area which could be subject to elder abuse if these funds or proceeds are mis-directed. However, the use of a pre-appointed fiduciary to act in the retiree's best interests, and in accordance with retirees pre-determined wishes would be a potential solution to this issue.

7.7 Community engagement

Community engagement is another critical aspect to well-being in retirement. A retirement system needs to consider how community engagement can be maintained with the elderly retirees, for the benefit of both the community and the retirees.

Benefits include:

- Socialisation to maintain positive mental health and prevent loneliness and depression amongst retirees, and
- Interaction between 'active' members of the community to help assess and monitor the well-being of retirees
- Retirees remain positively contributors to society and their communities.

8 Potential solutions

At present we do not believe that any retirement solution, including the established pensions and lifetime annuities, cater adequately for retirees entering the passive and frail phases of retirement. Whilst pensions and annuities can secure an income stream for life, they do not provide a holistic outcome to secure the quality of life throughout retirement. In addition, they may be relatively inflexible in the active retirement phase. These products tend to be capital intensive and hence expensive for the retiree to utilise. There is a lack of suitable long term secure investments to support the payments. In Australia there is low uptake of traditional annuities.

In Australia the account based, individual pension accounts provide flexibility during the active phase, but do not secure the longevity risk, and do not specifically consider the needs of the passive and frail retirees. However, these products do not require capital to be maintained and are 'low cost' from a retiree perspective.

The scope exists for the development of new holistic retirement product solutions, using the established building blocks that are currently available, and established actuarial techniques.

8.1 Retirement income streams for life

More than 50% of superannuation funds in Australia are held in Self Managed Superannuation Funds and the Industry Funds which, by their nature, do not hold any reserve capital. This implies that if these superannuation providers want to generate solutions for their members in providing lifetime retirement income they need to consider low capital intensive solutions.

The Australian Treasury put forward a discussion paper in 2016 with respect to potential designs for group self annuitised products (Comprehensive Income Products for Retirement). See CIPR 2016. There were many responses, including Gribble and Helenius 2017b.

From a financial perspective the need for pooling of assets to manage longevity is clear. This is due to both the variability in ages at death for a given mortality table and the long-standing decline of mortality rate in older ages. For an individual to manage these risks by themselves, without running out of funds, they would need to assume their death at an old age, say 100 or 105, and plan their income streams accordingly. The security of reducing the risk of possibly running out of funds, is clearly significantly inefficient at a group or societal level as, on average, people will not live that long. We note that this assumes the purpose of saving for retirement is to support the retiree living in retirement. This is the case in Australia, with proposed legislation stating: *'The primary objective of the superannuation system is to provide income in retirement to substitute or supplement the age pension.'* This does not consider other objectives retirees may have, such as bequests and supporting their children.

There are new actuarial approaches to income streams which address equitable sharing of pooled funds and offer ways to overcome the deficiencies with traditional annuities and account based pensions noted above. These include Group Self Annuitisation (GSA) products.

See, for example, Milevsky and Salisbury 2016, Porcel et al 2016, Qaio and Sherris 2016, Shang and Su 2016, and Sneddon at el 2016.

We believe that the keys to longevity will be to design products that have pooled members, based on actual mortality experience, in accordance with the CIPR designs outlined in the CIPR discussion paper. These products would not require the additional capital needed for guaranteed levels of income or indexation rates. They also can be managed based on actual investment performance, and hence can be managed with available cash, fixed interest and other secure, liquid investments. See Gribble and Helenius 2016 and Gribble and Helenius 2017.

See also CMI 2017 for global insight into mortality rates, their changes and excepted future outcomes. It is interesting to note that the rates of mortality improvement appear to now be slowing in many developed countries, including Australia.

8.2 Services

The services that are needed should be considered from the perspectives of physical and mental decline that occur with age, to assist and improve the quality of life for retirees during this time.

This can include services to assist in the event of cognitive decline, functional decline and behavioural and phycological issues, with the overall aim of improving quality of life.

NSA 2017 provides some key areas where services may be needed:

- Cognitive assistance: For example, financial decision making, paying bills, using of tools and appliances, and managing appointments
- Functional decline: For example, assistance with meals, medication, walking, bathing, shopping, transport
- Behavioural and phycological: For example, visiting services to address loneliness, counselling to address depression, anxiety compulsive behaviours or eating disorders
- Quality of life: For example, managing financial future, mental health, and physical health

New product designs targeted to the passive and frail retirees need to provide financial security and integrating aspects of dealing with physical wellbeing and mental health.

8.3 Protection and security – fiduciary role

A fiduciary is required to support change of focus from income to services because when the services are most needed is likely to be the time when the retiree is least capable of putting these services in place for themselves.

At present, the implementation of 'stay-at-home' services or the shift to 'residential care' is largely undertaken by family members, but with the changing nature of family characteristics, and the increasing possibility that children or aging spouses will become unable to provide the support, we believe there is a role for a 'corporatised fiduciary' acting on behalf of the retiree and in accordance with their pre-determined preferences.

The retiree's needs and wants should be clearly pre-planned with a trusted competent third party to execute decisions when the retiree cannot.

As the boundaries between a retiree moving from the active phase of retirement to the passive or frail phases are not clear and vary for each individual, it requires that 'triggers' are put in place and agreed upon in the active phase.

Triggers can be obvious, such as an accident or sudden health issue, or sometimes less obvious such as a gradual deterioration to a mild cognitive impairment, or even the onset of dementia.

During the active phase the retiree needs to put in place what triggers, or events, will generate the need for the fiduciary to commence acting on their behalf. The fiduciary could be a trustee, fiduciary, financial planner, family doctor, or relative who essentially has a power of attorney to execute the wishes and needs of the retiree.

We suggest that a corporate fiduciary is the better way to go for the long-term benefit of society. See Gribble and Helenius 2017.

8.4 Adequacy

If the retiree is very wealthy there should be minimal issues in delivering the needs and wants of the retiree by way of support services. However, it is likely that, given the present average superannuation retirement balances in Australia, a number of retirees will have inadequate funds to support all of their desires, and hence there will be a need to prioritise. We would suggest that prioritisation should occur during the retiree's active phase, and be revisited annually, or more frequently, to reassess and re-establish the priorities, whilst the retiree is in the active phase.

It may be a separate question to determine what is an adequate amount of real income (and that may be driven by the amount accumulated). This may also require a different level of funding during the accumulation phase of superannuation.

8.5 Education

There can be wide gap between choices made on rational basis, grounded in knowledge and understanding of risks, and choice made based more on other criteria such as ease and consistency with peers. Overall, financial services providers are becoming increasingly aware that consumer choices and actions are not necessarily rational but driven by deep-seated behavioural drivers.

This gap is increased due the information asymmetry between consumers and expert providers. Improving consumer knowledge so more informed choice can be made is a laudable and important social objective. However, it is also a long-term objective which, given low levels of financial literacy, may also be starting from a low base.

In general, retirees need support understanding and navigating the many choices available in entering and during their retirement . Such support can come from many sources. It may be self- managed by individual research. It may be come from trusted advisor, including family, friends and professionals.

The need for education of retirees and potential retirees is clear.

Equally clear is the need for higher levels of education for professional advisors and financial planner. These people provide expert advice their client should have confidence in and trust when making their decisions.

As retirees age the key role of financial planners, fiduciaries, and others who support retiree in their retirement, such as service providers, as trusted advisors will become increasingly important.

8.6 Public confidence

Ensuring that retiree's interests are protected will be crucial for both retiree protection and public confidence.

It is also crucial that public trust is enhanced to support better decision making.

At a principle level this is about service providers being competent and professional in their actions and behaviours and so being trusted by the public to look after their best interest. At a delivery level this can be supported by improved and continuing professional education requirements for service providers and strong regulatory and supervisory actions. Additionally, by some form of code of conduct and enforceable duty of care for advisors requiring them to act in a professional manner would be desirable. A good target to aim for may be the analogy of doctors and their patients. The financial services industry is some distance away from that currently.

Increasing public confidence in 'the system' will also be supported by education of both the users and providers of services.

9 Conclusion

In Australia, the over 80s market:

- Is viable by size as measured by the number of people in it
- Is growing, by numbers of people, at twice the rate of the general population
- Will grow faster based on wealth as over 80s wealth will be leveraged by the 'bulge' of assets emerging as the superannuation system matures
- Needs to be supported by lifelong income streams, integrated with services, as a means to support quality of life
- Is not currently catered to by the superannuation industry.

The second bullet point reflects a global outcome. In more developed countries, with aging populations, the first bullet point is also likely to remain valid.

From a retirement perspective the over 80s market typically consists of passive and frail retirees. The objective is to optimise the quality of life for retirees. This is supported by the services used, which in turn are supported by the income flows available. That is, both income and services are means to the end of optimising quality of life. This group has very different risks, needs and competencies than active retirees. It is a more complex market to serve since the impact of physical and intellectual decline need to be integrated into products and services provided. For many, the two-way interaction with an advisor will need to be replaced by a three-way interaction, including a fiduciary, as the retiree's competencies diminish.

To sustainably meet the needs of this market some fundamental paradigm shifts need to be made:

- Expand the view of the retirement system to move past the provision of income to focus on the uses that income is put to
- Change the target to focus on quality of life, recognising the decline in capacity of aging retirees
- Introduce fiduciaries to protect retiree's best interests in accord with their chosen preferences
- Change the perspective from wealth accumulation to wealth management for life.

To be sustainable, products and service need to meet the reasonable needs for all key stakeholders. In the over 80s market these challenges are larger for all stakeholders - retirees, product and service providers, distributors, regulators and supervisors, and government and community.

We highlight that many of the building blocks are already in place or available. What is missing is the change in strategic perspective to seize the opportunities that flow from putting these building blocks together in new ways with new objectives. We also need to recognise the importance of behavioural issues in developing effective and sustainable solutions.

To successfully meet the needs of the over 80s market we need to progress past the current typical view that retirees are all healthy, wealthy, capable and interested in managing their retirement for their entire lives.

References

ABP 2018. Australian Budget Papers, May 2018.

ABS 2016. Australian Bureau of Statistics, *'Dementia: Australia's Future Leading Cause of Death?,* Catalogue Number 3303.0, September 2016.

ABS 2016b, Australian Bureau of Statistics, '*Disability, Ageing and Carers, Australia: Summary of Findings',* Catalogue Number 4431.0, October 2016.

ABS 2016c. Australian Bureau of Statistics, *'Disability, Ageing and Carers, Australia: Summary of Findings, 2015 – Older People'* Catalogue Number 4430.0, October 2016.

ABS 2017. Australian Bureau of Statistics, *'Household Income and Wealth, Australia 2015-16'*, Catalogue Number 6523.0, December 2017.

ABS 2017b. Australian Bureau of Statistics, *'Dementia and Death in Australia',* Catalogue Number 3303.0, July 2017.

ABS 2018. Australian Bureau of Statistics, *'Australian Demographic Statistics, Sep 2017'*, Catalogue Number 3101.0, March 2018.

Agnew et al 2013. Agnew J R, Bateman H, and Thorp S, *'Financial Literacy and Retirement Planning in Australia*', Numeracy: Vol.6: Issue 2, Article 7, 2013.

AIHW 2016. Australian Institute of Health and Welfare, *'Australia's Health 2016',* Australian Government, September 2016.

ALRC 2016. Australian Law Reform Commission, *'Elder Abuse',* ALRC Discussion Paper 83, December 2016.

ANB 2018. Australian Network on Disability website, *'Disability Statistics'*, March 2018.

APL 2017. *'Trends in home ownership in Australia: a quick guide',* Australian Parliamentary Library, June 2017.

ASFA 2017. The Association of Superannuation Funds of Australia Limited, *'Superannuation account balances by age and gender'*, October 2017.

CIPR 2016. Australian Government Treasury, *'Development of the framework for Comprehensive Income Products for Retirement – Discussion Paper'*, December 2016.

CMI 2017. SIAS and CMI, '*Mortality improvements in the next decade*', Discussion hosted by SIAS and the IFoA Continuous Mortality Investigation CMI Mortality Projections Committee, Staple Inn Actuarial Society, April 2017.

DA 2018. *'Dementia Key facts and statistics 2018'*, Dementia Australia, January 2018.

Gribble and Helenius 2016. Gribble J and Helenius C, '*Lifetime income in a DC world*', IFoA Pensions, Risk and Investment Conference with AFIR, Edinburgh, June 2016.

Gribble and Helenius 2017. Gribble J and Helenius C, *'Designing successful and resilient lifetime retirement income products',* Institute of Actuaries of Australia Summit, Melbourne, May 2017.

Gribble and Helenius 2017b. Gribble J and Helenius C, submission to *'Development of the framework for Comprehensive Income Products for Retirement'* public consultation by the Australian Government Treasury, June 2017.

Lefevre and Chapman 2017. Lefevre A and Chapman M, '*Behavioural economics and financial consumer protection'*, OECD Working Papers on Finance, Insurance and Private Pensions, No. 42, OECD Publishing, Paris, 2017.

MCI 2015. Sachdev PS, Lipnicki DM, Kochan NA, Crawford JD, Thalamuthu A, Andrews G, et al., *'The Prevalence of Mild Cognitive Impairment in Diverse Geographical and Ethnocultural Regions: The COSMIC Collaboration.'* PLoS ONE 10(11), e0142388. doi:10.1371/journal.pone.0142388, 2015.

Milevsky and Salisbury 2016. Milevsky M A and Salisbury T S, *'Equitable Retirement Income Tontines Mixing Cohorts Without Discrimination',* ASTIN Bulletin 46(3), 571-604, 2016.

NSA 2017, *'Better Ways of Assessing Cognitive Health'*, October 2017, National Seniors Australia, October 2017.

Porcel et al 2016. Porcel J P, Ventura-Marco M, and Melia C V, *'Life Care Annuities (LCA) Embedded in a Notional Defined Contribution (NDC) Framework'*, ASTIN Bulletin 46(2), 331-363, 2016.

Qaio and Sherris 2011. Qaio C, and Sherris M, *'Managing Systematic Mortality Risk with Group Self Pooling and Annuitisation Schemes'*, ARC Centre of Excellence in Population Ageing Research Working Paper 2011/4, 2011.

Readiness 2017. *'Retirement Readiness A Comparative Analysis of Australia, the United Kingdom & the United States'* American Academy of Actuaries, Australian Actuaries Institute, and the Institute and Faculty of Actuaries in the United Kingdom), October 2017.

RMP 2017. *'Reverse Mortgage Providers – Australia Market Research Report'*, IBISWorld, October 2017.

Shang and Su 2016. Shang K, Su H, *'Enhancing the Security of Defined Contribution Plans'*, Society of Actuaries Pension Section, 2016.

Sneddon et al 2016. Sneddon T, Zhu Z and O'Hare C, *'Modelling defined contribution retirement outcomes: A stochastic approach using Australia as a case study'*, Australian Journal of Actuarial Practice, Volume 4, 5 -19, 2016

UN 2017. United Nations, *'World Population Prospects: The 2017 Revision - Special Aggregates, DVD Edition'*, Department of Economic and Social Affairs, Population Division (2017), 2017.

WEF 2017. World Economic Forum, '*We'll Live to 100 – How Can We Afford It?*', White Paper, May 2017.

WHO 2002. *'Active Ageing A Policy Framework'*, Second United Nations World Assembly on Ageing, Madrid, Spain, April 2002.

WHO 2017. ' *Global strategy and action plan on ageing and health'*, Geneva: World Health Organization; 2017.

WHO 2017b. '*WHO methods and data sources for global burden of disease estimates 2000-2015,* Department of Information, Evidence and Research WHO, Geneva 2017.

WHO 2017c. *'World health statistics 2017: monitoring health for the SDGs, Sustainable Development Goals'* Geneva: World Health Organization; 2017. Licence: CC BY-NC-SA 3.0 IGO.

WTW 2016. Willis Towers Watson, *'Global Pension Assets Study 2016'*, 2016.

WTW 2017. Willis Towers Watson, *'Global Pension Assets Study 2017'*, 2017.

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