The Retirement Outcomes Continuum

A strategic approach to investments and the retirement phase

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ASFA is a non-profit, non-political national organisation whose mission is to continuously improve the superannuation system, so all Australians can enjoy a comfortable and dignified retirement. We focus on the issues that affect the entire Australian superannuation system and its $2.8 trillion in retirement savings. Our membership is across all parts of the industry, including corporate, public sector, industry and retail superannuation funds, and associated service providers, representing over 90 per cent of the 16.1 million Australians with superannuation.

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Executive Summary

This paper looks at what fund trustees should consider when developing strategies that improve retirement outcomes.

As the superannuation system matures, there is a greater imperative on funds and trustees to ensure they are focused on the long-term. To date, much of the conversation in superannuation has been on the accumulation phase. This is not surprising given that the Australian superannuation system is still maturing, however, the ongoing shift of superannuation assets from the accumulation phase to the retirement phase brings into sharp relief the need for a broader approach.

Central to this is a fund's approach to investing. It is perhaps non-controversial that funds should focus on long-term investments that build wealth for members. However, this can be difficult for funds to sustain. Funds need robust frameworks and processes to provide confidence and incentives to pursue prudent investment strategies at the right time, consistent with the fund's mission to serve the best interests of members.

Member engagement can also help sustain a long-term investment approach. This means not only explaining how long-term investment strategy creates value, but helping members form reasonable expectations of income in retirement, based on the member's specific circumstances and preferences, and in the context of a long-term investment approach. Ultimately, for fund members, a good outcome is that the fund provides outcomes not materially different from those expectations.

An individual member's retirement outcome problem is personal. So, retirement solutions that span an individual member's lifecycle need to take account of the member's circumstances and preferences – which of course change over time.

For the typical defined contributions member, a more fundamental issue that retirement solutions need to better address is mismatch of risk. The key challenge is the development and provision of retirement solutions that would allow members to better deal with fundamental risk mismatch.

Funds also need to ensure 'advice' services are well integrated into the fund's broader retirement income solutions – that emphasise financial outcomes and income replacement. Arguably, ongoing technological advancements (particularly advancements in data analytics and artificial intelligence) will facilitate the emergence of more bespoke investment strategies and retirement outcomes, which will incorporate more detailed personal information. However, it is up to industry to continue to innovate in this area.

A more holistic approach to the provision of retirement outcomes will help Australia's future retirees enjoy a higher standard of living in retirement.

1. Introduction

The focus of stakeholders is shifting. There are numerous industry events and fora that focus on 'post retirement' issues. Industry is advancing research on improving retirement outcomes for individuals – including more bespoke investment and retirement income strategies.[1] In terms of policymaking, government has also become more interested in issues around the retirement phase. While these trends are welcome, arguably what is required is a more holistic approach.

For the superannuation industry, the key challenge is the development and provision of retirement solutions that better meet the retirement outcome needs of *individual* members. In particular, retirement solutions need to take better account of individual member's circumstances and preferences, the risks that individual members' face, and individual members' (sometimes competing) retirement goals[2] – all of which can change over time.

Ultimately, it is the duty of fund trustees to ensure that funds continue to innovate to provide the best possible retirement outcomes for their members. This paper summarises a number of issues that fund trustees should consider when forming a broad-based strategy to improve their provision of retirement outcomes for members.

The superannuation industry is at the very start of dealing with this extraordinarily complex area.

1 *Such as the Member's Default Utility Function project.*

2 *Rice Warner 2017, The next decade … and the long-term future, presentation by Michael Rice at the Rice Warner 2017 Summit, 20 June.*

2. Context: superannuation system assets are shifting to the retirement phase

For the purposes of this paper the defined contribution (DC) sector of the superannuation system can be considered to include people with DC accumulation-phase accounts, but also people who at one time had a DC account but who have since transitioned to the retirement phase and have some form of retirement income product – typically an account-based pension (ABP) or similar product.

It is a long established fact that Australia's population is getting older. Over the next few decades the proportion of people who are of working age will decline, while the proportion of those of retirement age and older will increase (Chart 1). By 2040, population ageing means there will be just over three working-age people for each person of retirement age and older,[3] compared with four today and five just one generation ago.[4]

Chart 1: Population cohorts[5]
(% total population)

Source: ABS and the Australian Treasury[6]

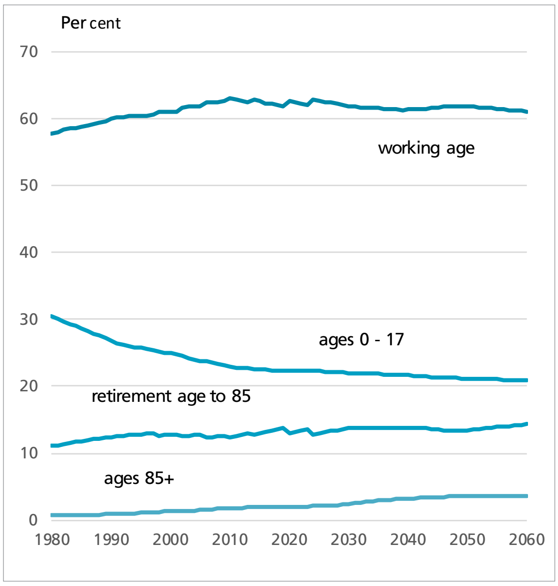
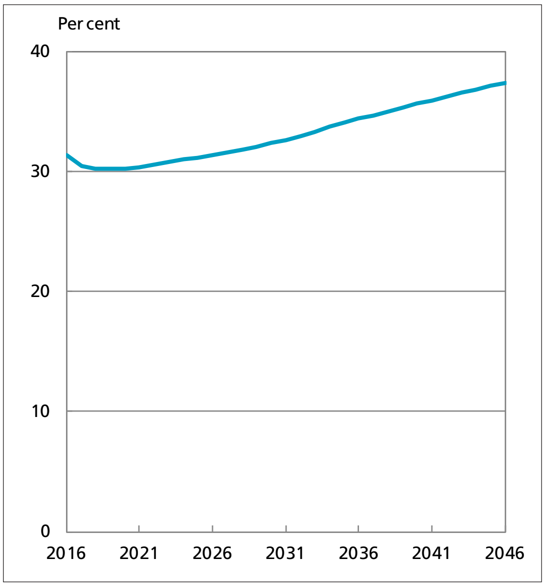


Chart 2: Superannuation assets in the retirement phase
(% total superannuation assets)

Source: Rice Warner



Population ageing will drive the ongoing shift of superannuation assets—at the system level—from the accumulation phase to the retirement phase (Chart 2).

Today, around 30 per cent of assets in the superannuation system are in the retirement phase[7] – where total retirement-phase assets are, broadly speaking, evenly split between institutional superannuation funds and self-managed superannuation funds (SMSFs).[8] By 2040, the share of retirement-phase assets in the superannuation system is projected to be just below 40 per cent.

3 *The effect of ageing on the proportion of people who are of retirement age and older will be offset partially by anticipated changes to Age Pension eligibility (from 65 to 67 over the period 1 July 2017 to 1 July 2023).*

4 *That is, 3.4 working-age people for each person of retirement age and older at June 2060 (retirement age of 67 years), compared with 4.0 at June 2018 and 4.9 at June 1980 (retirement age of 65 years for men and 60 for women).*

5 *Assumes anticipated changes to the eligibility age for the Age Pension from 65 to 67 (over the period 1 July 2017 to 1 July 2023).*

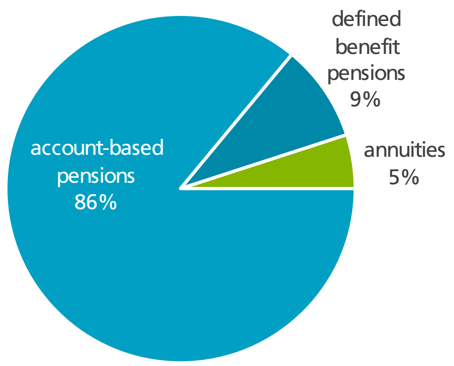
6 *Australian Bureau of Statistics (Australian Demographic Statistics, ABS Cat. no. 3101.0, July 2018 and Population Projections, Australia, ABS Cat. no. 3222.0, November 2013), and The Australian Government the Treasury, 2015 Intergenerational Report: Australia in 2055.*

7 *For institutional superannuation funds around 25% of assets are in the retirement phase, compared with around 40% of SMSF assets.*

8 *The institutional superannuation fund sector also includes public sector funds that were set up under an Act of Parliament (not set up as a trust). These are Exempt Public Sector Superannuation Schemes (EPSSSs). EPSSSs are not regulated by APRA or the ATO, but are supervised by the relevant state government or by the Commonwealth Government (as the case may be).*

With respect to the retirement phase, the vast majority of benefits in the system are in account-based products.[9] Indeed, for a member of an institutional superannuation fund, an account-based product is likely to be the only retirement income product offered by that fund. In the institutional funds sector around 86 per cent of retirement-phase benefits are in account-based pension products (including transition to retirement income streams). In contrast, only around 9 per cent of total retirement phase benefits (in the institutional sector) fund DB income streams (Chart 3).

Chart 3: Types of retirement income products
(% members' benefits, institutional superannuation funds)



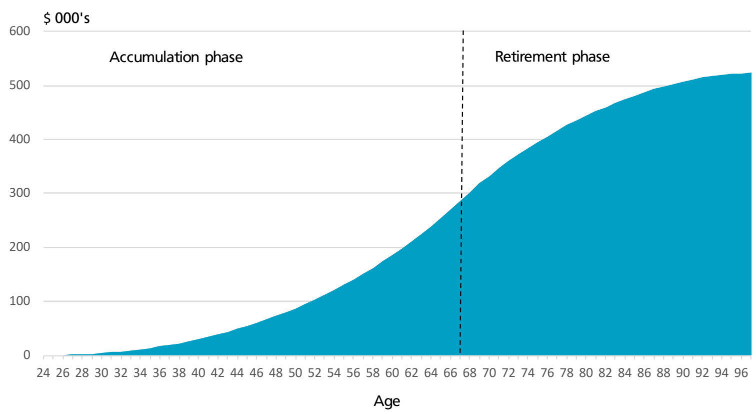
Source: APRA and ABS

A small proportion of retirement-phase benefits are in annuity products, with the bulk in 'traditional' term annuities. So-called hybrid products – which have features of both account-based and annuity products – comprise a very small share of the market. Some products, such as term allocated pensions, are closed to new members.

The retirement phase matters for an individual's investment earnings

A further point worth noting is that for a typical DC member[10] (who has a DC account during the accumulation phase and then transitions to some form of retirement income product), investment earnings generated during the retirement phase comprise a large proportion of total investment earnings. Chart 4 shows the accumulated investment earnings during both phases for a stylised individual cameo (details in footnote).[11] In this case, almost 50 per cent of the individual's investment earnings are generated in the retirement phase.

Chart 4: Accumulated investment earnings for an individual (stylised)



Source: ASFA

9 *This includes allocated pensions.*

10 *A definition of DC member as it is understood in this paper can be found in the Appendix.*

11 *The cameo assumes that the individual starts work at 23 years of age, retires at 67, and dies at 97. The individual earns average wages throughout his/her career.*

3. The risk mismatch problem for fund members

An individual's retirement outcome problem is personal. For an individual DC member, the retirement outcome problem is, in essence, one of managing personal assets over his/her lifecycle in order to meet potential expenditures in retirement – the discounted present value of which is the individual's liabilities at a particular point in time. Superannuation is the typical asset vehicle by which individuals accumulate savings for expenditure in retirement, although by no means the only vehicle. Retirement expenditures (liabilities) include general goods and services, but also aged care and health care requirements.

For a DC member, there are numerous sources of risk on both sides of the ledger. For example, on the asset-side, a DC member in the accumulation phase is exposed to portfolio risk – the risk of low investment returns on financial assets. Portfolio risk also is relevant for a retired member with an ABP (or similar product). The timing of returns in the context of a member's lifecycle also matters (sequence of returns risk). On the liability-side, a retired member with an ABP is exposed to inflation risk – the risk that prices of goods and services will be higher than expected. A retired member is also exposed to the risk of outliving his/her savings (or longevity risk).

For the typical DC member, a more fundamental issue is that he/she faces a significant mismatch of risk. As noted above, the bulk of DC members who stay in the superannuation system transfer their accumulated assets (in full or in part) to an ABP or similar product. And some members who have a default MySuper accumulation product can be transferred to a 'trustee choice' ABP that has the same, or a very similar, investment strategy. With respect to the specifics of risk mismatch:

- **On the liability-side**, a member needs to make ongoing purchases of goods and services throughout his/her retirement period. Although some expenditure can be a matter of discretion, it is certainly the case that minimum expenditures are required to sustain a modest standard of living. In addition, some non-discretionary expenditures can escalate over the course of retirement – such as health and aged-care costs. Further, since an individual's lifespan is uncertain, so is the duration of expenditures.

- **On the asset-side**, typical members with an ABP themselves manage the funding of expenses via capital drawdown on an asset base – the value of which is subject to significant risk. Particular risks include the risk of low returns (portfolio risk) and the timing of low returns (sequence of returns risk).

For the superannuation industry, the key challenge is the development and provision of retirement outcomes that better meet the retirement needs of DC members. In particular, funds need to take better account of individual members' circumstances and preferences, need to better balance individual members' (sometimes competing) retirement goals,[12] and need to better account for the risk mismatch that DC members face.

The following sections of this paper summarise a number of issues that fund trustees should consider when forming a broad-based strategy to improve their provision of retirement outcomes for members.

12 *Rice Warner 2017, The next decade … and the long-term future, presentation by Michael Rice at the Rice Warner 2017 Summit, 20 June.*

4. Noting community expectations: that the system delivers for members

The need for a more holistic approach to the provision of retirement outcomes has been brought into sharp relief with the recent scrutiny of the superannuation industry. This includes the Productivity Commission's (the PC's) multi-stage review of the efficiency and competitiveness of the superannuation system, but also the Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry (the Royal Commission), which focused on whether the conduct of organisations has fallen short of community standards and expectations.

In response to both of these processes, ASFA has argued that, broadly speaking, the Australian superannuation system delivers good outcomes for the vast majority of members. Of most relevance to this paper, ASFA has noted that the superannuation system needs to continue to evolve to meet the needs of consumers where 'one size does not fit all'.[13]

It should be noted that public opinion of superannuation is generally positive. The PC's own survey of superannuation fund members found that the majority of individual members have relatively high levels of satisfaction with the overall performance of their fund(s), with only a small minority (around 10 per cent) expressing some degree of dissatisfaction. While most respondents thought their fund's performance had not changed much over the previous few years, where they did, it was typically for the better.[14]

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13 *ASFA 2018, Response to the draft report Superannuation: Assessing Efficiency and Competitiveness, 13 July.*

14 *Productivity Commission 2018, Superannuation: Assessing Efficiency and Competitiveness: Draft Report, Canberra.*

5. Ensuring the best interests of members: trustee obligations

Trustees of APRA-regulated superannuation funds are subject to extensive legislative and prudential requirements, as well as overarching fiduciary duties, to help ensure trustees act in the best interests of their members – and so deliver quality retirement outcomes.

In broad terms, the obligations of trustees of Registrable Superannuation Entities (RSEs) are formalised in the Superannuation Industry (Supervision) Act 1993 (the SIS Act). The Cooper Review noted that the SIS Act reinforces the common law's orientation of trustees towards the best interests of members and emphasises that the sole purpose of the superannuation system is generally to provide retirement benefits to members.[15]

That said, it is fair to say that the SIS Act was not written with a focus on retirement outcomes. For example, there are covenants in the SIS Act that set out obligations on trustees to formulate, review regularly and give effect to investment, risk management and insurance strategies – but there are no specific requirements in respect of retirement income strategy.

The need for a retirement income covenant?

The Government (Treasury) has been consulting on possible options and scope of a retirement income covenant in the SIS Act in the context of its broader regulatory framework for Comprehensive Income Products in Retirements (CIPRs). In its submission to Treasury, ASFA was broadly supportive of a retirement covenant being inserted into the SIS Act as part of the Government's framework (although ASFA does not support compulsion for trustees to develop and offer a CIPR that contains a longevity component).[16]

Although the focus of this paper is on funds' approach to the provision of retirement outcomes, rather than potential regulatory reforms, a few points are worth noting regarding any retirement covenant.

- In terms of an over-arching objective, ASFA considers that a retirement covenant should provide the impetus for funds to develop a retirement income strategy and framework, but also support fund members to develop a personal retirement income solution suited to their circumstances, needs and objectives.
- Any covenant should be principles-based rather than prescriptive – in line with the existing covenants in the SIS Act. This is particularly important given that determining a member's best interests in respect of retirement is complex. In part, this reflects the (often) competing objectives involved with delivering retirement outcomes. For example, there is a tension between providing members with an 'optimal' stream of income for expenditure in retirement and providing members with flexibility to access their retirement benefits.[17]

APRA member outcomes

Of more direct relevance to the subject of this paper is APRA's member outcomes assessment framework, which is due to take effect from 1 January 2020.

The member outcomes framework incorporates an outcomes assessment, which will require an RSE licensee to annually benchmark and evaluate their performance in "delivering sound, value-for-money outcomes" to all fund members,[18] and determine whether these outcomes can be improved into the future.

For any RSE licensee, an outcomes assessment would be broader than just investment returns. A licensee would have to take account of a broad range of factors, including product features and fund expenditure on the outcomes provided to members. An outcomes assessment would apply to all types of superannuation products, including retirement income products.

- It is worth noting that ASFA, while acknowledging that industry should work to deliver better outcomes for members, considers that member outcomes assessments (in their current form) will add to fund costs without providing all the desired benefits.

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15 *Australian Government 2015, Review into the Governance, Efficiency, Structure and Operation of Australia's Superannuation System (the Cooper Review): Part Two, Chapter 2.*

16 *ASFA 2018, Response to the Consultation on the Retirement Income Covenant Position Paper (Position Paper).*

17 *Ibid.*

18 *APRA 2019, APRA finalises new measures to strengthen outcomes for superannuation members, 12 December (https://www.apra.gov.au/media-centre/media-releases/apra-finalises-new-measures-strengthen-outcomes-superannuation-members).*

6. Revamping the fund mission

For trustees of superannuation funds, developing a holistic approach to the provision of retirement outcomes starts with the fund mission – a high-level articulation of the core objectives of the fund.

Most superannuation funds have a mission statement, or similar documentation. And it is certainly the case that a typical fund's mission statement incorporates objectives around advancing the best interests of fund members. Typically, particular objectives tend to focus on delivering strong investment returns for members and providing a range of valuable member services. However, in respect of a holistic approach to the provision of retirement outcomes, trustees may have to revisit their fund's mission.

Arguably, the main function of the fund mission is to frame behaviour and decision-making throughout the organisation and the fund's broader value chain, which includes outsourced service providers. In the context of the provision of retirement outcomes, a fund's mission ideally should incorporate the following elements:

- Formulation and delivery of investment approaches that focus on long-term wealth creation (Section 7).
- Commitment to produce retirement outcomes that align with member expectations (Section 8).
- Provision of retirement solutions that reflect members' particular requirements, circumstances and preferences (Section 11).

With respect to the second point, it is unlikely that more than a very small proportion of a fund's members would be sufficiently engaged to read the relevant information (let alone understand how the mission relates to their personal circumstances).

As such, the fund mission should shape the broader engagement a fund has with its membership – with the aim of influencing members' perceptions and behaviour. In this regard, a fund should help members form reasonable expectations of their income in retirement. This would include helping members understand:

- how long-term investment strategy creates value
- how investment risk relates to retirement outcomes.

Ultimately, for a fund's members, a good outcome is that the fund enables members to form reasonable expectations of their retirement incomes, and that the fund provides outcomes not materially different from those expectations.[19]

19 *Towers Watson 2014, Rethinking the Superannuation Fund Mission: A Member-focused Approach, July (https://www.towerswatson.com/en-AU/Insights/IC-Types/Survey-Research-Results/2014/07/Rethinking-the-Superannuation-Fund-Mission).*

7. Focusing the fund investment approach: long-term wealth creation

If one accepts that the ultimate mission of funds is to deliver quality retirement outcomes, it is non-controversial that a fund's investment approach should focus on long-term investments that build wealth for members, and in particular, investments that generate long-horizon cash-flows.

There is an extensive literature that espouses the benefits of such an approach. For example, Keith Ambachtsheer argues that long-term investing is the best way for funds to improve the 'affordability' of retirement income provision, and in this regard identifies three key advantages of long-term investing (compared with alternatives):[20]

- The potential to invest in unlisted and other illiquid assets, which provides access to illiquidity premia (in investment returns) and provides some diversification benefits.
- The capacity to pursue investments where the timing of payoffs is open-ended.
- The ability to exploit opportunities arising from the actions or aversions of short-term investors.[21]

The key challenge for a fund is to develop robust frameworks and processes that will help sustain a long-term investment approach. Well-considered and well-implemented frameworks and processes provide funds, and outsourced service providers, with the confidence and incentives to pursue prudent investment strategies, which might differ from those that have been broadly adopted, and which may be perceived to be 'wrong' in the short term,[22] but are consistent with the fund's mission and serve the best interests of members.[23]

Setting a long-term investment approach

Trustees should ensure that the fund's commitment to a long-term investment approach is reflected in the fund's stated investment beliefs. There is no specific form that investment beliefs should take. However, the key guiding principle is that they need to outline how the fund can create value for its members.

An example of good practice is the set of investment beliefs for the Ontario Teachers' Pension Plan (OTPP), which comprises a set of 12 guiding principles that define the OTPP's philosophy for earning superior returns and managing related risks to ensure the long-term sustainability of the plan (see Case Study).

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20 *Ambachtsheer, K. P. 2016, The Future of Pension Management: Integrating Design, Governance, and Investing, Wiley.*

21 *Ibid.*

22 *Clark, G. L. and Urwin, R. 2007, 'Best-Practice Investment Management: Lessons for Asset Owners', Oxford-Watson Wyatt Project on Governance, October.*

23 *Johnson, K.L. and Jan de Graaf, F. 2009, Modernizing Pension Fund Legal Standards for the 21st Century, Network for Sustainable Financial Markets: Consultation Paper No. 2, February.*

Case Study: Investment beliefs for the Ontario Teachers' Pension Plan[24]

Who We Are…

1. Our people drive our success. We develop, strengthen and retain our intellectual capital so we can remain successful through industry leadership and innovation. Collaboration within and among our asset classes is the key to unlocking our team's full value.

2. The best investment results come from people who are empowered to make decisions and are accountable for them. We respect humility and understand that not every decision will result in success.

3. The Ontario Teachers' brand is a strong and valuable asset. Our brand and culture give us a competitive advantage in attracting quality people and investments because they reflect a reputation for excellence and integrity, earned over many years. We collectively share a responsibility to protect and cultivate our brand.

How We Invest…

4. Taking risk is necessary to earn the returns required to meet our pension obligations. In so doing, we accept we will experience periodic investment losses.

5. We engage in active management, with a global perspective, to earn higher returns because we believe markets can be inefficient. Our approach to these inefficiencies is dynamic; we respond to market conditions. We pursue market inefficiencies that often exist in illiquid investments.

6. Our investment strategy considers our risk profile, our plan assets and our liabilities. Our long investment time horizon supports our primary goal of generating the superior returns required to fund our members' current and future pensions.

7. Total fund diversification, through effective portfolio construction, is fundamental to our success. Diversification allows us to spread risk across key factors such as time periods, geography, and economic outcomes, which reduces the adverse impact of any one investment loss on the fund overall.

8. Strong relationships support our success. We identify and cultivate relationships with like-minded partners globally to broaden our investment reach. We build success together based on cooperation, trust and transparency.

9. The returns we can expect will not be constant over time. Therefore, our investment strategy must adjust to reflect the potential reward relative to the investment risk. We must be flexible and disciplined as we adapt to business cycles and shifting investment environments.

10. Innovative strategies and our long-term horizon are powerful investment tools when used with sound risk and liquidity management. Derivatives can be used to improve diversification, which in turn reduces our total fund risk.

11. Investing is a business. As such, our results are net of our costs. Costs should be managed and linked to the investment value creation process.

12. Good governance is good business and contributes to sustainable values. We continually consider all risks in our investment process, including those related to environmental, social and corporate governance factors. We expect management teams and boards of directors to be responsive to their shareholders. We lead by example.

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24 https://www.otpp.com/investments/performance/investment-strategy/our-beliefs

Taking the above example of good practice, a few points are worth emphasising.

Firstly, the set of investment beliefs makes clear that a long-term investment philosophy is central to wealth creation. By extension, investment beliefs also frame the fund's investment strategies.

In this regard, there is something of a conflict that funds have to manage. The typical DC accumulation fund has a number of tailor-made investment options for members, each with a particular investment strategy – for example, a growth-oriented option with a relatively high allocation to equities. The typical DC fund also has a default product. The range of options reflects the range of risk appetites among individual members, as well as members' desire for choice. Notwithstanding this, it is most certainly the case that the fund will have a view regarding the 'best' strategy for building wealth over the long-term.

A second point is that funds need to set appropriate investment objectives (or targets). Within a particular fund, different schemes will have different investment objectives – consistent with underlying investment strategy. However, the common consideration is that investment objectives should be set such that they support the fund's overarching long-term investment philosophy.

Thus, broadly speaking, investment objectives should embody a long-term horizon and focus on long-term investment returns. Investment performance should be measured and assessed against those long-term objectives. As a corollary, investment risk should be defined in terms of the failure to achieve long-term objectives.[25]

Ensuring a long-term investment approach is reflected in fund investment functions

It is the responsibility of management to ensure that the fund's long-term investment approach permeates all of the fund's investment-related functions, on an ongoing basis. This includes various investment functions within the fund, but also investment functions in the fund's broader value chain – in particular, external asset consultants and investment managers.

Effectively, this requires aligning the interests of investment professionals – in a fund's value chain – with the overarching investment approach. This issue has been explored at length in the literature, however it is worth emphasising a number of key points.

In a recent (local) paper Neal and Warren (2015) highlight two particular challenges for funds. The first is securing alignment along the chain of delegations where time horizons may differ. The second relates to the unavoidable need for fund trustees to monitor investment professionals, but without the option of reserving judgement for long time periods. Neal and Warren note that it is this discord in horizons that makes long-term investing so difficult to pursue and sustain.[26] Challenges are exacerbated where investment functions are outsourced.

With a specific focus on ensuring a long-term investment approach, funds should seek to develop the right culture and align performance incentives.

- **Develop the right culture:** fund trustees and senior executives should work to develop the right culture within the organisation – one which supports the building of long-term wealth for the funds' members. This entails more than just employing the right people. It means implementing frameworks that foster belief in the long-term approach. In practical terms, this may include ongoing emphasis of a long-term investment approach, including in the fund mission, the fund investment approach and the investment objectives for fund schemes (all as outlined above).

- **Align performance incentives:** performance incentives need to encourage a commitment to a long-term investment approach among asset consultants and investment managers (and alike).

  In public markets, the typical duration of an investment mandate (for investment management) is in the order of three years – where investment agreements typically allow agents to terminate a mandate with very short notice.[27] Clearly, this is not compatible with performance evaluation in the context of long-term investing. However, there are significant practical barriers to performance evaluation and remuneration over longer periods.

25 *Neal, D. and Warren, G. 2015, Long-Term Investing as an Agency Problem, Centre for International Finance and Regulation, working paper no. 063/2015.*

26 *Ibid.*

27 *In the case of private markets, mandates may include a defined/expected tenure.*

As such, funds may need to be innovative to design evaluation and remuneration structures where a portion of remuneration reflects sustainable value created.[28] For example, one potential approach is to reward behaviour that is deemed consistent with pursuit of long-term investment objectives, as well as to reward outcomes.[29]

As a corollary, funds should seek to limit their participation in short-term performance comparisons. A range of organisations publish league tables of fund investment performance over short-term periods. Top performers typically receive recognition – in the trade press and/or the general media.

However, a fund's participation in short-term performance comparisons may be to the detriment of fund members. To the degree that a fund will alter its investment approach/strategy in order to improve its shorter-term performance, this may lead to lower long-term investment returns (than otherwise would be the case).[30]

Bringing members along with a long-term investment approach

Ultimately, gaining acceptance from fund members, or at least not losing the confidence of members, for a long-term investment approach is necessary if that approach is to be sustained (obviously acceptance from members would be implicit, rather than explicit). This is largely an issue of member engagement, which is discussed in the next section.

28 *Johnson, K.L. and Jan de Graaf, F. 2009, Modernizing Pension Fund Legal Standards for the 21st Century, Network for Sustainable Financial Markets: Consultation Paper No. 2, February.*

29 *Neal, D. and Warren, G. 2015, Long-Term Investing as an Agency Problem, Centre for International Finance and Regulation, working paper no. 063/2015.*

30 *Johnson, K.L. and Jan de Graaf, F. 2009, Modernizing Pension Fund Legal Standards for the 21st Century, Network for Sustainable Financial Markets: Consultation Paper No. 2, February.*

8. Improving member engagement

In essence, the core purpose of member engagement is more than just providing information or answering member queries. Rather, it is about aligning the expectations of members with what the fund can deliver for them. In the context of a holistic approach retirement outcomes, this involves:

- communicating the benefits of a long-term approach to investing
- helping members form reasonable expectations of income in retirement
- providing members with information about what they can do to better achieve their retirement goals, and the tools to operationalise those decisions.

Communicate the benefits of investing for the long-term

In member communications, funds should seek to explain how a long-term strategy creates value, and that long-term investing entails taking positions where the ultimate payoff may take time to realise.

In reporting investment performance to members, funds should focus on longer-term metrics. This would include an emphasis on long-term fund returns, rather than short-term performance. It would also frame long-term returns in terms of the fund's long-term investment objectives. This is not to suggest that information on current balances (and alike) should not be reported to members but should be provided in the context of a target income framework.

As noted in the previous section, funds should seek to limit their participation in short-term performance comparisons. While participation may directly affect fund investment approach/strategy, it may also adversely influence consumer decision-making. In particular, it is likely that a small proportion of consumers will base their choice of fund/investment strategy on outcomes of short-term performance comparisons.[31] Of course, this behaviour may feed back into fund investment approach/strategy.

Help members form reasonable expectations

The fund should help a member form reasonable expectations of his/her income in retirement, based on the member's specific circumstances and preferences, in the context of a long-term investment approach.

Funds should present subjective income targets for members – that is, reasonable targets for income in retirement that are based on personal factors – such as current balance, estimates of future contributions and investment returns, and income from other sources such as the Age Pension.[32] Funds could also indicate the number of years that the target income would be paid.

- It has been noted elsewhere that the projection of future benefits as an income stream can minimise member concern that can arise during periods of poor market performance – putting into perspective, particularly for younger members, that market 'falls' may not have a material impact on ultimate benefits.[33]

- An important and related point is how to incorporate investment returns. In recent years investment returns have been strong, and account balances have grown as a result, however there is no guarantee that returns will be as high going forward. To remove the 'income illusion', future returns may need to be discounted (such as by using annuity rates).

Funds could also make use of retirement benchmarks. For many years, ASFA has published budget standards for older Australians. The ASFA Retirement Standard provides annual budgets needed to fund either a comfortable or a modest standard of living in the post-work years. ASFA also publishes estimates of required balances at retirement (to fund a particular standard of living).[34]

- That said, the ASFA Comfortable benchmark (or alike) should be promoted as being aspirational rather than necessary. For some members, say those on lower incomes, such benchmarks maybe unrealistic (of course, benchmarks may become less/more realistic over a person's working life).

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31 *Johnson, K.L. and Jan de Graaf, F. 2009, Modernizing Pension Fund Legal Standards for the 21st Century, Network for Sustainable Financial Markets: Consultation Paper No. 2, February.*

32 *Towers Watson 2014, Rethinking the Superannuation Fund Mission: A Member-focused Approach, July.*

33 *Ibid.*

34 *See ASFA website (https://www.superannuation.asn.au/resources/retirement-standard)*

For any individual, changes in circumstance may affect the range of potential retirement outcomes. These can include realised investment returns, and changes to an individual's work and remuneration. In this regard, the fund should help members reassess their expectations (of their retirement outcomes).

By the same token, funds may have to revise their own targets – for example, where there has been a fundamental re-think of the long-term investment environment. It would be crucial that information about the effects of any such change are clearly communicated to members.

Help members achieve a more aspirational target

Funds should provide members with information about what they can do to better achieve their retirement goals, and the tools to operationalise those decisions.

Funds should communicate information to members regarding what a member would have to do in order to achieve a more aspirational target – that is, extend working life, increase periodic contributions or change investment strategy. In this regard, risk needs to be part of the conversation – in particular the risk required to achieve particular outcomes, and the likelihood of success.

9. Provision of quality, holistic 'advice' services

Decisions concerning retirement outcomes are complex, and most individuals lack the financial expertise required to self-govern their retirement savings effectively.[35] This necessitates the provision of quality, holistic advice.

Broadly speaking, advice should be considered as any mechanism that obtains information about a member – such as individual circumstances and preferences – to inform decision-making (either by the member or by another entity on behalf of the member).

From this perspective 'advice' is far broader than 'traditional' forms of advice, such as personal financial advice – where an advisor considers a range of information about a member and develops an appropriate plan. In this regard, a broader definition of 'advice' would include:

- robo-advice services;
- algorithms that allow individuals to 'self-assess';
- smart defaults – where 'advice' is the output of an algorithm that infers the preferences of a member.

It is likely that non-traditional forms of 'advice' will become widely used – facilitated by ongoing advancements in technology and data analytics (which is itself an emerging field), particularly given that the affordability of traditional personal advice is likely to remain a barrier for many members.

A broader point is that advancements in non-traditional forms of 'advice' may lead to the 'inversion' of current business models – where quality 'advice' could be provided en mass to members, and this would be the major driver of investment and retirement decisions (whether explicit or implicit).

That said, there are a number of major challenges for funds (and relevant service providers) in the development of non-traditional forms of 'advice':

- The quality of advice is a function of the information upon which it is based. Funds (or service providers) will need to improve the scope and quality of their data regarding members' personal preferences and circumstances.

- Funds (or service providers) will have to improve their data analytics capabilities to process member information and derive more sophisticated insights about their members.

- Funds will need to ensure 'advice' services are well integrated into the fund's broader retirement income solutions – that emphasise financial outcomes and income replacement.[36]

Crucially, 'advice' should be provided throughout different stages of a member's lifecycle, rather than just at the point of retirement. There are two key benefits of such an approach. Firstly, decisions made early in a member's lifecycle can have a significant bearing on the member's retirement outcomes. Secondly, a member's circumstances can change markedly during a member's lifecycle. This is explored in more detail in the next section.

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35 *Willis Towers Watson 2011, DC Best Practice Governance, March.*

36 *Drew, M. E. and Walk, A. N. 2014, How Safe Are Safe Withdrawal Rates in Retirement: An Australian perspective, Financial Services Institute of Australasia, March 2014.*

10. Setting a 'personalised' framework as a basis for decision-making

The basis for 'advice' should be based on members' particular circumstances. A useful way to frame a member's circumstances is in terms of his/her balance sheet (Table 1), and more broadly the member's household balance sheet – since an individual's income and expenditure in retirement should be considered in the context of the income/expenditure of the household.[37] While the superannuation system is designed around the individual, not the household, around 65 per cent of people retire with a partner.

Table 1: Member balance sheet and main risks for asset and liability components

Asset/Liability	Risk Type
Asset side – source of income	
Financial assets: superannuation/other investments	Market
Age Pension/other government support	Change in government policy
Family home	Market
Human capital	Unable to find work/ill-health
Liability side – uses of income	
Living expenses	Longevity, inflation generally
Health care	Early/severe health issues
Accommodation, including aged care	Early care required

Key elements of the member balance sheet

Superannuation savings is one of the most significant assets individuals hold at retirement. An individual's broader set of assets typically include the family home, business assets (for self-employed persons), the discounted present value of future Age Pension payments (and other government benefits), human capital (that is, the individual's capacity to earn income from work), and future intra family (monetary and in-kind) transfers.

An individual's liabilities represent his/her future stream of potential expenditures, which reflect a combination of essential and aspirational consumption goals.[38] These include general personal consumption, accommodation expenses (owner occupation, aged-care or otherwise), and health-care expenditures. An additional liability is the desire to leave a bequest. Surveys of retiree attitudes suggest that leaving a bequest remains 'very important' to 'somewhat important' for around half of Australian seniors.[39]

a) The family home

The family home is typically the largest asset of an individual/household. Currently, around 80 per cent of people aged 65 and older own their own primary residence, with the vast bulk of the those—around 90 per cent—having no mortgage. In aggregate terms, it is estimated that the home equity of retiree households totals around $1.0 trillion.[40] Home equity can be a source of funds for expenditure in retirement – including through downsizing or equity withdrawal.

The value of home equity also can be considered relative to future requirements for accommodation (a liability), whether this is in the form of owner occupation, aged care or otherwise. To the extent that equity in the family home exceeds this liability, the surplus represents a net (dwelling) asset.

In this regard, home equity can be used to directly fund the cost of accommodation in retirement. This includes using home

37 *It is worth noting that the following framework would be familiar to many financial advisors. Indeed, as consistent with professional codes of practice, financial advisors frame their clients' financial plans in terms of a member's circumstances – either explicitly or implicitly.*

38 *Martellini, L. 2016, 'New Frontiers in Retirement Solutions', Investment and Pensions Europe: Research Insights, Spring.*

39 *Productivity Commission 2018, Superannuation: Assessing Efficiency and Competitiveness, 29 May*

40 *ASFA calculations.*

equity as collateral to borrow funds for an accommodation bond. The Productivity Commission notes that refundable accommodation deposits were about $22 billion in mid-June 2016.[41]

b) Age Pension/other income support

An individual's eligibility for a full or part Age Pension depends on their personal assets and income – and subject to assets and income tests. The operation of the Age Pension asset/income tests means that Age Pension payments phase-out depending on assets/income at a particular point in time.

Looking ahead, a key source of uncertainty for retirees is the future settings for the assets/income tests. In recent years, the government has tightened the Age Pension assets/income tests. In effect, for a given superannuation balance and income, tighter tests reduce potential retirement income (all else being equal).

c) Retirement savings

In retirement, superannuation assets can be realised as a stream of income payments, or as lump sum amounts, or (more rarely) used as collateral for new loans. Some retirees will take their superannuation as a lump sum at retirement (in part or in full) to purchase new assets or clear outstanding debts (both which amount to a reorganisation of household assets), or to fund large consumer expenditures.[42]

Risk mismatch on the member balance sheet

Each of the components of the individual's balance sheet, on the asset and liability side, is subject to risk. In general terms, a few points are worth making:

- For any member, the types of risks will change over his/her lifecycle – in terms of both absolute intensity and relative importance. Some risks only become 'active' in retirement.

- In general terms, as a member ages – and in particular as he/she shifts from the accumulation to the retirement phase – the risk landscape becomes more complex.

- In addition, as a member ages his/her capacity to bear risk diminishes. For example, as a person ages, it becomes more difficult for him/her to find/do work,[43] and therefore to generate labour income.

For the typical DC member, the fundamental issue is that he/she faces a significant mismatch of risk.

On the liability-side, a retiree will need to make ongoing purchases of goods and services to support a particular standard of living in retirement. For a typical member, this expense stream would be expected to be relatively stable and predictable over time. That said, expenditure on some items can escalate through retirement, such as healthcare and aged-care expenditures.[44]

On the asset-side, a member needs to manage his/her assets – prior to and during retirement – in order to fund retirement expenditures, where the member's assets are subject to significant risk.

For a typical DC member, the key risk is that the member's portfolio of assets will lose value. For a DC member with exposure to a diversified set of assets (within each asset class), portfolio risk largely reflects sources of systemic risk, and in particular market risk.

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41 *Productivity Commission 2018, Superannuation: Assessing Efficiency and Competitiveness: draft report, 29 May.*

42 *Productivity Commission 2018, Superannuation: Assessing Efficiency and Competitiveness: draft report, 29 May.*

43 *Cooper, J. and Pfau, W. 2014, The Yin and Yang of Retirement Income Philosophies, Challenger.*

44 *With regard to health costs, the government provides a degree of insurance, including via the Medicare system and the Pharmaceutical Benefits Scheme. However, there is also the potential for out-of-pocket costs. Individuals can manage this risk by taking out private health insurance, although this may be unaffordable for some.*

In the context of a member's lifecycle, the timing of losses also matters (sequence of returns risk). For a DC member, risks around the timing of losses are particularly pertinent in the lead up to retirement, but also in retirement. This is best illustrated by way of examples:

- At retirement, members may make decisions that can lock-in portfolio losses. For example, for a DC member who chooses to purchase an annuity (or similar product) following a loss in portfolio value, the effect of the loss on the individual's retirement income is permanent.
- At the point of retirement, a DC member may simply transfer his/her assets from an accumulation product to an ABP – with a more defensive asset allocation. If portfolio losses prior to this are due to a fall in the prices of growth assets, then this will limit recovery in portfolio value.
- Even if the same portfolio is retained, the individual will be drawing down his/her balance – so that a recovery in prices will be from a lower base (of portfolio value). As such, the timing of any recovery in prices also matters – the longer it takes, the greater the impairment to retirement income.
- This latter point applies to the whole retirement period.

The above framework makes clear that for any individual the calculus of risk is complex and personal. Individuals have different risk appetites, which can change over time. And the particular risks faced by an individual will depend on specific personal/household circumstances, which also change over time.

11. Developing customised retirement solutions

Developing retirement solutions is a hugely challenging and complex area. Superannuation funds need to offer retirees solutions that meet a number of sometimes competing goals, which differ among members according to their personal preferences.[45]

Retirement solutions: optimising utility

Conceptually, in the provision of an individual member's retirement outcome, the funds' task is ultimately one of optimising the member's 'utility' – that is, the member's (expected) satisfaction received from 'consuming' future (potential) income.

With respect to a member's utility, one can identify a number of generally held preferences. Bell et. al. (2017) propose a set of 'sensible' preferences (some of these tend to counteract each other):

- Members prefer higher (rather than lower) income in retirement.
- Members would prefer a smooth rather than a volatile income stream.
- It would be undesirable for a member to outlive their retirement savings (or the income stream it generates).
- Members place some value on the residual benefit at death.
- Members are economically risk averse – that is, the size of the joy experienced from a higher level of consumption is less than the size of the pain experienced by an equivalently sized reduction in consumption.

Fund members are heterogenous with respect to their particular preferences. In the above framework, effectively this means that each member would assign (implicitly) different parameter values for each of the particular 'preference functions', and that each member would assign different weights to the various functions, when considered in combination. Further, a member's preferences may change over time as he/she ages.[46]

Retirement solutions: dealing with a member's risk mismatch

For many DC members, the set of preferences as listed above may not be fully reflected in their superannuation investments or products – particularly with respect to risk.

For example, the bulk of DC members who stay in the superannuation system transfer their accumulated assets (in full or in part) to an ABP or similar product. For some funds, members in default MySuper accumulation products can be transferred to a 'trustee choice' ABP that has the same, or similar, investment strategy.

As noted in the previous section, a DC member in these circumstances would bear a significant mismatch of risk. This is particularly pertinent given that while investment returns have been strong over recent years, there is no guarantee that returns will be as high going forward.

Consider the following stylised case study:

- A member has a balance of retirement of $500,000. This balance is high in terms of current median/average balances for people of retirement age, but not for later generations – who will have contributed at higher (Superannuation Guarantee) rates for their entire working life.

- Assuming a rate of return on investment in retirement of 8 per cent, and current rules around assets/income tests for the Age Pension, the member could derive an annual income of $43,000 (in line with the ASFA Comfortable Retirement Standard Budget), and still have funds for a bequest.

- If, however, returns are only 4 per cent, then the same income would see the member's balance depleted by the age of 85. This ignores any escalation of health and aged-care costs.

Although this is a stylised example, and it is unlikely that an individual would draw down income as presented in the 'low-growth' scenario, it makes clear the issue of risk mismatch, and that the burden of that mismatch is borne by the DC member.

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45 *Rice Warner 2017, The next decade … and the long-term future, presentation by Michael Rice at the Rice Warner 2017 Summit, 20 June.*

46 *Bell et al (2017), An introduction to the Member's Default Utility Function, version 1.*

Retirement solutions: Funds' approach

The key challenge is the development and provision of retirement solutions that better meet the retirement outcome needs of members. In particular, retirement solutions that would allow members to take better account of circumstances and preferences, and deal with fundamental risk mismatch.

- Note that investment products (and combinations of products) are probably best considered as mechanisms to gain access to a particular approach to investing and risk management, rather than a 'product' per se.
- For example, some members in retirement may have a combination of an ABP and an annuity to achieve a particular approach to investing/risk management in order to deliver an expected income stream in retirement.

A vast range of different retirement investment strategies and retirement income products (and combinations) have been developed – particular investment strategies, various forms of annuities, combinations of various products, or fund-level approaches such as asset liability management (ALM).

However, it is not the purpose of this paper to provide a detailed analysis of the pros and cons of the various retirement solutions. Nor is it the purpose of this paper to take a position on which approach is superior (and so recommend a particular approach). Other authors have done so in great detail – for example, Wade Pfau and Jeremy Cooper provide a detailed summary of the spectrum of approaches in the Yin and Yan Retirement Income Philosophies. Which approach(es) will be able to provide the best retirement outcomes is an empirical question.

That said, a lifecycle framework for the retirement income problem suggests a similarly-focused approach to investing – integrated with algorithms to determine member preferences (as noted above).

The accumulation and retirement phases of superannuation are typically regarded as two discrete segments – not only by members, but also industry. And, generally speaking, the products and services offered by the superannuation industry (in the DC sector at least) are also structured in this way. Notwithstanding the fact that the accumulation and retirement phases present very different challenges, funds should – to the extent possible – ensure a coherent approach across the two phases, and that the member experience entails a transition, rather than a 'step' change.

For example, a typical approach may involve segmenting a pool of members into cohorts by member age, developing an investment strategy for each age cohort, and managing those strategies dynamically as cohorts and risks change.[47] An increasingly sophisticated approach would involve more cohorts, segmented by more factors. This would lead to more targeted investment strategies for individuals. However, there are numerous challenges to more sophisticated lifecycle-style investing.

As noted in Section 9:

- Funds (or service providers) will need to improve the scope and quality of their data (regarding members' personal preferences and circumstances) in order to derive more sophisticated insights about their members.

- Funds (or service providers) will have to improve data analytics capabilities. This includes investments in new data analytics technologies, but also in expertise.

- ALM in particular requires specialist personnel. This includes professionals that have familiarity with complex ALM modelling techniques, but also those that have expertise specific markets – such as global fixed income/credit/derivatives.[48]

Research and technological advancement will influence the way in which industry evolves.

Arguably, ongoing technological advancements (particularly advancements in data analytics and artificial intelligence) will facilitate emergence of more bespoke investment strategies and retirement solutions, which will incorporate more detailed personal information. This would be expected to facilitate better retirement outcomes and be available to a broader cohort of members.

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47 *QSuper 2015, An ALM Approach to DC Savings, Presentation to UK Institute and Faculty of Actuaries Pensions Conference 2015, Glasgow, 24-26 June.*

48 *Ambachtsheer, K. P. 2016, The Future of Pension Management: Integrating Design, Governance, and Investing, Wiley.*

Appendix

Defining the 'defined contribution' sector

With respect to institutional superannuation funds, around 95 per cent of total member accounts and around 80 per cent of total member benefits are part of the broader DC sector (Table 2). This follows a multi decade shift away from defined benefit (DB) schemes to DC schemes (see Explainer below). Looking ahead, the bulk of the assets/benefits that will shift from the accumulation phase to the retirement phase will be those within the DC sector.

Table 2: Total member accounts and member benefits in the institutional funds sector

		Accumulation phase	Retirement phase
Defined contribution system	Number of member accounts ('000)	25,140	1,608
	Members' benefits ($b)	1,422	413
Defined benefit system	Number of member accounts ('000)	736	
	Members' benefits ($b)	305	

Source: APRA

Explainer: The shift from DB schemes to DC schemes

DB schemes were, at one time, the dominant type of scheme in Australia – typically available to salaried employees in the public sector and in some large companies.

Governments' concerns about the rising costs of unfunded public sector DB schemes resulted in many public sector funds closing their DB schemes to new members or to future accruals for existing members, and establishing DC schemes for both new and existing members. Similarly, many corporate employers, in order to limit their exposure to DB funding risks, closed their DB schemes to new members/future accruals and established DC schemes.

Only a small number of DB schemes are still open to new members. The largest is UniSuper's Defined Benefit Division, with an asset pool of $24 billion as at 30 June 2018. It is unlikely that DB schemes will make a comeback in Australia – in large part because of the risks around funding exposure.

The evolution of award-based superannuation has also been a key driver of the rise of the DC sector. Most industry-based superannuation funds (multiple employers across an industry) that were established to accept award linked contributions—which began in the mid 1980s—were accumulation based schemes. The introduction of the Superannuation Guarantee (SG) in 1992 extended coverage of superannuation particularly to workers covered by awards. This was accompanied by an increase in the number and coverage of industry-based funds.