



SESSIONAL PAPER

Report of the target end-states for defined benefit pension schemes working party

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Abstract

Running off the £2 trillion of UK corporate sector defined benefit liabilities in an efficient and effective fashion is the biggest challenge facing the UK pensions industry. As more and more defined benefit pension schemes start maturing, the trustees running those schemes need to consider what their target end-state will be and the associated journey plan. However, too few trustee boards have well-articulated and robust plans. Determining the target end-state requires a grasp of various disciplines and an ability to work collaboratively with different professional advisers. This paper sets out issues trustees, employers and their advisers can consider when addressing whether their target end state should be low- dependency, buyout or transfer to a superfund. Member outcomes analysis is introduced as a central tool through which to differentiate alternative target end-states. A five-step methodology is set out for deriving an optimal target end-state for a scheme. Also considered are the specific factors impacting stressed schemes, which highlights the importance to trustee boards when considering their Plan B should their employer or scheme ever become stressed. The paper ends with specific recommendations for the actuarial profession and The Pensions Regulator to take forward.

Keywords: pensions; funding; defined benefit; end state; low dependency; member outcomes

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(Other working party members: S. Bala, M. Cliff, R. Farr, G. Henty, N. Johnson, T. Lord, J. Ralfe, and M. Stafford)

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Section 1: Introduction

1.1. The Context

This Working Party and its paper were born out of the Running Off Mature Schemes Working Party. It recommended that the actuarial profession sponsors research the various facets of run-off to consider when assessing the Target End-State (TES) options for UK-defined benefit pension schemes (“schemes”).

This paper’s primary purpose is to assist actuaries in advising on end-state options. This will support the delivery of robust advice and improved outcomes for members and employers. The Working Party includes practitioners from outside of the actuarial profession, reflecting a topic that requires collaboration across multiple specialist areas.

1.2. Some Key Conclusions

We define the TES as the target stable state for a scheme such that when it achieves that state (providing it maintains it) member benefit entitlements will be met in full, with a high degree of certainty.

It will be clear from the length of this paper that the question of TES for schemes is a complex topic, which merits a thorough discussion. Having spent a considerable amount of time wrestling with these questions, a few key conclusions stood out to us.

1.3. Conclusions for Actuaries

1. **The role of the actuary should change:** Rather than be a technical specialist, actuaries have the opportunity to move into a strategic advisory role, which will be needed to help clients properly. Many actuaries already have. Broad generalist skills are vital, and deep, technical precision is replaced by more agile, rounded thinking: the ability to facilitate multi-disciplinary collaboration, quickly weigh up options, and play out alternative scenarios. New skills include:
 - Strategist
 - Contingency planner
 - Decision-making coach
 - Cross-disciplinary facilitator (bringing the strands together).
2. **A new paradigm is needed, focused on member outcomes:** When we considered how to decide between the different TES (Section 8) it was clear that standard industry metrics and funding levels were not good enough. An approach that focuses on the member outcome is an essential tool in equipping clients to make these tricky decisions.
3. **The actuarial valuation needs to be re-positioned:** It has become almost a cliché in the industry to talk about “journey plans” to get to the TES, but the analogy is a good one for many reasons. The actuarial valuation has an evolving role to play as a key mile-marker in the context of a longer journey rather than itself being the centrepiece of the decision-making framework.

1.4. Conclusions for the Profession and Regulators

1. **Levels of accuracy in the understanding of the scheme liabilities:** No matter which TES trustees might choose, having a clear and legally signed-off understanding of the membership’s legal entitlement to benefits and fully cleansed data should become the norm. This level of accuracy is a necessary foundation upon which member outcomes and the pursuit of the TES rest.
2. **Look to stressed schemes for examples:** A strong employer today can become stressed in just a few years. With contingency planning – a core thread running through this paper – we

found that looking at some of the edge cases in the current world was helpful to give actuaries a handle on exploring possible scenarios. More sharing of ideas and experiences in these difficult cases would also benefit everyone.

3. **Solutions need to downward scale:** The defined benefit landscape in the UK is skewed towards a very large number of small schemes that have vastly different capabilities for what they can achieve, and the options based on their size. All our considerations need to be capable of proportionate application to smaller schemes.
4. **Dynamic discount rates:** The funding model once a scheme reaches a low-dependency TES has not been subject to the level of research and innovation that other areas have, and this needs to change if it is to become a credible TES, particularly for some of the larger schemes. Investment and funding policies ought to work together to deliver the best member outcomes. In particular, the industry should develop methodologies for variable discount rates that, where appropriate, can be used in a low-dependency TES to better align funding measures with financing.

1.5. How to Use this Document/Why is it Written this Way

Most of this paper is dedicated to exploring the details of each of the TES options in order to equip actuaries with enough of a working knowledge of each option to approach conversations on it (Sections 4, 5 and 6 go into detail on the different TES options and Section 8 provides help on how to decide).

However, there are three areas that became clear above the different options and are common themes that occur throughout these discussions, which we have set out at the start:

1. **The role of the trustees (Section 2):** In our explorations of the different options, we kept coming back to some fundamental questions facing trustees. What are their core duties and obligations? In this section, we provide a primer on the blend of trust and pensions law in which trustees operate, particularly as it pertains to selecting a TES and delivering the benefits.
2. **Sponsor covenant (Section 3):** This sits at the heart of every discussion on TES and is a key aspect that differs substantially from one scheme to the next. The core commonality across all the discussions of TES options was the impact of the employer's covenant and changes in the covenant strength. While trustees will typically have specialist advisers for this, actuaries need to have a sound working knowledge of the interplay of employer covenant with other considerations, to advise effectively in this area.
3. **How to choose – using member outcome models (Section 7):** It became clear to us that a paper like this would be incomplete without a clear framework for helping actuaries support their clients in taking the important decisions around the TES. However, many of the classic frameworks around funding, volatility or value-at-risk were lacking as they either failed to incorporate employer covenant adequately or lacked the appropriate view of timescale. We conclude that models that attempt to directly model member outcomes (which are starting to emerge in the industry) are an essential tool in helping clients make this decision. As we discuss each TES, therefore, it is important to view it through the lens of member outcomes, as well as provide some background on how to set up a member outcomes-driven decision frame.

Section 2: The Role of the Trustees, the Employer and the Actuary

2.1. Introduction

The corporate sector defined benefits pensions industry in the UK is a significant driver of the economy. Pension Protection Fund (2020b) states that the sector has assets of £1,701 billion on 31 March 2020, backing liabilities on a buyout basis of £2,369 billion, representing circa 5,300 schemes and covering just under 10 million members. These figures are comparable to the UK's annual gross domestic product in scale. Ultimately, corporate sector schemes will support millions of individuals, in many cases providing a significant source of financial security over the next 50 years or more.

When considering the TES and the journey plan to deliver it, at the centre of all decisions are the legal duties and responsibilities of the parties concerned.

This section considers the role of the trustees and the employer, the two parties that are generally assigned various duties by a scheme's governing documentation, together with the role of the actuary, who is a key adviser. Of course, other advisers are also important but only the actuary is covered here, given the context of this paper. The role of other advisers can nevertheless be inferred from narrative throughout this paper.

Whilst much is made of the asset side of achieving a TES, the starting position from a legal and holistic perspective is the actual benefit payments a scheme is committed to make. Too little attention is often paid to the exact legal entitlements of the beneficiaries of schemes.

Detailed benefit reviews are nearly certain to find overpayments as often as underpayments – the earlier these issues are found, the lower the cost of correction, as well as promoting a more robust TES. This section therefore devotes some detail to this topic.

Also covered in this section are other aspects key to the TES discussion, such as whether trustees are obliged to target a buyout or can instead gravitate to a preferred alternative.

2.2. Summary of the Pensions Legal Landscape

Pensions law is a complex mix of:

1. Trust law principles developed over centuries
2. The rules of each scheme
3. Statutory provisions and regulation
4. Other overriding court case judgments and precedents.

As well as pensions law itself, there are myriad other overlapping legal areas such as company, commercial, investment, financial services, data protection and disputes law.

Non-compliance with the generality of pensions law can result in liability to the trustees for losses suffered as a result. Breach of statutory provisions can result in fines, civil penalties and criminal prosecution.

Pensions legislation has been clarified by codes of practice and guidance developed by TPR. TPR has the power to issue codes of practice relating to most pension legislation enacted since 1993 and in some areas, it is obliged to issue these. The codes explain key elements of pensions legislation and give examples of TPR's expectations.

Compliance with codes of practice (where TPR strays from source legislation) and guidance is not compulsory and whilst an important part of the pensions landscape, it is fundamentally not pensions law. But where trustees or an employer are subject to a legal proceeding, failure to comply with codes of practice may be considered. Thus, parties that do not comply with codes fully should be able to properly explain the reasons for that non-compliance.

Until recently there has been little guidance from TPR in terms of what a scheme's TES should be or how a scheme should progress to its TES. Since 2004, the focus from a scheme financing perspective has primarily been on the triennial actuarial valuation cycle for determining funding and deficit recovery plans.

In March 2020, the position changed significantly with the publication of the TPR's first consultation on a new funding code of practice to implement the measures introduced in the Pension Schemes Bill 2020¹ laid in Parliament in January 2020.

The Bill will introduce a requirement for trustees to set combined, or "integrated", funding and investment strategies that essentially take the form of a long-term journey plan, which TPR describes as the "long-term objective" (LTO). TPR's expectation is that by the time a scheme is significantly mature, the LTO will ensure it is fully funded on a so-called "low dependency" basis, which it describes as a state where the scheme should have high probability of being able to meet all benefits in full without significant further financial resources being required from the employer. Further details on the specifics of the new funding code are set out in the appendix. However, for the purposes of this paper, the key point is that all trustees will, for the first time, be obliged to set a LTO and also have a plan for how they will get there.

We have intentionally used the phrase TES rather than LTO in this Paper. Although it will be a significant step forward for all schemes to have an LTO in line with the proposals set out by The Pension Regulator (2020a), a key thrust in our paper is that the target end position, the TES in our terminology, needs to be articulated in detail and to cover all key facets of a scheme's operations.

2.3. A Summary of the Legal Duties and the Roles of Trustees

At the base level, the duty of the trustees of all schemes is to pay the actual legal entitlements of all members and their beneficiaries as and when they fall due. Those legal entitlements are primarily expressed in the scheme rules and associated pension laws.

The duties placed on trustees, which are at the heart of all trustee actions and decisions, include the requirement to:

- Act in accordance with their legal powers under the scheme's rules as they apply, as supplemented by statutory requirements
- Pay the benefits to which the members and their beneficiaries are legally entitled under the scheme rules and pensions law
- Act in the best interests of all the scheme beneficiaries – this legal principle has developed over centuries and is a feature of almost all pension litigation. It includes a secondary obligation to take account of the employer's interests dependent on the circumstances and the terms of the scheme rules
- Act impartially between members. There is no obligation to treat all members in the same way.
- Invest the assets in a manner that is appropriate given the scheme's circumstances.

Trustees need to remember that they owe impartial duties to all beneficiaries. For example, member-nominated trustees do not represent the interests of the membership group from which they are drawn, and employer-appointed trustees do not represent the employer's interests.

Professional trustees are becoming increasingly common and are expected to have higher levels of knowledge and understanding than non-professional trustees.

Regardless of expertise, trustees of defined benefit schemes are expected to seek appropriate professional advice on all material matters, and legislation specifically requires professional advice to be sought on specific matters.

¹Currently going through the final stages of the legislative process.

The focus of pensions law is on the delivery of beneficiaries' entitlements as written in the scheme rules – this is the primary point and purpose of a scheme. The means through which those entitlements are delivered is important, but it is a secondary matter – the employer's contribution obligation and the way the assets are invested are each a means by which those entitlements are delivered but they are not the point and purpose of the scheme.

The various duties and expectations of trustees do mean that trustees will generally operate in a relatively risk-averse manner. However, taking an extremely low-risk or no-risk approach to legal issues in isolation can translate to an ultimately higher-cost approach being taken that undermines member security and, as such, should be avoided. An example of this is not using available powers to make a scheme more efficient to insure, such as general actuarial equivalence changes, meaning a scheme takes longer to reach its TES.

2.4. Actuarial Valuations and the Long-term Funding Objective

The Pensions Act 2004 codified the regime under which schemes have operated for over a decade. It prescribes a scheme-specific funding regime governed by triennial actuarial valuations that assess the market value of the assets held against a "prudent" evaluation of the present value of the liabilities. For schemes in deficit, a recovery plan to make good deficit is agreed upon between the company and trustees every 3 years, currently lasting an average of 6.7 years with the 95th percentile at 15.9 years (TPR, 2019a). The triennial valuation process has become a cornerstone of the way schemes are funded.

However, there was nothing in that regime that required trustees to consider and evaluate their TES.

A good deal has changed in the last few years: schemes have, overall, become better funded following a strong tailwind of investment returns, payment of deficit contributions from employers and some other minor factors, such as reductions in longevity assumptions. Schemes are maturing slowly but steadily, meaning that many are shifting into cash flow negative mode. The endpoint has been crystallised and is generally much more tangible.

Overall, this calls for a shift in the approach taken to funding schemes from the perspective of member security: placing the long-term objective of the scheme, in other words, the TES, front and centre in the decision-making agenda (rather than indirectly through the next triennial valuation), and working back from that to determine funding and investment policies.

TPR (2019b) recognises this and explains quite eloquently the increasing focus on target end-state (noting that the terminology of a long-term funding target (LTFT) has since been replaced by the LTO.):

"Paying the promised benefits is the key objective for all schemes. This requires schemes to look ahead and set clear plans for how the objective will be delivered. Good practice . . . involves trustees and employers agreeing a clear strategy for achieving their long-term goal, which recognises how the balance between investment risk, contributions and covenant support may change over time as the scheme gets better funded and more mature.

Typically, this leads to a long-term funding target (LTFT) being agreed between trustees and employers . . . We expect all schemes to . . . set a LTFT consistent with how the trustees and employers expect to deliver the scheme's ultimate objective, and then be prepared to evidence that their shorter-term investment and funding strategies are aligned with it."

This approach is expected to be formalised through the Pensions Schemes Bill (2020). It will require trustees to determine their “funding and investment strategy” with the purpose of “ensuring that pensions and other benefits under the scheme can be provided over the long term”. In other words, trustees will, for the first time, be required to articulate their TES and, at a minimum, design the “funding and investment strategy” that will deliver their TES.

2.5. Understanding Benefit Entitlements

Trustees are used to taking measured financial risks. Trustees spend significant time considering investment strategy risks, employer covenant risks and funding risks.

Most trustees are not used to evaluating legal and operational risks. A key area of such risk, when it comes to discussion around the TES, is the possibility of deviation between:

1. The actual legal benefit entitlements of members and their beneficiaries; and
2. The benefit entitlements actually being paid, or to which it is understood beneficiaries are entitled.

Whilst there are elements of every benefit structure that are not set out in the rules precisely and are bound up in the administrative calculation routines of schemes, those calculations must still be logical and consistent with the rules overall and pensions law.

It is therefore critical to invest time documenting beneficiaries’ actual legal benefit entitlements to avoid issues being discovered at a time when it is highly disruptive (and arguably too late) to resolve them, hence putting the TES and member benefit security at risk.

Intuitively it might be felt that such issues must be the exception rather than the norm but that is not the case. Almost every scheme will have some issues to resolve and in some schemes material issues might be uncovered. In fact, the Pensions Regulator (2020c) states “*The PPF’s experience is that scheme benefits are usually incorrect and the necessary work to put them right, more often than not, results in an increase in liabilities*”. Often trustee boards do not mandate advisers to fill in the gaps, perhaps because the business case for the advisory spend is less tangible, the issues are felt to be less immediate or the work is thought to be unnecessary. Sometimes the pressure is from the employer who may see this as “looking for problems”. However, in practice, the advisory costs are immaterial in the content of a scheme’s total liabilities.

Without being certain of beneficiaries’ actual entitlements, trustees can never be certain that they have attained the correct TES. Thus, the preparatory data and benefit tasks typically carried out for buyout (see Section 5) should be done by all schemes as part of the work to achieve the TES.

2.6. Must Trustees Target Insurance Buyout?

Quite simply, no.

In many circumstances, if trustees are able to afford to purchase buyout they will do so. Why? Because they will assess that this offers the best member outcome as it sensibly minimises the likelihood of beneficiaries not receiving their entitlements. “Sensibly” is an intentional qualification, as the duty of the trustees is not necessarily to eliminate risk, but it would certainly be to manage and reduce risk and uncertainty to a reasonably low level, consistent with their duties as trustees.

At present, within the pension community, there is a lot of promotion surrounding buyout. There is less publicity about trustee boards that have skilfully managed a scheme to a low-dependency status. Hence, in today’s environment, the emphasis is often on “why wouldn’t we buyout?” rather than on “should we buyout?”

A buyout is simply one way of meeting benefit entitlements, but it is not the only way. There is nothing in legislation that says buyouts must be targeted and neither does TPR state that.

Also, many employers may prefer trustees not to aim for buyouts. That may primarily be on financial grounds, but it should also be noted that almost all scheme rules (which in all cases were established by the employer) are designed around schemes running on an ongoing basis, meeting benefits as they fall due from assets, as is most pensions legislation and TPR guidance, with the winding up and buyout provisions being a permissive rather than an automatic provision.

In fact, as the employer in most schemes can replace the trustees (or at least those that are not Member Nominated Trustees) or replace the whole trustee board with a single sole trustee, it means that the employer can, in some cases justifiably, appoint a trustee board that philosophically supports that buyout is not the default TES (subject to that being consistent with being in the best interests of beneficiaries in the specific circumstances).

Given the overriding duty of trustees is to act in the best interests of beneficiaries of the scheme the trustees should have a carefully considered rationale as to why they have selected a particular TES, whether this be buyout or otherwise.

2.7. The Role of the Employer

Employers are also taking an increasing interest in the TES, recognising that their input is central to helping trustees develop a TES that aligns with corporate objectives and associated financial constraints.

Whilst employers of schemes owe different legal duties towards the scheme beneficiaries, they are still obliged to comply with the terms of the scheme rules and pensions law.

Where the employer has powers under the scheme rules, it is obliged to consider the interests of members in making that decision but in most cases, it is also able to take account of its own commercial interests.

Company directors also have legal duties to their other stakeholders, which include shareholders, debt investors, suppliers, customers, etc. Often company directors will need to put these duties ahead of the scheme, which may create conflict and tension with their responsibilities to the scheme.

Following the Pensions Act 2004, many schemes have a contribution power which requires trustees to reach agreement with their employers on actuarial valuation assumptions and, combined with the requirement on trustees to take account of the employer covenant and affordability, this puts the employer at the centre of the debate on the pace of funding for schemes.

The upcoming new requirement for all schemes to have an LTO means that the triennial actuarial valuation process will not just be about the pace of funding to achieve technical provisions, but also about the TES. The employer therefore has a key role to play in determining the TES for their scheme, the pace at which that destination is reached, and the actions taken on that journey.

In this debate, it will be crucial for trustees and employers to understand the relative balance of key powers within their scheme rules. It is surprising how many trustee boards and companies have not done so to date, yet this is fundamental to developing a robust TES.

Where objectives between employers and trustees can be aligned, this is likely to achieve the greatest success in efficiently moving towards an agreed TES, but sometimes there can be a difference in views between the trustees and the employer. Advisors have a key role to play in helping to align objectives or agreeing to compromises so that an overall objective can be agreed upon.

For well-funded schemes that are very close to buyout, and without the need for further employer funding, trustees may be able to proceed with a buyout process without significant involvement of the employer. In these situations, the employer will still want to ensure the buyout process is efficient and complete. For example, it is reasonable for an employer to expect the

correct benefits to be secured, to be consulted fully on how discretionary benefits are to be codified and for there to be a discussion on the allocation of post-buyout risk so that the employer retains no more legal risk than it is comfortable with.

A common approach to engagement between the employer and trustee board is linked to the triennial valuation cycle, with an employer's focus often being on minimising cash requirements (or other priorities, such as P&L impact of any change), meaning there can be little engagement between valuations. Current legislation, to some extent, may encourage this sub-optimal behaviour.

The key for employers would be to actively engage in TES planning, taking advice to help set their TES objective. Employers should then look to build and implement the journey plan in collaboration with the trustees. The journey plan should be specific, with clear objectives, setting out an agreed remit for each party, including a definition of the advisor roles.

The employer needs to understand the risks it is running – not just financial but legal and operational. Employers need to be cognisant of current risks, for example, TPR's power to issue contribution notices and financial support directions; and of changing regulations, such as government proposals to allow TPR to introduce a criminal offence as a sanction for "wilful or grossly reckless behaviour" of company directors.

2.8. Can Employers Benefit from the Scheme?

Where a scheme is funded in excess of the level of its buyout liabilities, the use of surplus is determined by the scheme rules. The rules setting out utilisation of surplus are varied and often significantly out of date. The one constant is that a refund of surplus to the employer (assuming this is permissible under the rules) always requires trustee agreement under statutory provisions and that power must be exercised in the best interests of the beneficiaries.

There remain many trustees and their advisers who believe that acting in the best interest of the beneficiaries in a surplus situation means that members must benefit from the surplus to some degree. This approach is too simplistic and ignores case law which emphasises the need for rules to be construed in the context of their purpose and that the reasons for surplus arising are a material factor in how surplus should be spent.

Employers would be well advised to undertake a legal review of scheme rules long before surplus arises and include rule amendments to protect their interests should a confirmed buyout surplus arise. For many schemes, there is no reason why such changes cannot be made as a part of a long-term funding package agreed as a part of triennial actuarial valuations.

Trustees of well-funded schemes also need to take care as they approach their TES not to be tempted to invest for surplus over security unless their employers are supportive of this approach and have the covenant to support it. Very few schemes have rules that would justify a unilateral attempt by the trustees to create a buyout surplus with a view to improving member benefits.

2.9. The Employer's Financial Statements

For many employers, delivery of KPIs within published financial statements is a key corporate success measure. KPIs might include annual operating profit, earnings per share and balance sheet ratios. The way these KPIs are calculated depends on the GAAP adopted by the employer.

Unfortunately, GAAP can create tensions between quite reasonable activities trustees might take to deliver member benefit entitlements, such as reducing investment risk or purchasing bulk annuities, and the resulting adverse impact on KPIs in the employer's published financial statements.

A perverse example (but not the only example) that sometimes occurs can be when a scheme can afford to secure all benefits with a buyout and in which scheme surplus cannot, except in extremely remote circumstances, ever revert to the employer. However, by undertaking that transaction the trustees can create a severe impact on the employer's published financial statements.

Such tensions are typically created by the requirements of the specific GAAP not reflecting the true economic realities of the schemes. Unfortunately, the financial and actuarial factors impacting schemes are complex. Consequently, senior decision-makers, especially at non-UK multinationals, will often focus on the financial statements as the objective factor that matters.

As a result, employers may discourage trustees from reducing risk or from taking actions they would otherwise have implemented. The authors have each come across examples in which desirable activities to de-risk schemes have been deferred or even curtailed for no reason other than the potential impact on the employer's financial statements.

2.10. The Role of Advising Actuaries

The scheme actuary is often long-standing and seen as the trusted advisor by the trustees, and therefore has a pivotal role in helping to define and navigate the path to the chosen TES. But it is important to remember where the scheme actuary role starts and ends.

A key duty of the scheme actuary appointed under section 47 of the Pensions Act 1995 and its associated regulations is to advise the trustees of all aspects of the funding position of the scheme. This includes requirements of the Pensions Act 2004, such as carrying out and certifying regular valuations of the scheme assets and liabilities and determining, together with certifying, the level of contributions that need to be paid into the scheme.

The scheme actuary or other actuary advising on TES is already required under Actuarial Standards to be aware of the current state and future evolution of a scheme and to advise their client appropriately. However, as covered below, the actuary's role in advising on TES planning is rapidly evolving.

The actuary has a key but evolving role to play in the changing landscape. Typically actuaries have overseen the setting of the triennial valuation assumptions (whether acting on behalf of either trustees or employers) and have also been involved on the investment side, setting strategic asset allocation and other risk management areas (e.g. through member options or bespoke liability management exercises).

We envisage the future role of the actuary as pivotal in helping trustees to understand how to bring together the necessary funding, investment and covenant considerations as well as helping to point out the legal and operational considerations. In that role, the actuary would work closely with other specialist advisers. That way trustees will receive suitable advice and the full picture of their TES objective, hence delivering member benefits with the necessary degree of security whilst also meeting their legal obligations to members. The challenge is the multi-disciplinary nature of the subject matter.

Actuaries should make their clients aware of the existence of legal and operational risks and explain why precision in the understanding of the scheme liabilities is important. However, actuaries should remember that they are not lawyers, covenant advisors or administrators and should include other professional advisors early in the process as required.

In an effort to ensure cost efficiency in difficult financial circumstances, many trustee boards have become accustomed to inviting some of their advisers to short segments of their meetings assigned to them. This can stifle the ability of advisers to offer valuable insights on key issues and discourages beneficial collaboration between advisers and service providers.

Only a minority of trustee boards have adviser-free time where they can do "blue sky" strategic thinking and discuss freely their views on the direction of the scheme, the employer, and their advisers.

In many schemes the actuary is the only adviser who has a clear view of such issues in the governance of the trustee board and, as the TES approaches, these weaknesses in the governance structure are likely to hinder proper deliverance of the TES. The actuary is therefore often better placed than most to encourage schemes to have a more dynamic and collaborative approach to the conduct of trustee business as well as underline the importance of adviser-free time.

Section 3: The Employer Covenant Still Matters

3.1. Introduction

The employer covenant is pivotal in the strategic direction of a scheme, providing additional capital and contingent support (see Figure 1). It can also have a significant impact on the amount of time a scheme has to realise its TES. Understanding the interaction of these factors helps develop a robust TES strategy, including what TES may not be appropriate and how quickly (or not) the scheme could be able to reach a TES.

A holistic analysis incorporating the interactions between covenant and legal, funding and investment dynamics highlights the key role of employer covenant in the strategic direction of a scheme and not just in providing financial support.

TPR's increased focus on TES planning means looking beyond the triennial valuation cycle and focusing instead on the lasting dynamics that link the fates of the employer and its scheme. Effective integrated risk management ("IRM") requires consideration for how both the scheme and the employer are expected to develop over the medium to long term.

To develop a TES strategy, trustees need to consider principally:

1. The long-term viability of the employer covenant.
2. The implications on the scheme of an employer covenant failure.
3. The downside protections are available (e.g. third-party guarantees, collateralised support).

The interaction between these items and the scheme's funding and investment positions will help trustees determine the choice of TES and the period over which to achieve it. While trustees can rarely control when the "music stops" for the employer, they are well placed to develop a TES strategy that seeks to protect the security of member benefits along the journey.

This section examines the role of the employer covenant as:

1. The underwriter of investment, funding and demographic risks.
2. A source of additional funding for a scheme.
3. A key factor determining the time a scheme has available to realise its TES.

3.2. What is the Employer Covenant?

Employer covenant attempts to measure the ability of the employer to underwrite the risks and obligations of a scheme over its life.

Therefore covenant is key in the development of the TES for a scheme. The extent to which the employer can underwrite the risks inherent in the scheme and the long-term viability of the employer covenant directly influence the TES. In many instances, some TES can be ruled out by covenant considerations. For example, where a scheme is supported by a business in an industry in structural decline, a run-off investment strategy is unlikely to be appropriate.

In December 2016, TPR published its IRM guidance and identified covenant, investment and funding as the three fundamental risks, as shown by Figure 1. It defined IRM as:

"A method that brings together the identified risks the scheme and the employer face to see what relationships there are between them. It helps to prioritise them and to assess their materiality. It can take many forms but should involve an examination of the interaction between the risks and a consideration of 'what if' scenarios to test the scheme's and the employer's risk capacities."

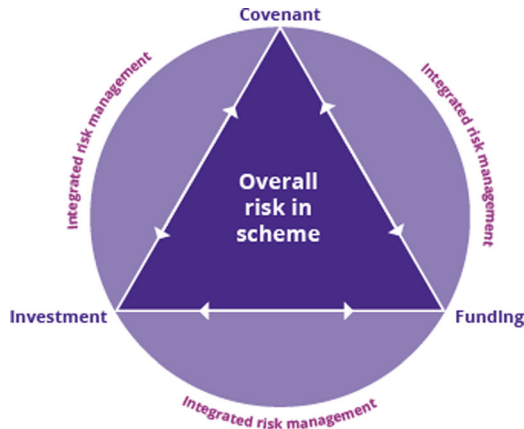


Figure 1. IRM relationship triangle (TPR, 2016, p.1).

It has become increasingly obvious that effective IRM requires taking a longer-term view than simply the triennial valuation cycle. The assessment needs to consider the employer's ability to stand behind the journey towards a TES and the investment, demographic and other risks that result from the trustees' chosen strategy.

3.3. How is Credit Risk Assessed by Commercial Lenders?

At its core, an assessment of the covenant is concerned with credit quality and capacity to absorb risks that may arise from pension obligations. Notably, the assessment must be made with respect to obligations that have a very long duration (multiple decades).

There are some parallels between an assessment of the employer covenant and assessments commonly undertaken by credit-rating agencies and banks. The appropriateness of utilising credit-ratings and historical probabilities of default ("PD") to assess the employer covenant is examined below.

Credit rating agencies and banks tend to utilise historical default statistics and credit ratio analysis to identify companies more or less likely to default on their borrowings. As illustrated in Figure 2, the resulting PD can be low over the short term but increase substantially thereafter.

Banks use these statistics in the context of building large lending books with several borrowers, operating across industries and geographies, and with caps on exposure to any individual or related group of borrowers. Banks also recognise that time can reduce the effectiveness of historical PD statistics in an economy that is in constant flux, which is one of the reasons they opt to set strict limits over the length of time they are prepared to lend to a company.

The employer/scheme relationship is different from most other forms of lending. An example is the high degree of concentration and idiosyncratic risk embedded in most employer covenants. Schemes have a concentrated exposure to a single employer or a small number of employers within a related corporate group. The resulting lack of diversification means that employer covenant risk is dominated by idiosyncratic risks that are unique to the individual circumstances of the employer. Statistical credit models are not intended to capture idiosyncratic risk. In fact, they largely ignore it on the assumption it is managed by holding a well-diversified credit book.

Assessing the long-term viability of an employer requires an approach that captures those characteristics that are unique to the employer. That means recognising that insolvencies can be triggered by reasons that are specific to the business rather than being driven by macro trends and that trustees are rarely in control over when the employer fails.

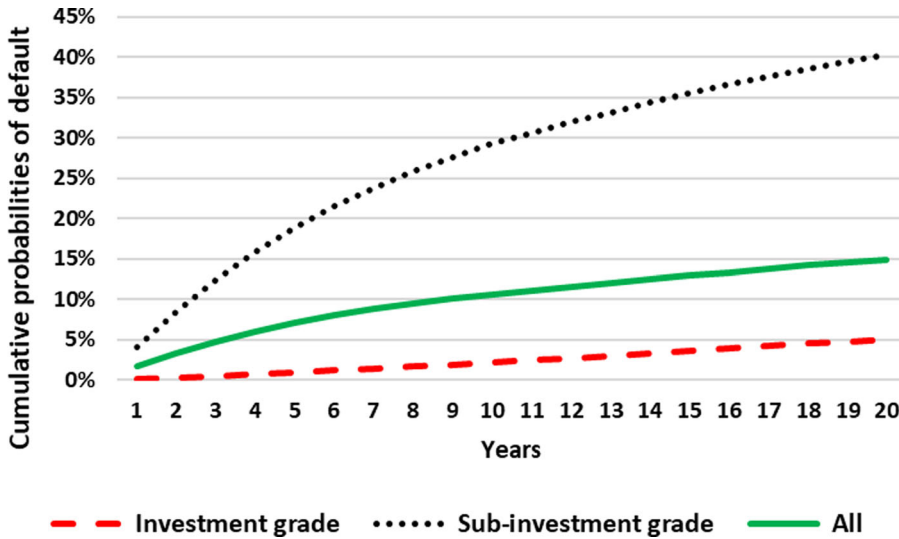


Figure 2. Cumulative probabilities of default. Source: “Moody’s Investors Service (1970-2017): Annual default study: Defaults will edge higher in 2020”.

3.4. How is the Employer Covenant Assessed?

Covenant assessment reflects expert judgement based on relevant matters including the following:

1. Specifics of the employer, including financial performance.
2. Relevant features of the industry in which the employer operates.
3. Funding position and risk profile of the scheme.
4. Rights of the scheme under relevant legal documentation.

For example, the Pensions Employer Covenant Practitioner Working Group (2016) stated: “At a high level, assessments should enable trustees to form an objective view on the ability of the sponsoring employers to meet schemes’ demands for cash, now and in the future. A proportionate analysis should therefore include:

1. Identification of the legal obligations.
2. Consideration of the employer’s ability to generate cash.
3. Immediately (availability of liquid assets/finance).
4. In the short to medium term (trading/cash flow analysis).
5. In the longer term (market analysis).
6. In the event of distress (structural priority and/or insolvency analysis).”

To date, the output of most covenant assessments is a rating. TPR uses a four-rating scale and covenant professionals used by trustees may use scales with up to 8 or 10 ratings.

As the focus switches from the triennial valuation cycle to developing concrete TES strategies, covenant advisers will need to develop new ways to help assess long-term viability but in practice covenant visibility² may be limited to the medium term for most employers. Hence, trustees need to understand the period over which assessments remain valid and developments that could materially impact the assessment, to inform the pace of the transition to the TES.

²Covenant visibility assesses the period over which there is a reasonable degree of certainty about the long-term viability of the covenant.

3.5. Time as a Valuable Commodity

We have already highlighted the role of the covenant to fund the scheme and to provide risk-bearing capacity to the scheme. For example, the amount of investment, funding and demographic risks borne by a scheme should be set in relation to the employer's ability to underwrite the exposure. Should the risk(s) crystallise and a funding deficit be identified, the covenant is called to recapitalise a scheme.

Less well understood, but critical, is the role employer covenant plays in determining the time a scheme has to achieve its TES. Schemes are typically thought to have time in abundance. After all, many of the benefits held by a scheme will not fall due for decades. However, the amount of time a scheme has to reach its TES objective is intrinsically linked to the employer covenant.

In most cases, in the event of employer insolvency, a scheme would wind-up. Therefore, should the employer fail, and the scheme has insufficient resources to afford a full buyout of benefits, members will receive reduced benefits through PPF entry or a PPF+ buyout.

Given that insolvency of an employer can call time on the normal development of a scheme, this is a relevant consideration even for schemes that are not expecting additional deficit funding from the employer. That means that as funding improves, the value of the employer covenant shifts to an underwriter of tail risks and to creating the time for a scheme to realise its TES.

The issue is that companies do not tend to live forever. The lifespan of the average company is much shorter than the potential 80-year-plus lifespan of the obligations delivered by a scheme.

The UK pension framework is built on a duration mismatch, where the ultimate bearer of risk (the employer) is usually expected to be outlived by its pension promise. The likelihood of insolvency over the short term (one year) is low for the average corporation but, as illustrated in Figure 2, the risk of covenant failure increases significantly beyond the medium-term, an aspect often overlooked in the triennial valuation cycle. Black swan events, such as the current Covid situation, can lead to rapid deterioration of what may have been deemed a very solid covenant.

This duration mismatch dynamic introduces a level of uncertainty concerning the long-term viability of covenant strength – there is no one way of telling, with a high degree of certainty, how a business will perform over the time horizons relevant for most schemes. Whilst there may be some definite milestones that can be identified in exceptional cases (expiry of franchises, legal developments), broadly speaking the visibility of an employer's prospects declines over time.

As such, there is no perfect way of assessing long-term viability and therefore covenant visibility is likely to be limited to the medium term in most cases. Ultimately, if a scheme is to rely on its employer for an extended period, a prudent approach dictates that the investment risk in a scheme's assets that can be supported by an employer should be reduced over time.

3.6. What can Trustees do About Employer Covenant?

Whilst taking unilateral action to improve covenant strength is not usually an option for most trustees, there are actions trustees can take to better understand and mitigate key covenant risks.

Trustees can monitor covenant strength by developing an information-sharing protocol with the employer. Monitoring allows trustees to better understand the specific forward-looking risks facing an employer and to integrate these risks into the journey plan. However, management projections can be materially off the mark in a fast-changing marketplace and, as such, while monitoring can be helpful for IRM and as an input into TES planning, it has its limitations.

There are, however, three other key approaches to enhance the employer covenant:

1. **Restructure the employer covenant.** This seeks to codify legal access to value that already forms part of the covenant with a view to ring-fencing specific assets to support the scheme

should the employer be unable to do so in future. This could include, for example, pledges over assets, escrow accounts and corporate guarantees.

2. **Diversify or hedge the exposure.** Earlier we noted that other lenders manage risk through diversification. Schemes also have tools to increase diversification of the covenant. This usually involves swapping exposure to employer-specific risk to other assets or businesses, for example obtaining guarantees (such as surety bonds or letters of credit) from third parties, thereby diversifying credit exposure; or covenant-driven investment strategies (such as credit default swaps or inflation protection).
3. **Exchange the employer covenant for other forms of security.** Trustees also have the option to exchange their employer covenant for other forms of covenant support as a means to increase the security of members' benefits. These transactions include insured buyouts and superfunds and are examined in further detail in Sections 5 and 6, respectively.

Section 4: Low Dependency

4.1. Introduction

One solution to discharging the trustees' duty to take such steps as are appropriate and reasonable to seek to pay benefit entitlements would be to simply continue paying the benefit outgo from the assets. The scheme could be wound up when the last payment has been made, or more likely at a pragmatic point before then when the assets have become small, with remaining liabilities secured with a buyout.

This approach to discharging the trustees' duty has been known by various names including run-off, self-sufficiency, low dependence and low reliance.

These approaches are frequently compared against buyouts and schemes are encouraged to select one or the other as a TES target. However, there are significant differences in that a buyout represents a transactional event, which usually includes the scheme winding up and ceasing to exist, whereas a low-dependency solution refers to an ongoing state, and the funding and investment policies that ought to back this state, which is always going to be less clearly defined than a transaction.

This section will help trustees to clearly define a low-dependency TES by addressing:

1. The different approaches to defining low dependency.
2. How they differ and why that is important.
3. What influences the approach a scheme should take.
4. The different investment approaches to low dependency.
5. Other key considerations for low dependency.

4.2. What does Low Dependency Mean?

For trustees to be satisfied that they are discharging their legal obligation by continuing to run the scheme and pay pensions over the long term rather than the buyout or superfund alternatives, they will usually require a funding and investment strategy that gives confidence that the benefits will be met. As the name suggests, in this state, for the trustees to be confident of fulfilling their obligations, they will generally want to target a state that has a low dependency on the employer, to effectively remove the failure of the employer as a severe risk to members' benefits.

The question is what level of funding and investment policy can combine to give trustees confidence that their duties are being appropriately discharged when following this approach. The challenge is there is typically a wide variety of interpretations of what this entails.

Low dependency does not represent a firm endpoint in the same way that a buyout or superfund transaction would, so it does not preclude entering one or the other of these transaction-based TES at some future point. Indeed, many schemes will take the view that low dependency is an interim step until such time as the scheme is mature enough, pricing is good enough or the employer is sufficiently aligned with a buyout approach to move ahead with that option. In this section, we propose three possible definitions of low dependency that trustees and advising actuaries could adopt and illustrate three different possible approaches to investment.

4.3. The Trustee Duty

As noted earlier there is no legal obligation placed upon trustees to target a specific approach to paying pensions. The legal obligation placed upon trustees is to take such steps as are appropriate and reasonable to seek to satisfy all benefits entitlements and, once the Pension Schemes Bill 2020 is enacted, trustees will in effect need to document their TES.

When schemes are well funded, invested in a low-risk way and have limited reliance on the employer it is generally accepted that this is an appropriate way for trustees to meet their responsibility. Risks remain, and these are discussed in this section. The issue of how much risk ought to remain within these approaches is the major question.

4.4. The Employer Perspective

There may be tactical considerations for the employer to retain the option to commit (or not) to a buyout TES in the future and hence to pursue low dependency as more of an interim solution.

The low-dependency TES is in most cases likely to be a weaker funding requirement than a full buyout. However, there are exceptions to this that are important to be aware of, especially for schemes that comprise almost exclusively pensioners.

If considering low dependency as a genuine long-term strategy the employer may want to give more careful consideration to an asset-backed funding (such as using property through a Scottish Limited Partnership) or escrow arrangement to give the trustees additional confidence in being able to fulfil the obligation in the absence of the employer.

4.5. The Historical Context

Historical common practice was to discount pensioner cashflows at a discount rate such as gilts + 0.5%, meaning that as a scheme matured the overall funding basis would tend toward this figure, which would be broadly consistent with an investment policy of investing in high-quality bonds. This approach is certainly due for an update, given schemes are maturing and seeking to make more detailed plans for their TES, and especially given the need to better integrate investment, funding and covenant considerations rather than view them as somewhat separate, as was previously the case.

TPR (2020a) makes the following comments on low dependency: “*Low dependency means that funding and investment strategies are such that there is a low chance of requiring further employer support and, to the extent that such support is required, it is low relative to the size of the scheme.*”

Industry surveys (Aon, 2019) (Mercer, 2020) show that approximately 40–50% of schemes are targeting low dependency as their TES, so it seems important to make progress on some form of definition, or at least a framework for one. As of today, there is no industry consensus on definitions.

4.6. Defining Low Dependency: Starting Points for a Useful Definition

Some important questions to ask when considering a definition of low dependency:

1. Is the definition tangible?
2. Is it specific enough to help decision-making?
3. Is it clear and unambiguous (or is it open to interpretation)?
4. Is it outcome-focused (or funding-focused)?
5. Is it prescriptive in terms of investment policy?
6. Is it objectively measurable?

A key question is whether, in defining low dependency, we are looking to define a funding basis, a funding basis plus an investment policy, or an overall outcome which will give rise to and could accommodate a variety of different funding bases and investment policies.

Low dependency historically has been viewed through the relatively narrow lens of funding. We would argue that we need a more rounded view, taking into account investment strategy jointly with the funding policy, in light of the covenant strength considerations of the employer and allowing for future demographic risks.

4.7. Approaches to Defining Low Dependency

In defining low dependency, we propose a range of options that fall on a continuum from “strong form” to “weak form” that actuaries may find helpful in guiding conversations.

4.8. Strong Form of Low Dependency

This could be articulated as having sufficient invested assets to pay all benefit payments with no measurable risk exposure to security prices, non-sovereign credit default risk or longevity risk. This would probably envisage 100% (or more) funded on a gilts basis³ with assets invested in gilts and a full longevity swap.

This is a good definition, and hard to argue with, but it is so conservative as to arguably not be very helpful (potentially a stronger basis than buyout). But there will always be those who will argue for the strengthening of low dependency whilst there are any remaining risks. While this definition probably isn't useful in practice, it is helpful to have it as a boundary case.

4.9. Probabilistic Low Dependency

Examples of this might be:

1. To be able to meet future pension payments within an agreed confidence level with no further recourse to the employer, for example, 95%, 97.5%, 99% etc.
2. The probability of paying all future pensions with no further recourse to the employer is higher than a pre-determined level, for example, 95%, 97.5%, 99% etc.
3. The probability of requiring any further contributions from the employer is less than a pre-determined level, for example, 5%, 2.5%, 1% etc.

This measure is most analogous to insurance solvency modelling and, of course, the probability level can be varied to reflect risk appetite.

³A gilts basis is a relatively conservative funding approach where assets are held equivalent to the present value of the liabilities discounted using gilt yields without adjustment.

The attraction of this measure is it wraps up funding and investment policy into a single number while leaving the exact investment policy choice open. The downside is that it will be model-dependent and assumption-dependent. Hence 95% probability in one model might be equivalent to 90% in another model. Certain models will favour particular assets and can end up embedding in views around mean reversion etc., which later may prove to have introduced risks that were not recognised.

It is quantitatively specific, which means it could be helpful for making tangible decisions and as a framework for structuring an investment strategy, but might also be considered too precise, in that trustees might be worried that they will later be held accountable as to the choice of 95% versus 97.5%, for example. An advantage is that it allows for explicit consistent evaluation of the value of financial covenant (e.g. entering a consolidation vehicle). A disadvantage is that probability does not capture shortfall – running out of money with £1bn left to pay is very different from being £1 short and this measure would not readily distinguish between the two. Therefore, trustees are likely to aim to “overshoot” rather than “undershoot” to reduce the likelihood of a shortfall.

Consequently, a variation or addition to this measure could be an expected surplus target, for example, to be invested and funded in such a way that results in a projected residual surplus of £x once all benefits have been paid, where £x is determined by the trustees. Qualitative low dependency (weak form)

An example is “To be invested and funded in such a way as to be able to meet future benefit payments with a [high/very high] degree of confidence without further recourse to the employer, taking into account key sources of risk (for example asset prices, inflation, longevity, credit etc.)”

This is probably the easiest to commit to and write down but introduces a lot of possible interpretation and semantics around the exact words used (similar to the use of the word “prudent” in the scheme-specific funding regime), and may not in practice be overly helpful in making decisions, especially when a scheme becomes better funded (although it may be helpful in setting direction if the scheme is at a low level of funding).

Overall, it is probably more helpful to have an objective that gives a more tangible endpoint than this weak form, especially once the trustees are getting close to a low-dependency state. This form of definition may nevertheless suffice earlier in the journey plan.

4.10. Key Considerations for Low Dependency

Over the next few sections, we discuss key considerations for a low-dependency framework:

1. Investment strategy.
2. Longevity risk.
3. Covenant strength and failure.
4. Scheme size and scale.
5. The actuarial valuation cycle.
6. Governance.
7. Member options.
8. Operational costs.

4.10.1. Investment strategy

There will be variations in investment strategies that can be adopted, which stems from the fact that risk can be viewed in different ways. Some might consider low risk to mean achieving a high degree of cashflow matching whereas others might view low risk as meaning minimising funding

level or deficit volatility. Each is a valid risk lens but will drive different investment strategies. Therefore, an important part of choosing a TES target will be to clearly define risk at the outset.

We explain three investment approaches that are summarised by Table 1:

Table 1. Attributes of Different Low-Dependency Investment Approaches

Investment Approach	Attributes					
	Returns Depends on credit spreads	Exposure to Credit default risk	Exposure to Market prices	Cashflow Risk	Funding Level Risk	Re- investment risk
Cashflow matching	✓	✓	χ (in theory)	χ	less relevant (in theory)	χ
Contractual	✓	✓	χ (in theory)	Reduced	less relevant (in theory)	Some
Diversified	Some	Some	Yes	✓	Low (if highly diversified)	✓

4.10.1.1 Investing for low dependency – cashflow matching. If precise cashflow matching is a significant concern this implies an investment strategy consisting of assets that provide contractual returns to match projected benefit payments. This is often referred to as cashflow-driven investing (“CDI”).

“Low risk” in this context implies holding high-quality (low risk of default) assets with contractual return sources to ensure a high probability that the expected asset cashflows are received. It also implies largely holding assets on a buy-and-hold basis – funds in which managers can actively change the underlying holdings are unlikely to lend themselves well to a cashflow matching approach as the projected asset income then becomes less certain.

This therefore implies high allocations to gilts, liability-driven investments (“LDI”) and investment grade bonds and limited exposure to other assets or funds in a true CDI approach. In theory, the combination of matched cashflows and contractual returns means a scheme should not be a forced seller of assets and re-investment risk is significantly reduced.

Of course, being overly focused on cashflow matching may be spurious where there are other significant factors at play. For example, projected cashflows might have inherent uncertainties (for example due to exercise of member options) and some types of pension indexation are not practical to match exactly.

Figures 3 and 4 illustrate what a low-dependency CDI portfolio might look like. The expected return on this portfolio might be in the range of gilts+0.25% to gilts+0.5% p.a. (based on market conditions over 2019).

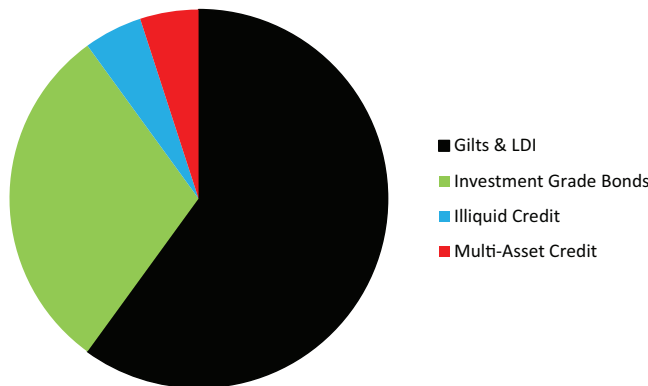


Figure 3. Example cashflow matched asset strategy.

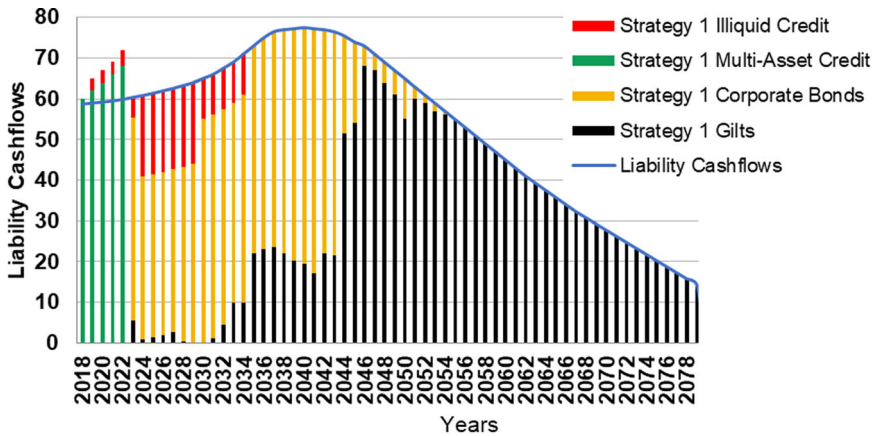


Figure 4. Projected asset cashflows (over 60 years) for the example cashflow matched asset strategy.

There are a number of practical considerations that make this approach more complex than might be first thought:

1. **Diversification:** The long-dated sterling corporate bond market has significant concentration in the property and utilities sectors. Many schemes may feel they need to look overseas, particularly to the US, to build sufficient diversification.
2. **Currency risk:** When investing overseas, a cross-currency swap is needed to fix cashflows in Sterling terms. Swaps will require collateral and currency fluctuations through time will necessitate rebalancing through selling/buying of bonds.
3. **Inflation:** Most corporate bonds are not inflation-linked, and index-linked gilts are not available at all maturities. A derivative overlay can synthesise the required inflation sensitivities, but this will require collateral to back the derivative programme and is likely to mean that in practice buying, selling and rebalancing will take place.
4. **Spread levels:** The attractiveness of a CDI portfolio is linked closely to the spread levels available on the sort of bonds being considered for the portfolio. When spread levels are high, such a strategy is relatively attractive compared to alternatives. When spreads are very narrow, it could be that alternative strategies come into consideration even though they do not provide the cashflow matching characteristics of a CDI portfolio.
5. **Reinvestment:** The duration of contractual income assets is shorter than the duration of the liabilities of most schemes. Consequently, reinvestment risk may exist where there is an assumption made about future investible spreads as part of the strategy.
6. **Funding:** To better align the funding and investment policies around the overall objectives in a CDI approach the funding discount rate could be derived from the yield on the asset portfolio. This should mean that asset and liability values move in tandem from a mark-to-market perspective. The real risk to the funding position (and the overall objective) will be default risk and downgrades.

4.10.1.2 *Investing for low dependency – contractual income.* Alternatives to precise cashflow matching can also be suitable for low dependency and might even be preferred.

Where there is still a preference to rely on contractual returns in the TES, the investment strategy is still likely to involve allocating to high-quality (i.e. low risk of default) assets with contractual income sources, e.g. gilts, LDI and investment grade bonds.

However, relaxing the requirement to cashflow match will increase the opportunity set of assets that can be held. For example, as illustrated by Figure 5, actively managed credit funds or multi-asset credit funds and allocations to high-quality illiquid assets with contractual return sources may also be possible. Some other features of this investment approach are:

- The increased opportunity set should increase the expected assets compared to a CDI approach, raising it to gilts+0.5% to gilts+1% (based on market conditions over 2019).
- There is likely to be a wider range of assets held compared to a precise CDI approach, which may have some diversification benefits (although credit risk is still likely to be a dominant risk factor in the portfolio).
- The assets held may still provide a broad cashflow match.

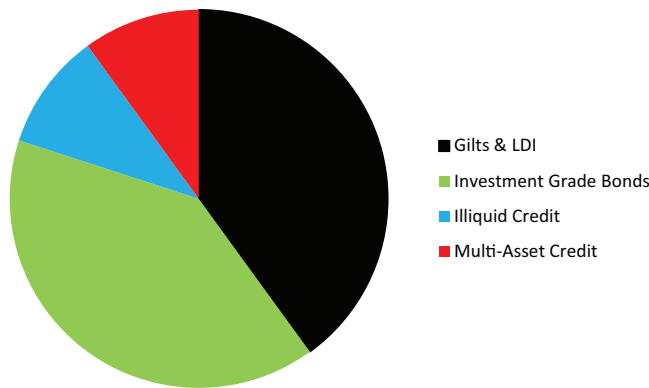


Figure 5. Example contractual assets strategy.

As with the CDI strategy, the funding discount rate could be aligned with the yield on the asset portfolio. Re-investment risk would likely be significant under this approach.

4.10.1.3 Investing for low dependency – diversification. Where appropriate diversification is a key consideration rather than just having exposure to contractual asset returns, investment strategies that include allocations to assets that generate non-contractual returns (e.g. equities) can also be appropriate.

This will typically involve allocating a large proportion to gilts and LDI (circa 80%) to ensure overall risk in the portfolio is kept low, as shown by Figure 6. The remaining allocation is then invested in a suitable range of assets that generate contractual and non-contractual returns.

Including this allocation across a range of different asset sources will increase diversification in the investment strategy. This type of strategy, a large allocation to gilts and LDI coupled with a smaller allocation to other assets, is sometimes referred to as a barbell strategy. Some other features of this investment approach are:

- Expected returns on this type of portfolio are likely to be higher than holding only contractual assets, e.g. gilts+0.5% to gilts+1.5% (based on market conditions over 2019).
- A suitable range of both contractual and non-contractual assets will capture different risk exposures, which will have diversification benefits, in contrast to strategies that only hold contractual income assets where credit risk will dominate.
- While these strategies run higher levels of re-investment risk, their risk measured using deficit or funding level volatility measures is likely to be lower.

This portfolio will likely leave considerable re-investment risk on the table but it will not be as dependent on the level of credit spreads and, by being diversified, might actually result in smaller fluctuations in the funding level.

This sort of strategy might have higher expected asset returns than a pure credit-based strategy as, by “locking in” contractual returns, a credit-based strategy will typically not offer many opportunities for upside returns beyond the base yield.

On the downside, the success of this strategy will probably depend on selecting securities and strategies that increase in value, which of course is not guaranteed to happen. This strategy is likely to see periods of underperformance where the strategies do not deliver the returns expected, and this might increase cashflow risk for very mature schemes that need to liquidate a significant amount of assets each year to pay pensions.

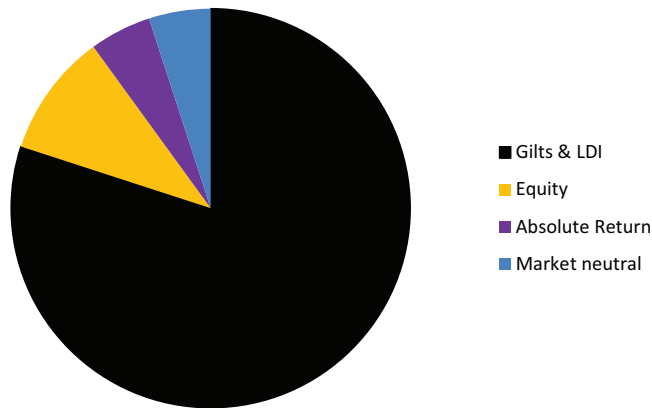


Figure 6. Example diversified asset strategy.

4.10.2. Longevity risk

Longevity risk is another key consideration in a low-dependency TES and can sometimes represent the largest risk over the long term to benefits being paid. Over the whole-of-life run-off of a scheme, longevity uncertainty is often measured in the 10-20% impact on liabilities, depending on scheme size and confidence level modelled.

Fundamentally, there are two key approaches to managing longevity risk:

1. Hedging (undertaking transactions that directly remove the longevity risk, usually at a cost) such as longevity swaps, or bulk annuity buy-ins.
2. Reserving (an explicit reserve or allowing for a margin in investment return expectations and other assumptions to withstand a worsening of experience).

Survey data suggests that 38% of respondents planned to hedge with bulk annuities, 11% with swaps and 30% had not yet considered their hedging plans (Aon, 2019).

The preference between these two approaches is likely to be a matter of belief for most schemes, coupled with considerations around feasibility. Developing a framework around managing longevity risk in low dependency is perhaps at least as important as a framework for investing.

4.10.3. Covenant strength and failure

In a sense, the aim of low dependency is to no longer be reliant on the employer covenant so, in theory at least, covenant should be less relevant in low dependency than at other stages of a scheme’s journey. Given that low-dependency schemes with a stronger employer will have a better fallback in the case of the investment or funding strategy not delivering, it might be that this will influence the extent to which trustees build buffers against adverse experiences, and the question of how much risk there is overall in the low-dependency structure. For schemes with little fallback, trustees might choose to target less risk.

Ultimately low dependency is not no-risk. The trustees should ask their advisers to identify and evaluate the risks inherent in a specific low-dependency TES, including reliance and exposure to the employer. At its most basic, this could be achieved by worst-case (but still plausible) scenario analysis that tests the outcome of the following events on member outcomes:

1. Sponsor insolvency.
2. Asset shock.
3. Longevity events.

Specifically, regardless of the strength of the employer, future insolvency is always a possibility and unless at that time (together with insolvency recoveries) the scheme is sufficiently well funded, members will see cutbacks to their benefits. We would expect that most schemes that have achieved their low-dependency target funding level will be better funded than the PPF funding level, which means that on employer insolvency members would receive benefits of value greater than the value of PPF Compensation.

Consequently, given this continued risk of employer insolvency, where the trustees are not assured of a funding level (with recoveries) that is still expected to deliver full benefits the trustees need to address the philosophical question of whether that underlying risk to members' benefits is appropriate. That funding level might be buyout affordability, superfund affordability or a funding level (and legal construct) that supports the scheme continuing to run as a 'Scheme without a Substantial Sponsor' (SWOSS). These aspects are covered in the following sections, with Section 9 focusing specifically on stressed schemes.

4.10.4. Scheme size and scale

A significant consideration around scheme size is the availability of solutions.

For many investment strategies, such as multi-class credit, diversified growth funds as well as traditional investment in equities and liability-driven-investing, pooled funds now exist that enable even small schemes to construct portfolios that deliver good risk-managed outcomes.

Precise cashflow matched portfolios by their nature will be bespoke and a detailed cashflow match will usually only be possible in a segregated managed account, which will likely only be feasible for schemes above £500m in total assets. Recently, a number of pooled building block solutions have come to the market that offer a reasonable degree of tailoring for smaller schemes.

LDI profile funds have been developed that offer a hedging profile that represents a portion of the liabilities of a typical scheme. By combining these pooled funds in a sensible way, it is possible for schemes to get a relatively close match to their liability profile.

Credit-based profile funds have come to market more recently from a variety of managers offering an approach here for smaller schemes. This is likely to continue to evolve over the coming years, however, there will remain limits on how close a match can be achieved for small schemes. For example, it would be difficult for a small scheme to put in place additional derivative overlays to generate an inflation match and to hedge any overseas bonds.

Similarly, longevity swaps are (at present) mainly bespoke transactions and currently only really make sense for schemes of perhaps half a billion pounds or larger in size.

The recent development of capital-backed journey plans, also called third-party capital solutions, is another example of an approach that is not accessible to smaller schemes. These solutions enhance the risk-bearing capacity of the covenant by providing a contingent asset that is drawn upon in specified circumstances to mitigate the impact of funding losses caused by risks such as longevity exposure and investment and hedging risks.

Entering into a master trust is one potential approach to accessing large scheme-type investment solutions for smaller schemes.

Consequently, scheme size may mean some TESs are not practical or need to be implemented differently to large schemes. Nevertheless, we would hope that with time the trend of "big scheme"

solutions eventually becoming available to smaller schemes continues, so that trustees of smaller schemes are not overly constrained in their choice of TES.

4.10.5. *The actuarial valuation cycle*

The low-dependency state is not just about the investment strategy, but about the joint funding and investment policies that work together to deliver the member outcomes. In low dependency, the actuarial valuation becomes a vital tool.

Done well, the actuarial valuation process in a low-dependency state provides a key check on its success. A key consideration for trustees is to arrive at an actuarial approach that provides a clear picture of their funding status relative to what is necessary to fulfil their objective, while at the same time not creating excessive funding level volatility (Cowling et al., 2017).

For many schemes, this could point toward an actuarial valuation methodology that looks to align the actuarial discount rate assumptions with the actual yield of the portfolio, rather than opting for the common “gilts + fixed margin” approach where that fixed margin is not dynamically adjusted to reflect anticipated returns.

This approach builds up a discount rate based on the likely returns or yields on the assets held in the portfolio less a margin. The discount rate depends on the investment approach taken and lends itself more towards the cashflow-driven or contractual-driven approaches, given that future yields for these portfolios can be estimated with more confidence (Mercer, 2016).

The dynamic discount rate changes through time in line with the asset portfolio, resulting in a smoother funded position through time and less variability in deficit-reduction contributions. The main risk driver of the funded status in this approach becomes default risk of the contractual income cashflows and so analysis is required on the deduction to make for expected defaults to the gross yield. This approach is known variously in the industry as “dynamic discount rate,” “asset-led discounting” or “cashflow-driven financing.”

Collaboration between the scheme actuary and investment adviser is essential to getting the important mechanism of the valuation working well. A key issue to address is the question of time horizon: usually the time horizon of the asset yield will be shorter than the full liability duration, leaving some uncertainty regarding the future reinvestment rate, which needs to be allowed for.

This approach of referencing the actual asset yield is not dissimilar to the approach insurers usually adopt for annuity reserving, meaning they can invest in contractual income assets that offer yields higher than risk-free whilst avoiding the solvency volatility that would have been created by adopting a relatively static “gilts + discount rate” approach. Of course, schemes have an advantage over insurers, in that they do not need to navigate capital “penalties” across different asset types, meaning that a scheme adopting a dynamic discount rate would have greater investment freedom across its low-dependency investment portfolio.

Insurers spend significant time in seeking to match cashflows and reduce reinvestment risk. So, although insurers may have appeared to have successfully tackled the dynamic discount rate question, that does come at the cost of not immaterial sophistication, complexity and operations.

The use of such a dynamic discount rate will remove funding volatility that is arguably artificial in nature, and is largely a consequence of the actuarial methodology adopted, and will become increasingly relevant for schemes with a low-dependency TES that adopt asset strategies that more closely address matching of assets and cashflow liabilities.

4.10.6. *Governance*

A low-dependency scheme may be quite different from a scheme earlier in its life cycle. Different skills and expertise will be needed around the trustee table, for example, the prominence of longevity, credit-based strategies and so on means some experience in those areas is desirable. Also, specific trustee committees might be set up to oversee the aspects critical to delivery of the TES.

The investment, actuarial and covenant advisers will have to work incredibly closely together so it may make sense to revisit appointments to ensure the setup remains appropriate. The employer would need to be involved in a constructive way and understand the strategy.

If an employer does become insolvent during a low-dependency strategy, then advice around wind-up would be needed quickly so that the trustees can understand the options and make effective choices. Indeed, pre-planning through scenario testing for employer insolvency may be highly desirable so that trustees can ensure that their scheme is robust with the right rules and powers to cope in such circumstances and that the trustees are able to act swiftly and decisively.

4.10.7. Member options

Assumptions about members exercising options are not only important for funding purposes. The future cashflow profile of a scheme is unpredictable, even more so where that cashflow profile is very susceptible to changes in member option behaviour. Managing that risk is particularly important in a low-dependency state.

As an example, transfer value experience is likely to be important for trustees in a low-dependency state, especially if using a cashflow-driven investment strategy.

The increase in members taking transfer values in recent years, due to the introduction of pension freedoms, is one example of how a cashflow profile can change. Whilst there are signs of activity slowing down it continues to vary significantly from scheme to scheme, with some still seeing very little activity and some seeing much more. Keeping track of transfer value experience ensures that trustees know how transfer payments affect expected future cashflows, hedging, liquidity and proximity to de-risking triggers.

4.10.8. Operational costs

Charges, predominantly asset management fees but also running costs such as advisor and operations fees, are a significant consideration in a low-dependency structure given the likelihood of a relatively low investment return objective (see Figure 7).

For a low-dependency structure to work trustees need to be clear that investment return targets and funding assumptions work net of all fees from all advisers and suppliers. This suggests some form of expense reserving to allow for projected expenses in the low-dependency structure, this being a key recommendation in IFoA (2018).

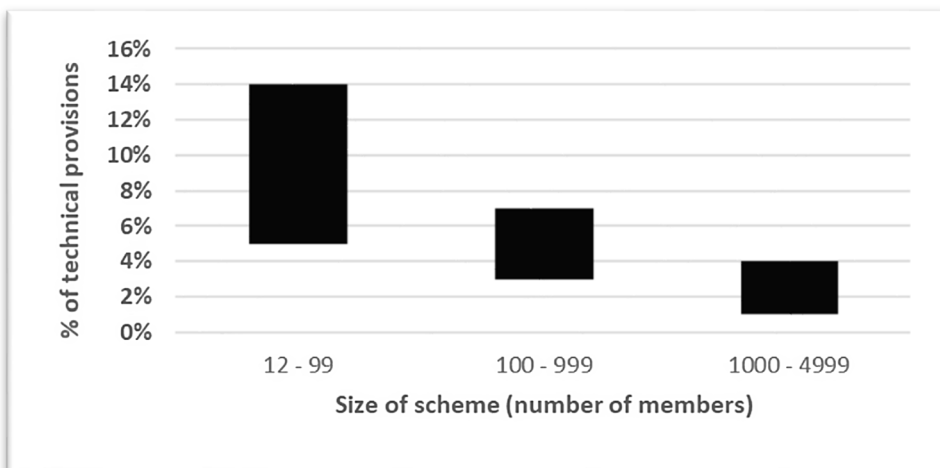


Figure 7. Estimated reserve for expenses, assuming winding up after 25 years. Data source: Institute and Faculty of Actuaries (2018).

4.11. Conclusion

Ultimately the definition of low dependency and how it is implemented with regard to investments is influenced by a range of factors, including investment beliefs. Actuaries can help guide their clients toward the solution that works best for the scheme in question.

Low dependency is low risk, not “no risk.” The most useful form of definition of low-dependency captures both funding and investment considerations together rather than separately, focusing on outcomes. Considerations such as investment beliefs, longevity beliefs, employer covenant, scheme scale and resources will influence the approach to low dependency and even whether it is an appropriate endgame target for a given scheme.

Continuing with the not “no risk” theme, trustees establishing a low-dependency TES need to address the philosophical question of whether the risk to members’ benefits in the event of employer insolvency, a risk that is not remote in the long term for most employers, is appropriate.

On the investment front, cashflow matching is often a go-to paradigm for low dependency, but this is not a panacea and is one of at least three different approaches that could be considered.

Longevity risk will become a key risk for a scheme running long-term in low-dependency mode so specific thought is required to address this. In that context, it might not make sense to reduce investment risk beyond a certain point (as any reductions in investment risk may be “drowned out” by longevity risk).

The use of a dynamic discount rate approach will help schemes to manage their risks and journey plans better, removing artificial funding volatility.

A team of expert advisers (investment, actuarial, covenant) working closely together with the trustees and the company will help the smooth running of a low-dependency TES.

Member options activity and operational costs matter in low dependency, given investment return targets are likely to be low. Fees, expenses and charges will likely consume a greater share of the excess returns than for a growth-focused portfolio. These need to be estimated and reserved in a sensible way, especially for cashflow and liquidity planning.

Section 5: Buyout

5.1. Introduction

Buyout is often described as the “gold standard,” usually on the basis that a bulk annuity with an insurer is viewed as far more secure than a pension funded by a defined benefit scheme backed by an employer⁴. However, the legal duty of trustees is not, necessarily, to target securing pension entitlements with a buyout. This section examines why trustees might or might not choose to target a buyout and, for those schemes targeting buyout, the section outlines how issues they need to consider differ from those schemes targeting a low-dependency TES.

This section will help trustees clearly define a buyout TES by addressing:

1. What “buyout” means.
2. Reasons for choosing buyout as the TES (and otherwise).
3. How an insurer prices a buyout policy.
4. The journey plan to buyout.

Other relevant aspects, including employer considerations, investments, funding for buyouts, member options, using bulk annuities and longevity insurance, and benefit simplifications.

⁴If an insurer fails then the impact falls directly on the scheme (and hence the employer) until members become individual policyholders of the insurer and thereafter it falls on the members. Although the risk of an insurer failing may be small it does exist. For example, PRA (2019, p.5) states: “Government risk appetite for DB pension scheme consolidator failure may be higher than the Government risk appetite for insurance firm failure.”

IFoA (2018) projected bulk annuity volumes of around £250 billion over 2018–2037 in 2018 money terms, which is a huge spend by trustees of schemes. Hence, it is critical to be clear as to the rationale for targeting buyout and, where that is the target, for the myriad aspects relevant to running a scheme to be tailored to that TES.

Section 8 describes how trustees can select between the different TES options open to them. The purpose of Section 5 is to describe the attributes of the buyout TES so that it can be properly constructed and evaluated against alternative TESs.

5.2. What does “Buyout” Mean?

“Buyout” is a commonly used term but in practice, it is not tightly defined.

Usually, buyout is interpreted as purchasing a bulk annuity policy in the name of the trustees covering all scheme members which, at some point, is converted into individual annuity policies in the name of each member. Provided that this discharges the scheme liabilities in their entirety, this enables the scheme to be wound up.

Consequently, what matters is the process the trustees use to satisfy those liabilities so that the scheme can be wound up, and the purchase of a bulk annuity policy is just one part of that process. In this paper, we use the term “buyout” to either refer to the bulk annuity policy or to refer to the whole winding up process, as the context requires – that is for brevity only.

How the trustees can achieve a proper winding up of the scheme is a legal question, albeit often requiring input from actuarial advisers. The process adopted will differ between schemes as they will each have their own specific histories and idiosyncrasies, and different trustee boards and employers will have different risk appetites in terms of residual risk after the wind-up process is complete.

There are several steps that well-advised trustees should take to ensure that they properly discharge their responsibilities prior to a scheme being wound up. Winding up a scheme tends to be more complicated than assumed. Trustees and advisers must avoid looking only as far as the bulk annuity transaction – they must look beyond that and ensure they are clear about the whole end-to-end process to completion of winding up.

5.3. Why would Buyout be Selected as the TES?

There are three key features of buyout relevant to whether it should be the TES:

1. **Member outcomes:** buyout is usually considered to be an attractive option given that insurers are highly unlikely to fail, compared to the risks inherent when meeting pensions from an ongoing scheme. Hence, members have a high likelihood of having their benefits paid in full.
2. **Cost:** Buyout is usually the most expensive of the TES.
3. **Exit:** Practically, buyout is the only way to remove and wind-up a scheme (and the risks associated with managing defined benefit liabilities) other than a scheme transfer.

So, buyout is typically the most expensive option, but it is the option that is usually considered the most secure for members. So how do trustees make the trade-off between costs and benefits?

The decision to target buyout is sometimes not finely balanced in that it is not driven by a detailed analysis of marginal economic costs versus marginal member outcome metrics nor compared to an alternative TES such as low dependency. It is often driven by more fundamental factors.

An initial factor to consider is affordability. If buyout is not affordable, regardless of what employer funding might be available and what investment returns are realistic, it cannot be a sensible TES within a reasonable time horizon. Employer contributions are often key to determining affordability in many cases.

For trustee boards, the key factor is usually recognition that the ability to meet their obligations relies on the continued existence of the employer with a sufficient covenant but that there is no guarantee that the employer will continue in the very long term. A sound and strong covenant is important because, even if the scheme is well funded today, the position might deteriorate and so require further employer contributions.

An analysis of the trio of key components of an IRM analysis, namely covenant, funding and investment, may very quickly point towards buyout being the most appropriate TES.

For corporates, a key factor is often simply a desire to remove a long-term legacy liability from its balance sheet that is demonstrably or potentially impeding its business activities. Where the employer is keen to target buyout, in most cases it would be unusual for trustees to resist but in some cases, they do as they place real value on the employer covenant.

Of course, there may also be other reasons for choosing a buyout TES beyond a purely financial analysis. For example, a philosophical view is that pension liabilities do not belong on corporate balance sheets.

It is of course possible for a trustee board and employer to have different views (usually where that is the case, the trustees wish to target buyout and the employer does not). Section 2 describes in more detail the interaction between trustee boards and employers. It goes without saying that, where there is a difference of opinion, it needs to be reconciled. The position may depend on the balance of powers within the rules of the specific scheme and there will be some schemes for which the trustees cannot realistically implement a buyout TES without the support of the employer.

A longer list of factors for targeting buyout or otherwise is set out in Table 2, but there may be additional scheme-specific factors that trustees and their advisers can help to identify. Many of the factors in the long list below will not apply to the circumstances of a specific scheme and hence can be deleted, leaving a more manageable list.

Table 2. Pros and Cons of a Buyout TES*

Positive: Towards a Buyout TES	Negative: Against a Buyout TES
Primarily considered with an integrated risk management analysis	
<p>Covenant: Buyout removes the need to rely on the employer covenant.</p> <p>Risk transfer: The trustees and employer may not want to retain the risks of running off a scheme in the long term. This may be because the scheme is small and so has significant idiosyncratic risks that are averaged away when pooled on an insurer's balance sheet. Or it might be the trustees and employer have views in areas such as future longevity improvements.</p> <p>Member outcomes: It achieves what is commonly perceived as an attractive member outcome, so why wouldn't it be targeted?</p>	<p>Strong employer: The trustee board is comfortable that the employer is strong so there is no need to target buyout*.</p> <p>Low risk does not mean no risk: The trustee board is comfortable that as long as the impact on members by way of benefit reductions, in the event of employer default, is low an acceptable balance between member outcomes and employer cost has been achieved.</p> <p>Contingent funding: There is sufficient contingent funding in place to allow the scheme to buyout in the event of employer default. Hence there is no covenant-driven reason for buyout.</p>
Other factors	
<p>Cheaper: Insurers have enormous economies of scale, which reduces effective cost on a like-for-like basis. Also, there are lots of soft and hard costs in running off a scheme (for example management time and PPF levies) that are often not quantified.</p> <p>Tactical: Targeting buyout means a more prudent funding schedule for the scheme, which increases member security, even if buyout is never attained.</p> <p>Prudence utilisation: The cost might be low as prudent technical provisions under the pension's regime might be close to or less than buyout for some schemes e.g. mature schemes.</p>	<p>Value for money: The trustees and company believe they can run-off the scheme at a cost less than buyout, so why pass value to an insurer? In fact, for some employers, this might offer an attractive risk/return depending on the surplus rules of the scheme.</p> <p>Accounting: The employer wants to avoid the impact of settlement treatment or other accounting impacts in its financial statements.</p> <p>Past issues: The due diligence usually undertaken as part of a buyout may unearth past data and legal issues that need rectification. In other words, better to "let sleeping dogs lie"[†].</p>

(Continued)

Table 2. (Continued)

Positive: Towards a Buyout TES	Negative: Against a Buyout TES
<p>Peer pressure: Other schemes target buyout – so why wouldn't the trustees do likewise?</p> <p>Management burden: The employer finds dealing with the scheme too much of a management burden.</p> <p>Philosophical: The employer believes it is not in the business of long-term insurance.</p> <p>Corporate activity: The scheme may be an impediment to corporate transaction activity.</p> <p>Economic: Corporates looking at their balance sheets from a capital efficiency perspective (for example, financial institutions) may assess that buyout is economically advantageous as it releases balance sheet capacity for other uses.</p>	<p>Insurer strength: The trustees and/or employer do not believe the risk of insurer failure is remote.</p> <p>Not causing any issues: The scheme is already de-risked and has been running off uneventfully for years. What's the burning platform?</p> <p>Active members: The scheme still has active members still accruing benefits.</p> <p>Discretionary benefits: There is a possibility of members receiving discretionary increases that would be lost should the scheme buyout.</p> <p>Members might be worse off: The benefits secured on buyout might be worse for some members.</p>

*Although in such a scenario the trustees could consider targeting a "full" bulk annuity buy-in held as an asset rather than continuing to buyout, should the insurer ever default the trustees can then still revert back to the employer.

†As a general point, where there are indications of issues, trustees would be at risk of not meeting their legal duties to members if they were not dealt with. But the issues found may lend themselves better to being run-off over the longer term, rather than taking an excessively low-risk approach and securing extra benefits when the rationale for doing so is not wholly convincing.

In summary, the decision on whether to select a buyout TES might depend on a number of interrelated factors as shown by Figure 8.

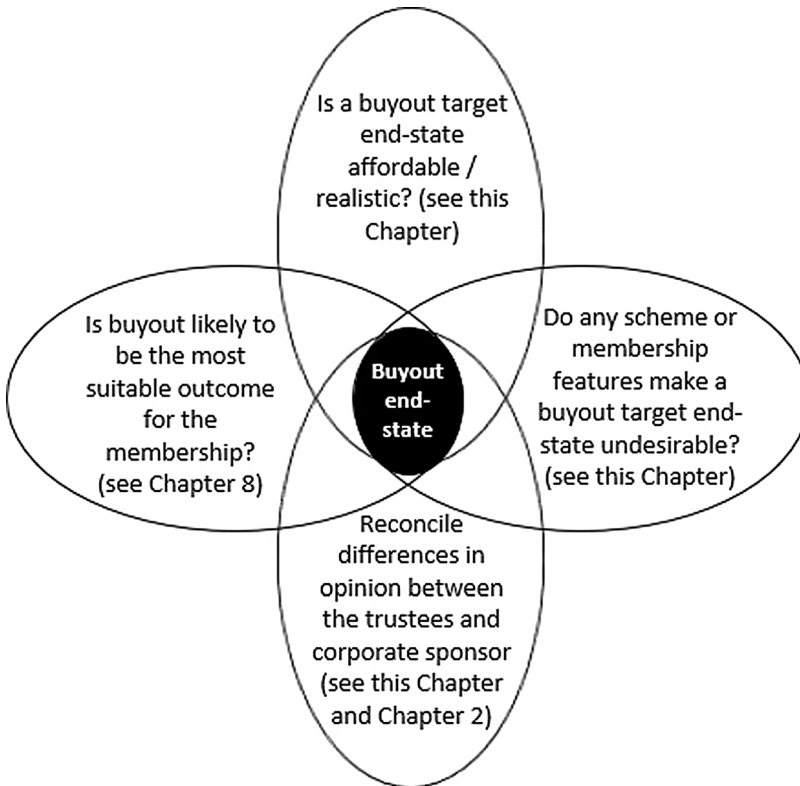


Figure 8. Deciding whether a buyout TES is most appropriate.

5.4. Estimating Insurer Pricing

Given the complexity of insurer pricing, it is not possible to come up with a generic approach to predict with high accuracy, by reference to observable market data such as credit spreads, and



Figure 9. Adjustment to gilt yields to estimate pensioner buy-in pricing*. Source: Willis Towers Watson.

* The chart shows estimated figures. Actual pricing achieved for a particular transaction will depend on the specifics of that transaction and might therefore deviate materially from the median line

“best” insurer pricing at any point in time. Insurers have different asset strategies to one another, different reinsurance strategies, different capital calculations, different profit measures, different commercial objectives and different constraints.

It is possible to make generalisations, for example, that at a macro level insurer pricing will be correlated to credit spreads, interest rates, reinsurer longevity pricing etc. However, there can be significant variations around a trendline derived from macro factors.

In terms of historic pricing levels, Figure 9 shows bulk annuity pricing for pensioners (purple line) expressed as the “gilts + x%” discount rate required to discount the projected pensions back to the premium. Pricing for portfolios including deferred pensioners is less attractive.

It is therefore important to introduce early funding triggers under which actual insurer pricing is sought to verify actual proximity to the buyout target rather than relying on estimates until close to the (estimated) end point.

5.5. The Journey Plan to Buyout

A buyout TES differs from a low-dependency TES. Low dependency is more akin to state of ongoing existence – even once the low-dependency target is attained the scheme still needs to be managed in the long term around that TES. This contrasts with the buyout TES, which has a clear ending.

The journey to buyout involves some very specific activities that are different to what might be encountered when targeting a low-dependency TES:

1. **Funding, including management actions:** The normal constraint relating to buyout is affordability, so the trustees will need to close the gap between current funding and the amount required to buy out and wind up the scheme. This will usually involve an asset strategy with expected returns higher than the expected year-on-year change in buyout pricing for the scheme. There may also be funding available from the employer. Importantly

there are various other actions that can be taken to improve funding, such as member option exercises.

2. **Buyout readiness:** There is a series of actions to ensure the scheme is ready for buyout and winding up when the time comes, for example, data quality, benefit audits, trustee training, governance and asset liquidity.
3. **Bulk annuity purchase process:** Given that the actual cost of buyout is difficult to estimate there needs to be a plan for when the insurance market should be approached. Most trustees choose to err on the side of approaching too early rather than too late and the journey plan needs to fit around that.

The key covenant issue within the journey plan, where a scheme is targeting a buyout TES, is making sure that the scheme can get to the buyout funding level within a sensible time horizon given the covenant outlook and without taking investment risk along the way, outside of what can be supported by covenant. Unlike low dependency, where scheme funding builds towards buyout, a scheme with a buyout TES almost always has some reliance on the employer until winding up is complete.

5.6. Employer Considerations

A number of considerations for employers have already been touched upon when addressing the reasons why buyout may or may not be the target end game.

Where the employer is supportive of buyout, trustee and employer interests should be broadly aligned. However, that does not mean that trustee and employer interests are identical.

An employer may wish to tactically consider when it wants to commit to a buyout TES. It may not wish to present this at the outset to the trustees, in order to not constrain funding flexibility and negotiation leverage. Once a buyout TES has been formally adopted by the trustees it would be difficult for them to dilute this to a less secure target, and the employer's funding support to get to buyout will be assumed, subject to affordability.

5.7. Investments

The trustees need to consider the extent to which they want to use asset performance to close the funding gap to buyout. Do they need to invest their way to buy out or will there be sufficient employer funding available? Managing liability risks (interest rate and inflation) is likely to be key to the strategy to ensure the buyout target doesn't get further away. The remainder of the assets would be invested for growth, in accordance with the investment principles and beliefs of the trustees.

There will be considerations as to the amount of illiquid assets that make sense given the need to be "buyout ready" when buyout affordability is approaching.

The other factor to consider when funding towards buyout is how to manage investment strategy so that funding volatility with regards to buyout pricing is minimised as affordability approaches. As described above, it is not possible to predict with high accuracy how insurer pricing will move. However, a strategy that includes exposure to interest rate and inflation swaps, gilts and investment-grade credit is likely to move roughly in line with buyout pricing. Nevertheless, there will remain a mismatch until a buyout is secured, which can be partially mitigated by making partial purchases of bulk annuities along the way.

5.8. Funding for Buyout

We have already mentioned in this section that one of the key areas of focus for trustees targeting a buyout TES is closing the gap between current funding and buyout funding.

Unlike low dependency (which is typically defined against a measurable metric) the quantum of the buyout funding level cannot be predicted in advance – it can only be known with certainty once an insurer selection process has been run, an insurer shortlisted, the contract negotiated, executed and premium paid.

The question therefore arises of how to estimate bulk annuity pricing.

5.9. Estimating Bulk Annuity Pricing for Funding Purposes and Seeking Actual Quotations

Whilst affordability for buyout is some way off, the buyout target will typically be determined using the scheme actuary's "best estimate" of typical pricing, recognising that this is an estimate and that, given the complexity in pricing, might be some way off an actual price. In practice, a scheme's actuary will not replicate an insurer's proprietary pricing methodologies. Instead, the actuary will use alternative proxies that experience shows are reasonable approximations.

This difficulty in estimating true bulk annuity pricing causes material funding issues – how do you fund for an uncertain target? If this is not done appropriately there is a risk of having insufficient funding; or there is a risk of surplus, which is not an attractive scenario for an employer versus not having paid the contributions to start with. Due to the difficulty in estimating actual insurer pricing, trustees and employers may find it suitable to arrange for some funding to be held outside of the scheme, either formally via an arrangement such as an escrow account, or informally via a promise to pay in a schedule of contributions until the final buyout price is known.

Tied to this issue is the strategy for approaching the insurance market for quotations. Given the difficulty in predicting pricing, and inherent volatility between scheme investments and bulk annuity pricing, insurers would normally be approached for quotations at the earliest time that buyout is thought to be affordable (albeit some insurers may decline to provide pricing if they deem the likelihood of a transaction is low). If it transpires that buyout is not yet affordable, this allows funding, asset strategy etc. to be realigned to the more accurate position.

5.10. Expense Reserving

The trustees should fund a reserve to cover their business as usual running costs up to the winding up of the scheme, their costs in dealing with the purchase of the bulk annuity, the costs of winding up the scheme and other costs such as asset transition.

To ensure a reserve is robust, trustees should consider well in advance of purchasing bulk annuities some of the more intricate issues related to winding up a scheme. For example, whether they will purchase "all risks" extensions to the bulk annuity – this typically costs between 0.75% and 1.25% of premium (or in terms of period of time to achieve buyout, perhaps one year). Such material matters are often (unfortunately) not considered until very late in the day.

Drawing up and reserving for an expense reserve in this way means that some uncertainty in the end target is reduced. Equally importantly, as the expense is now reserved for, it means activity can be undertaken in sufficient time, rather than being left until the very last moment.

5.11. Member Options

Member options are a factor that not only directly impacts members but also affects the time horizon to achieving a buyout TES (by as many as several years in some circumstances).

When it comes to member options when targeting buyout there are a number of different considerations compared to a low-dependency TES because:

1. The terms for options offered by insurers will usually differ from those offered by a scheme, which opens up the question of how the transition of the gap in terms is managed. For

example, an insurer's terms may be better for cash commutation but worse for transfer values.

2. Bulk annuity pricing is usually higher than a low-dependency measure and hence the funding gain from members taking options can be considerably higher. For example, a scheme that is, say, 95% funded on buyout, might find that it can close much of that gap through a member option exercise without significant effort.
3. Buyout includes key milestones such as purchase of a bulk annuity policy and ultimately issuance of individual member policies, which introduces practical issues to navigate. For example, an abrupt change in option terms (due to alignment) can materially impact members and hence there needs to be clear communication to members as to how their option terms will change. This contrasts with low-dependency, which describes a long-term state of affairs.
4. Some benefit types can be disproportionately expensive to insure – member options open up an opportunity to mitigate this.
5. Members taking options introduces extra selection risk compared to low-dependency, especially when a bulk exercise is run.
6. A buyout process introduces the ability to offer “Winding Up Lump Sums”, which are not readily available under low dependency.
7. Commercially, there is a question as to which entity benefits from the actuarial profit from members taking options – is it the insurer or is it the scheme?

Many of these factors are often not considered until buyout is close, whereas if they were considered earlier it could result in a more optimal path to buyout. Having a properly designed strategy for member options that aligns with the journey to buyout is highly desirable from a funding perspective and as a means of enhancing member outcomes whether or not members choose to take an option.

It is beyond the scope of this paper to cover the different ways through which member options can be managed and the merits of these approaches. In practice, in our experience, the nuances around member options are rarely a driver for the choice of TES but can be a key part of the journey.

5.12. Using Bulk Annuities and Longevity Insurance

Section 4 on low dependency mentioned the usage of bulk annuities and longevity insurance as a risk management tool or investment when running off.

5.12.1. Bulk annuities

When it comes to bulk annuities the considerations where buyout is the TES are different, as the purchase of a bulk annuity or bulk annuities covering all members is inevitable i.e. a matter of when, not if.

Where buyout is the TES there is a new funding consideration. Namely, if no bulk annuity purchase is made along the way, then the end buyout funding position depends entirely on what pricing is available at the end, which may be very different to what was estimated for funding purposes. Even if it was possible to estimate bulk annuity pricing, it is not possible in practice to completely immunise against changes, which again introduces risk.

This uncertainty may be beyond the parties' appetite for risk and so purchasing a bulk annuity covering part of the benefits reduces the size of the final bulk annuity purchase and hence the risk in monetary terms. Partial purchases may also allow a scheme to take advantage of periods of attractive insurer pricing, meaning that the trustees can incrementally improve the funding position.

For very large schemes, where market capacity means a single purchase might result in higher pricing, a series of partial purchases might be more optimal.

If a partial bulk annuity purchase is being made then there is an extensive discussion, not covered here, around the size of the purchase and which members should be covered. There are also some challenges in transacting with multiple insurers that are not covered here.

5.12.2. Longevity insurance

Similarly, given insurers use longevity insurance to manage risk and capital, purchasing a longevity insurance contract along the way reduces the extent to which the end bulk annuity price will depend on longevity reinsurance pricing at the time. The theory is that the longevity insurance contract (or rather, the reinsurance contract behind it) will be novated to the bulk annuity insurer.

Again, there is an extensive discussion around the pros and cons of purchasing longevity insurance and, if it is purchased, which members should be covered. A key point is that novation of a longevity insurance contract is not automatic and so there are practical aspects to navigate. Hence the purchase of longevity insurance as a prerequisite to a bulk annuity purchase is only likely to make sense where there is no strong expectation of the bulk annuity purchase occurring in the near term.

To the extent that risk is reduced by using bulk annuities and longevity insurance along the way, this can be reflected in the funding strategy.

5.13. Benefit Simplifications and Changes

Some benefits can be disproportionately expensive to insure. Some streamlining can be achieved by offering members the option to convert benefits into something more straightforward. However, there is a wider question about benefit simplifications and changes implemented on a “fair value” basis but without member consent. By doing so, funding requirements can be reduced, meaning less employer cost and/or the scheme can reach the buyout position more quickly.

Specific to buyout is the analysis of what simplifications are desirable, given that what might be disproportionately expensive to insure might be straightforward for a scheme running off on a low-dependency basis. In fact, there are occasions when a scheme offers a benefit that cannot be insured.

What can and cannot be lawfully done to re-shape benefits to enhance insurability is heavily dependent on the terms of the rules of the scheme (in particular the power to make amendments) and carefully considered legal and actuarial advice is essential.

Section 6: Superfunds

6.1. Introduction

The Department for Work & Pensions (2018) confirmed an intention to introduce a new TES option, namely the transfer to a commercial consolidation vehicle or “superfund”.

Transfer to a superfund is recognised by TPR as a valid TES. For many (and currently most) schemes, insolvency of the employer will lead to a PPF+ buyout or transfer to the ‘Pension Protection Fund’ (PPF), each resulting in reduced pension entitlements. Hence in many cases, a transfer to a superfund would be expected to improve member outcomes overall.

We will not cover the history behind the development of superfunds in this section. The Pensions Regulator (2020c) sets out guidance to trustees and employers of schemes considering transfers to superfunds.

In essence, a superfund is a defined benefit pension scheme that has been established specifically for the purpose of accepting transfers of the assets and liabilities of other schemes. It is

established as a commercial enterprise as a means of consolidating pension liabilities from single schemes or multiple schemes of different employers.

Once a pension scheme and its members are transferred into the superfund, the employer has no further liability in relation to those pension liabilities. Instead, the superfund takes on the obligation to pay all of the benefits. Of course, just like an insurance buyout does not necessarily completely remove all risks from the employer or trustees, a transfer to a superfund may leave some residual risks, but that is beyond the scope of this paper.

Typically, trustees would expect the employer to make a final contribution to the scheme or superfund as part of the business case for the trustees to agree to the transfer.

Although specific legislation to create a framework for superfunds was proposed by the Department for Work & Pensions, none has been drafted yet, and so superfunds operate under the existing pension regime overseen by TPR. TPR has published details of an interim regime for superfunds.

Superfunds do not have an employer in the normal sense. Instead, in lieu of a corporate covenant, they hold buffer capital. This provides risk-bearing capacity, but unlike a corporate covenant, it is a financial covenant. In other words, it is financial security, finite in quantum, measurable and accessible under the rules set between the superfund and buffer entities.

The investors who provide this buffer capital receive a return on their investment generated from actuarial surpluses, because the liabilities run off much like the investors in an insurer.

6.2. Capital and Security

The Pensions Regulator (2020b) sets out expectations for the capital adequacy of superfunds and anticipates that superfunds will be funded to a level (including buffer capital) and run in such a way that members who are transferred to a superfund have a high likelihood of receiving all of their benefits in full.

For example, TPR defines the level of technical provisions to be held by a superfund with reference to use of a discount rate of gilts + 0.5%. TPR requires a superfund to hold sufficient capital that demonstrates a 99% likelihood that it covers those technical provisions after five years. Of course, such a test does not guarantee security, but it does illustrate that superfunds are not intended to be a risky play but rather a valid solution for the right pension scheme.

However, by design, superfunds will not be as secure as an insurer but the quid pro quo is that they will not be as expensive as an insurance buyout. As an example, based on pricing guidance currently supplied by superfunds, pricing might be around 85 to 90% of the cost of an insurance buyout for an immature scheme.

Members of superfunds remain protected by the PPF and so, like the scheme from which they transferred, should the superfund fail they will retain the PPF safety net. In fact, superfunds will be required to unwind and secure reduced benefits for members through a PPF+ buyout, should their funding level fall so much that there is a heightened risk to the PPF.

This means that there are specific failure triggers under which member outcomes can be modelled for superfunds, unlike insurer failure which, although remote, does not have a well-defined process for modelling member outcomes⁵.

6.3. Transferring to a Superfund

For a board of trustees to agree to break the link to an employer they would need to be confident it is in members' best interests. In other words, will member outcomes be tangibly improved as a result?

⁵Other than assuming 100% coverage under the FSCS.

The Pensions Regulator (2020c) makes it clear that should the trustees expect to be able to achieve a buyout TES within a relatively short number of years, transferring to a superfund would be unlikely to be appropriate.

The expectation is that in most cases a transfer to a superfund would need to be accompanied by a worthwhile final funding contribution by the employer that would not otherwise be available if the transfer to the superfund did not take place. However, that will not always be the case. For example, as explained in Section 3, one of the key aspects that a covenant provides is the time for a pension scheme to achieve its TES. Should the covenant fail then the scheme will simply not achieve its TES and members will receive reduced benefits. The nature of the covenant provided by a superfund is different because it is a financial covenant and so the way it would fail, if it did fail, would be very different to a corporate covenant failure.

Transfer to a superfund removes the reliance on the employer remaining solvent, and therefore removes the binary member outcomes that can result from this risk.

6.4. Member Outcomes

The key point is that although superfunds are designed to have a high likelihood of delivering full benefits, unlike insurers their probability of failure is not negligible. This means that member outcomes on transfer to a superfund are not guaranteed to be 100% of benefits. Should the superfund fail then members would receive cutbacks to their benefits.

This creates an interesting analysis. A pension scheme being transferred to a superfund is likely to have a relatively weak covenant and a funding shortfall versus buyout. If the members remain within the existing scheme with the current employer then they retain exposure to the covenant, and if it fails they will likely receive reduced benefits. However, if it does not fail then the scheme might eventually be able to secure full benefits with an insurer. If the scheme transfers to the superfund there remains a possibility of failure, but it may be that such a possibility is lower, and it might be that the benefit cutbacks on failure are also lower.

This is one of the key aspects put forward by proponents of superfunds. They do not need insurer-like security so as to vastly improve member outcomes and in fact if there were no superfunds members of schemes may encounter much worse outcomes on covenant failure.

6.5. The First Transactions

At the time of writing (2021) superfunds have yet to complete their first transactions. In fact, the Pensions Regulator (2020b) was only issued in June 2020 to explain how TPR will assess superfunds prior to them being able to undertake transactions. However, the expectation is that the first superfunds will complete that assessment process at approximately the end of 2021.

Although it is early days for superfunds and it would be speculative to predict future volumes of scheme transfers to superfunds, given the potential improvement in member outcomes, it is not unreasonable to assume that they could become a not insignificant TES within the defined benefit scheme industry.

6.6. The Impact of Differing Propositions

A key difference and challenge with superfunds is they do not offer a common proposition.

If we look at buyout, the proposition offered by different insurers is very similar, albeit with some tailoring and special features. Nevertheless, the buyout product is relatively vanilla. There will of course be differences between insurers when it comes to aspects such as financial strength, member experience and so on, but in terms of assessing member outcomes and hence whether buyout should be the TES, there is no need to consider at the outset which insurer will be eventually used once buyout can be afforded.

That will not always be the case for superfunds. Sometimes trustees may be able to decide that in principle a transfer to a superfund is an appropriate TES on the basis that it will almost certainly improve member outcomes, and then decide on the choice of superfund as they approach affordability. In other cases, the specific proposition offered by the superfund may fundamentally impact whether the trustees feel it is an appropriate TES.

Superfunds are likely to offer a richer diversity of propositions than are available within the buyout market as they are not subject to the constraints of the insurance regime (albeit those constraints do also help ensure security). The first two superfunds that have launched and that are currently going through the TPR assessment process have different models:

- One is a “bridge to buyout” model. In other words, a scheme transfers into a segregated section of the superfund and so the finances of that scheme are separate from the finances of other schemes in the superfund. The superfund manages the scheme until it can secure benefits with a buyout. That timescale to buyout could vary but might be, say, 10 years⁶¹⁹ and, for future superfunds with this model, might be considerably longer.
- The other superfund is a pooled long-term run-off model. Schemes that transfer to it are aggregated, pooled and run-off in some form of low-dependency strategy. If the superfund generates surpluses, members receive augmentations via a profit share. This makes analysis of member outcomes on failure more complex because, although members’ benefits might get scaled back, that might be from a higher level due to augmentations, meaning they are not as significantly worse off as might be assumed.

Therefore, to assess a superfund, complex projections need to be undertaken to generate the range of likely outcomes for members should things go according to plan, but also the range of outcomes should the superfund fail, those outcomes additionally being time-dependent. Projections will of course be model-dependent and the reality is that actual outcomes will depend on what happens in practice after a transfer occurs, which can never be known with certainty.

6.7. Other Factors

A superfund transfer is a transactional TES, like buyout, and so many of the factors relevant to a buyout are also relevant here, but in a different way, for example, the sections within Section 4 on investments, member options and determining benefits. However, again, superfunds will come in many different variations and will also have more flexibility than insurers as they operate under the pensions regime. Therefore, given superfunds are relatively new but have this greater level of variation, we have not attempted to set out detail on these other considerations in the interests of brevity.

Section 7: Member Outcomes

7.1. Introduction

This section is concerned with member outcomes – the level of benefit entitlements ultimately received by members, compared with those promised under the scheme rules.

Historically, when many of the benefits provided to members (notably pension increases) were on a discretionary basis, it would be typical for member outcomes to be in excess of contractual benefit entitlements. As pension increases (and revaluation of deferred benefits) became

⁶¹⁹It is unlikely to be materially shorter as, otherwise, the trustees of the scheme in question would probably take the view that members would be better off if the trustees worked the scheme to buyout themselves as opposed to transferring to a superfund that would do so net of investor profits.

contractual, and discretionary benefits less common, the emphasis switched and nowadays member outcomes typically focus on situations in which members receive less than 100% of contractual entitlements.

Member outcomes are inexorably linked to the fortunes of both scheme and employer. The PPF has now accepted the transfer of 1,000 failed schemes (Pension Protection Fund, 2020a), with the clear implication that some members will not receive full benefits.

When assessing the entitlements that members expect to receive, allowance must be made for the future existence and viability of their employer. In practice, all members of schemes face a default risk associated with their benefits. Similarly, when designing the journey plan to a TES, allowing for the impact on member outcomes of different investment and risk strategies in combination with potential future covenant scenarios can lead to better – potentially materially better – member outcomes.

7.2. The Current Approach

Whilst maximising the chances of being able to pay benefits has always been a key consideration of trustees, detailed quantification of potential member outcomes has not been commonplace. The traditional system treats outcomes as binary: members are considered as either uncertain of receipt of their full benefits (receipt is dependent on the continued mix of covenant and scheme funding) or deemed to be certain of benefits (for example through a buyout).

Where quantification of member outcomes is undertaken, current practice within the industry, even for the largest schemes, is to typically focus on the projected funding level as a broad proxy for the severity of reductions in member benefits in the event of a future failure of the employer.

In this dynamic, the covenant of the employer is largely outside of the control of the scheme and is rarely modelled explicitly. The focus of trustees and decision-making is driven at a macro level around the funding level of the scheme. Member outcomes as such are not considered in depth – any increase in funding level is assumed to directly improve member outcomes. Clearly, at a simplistic level, this will be the case – the more assets in the scheme, the higher the chance of paying the members' benefits.

The issue is that the impact on member outcomes can be difficult to ascertain beyond this simplistic, aggregate level. The impact can vary considerably and can depend on:

1. Actions that can be taken by trustees to mitigate a worsening in funding level or deterioration in employer covenant.
2. What would actually happen to benefits in the event of employer failure (see Figure 10 as an example) – in addition to transfer to the PPF, options could include a PPF+ buyout, a transfer to a superfund or a run-off as a Scheme Without a Substantive Sponsor (SWOSS).
3. How different member cohorts are impacted due to the effect of factors such as expected life expectancy, benefit structure and the way in which statutory priority orders would be applied on insolvent winding up.

Funding levels are therefore at best a simplistic, indirect assessment of member outcomes, and we need more sophisticated, granular tools to be able to help trustees and employers navigate between the TES options available to them.

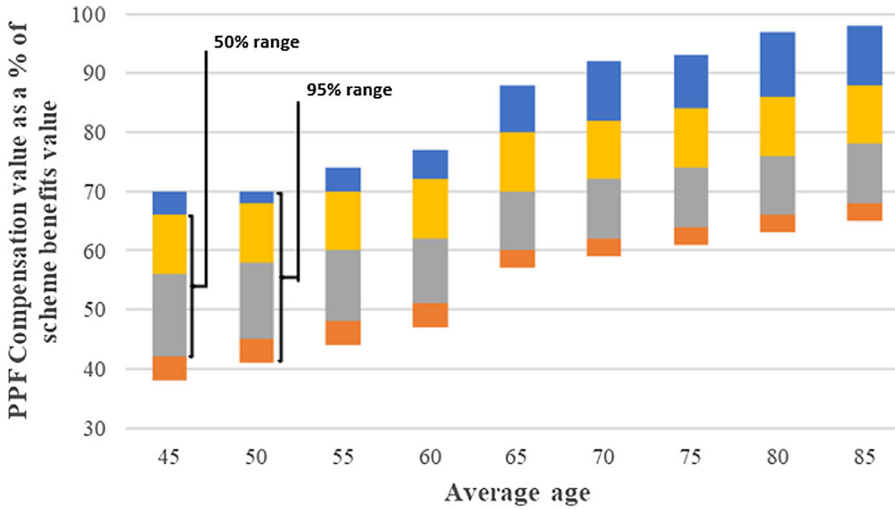


Figure 10. Analysis of member outcomes analysis for an example scheme on transfer into the PPF*. Source: Willis Towers Watson.

* This analysis is dependent on the scheme being assessed and the actuarial assumptions made. It does not allow for recent challenges to PPF Compensation such as “Hampshire,” “Bauer” and “Hughes”

7.3. The Introduction of Superfunds

The concept of superfunds has introduced a new dynamic into the industry. A superfund transfer removes the employer covenant relating to the transferring scheme. It changes the dynamic away from a relative assessment of scheme funding and covenant to one that requires an absolute assessment of whether the superfund’s capital, governance structure and other attributes will lead to better member outcomes than the existing scheme funding and covenant set-up.

TPR (2018) highlights the importance of trustees undertaking a member outcomes analysis when considering a transfer to a superfund. It is useful to set out an extract of this guidance:

“You need to satisfy yourself that members’ benefits will be better protected in the [superfund] than remaining in the current scheme with the sponsoring employer ... we expect this comparison to be informed by stochastic modelling of the progression of the funding of the scheme, supplemented by stress/scenario testing.”

TPR (2018) highlights the importance of assessing, in-depth, member outcomes when considering a transfer to a superfund and the latest guidance in this area. TPR (2020c) builds upon that. This of course makes sense, given a transfer to a superfund removes the employer covenant, which not only alters the security environment but is also, to some in the industry, considered to be objectionable except as a last resort.

However, we suggest that an in-depth analysis of member outcomes is key to support decision-making relating to any non-trivial or obviously positive activity, not only where a transfer to a superfund is on the agenda.

One of the key arguments made by the PLSA (2017) was that if buyout delivered 100% member outcomes, and PPF delivered much less on average – say 75% – then a superfund that delivers less than 100% but more than the PPF delivers an improvement in member outcomes.

7.4. Measuring Member Outcomes – A Simplistic Approach to Employer Default

The approach we set out in this section, although deterministic and scenario-based in nature, nevertheless offers significantly greater insights compared to focusing only on aggregate solvency funding levels.

Outcomes for members of any scheme are based on receiving known benefits in full until a trigger event occurs, after which benefits might be reduced. Typically, this trigger event is the insolvency of the employer. Once an employer insolvency trigger happens, members will either receive PPF Compensation or PPF+ benefits from an insurer. Both of these outcomes represent a permanent reduction in benefits for most members.

There are a number of factors to consider when assessing the amount of the reduction to member benefits. Key factors include:

1. The funding level of the scheme and the amount (if any) that can be recovered from the employer.
2. An assumption on how benefits will be provided following employer insolvency. As well as PPF Compensation or a PPF+ buyout, transfer to a superfund or run-off as a SWOSS need to be considered. If trustees are to assess member outcomes, they need to have sought advice and taken a view on each of these.
3. How different cohorts of members are impacted. In a run-off scenario, a pensioner at age 95 may have a high likelihood of receiving all benefits given that, by the time a downside scenario manifests itself and the scheme winds up, they might be well past their life expectancy. However, a deferred pensioner may have significant downside exposure. Analysis needs to recognise winners and losers relative to the average and the extent of the deviations from average.
4. The metrics selected for the analysis of member outcomes can produce different conclusions. Actuaries are very familiar with using actuarial values but scheme members will generally, in the first instance, focus on annual income. A member may be satisfied if their accrued pension is paid in full, even if actuarially they have lost, say, 20% in value due to future annual indexation being curtailed. That does not mean we should ignore actuarial values but, if members place less utility on some benefit elements such as future indexation, this will impact decision-making. There are behavioural aspects to consider in terms of member outcomes, as well as financial modelling aspects.

One of the trickier aspects of modelling member outcomes is the difficulty in modelling employer insolvency, particularly over longer time horizons of say five years or more – few corporates offer covenant visibility beyond such periods, and TPR seems to support the view that covenant visibility should not prudently be assumed to extend beyond 3-5 years.

Therefore, to simplify the analysis, likelihood of employer insolvency and recoveries on insolvency can be model inputs, informed by the covenant adviser, but amenable to scenario testing so as to determine the range of outcomes if the insolvency occurred at a given time.

Member outcomes can then be modelled for a given “insolvency point,” as shown in Figure 11.

In this example of an immature scheme the covenant adviser (see Figure 11(a)) assesses a 1/50 likelihood of covenant failure over year 1, rising to 1/20 each year from year 4. By the end of year 10 that means a nearly 40% likelihood that the covenant has failed. The covenant position may of course change but, nevertheless, a milestone would be affordability of a superfund solution that would cover full scheme benefits.

As shown by the green circles in Figures 11(b), 11(c) and 11(d), in this example under a relatively low-risk/return asset strategy a superfund solution cannot be afforded until year 12. Should the covenant fail in year 11 members would see reductions in pension value of up to 20% as shown by the green circle under year 11 in Figure 11(b). The level of reductions in

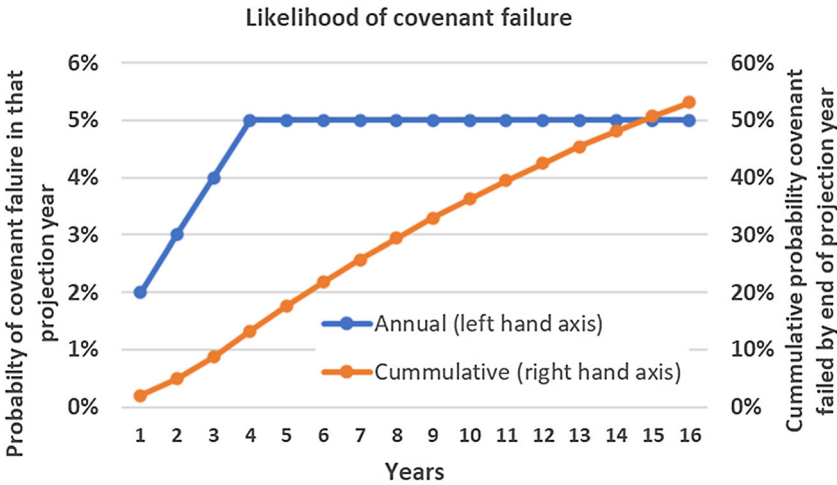


Figure 11(a). Likelihood of covenant failure.

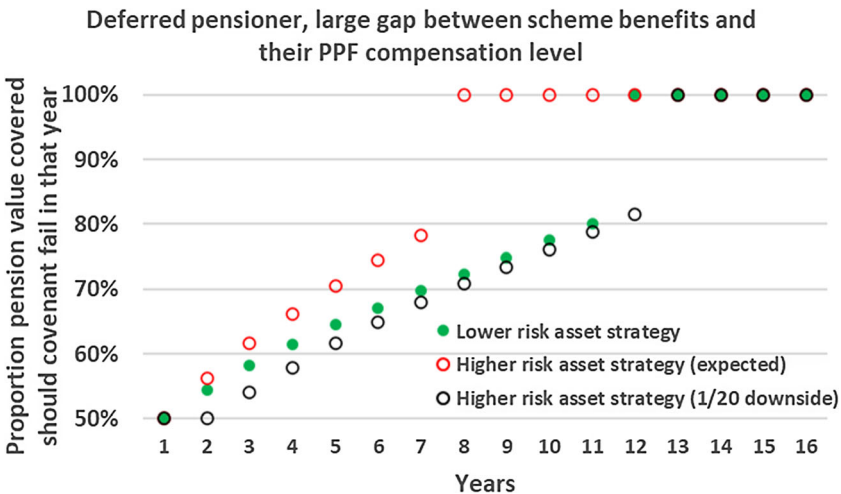


Figure 11(b). Deferred pensioner, large gap between scheme benefits and their PPF compensation level.

pension value depends on a member’s circumstances, as shown by Figures 11(b), 11(c) and 11(d).

The red circles in Figures 11(b), 11(c) and 11(d) illustrate the impact of adopting a high-risk/return strategy initially whilst the covenant remains available to support adverse performance, where superfund affordability is consequently expected to be attained by projection year 8.

Even in the 1/20 worst-case scenario shown by the black circles in Figures 11(b), 11(c) and 11(d) superfund affordability is attained in year 12, the same year as the low-risk strategy.

In the example illustrated here, member outcomes would appear to be enhanced through a higher risk/return strategy.

A stochastic model could be used to show a more granular analysis of projected member outcomes in each projection year and across a greater selection of representative member cohorts than the simple example in Figure 11. This can, for example, be used to optimise an investment

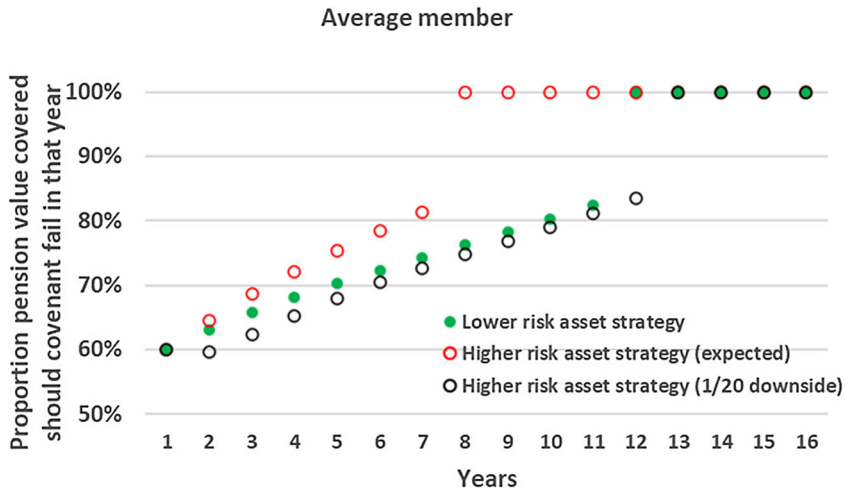


Figure 11(c). Average member.

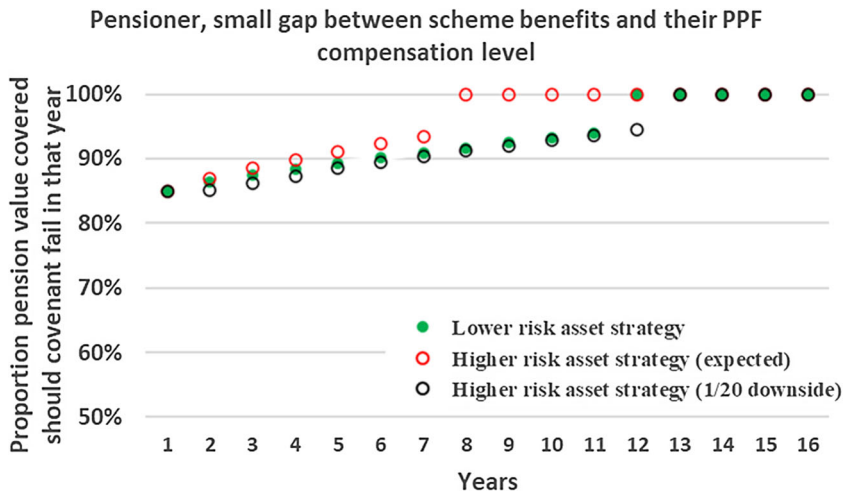


Figure 11(d). Pensioner, small gap between scheme benefits and their PPF compensation level.

(and longevity hedging) strategy that seeks to get the scheme’s funding level to an appropriate target level⁷, within a suitable time period in light of projected future covenant development, but without excessive risk of deficit funding contributions being required in excess of the employer’s projected ability to afford them.

7.5. Member Outcomes – Integrating All Key Risks into a Single Model

An idealised model would examine all potential future paths the development of the scheme might take hence enabling trustees to compare the features of different strategies. It would do what TPR has asked (quoted in 7.3) in allowing trustees to generate and quantify member outcomes using stochastic and scenario modelling of the scheme development, including the existence and

⁷This could be buyout, superfund affordability or an agreed minimum PPF+ buyout level.

strength of the employer (see the example illustrated by Figures 12(a) and (b)). It will enable them to compare:

1. Different investment policies, with higher or lower levels of expected returns and downside risks. Investment policies may well be dynamic and will evolve over time.
2. Different contribution strategies – what should the funding target be, and how quickly should the trustees attempt to reach that target?
3. Different financing strategies – such as the use of escrow accounts to hold assets above a certain funding level, which can support the scheme benefits or revert to the employer. Other contingent financing might include the use of insurance (letters of credit, surety bonds) to justify higher levels of risk in the investment policy.
4. The choice of different TESs – including a recognition that while PPF entry may not be a chosen TES, it might well be the actual end state, particularly where the scheme is operating over an extended period of time.
5. The knock-on impact on covenant and, in particular, whether downside scenarios in the scheme’s funding situation might lead to accelerated demise of the covenant and hence the usually detrimental member outcomes that occur in the event of employer failure.

In practice, we need to recognise the limitations of current modelling tools and techniques to take on board all of these complexities, and in many cases, compromises will be needed. This would be especially true for smaller schemes where the resources available will simply not permit sophisticated and expensive modelling of this type. Simplifications will be needed to deliver meaningful advice at an affordable price, but which capture the essence of the more detailed modelling.

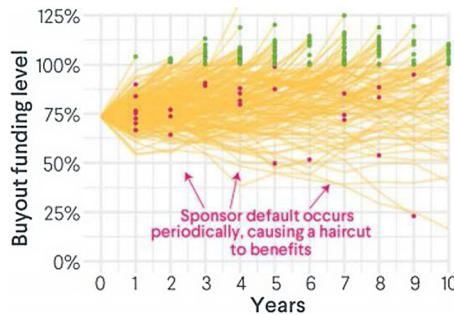


Figure 12(a). Stochastic projection of member outcomes assuming BBB employer at outset: Insert sub caption (Hymans Robertson, 2020, p.5).

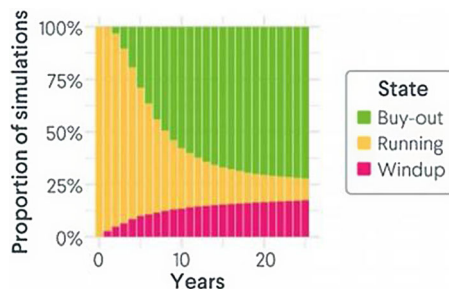


Figure 12(b). Stochastic projection of member outcomes assuming BBB employer at outset: Insert sub caption (Hymans Robertson, 2020, p. 5).

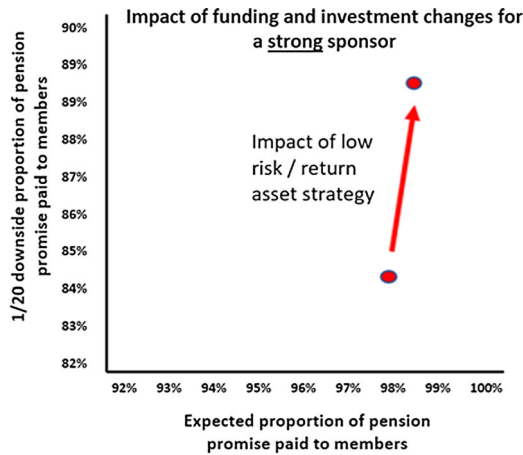


Figure 13(a). Sample analysis of Proportion of Pensions Paid integrated with covenant: strong employer (Lane Clark & Peacock LLP, 2020, p.19).

Detailed analysis, stochastic or otherwise, is helpful in identifying salient issues and in optimisation of member outcomes. However, such analysis can be complex to interpret. Consequently, it would be convenient for trustees and employers if the industry adopted standardised metrics that could condense the results of such modelling into a single statistic or a small array of statistics.

We might, for example, focus on the Proportion of Pensions Paid (“PPP”). This could start as a simple count of how many members receive their full pensions from the scheme. But we need to reflect on how severe the “failure” is – so if a 99-year-old pensioner fails to receive their final pension payment, or suffers a 5% benefit cut, this is less serious than a 65-year-old pensioner failing to receive their benefit, or receiving the same benefit cut. Severity could be a simple count, or it could be discounted, or weighted by liabilities. The failure counting could be stochastic or deterministic, in respect of all of the key variables, such as longevity, investment returns, employer failure and affordability.

We could look at the PPP for the whole of scheme membership, or various components of membership. We could look at where and when the failure to pay full benefits arises and see whether any changes to the trustee plans can improve the PPP.

Figure 13 shows an example comparing PPP should a low-risk/return asset strategy (and hence more prudent funding strategy) be adopted for a strong employer (Figure 13(a)) or a weak employer (Figure 13(b)). In the case of the strong employer, the net member outcome is a clear improvement in PPP because, in the (low likelihood) event of employer failure the increased funding to the scheme prior to insolvency results in higher pensions. However, for the weak employer, the overall position worsens because an assumption has been made that the higher funding burden on the employer as a consequence of the more prudent funding strategy tangibly increases the likelihood of employer failure.

For the weak employer, the increased likelihood of failure due to the more prudent funding approach is more detrimental to the PPP measure than any funding level gain due to the additional funding received prior to employer failure. The key point is that the use of a “lower risk” strategy and higher funding target simply shifts investment risk onto covenant risk, and for the weak employer, this shift is detrimental to PPP as there is already a lot of covenant risk present.

Derivation of suitable PPP metrics might help trustees more easily assess the pace at which to seek attainment of the TES. PPP metrics (or other simplified metrics) are of course only part of the decision-making framework – affordability and acceptability to the employer are also central. But

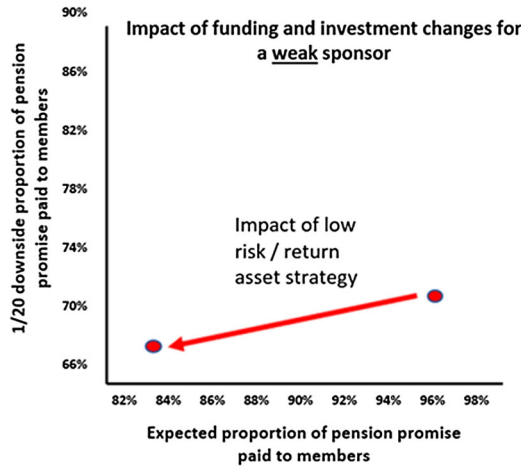


Figure 13(b). Sample analysis of Proportion of Pensions Paid integrated with covenant: weak employer (Lane Clark & Peacock LLP, 2020, p.19).

with simplified metrics such as PPP trustees boards, employers and advisers would have a common lexicon on which to discuss the impacts of a scheme's TES and journey plan.

Section 8: Choosing Between the Target End States

8.1. Introduction

A key objective for trustees is to pay the correct legal entitlements of benefits to members and their beneficiaries. Consistent with that is ensuring that there is sufficient funding (or financing or insurance) to meet those benefits as they fall due. Pursuit of this objective does not mean elimination of all risk – in most cases that would make the promised benefits unaffordable to the employer. Trustees can have regard to the employer's own requirements, objectives, and constraints, but they must be proportionate, as their primary responsibility is to act in the best interests of the members.

To deliver on this, trustees should determine the TES and work towards that.

Many schemes have in fact defined (or are in the process of defining) their TES and the journey plan to achieve it. Even though the TES might be some years off, trustees might be expected to apply suitable vigour in achieving it. What has changed over the last few years is the extent to which improving funding levels means the TES has become a realistic proposition, rather than some vague aspiration over an ill-defined future term. Figure 14 shows the dramatic increase in respondents to this survey describing their journey plan to reach their TES as “robust.”

Employer covenant (and the time horizon over which the trustees can realistically rely on this covenant being present) and affordability over different time horizons both play a key part in how the TES should be set. Defining the correct TES is a complex interplay between:

1. The current state of scheme funding (a better funding level generally increases the opportunity set available).
2. Trustee and employer desires, philosophies and constraints.
3. Investment opportunities and constraints.

The challenge is how to settle on the most appropriate TES.

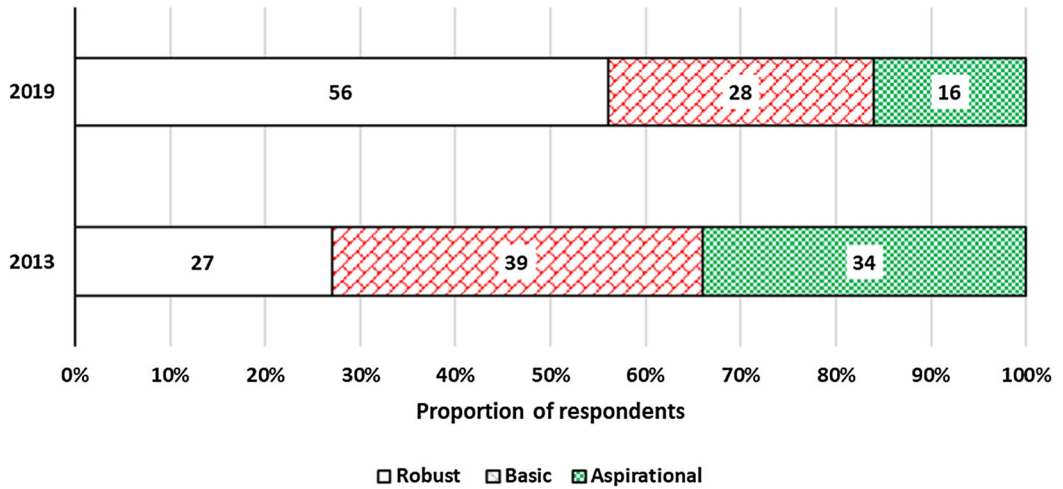


Figure 14. Categorisation of journey plans. Sources: Aon (2013) and Aon (2019).

8.2. The Trio of TESs

As already detailed, there are three TESs that will be relevant to most schemes, namely low dependency (which comes in different forms), buyout or transfer to a superfund.

All three of these TESs would meet the requirements, as defined under the governing documentation of a typical scheme, for discharging benefits, but they do so in very different ways.

1. Under low dependency, the trustees directly oversee the discharge of the benefits over the long term.
2. Under buyout, the benefits cease to exist within the pensions trust framework – they are instead transferred into the insurance regime.
3. Under the superfund option, the benefits are transferred to another scheme, overseen by a different board of trustees who will have their own TES.

Outcomes outside of this trio are possible – most commonly after the insolvency of the employer with PPF Compensation or a “PPF+ buyout”. These are hardly desirable targets for the trustees and employer, but we need to acknowledge that it is a likely potential outcome, and so actions to deliver other TESs need to be evaluated against this plausible turn of events.

Figure 15 illustrates the range of approaches to the TES being considered by the schemes surveyed. In this survey, carried out in late 2018, the organisers comment “No respondents indicated that they were targeting [superfunds], implying that these nascent solutions are perhaps

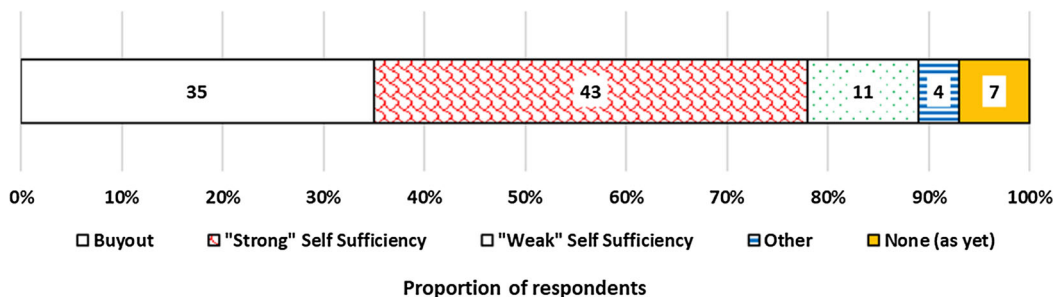


Figure 15. Long-term objectives. Source: Aon (2019).

seen as a fallback option rather than a destination to be aimed for.” This can be expected to change as superfunds become an established part of the pensions landscape.

It is clear that a large proportion of schemes intend to achieve either buyout or low-dependency as their TES. We believe that a large minority of schemes will – in due course – target a transfer to a superfund, and, perhaps regretfully, many will transfer to the PPF.

8.3. Determining the Appropriate TES

Over the remainder of this section, we set out a five-step approach to determining the appropriate TES as summarised in Table 3:

Table 3. Five-steps to Determining the TES

Step 1	Use a long-term IRM framework to identify which of the trio of TESs are in play and the journey plans that would get the scheme to those TESs.
Step 2	Understand any requirements, constraints or other factors that may impact the choice of TES.
Step 3	Model for different member outcomes under the TES in play in the event of employer default.
Step 4	Eliminate any TESs or journey plans that are not desirable.
Step 5	Determine the preferred TES from those remaining, after which the journey plan can be refined and a plan of action developed.

8.3.1. Step 1: Which of the TESs are in play?

A long-term IRM framework can be used to identify which of the three core options are realistically in play.

There is plenty of material on using IRM in the context of relatively short-term funding considerations (TPR, 2016). A key difference when thinking about TES planning is that timescales may be considerably longer. A low-dependency strategy may continue for 30, 40 or 50 years – at least in theory. But IRM over these extended timeframes brings some significant new challenges.

Covenant is normally modelled only over short timeframes but for TES planning we might need to model whether an employer is still in existence in 20 years’ time, and its ability to support the scheme at that time. Investment policies can be expected to change over long-term timeframes, perhaps dynamically. Funding targets themselves may well change as a scheme matures. Payments to and from contingent assets could be sudden and material over extended time frames.

A new generation of long-term integrated modelling is needed to support trustees and employers in their considerations of TES. Trustees and employers also need to put more effort into some codified and quantified thinking and planning for their TES and their journey plan – to move from the aspirational towards a basic and then ultimately a robust journey plan in the language of the survey in Figure 14. Robust means realistic – a TES of buyout in 40 years’ time has little realism. Equally, a buyout target in 5–10 years’ time for a scheme that is currently only 50% funded on a buyout basis has little credibility unless there is the prospect of material employer contributions.

Trustees should choose a sensible timeframe and exclude TESs that cannot be achieved in that timeframe. A TES need not be forever. Specifically, the idea of a low-dependency TES can be reviewed periodically and changed as circumstances develop – in effect, it can be a staging post. Once a scheme in a low-dependency state has a small number of members – typically pensioners only – it is likely to become uneconomic or undesirable to continue to run it. Buyout is the obvious solution at this stage. Equally many employers may explicitly view a low-dependency state as a holding position – waiting until the pricing of a buyout moves favourably towards the assets held, at which stage the trustees would execute a buyout.

The majority of schemes cannot currently afford buyout in the near future and in most circumstances trustees cannot enforce Deficit Recovery Contributions (DRCs) to achieve buyout funding on employers. Technical provisions, which drive DRCs, are intended to converge towards low dependency over time as the scheme becomes progressively more mature. In such circumstances, until a suitable maturity is reached, articulating a buyout target that is a very long way away (in time and/or in funding) is overly theoretical and unhelpful:

1. The role of the current trustee board should be to develop a TES that focuses on what is achievable within the medium term, in terms of improved outcomes for members, compared with the current position.
2. An employer is likely to be more sympathetic to a trustee board targeting low- dependency when buyout is by a considerable margin too far away and too expensive.
3. Over time, the trustees can then consider whether to be content with progress towards their TES, or whether to alter it to reflect circumstances at that time. By the time a suitable maturity (as specified by TPR) is reached, the IRM position of the scheme (financing, investment, residual covenant) should allow a much more realistic journey plan to the chosen TES.

Identifying which of the three core TESs are in play of course requires the trustees to develop the associated journey plan(s) to get there; to show which are realistic and the ways to achieve them. Not only does this help stakeholders to visualise how the TES manifests itself but it also avoids a TES being incorrectly excluded as not achievable and vice versa. The journey plan at this stage might be high level but it needs to be sufficiently detailed to be fit for purpose while keeping the analysis proportionate (especially for smaller schemes).

There may be more than one journey plan (or options inside a journey plan) for each of the TESs. Some of those may reflect different trade-offs within the IRM framework. For example, less investment risk means it may be expected to take longer to get to buyout, but the path to buyout will be less volatile. The trade-off here is that the longer expected period means it is more likely that the employer would have an insolvency event over that period. Different journey plans to the same TES can be used in Step 3 to model “what-ifs.”

8.3.2. Step 2: Understand constraints and other impacting factors

Requirements, constraints, or other factors that impact the choice of TES or journey plan will already have been identified as part of Step 1. Some of these may be issues to be dealt with on the journey to the TES whereas others might be real and significantly impact the choice of TES.

The employer and trustees may have different requirements, constraints and other factors, so noting these identifies common areas and areas of conflict that require bridging. For example, an employer may be concerned about the impact of the TES on its financial statements, while trustees might be more concerned about covenant visibility.

It is important to identify which are genuine requirements/constraints/factors and so these should be subject to healthy challenge. Some may be capable of resolution, for example, unusual annual indexation that is uninsurable may be capable of resolution before buyout, by way of benefit modification. Some may be less easy and so require difficult choices or patience – for example, if the employer is not keen on buyout because it would have an adverse impact on its financial statements. Some constraints might be capable of resolution if all parties agree. For example, if the trustees can grant discretionary increases but only subject to employer consent, then a carefully crafted letter from the employer to the trustees about its likelihood of (or lack of) giving such consent in future might mean the trustees can discount discretionary increases in relation to the TES.

Part of this process includes an analysis of key powers for the trustees and the employer within the scheme's trust deed and rules. For example, if the employer holds the power to trigger a winding up of the scheme, then its views on TES are even more important. Schemes must be run for the purpose for which they were created, and that purpose may depend on the nuances of the specific scheme. Hence, as highlighted in Section 2, legal advice is an important input to ensure that the TES is robust and specific.

Constraints may operate in different ways. For example, in relation to superfund transfers, TPR (2018) states: *"If the scheme is already sufficiently well-funded and expected to be able to buy-out with an insurer, or to do so within a short period (within three to five years), we do not expect it to be appropriate to transfer to a superfund."*

8.3.3. Step 3: Model the member outcomes under the TES in play

This is where the member outcomes narrative in Section 7 comes into play and is combined with the covenant narrative in Section 3. This can most easily be achieved using "what-if" scenarios. Those scenarios might be a suite of plausible deterministic scenarios, or they may also combine stochastic projections.

This modelling needs to cover the period during which the scheme is on its journey to the TES and, for a low-dependency TES, that would also cover the period until the last scheme member dies.

Where the TES is buyout, that modelling would cover the period until buyout is complete.

When it comes to the superfund TES one view might be that modelling is only required until the transfer to the superfund occurs. At this point, the original trustees have met their obligations to members. However, unlike buyout, member outcomes under a superfund are not assured as the risk of failure is not remote, by design. The focus of member outcomes modelling therefore needs to continue beyond the point of transfer to the superfund into the superfund itself. This results in some interesting dynamics:

1. Different superfunds will price their entry price differently
2. The projected member outcomes between superfunds will differ.

Therefore, there is potentially a complex dynamic as the years until a scheme can afford a superfund will differ depending on the pricing offered by each superfund. The longer the period before transfer to a superfund the more likely it is that the employer will have failed, but the superfund that is affordable soonest may not offer the most suitable member outcomes versus an alternative (but more expensive) superfund. The superfund market is still immature at the time of writing so these issues are not currently capable of modelling into the future, but as the superfund market matures this will introduce an extra dimension into member outcomes analysis.

A key factor in member outcomes is the interaction between:

1. Funding level and, in particular, how it is assumed any unexpected shortfalls or excess funds are managed.
2. Likelihood of employer insolvency, usually resulting in either PPF Compensation or a PPF+ buyout.

In terms of managing unexpected shortfalls, options might include increasing the target investment return, introducing new or alternative contingent assets, extending the timescale for reaching the TES, altering the TES (for example, to a weaker form of low dependency), additional employer funding or actions such as initiating member option exercises.

The likelihood of employer insolvency might be difficult to quantify to a material degree, especially in the medium to long term. Modelling further the knock-on impact on employer

Table 4. Credit Migration Rates

		Credit rating after one year									
		Aaa	Aa	A	Baa	Ba	B	Caa	Ca.C	WR	Default
Initial credit rating	Aaa	87.9%	7.8%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	3.6%	0.0%
	Aa	0.8%	85.3%	8.5%	0.4%	0.1%	0.0%	0.0%	0.0%	4.9%	0.0%
	A	0.1%	2.5%	87.0%	5.2%	0.5%	0.1%	0.0%	0.0%	4.7%	0.1%
	Baa	0.0%	0.1%	4.0%	86.1%	3.6%	0.6%	0.1%	0.0%	5.1%	0.2%
	Ba	0.0%	0.0%	0.4%	6.1%	76.6%	7.0%	0.7%	0.1%	8.2%	0.8%
	B	0.0%	0.0%	0.1%	0.4%	4.9%	73.7%	6.5%	0.5%	10.8%	3.0%
	Caa	0.0%	0.0%	0.0%	0.1%	0.3%	6.3%	68.8%	2.7%	14.6%	7.2%
	Ca-C	0.0%	0.0%	0.0%	0.0%	0.5%	2.2%	9.7%	38.7%	20.9%	27.9%

Source: Moody's. Average One-Year Letter Rating Migration Rates over 1970 to 2019.

failure risk created by a future increase in employer funding requirements might be challenging. Nevertheless, it can be helpful to introduce some simplified assumptions in these areas if only to aid prompt discussion around the inherent uncertainties.

However, especially over the medium to long term, the analysis may simply focus on the scenario of “what if the employer became insolvent?” without expending too much effort on trying to quantify the likelihood, given the binary nature and severity of the risk. We expect that, over time, modelling of insolvency (and less dramatic changes in the employer covenant) will increase in its sophistication and that covenant will be increasingly modelled alongside assets and liabilities. A starting point might be a transition matrix that is allowed to develop over time, similar to that in Table 4.

8.3.4. Step 4: Eliminate any TES or journey plans that are not desirable

For many schemes, there will be no TES that is superior under all scenarios. Hence there will be a need for trade-offs and at this stage, it is useful to start by asking whether there are any TES or journey plans that should be excluded for now.

A key aspect is the trustees’ appetite for member benefits not being paid in full in the event of employer default. This is fundamental in terms of deciding between the different TESs.

For example, given that the appetite for large haircuts to member benefits will be limited, trustees might then exclude the buyout TES at this stage if the target investment risk/returns to achieve buyout within an appropriate time horizon would result in downside scenarios along the way that are too severe. That does not mean that the scheme will never target a buyout TES, simply that at present it is not desirable to do so.

8.3.5. Step 5: Determine the preferred TES

If there remains more than one TES and journey plan in play at this time, the trustees need to consider which to select. There will always be trade-offs but at least they are being made on an informed basis. A rationally derived TES is better than none.

The pattern of how insolvency events might occur is key to any assessment: the industry recognises this is difficult, especially after the first few years of projection. However, once done this means the trustees can be much more robust in their decision making. Decision-making can be revisited periodically, and changes made with reference to the previous analysis. Importantly it then also opens up the debate for assessing the case for a transfer to a superfund, especially where affordability is far more imminent.

8.4. Plan A vs Plan B

The preferred (and achievable) TES will not come with absolute certainty. It might very well be achieved, but factors may crop up that necessitate a change in TES or other mitigations. As already mentioned earlier that may be to change to a better “Plan A” TES (for example a lower risk version of low dependency) or a worse “Plan B” position (such as giving up on a buyout TES).

TPR is expecting not just a well-defined TES for mature schemes, but also a robust journey plan as to how to reach that state. It will be necessary to develop suitable levels of contingency planning that may help prioritise and optimise activities in the meantime. The current Covid-19 crisis presents a very current and relevant example of how even well-developed plans can be thrown off course, and a well-developed journey plan will incorporate a number of potential scenarios that vary from the expected course, with committal actions.

Although developing a Plan B may be felt to be disproportionate for smaller schemes, it would certainly not be the case for medium and larger schemes. For example, suppose that Plan A is to target buyout in 10 years, but Plan B is to target a low-dependency run-off:

1. A partial pensioner buy-in may fit very well into Plan A but may constrain the optimal investment strategy under Plan B. The question therefore arises of how to strike the right balance between the primary Plan A and the back-up Plan B (see Figure 16).
2. Should the buyout market ever reduce in capacity so that buyout becomes impractical, then Plan B is not academic but a critical tool through which to run off the scheme until, eventually, buyout becomes practical again. In effect, low-dependency may be the only Plan A for an extended period of time.
3. If buyout pricing under Plan A were deemed to be a significant cost above Plan B funding, the trustees may feel it is in members’ best interests to negotiate some form of run-off with contingent assets in place rather than continue to take investment risk, especially if in downside scenarios that could result in employer failure.

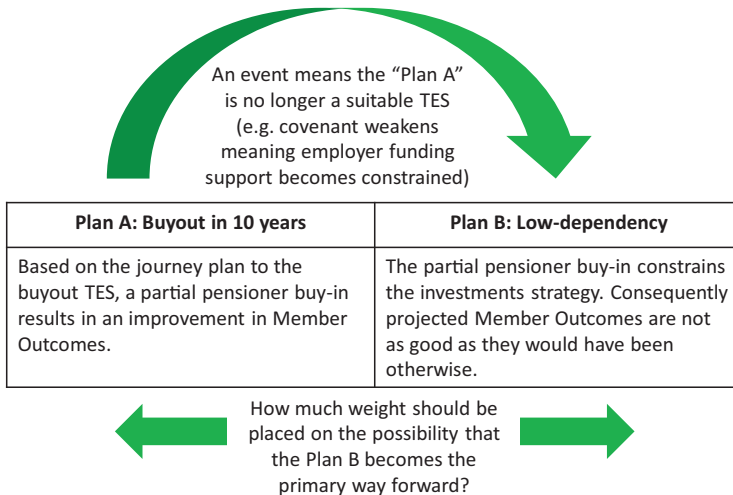


Figure 16. Getting the right balance between Plan A and Plan B.

8.5. Using the TES as a Stepping-Stone

We have already stated that the TES need not be a permanent state. This perhaps takes the pressure off trustee decision-making as their analysis of the preferred TES is not a “forever” decision. Rather, it can be a stop in what might be a multi-stop journey. So, when a scheme attains

its low-dependency TES it could continue to run on (as planned), or the trustees could switch to a buyout TES given the circumstances at the time. Similarly, if a scheme has reached superfund affordability level, the trustees can decide whether to push for this outcome or continue to operate, moving towards low dependency or buyout. Detailed analysis of member outcomes will help inform these discussions and an element of pragmatism is required.

Once a TES is attained things get interesting because the TES is not necessarily the end.

1. Where the TES is low dependency, it will require ongoing management so as to maintain the TES. In fact, the ongoing management might be more challenging than the initial journey to that TES.
2. Trustees might decide to change their TES to another level – perhaps a stronger version of low dependency.
3. This migration need not all be one way – for example, if the funding deteriorates within their TES (for example due to a period of high credit defaults) the trustees may decide it is better to change their asset strategy (and other areas such as longevity risk management) to align with a less strong version of low dependency as that, overall, results in better member outcomes.
4. An improvement in buyout pricing represents a similar positive movement that may not have been anticipated but now needs to be incorporated into planning.

Also, there may be a tactical element in terms of employer engagement. An employer is unlikely to be willing to commit to a strong (and hence expensive) TES if the scheme is a long way from that. To do so might formalise Deficit Reduction Contribution expectations at too strong a level. Hence, aiming for a medium-term achievable TES may be far more preferable.

The fact is that trustees should review their TES on a periodic basis to check it remains suitable and, as they get progressively closer to it, decide whether that is where they will stop or whether it is the first milestone in a longer journey.

8.6. The Management Plan

Finally, the TES is not just about the financial position of the scheme. There are a multitude of areas that impact how a scheme is run and hence the effectiveness of its journey to the TES and member outcomes. Once the TES is known, a broader management plan should be developed, an example of which is shown in Figure 17. It goes without saying that a poorly executed journey plan is not in any stakeholder’s interest.

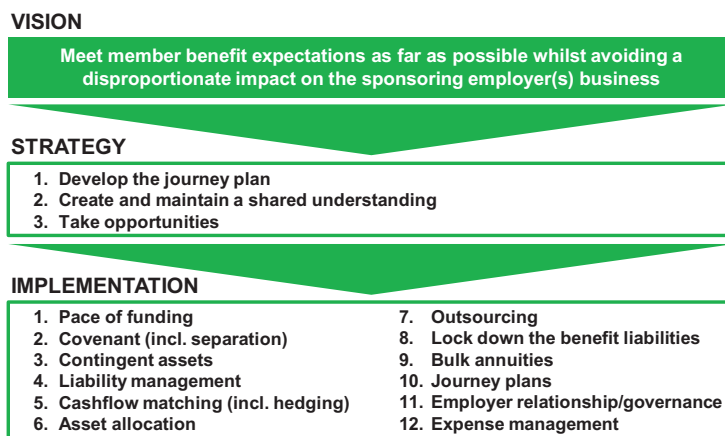


Figure 17. Developing the management plan (IFoA, 2018, p.76).

Related to this is that trustees and employers should pull away from using the triennial actuarial valuation process as the focal point through which to determine (or refine) the TES and journey plan. The outlook for member outcomes can change materially between actuarial valuations. Trustee boards should not be content to wait until a scheduled actuarial valuation to adapt their TES and journey plan to reflect changing circumstances.

Section 9: Stressed Schemes

9.1. Introduction

So far in this paper the analysis and commentary have made one key assumption, namely that the scheme has a good likelihood of delivering full benefits to members and consequently can define a TES and journey plan to that effect. The scheme might be poorly funded but with a strong and supportive employer, or it may have a weaker employer but be very well funded. Either way, it would expect to deliver benefits in full and would develop its journey plan with that as the primary focus. Of course, that does not mean such schemes will have a clear run with full assurance that they will achieve that objective.

However, the fact is that not all schemes are in this position. There are many schemes that are poorly funded and do not have the comfort of a strong and supportive employer. We refer to these as “stressed schemes.”

For stressed schemes, it can be unhelpful to focus on a TES strategy whose primary objective is delivery of full benefits for all members. That would just be a denial of the reality and the result would be a sub-optimal strategy for the scheme. Instead, the focus becomes one of maximising outcomes for members in light of the circumstances in which the scheme finds itself, even if those outcomes are not full benefit entitlements.

This section focuses on these schemes. This area is complex as it can require the trustees to focus on what’s in the best interests of the membership as a whole, recognising that this may lead to trade-offs in relation to the impact on different member groups. Further, scheme-specific dynamics, including the balance of powers under the scheme’s trust deed and rules, can have a deep impact on the trustees’ thought process, so it is important to consider the merits of each case individually. Consequently, in this section, we do not set out in as much detail as in previous sections the analysis and development of an appropriate course of action.

The structure of this section is as follows:

1. Examples of schemes in scope.
2. Considerations in relation to stressed schemes whose funding level is well below 100% against the cost of insuring PPF Compensation.
3. Considerations in relation to stressed schemes whose funding level is around 100% of the cost of insuring PPF Compensation with a bulk annuity, or better than 100%.
4. Schemes without a Substantial Sponsor (SWOSS).
5. Considerations for a low-dependency TES.
6. Policy questions.

Readers who are not familiar with the PPF, PPF Compensation, PPF assessment and PPF drift may wish to read Appendix 2 before continuing with this section.

9.2. Examples of Schemes in Scope

Not all schemes are in the fortunate position of being able to target full benefits with a high degree of certainty. Stressed schemes face a range of challenges that the existing regulatory framework is

Table 5. Common Problems Facing Stressed Schemes

Problem commonly faced by a Stressed Scheme	Example measure
Inability of the employer to underwrite pension risk	Enterprise value of the employer to the buyout deficit
High likelihood of financial distress of the employer (for example default or insolvency)	Sponsor probability of default over time
Inadequate recovery for the scheme in distress	Net tangible assets to buyout deficit
Covenant duration mismatch	Scheme probability of reaching its TES over time

not necessarily designed to address in an optimal manner. Some of the common problems facing stressed schemes are set out in Table 5, noting that each scheme will have to battle one or several of these issues at the same time.

Covenant plays a pivotal role in determining the security of members' benefits, with the first three items listed above informing what is commonly referred to as covenant strength.

A strong employer covenant can underwrite the gap between the value of the scheme's assets and the cost of insuring benefits in full, as well as comfortably affording the contributions and contingent support that the scheme requires to close the gap over time. In the absence of covenant underwriting, most schemes would not have enough resources to meet members' benefits in full.

In some cases, the strength of the covenant could also consider the value the scheme could expect to realise from an employer in financial distress. In these situations, the likelihood of the employer facing financial distress may be less relevant, as the scheme has a reasonable chance of gaining access to a meaningful recovery when in distress. However, in the absence of strong legal protections (for example, fixed or floating security), it is usually very difficult to predict with accuracy the recovery a scheme might expect to get from an employer in distress.

Regardless of how the covenant underwrite is provided (as a going concern business or through recovery in insolvency) a weak covenant is more likely to be associated with a stressed scheme. Schemes with a weak covenant represent the core constituents of this section.

However, having a strong covenant does not guarantee that benefits will be met in full. It is also very important to understand the length of time a scheme is required to rely on the covenant. Recent high-profile corporate failures have served as a reminder that we operate in an economy that is in constant flux. We therefore also cover schemes with relatively strong employers that adopt a low-dependency TES.

Fortunately, historical data suggests that employer failures over short periods of time are uncommon (albeit insolvencies tend to be linked to the business cycle, increasing markedly during recessionary periods).

We have focused on schemes that face a possible mismatch between the period over which there is visibility over the covenant's strength and the timescales required by the schemes to reach their TESs. These can be schemes that are funded below 100% relative to the cost of insuring PPF compensation benefits and are supported by a weak (or very weak) covenant. It could also include schemes that are funded well in excess of the PPF's basis but still require at least a handful of years to be able to ensure benefits in full and are backed by a very weak employer.

Naturally, some scheme failures are preventable. The emergence of a thriving market for schemes transferring into superfunds, which are expected to cost less than buyout, would reduce the number of stressed schemes as superfunds should offer a reasonably high likelihood of all (or most) benefits being delivered in full.

Nevertheless, a meaningful proportion of failures would remain. For brevity, in this section, we refer to the full insurance of benefits when referencing the funding level at which members can be assured of their benefit security, but such references can be replaced with references to a transfer to

a superfund as appropriate (albeit, of course, a superfund by design offers a lower degree of assurance than the insurance regime).

9.3. Stressed Schemes Whose Funding Level is Well Below 100% against the Cost of Insuring PPF Compensation

Schemes in this category (allowing for potential insolvency recoveries from the employer) are not short of challenges, including:

1. **Economic reality:** resources within the scheme are not enough to meet the cost of insuring benefits and covenant failure would force the scheme to crystallise the economic reality, where benefits are compromised to be brought in line with PPF compensation.
2. **Affordability constraints:** the employer is unlikely to be able to make meaningful one-off deficit contributions and those it can afford will be spread over multiple years, possibly beyond the point of visibility over the covenant.
3. **Investment strategy and the covenant underwrite:** a more aggressive investment strategy that targets a higher return could deliver funding improvements, but the covenant might not be able to take on its role as the underwriter of risk for the scheme.
4. **Keeping up with the liabilities (or PPF drift):** to complicate matters further, if investment returns and deficit contributions are not sufficiently high, the scheme's PPF funding position will deteriorate, as the growth in PPF liabilities outpaces the scheme's ability to grow its asset base.

Underlying these seemingly irreconcilable strains, the PPF plays a pivotal role in shaping the member outcomes dynamic that faces trustees of stressed schemes whose funding level is well below 100% against the cost of insuring PPF Compensation.

As the industry lifeboat, the PPF seeks to guarantee a minimum level of compensation for all members of qualifying schemes. The role of the PPF is passive for most schemes and trustees – employers and advisers will seldom account for PPF Compensation when taking a strategic decision. That is not the case for schemes in this category.

The PPF effectively provides schemes in this category with what can be described as an 'in the money' put option that introduces a floor to the loss members would otherwise experience. From an economic perspective, this effectively makes the PPF the ultimate underwriter of risk for stressed schemes in this category, stepping partially into the shoes that the employer covenant traditionally provides to most other schemes in the pensions' framework.

Notwithstanding this member outcomes dynamic, all schemes (including stressed schemes) are prohibited from taking account of the protection the PPF gives in the event of employer failure when making decisions. Trustees cannot organise their affairs to maximise the PPF's obligations to it should the employer fail. This would be designated as "gaming the PPF."

However, trustees are also not required to minimise the risk they present to the PPF. Thus, it is not for trustees of stressed schemes to actively seek, encourage or promote employer failure to achieve early entry into the PPF, just as the trustees cannot take excessive investment risk, maximise transfer value or apply augmentations that would increase the PPF's exposure.

In practice, this legal dynamic means that for some schemes in this category, the member outcomes will be improved if the covenant can be kept from failing, even if this comes at the expense of a deteriorating PPF funding position, under the view of extending the time it has to run-off and increasing the PPF Compensation entitlement of its membership due to PPF drift.

The challenge for trustees is balancing the underpin created by the PPF and acting in the interests of their members. Decisions require careful consideration, with the support of appropriate legal advice on where the line is drawn between acting in members' best interests and gaming the PPF.

9.4. Stressed Schemes Whose Funding Level is around 100% of the Cost of Insuring PPF Compensation with a Bulk Annuity, or Better Than 100%.

There are difficult judgement calls to be made by trustees of stressed schemes that are funded above PPF levels but below full buyout. In other words, schemes whose assets are sufficient to secure close to or better than PPF compensation with an insurer, but not full benefits.

This situation is different to stressed schemes covered earlier where their funding level, allowing for potential employer insolvency recoveries, is below that sufficient to secure PPF compensation with an insurer and is not expected to improve above that level. For those schemes, the optimal outcome for all members is almost universally achieved through a strategy of deferring the commencement of PPF assessment as long as possible.

For stressed schemes whose funding level is at or better than that required to insure PPF compensation, there will almost certainly be winners and losers within the membership depending on the strategy adopted by the trustees. A key judgement call is around when (and how) to crystallise the funding level to make sure the membership overall gets an appropriate outcome. As mentioned in Section 2, trustees do not need to treat all members the same. There may be no best strategy, simply a least bad strategy.

Trustees of schemes in this category need to weigh up the options and decide, subject to legal advice, whether to:

1. Crystallise the current funding level and arrange a PPF+ buyout now.
2. Carry on running the scheme.

The first option (crystallising benefits) may potentially only be achieved by scheme wind-up, accompanied by a shortfall claim on the employer, hence potentially crystallising employer insolvency. The rules of the scheme are important here as the trustees might not have the power to initiate wind-up.

Although the second option (carrying on) may on average mean members are better off, it is also quite possible that in practice at least some members may end up worse off. This second option also runs the risk of an outcome that results in worse benefits across all members due to an unexpected deterioration of the scheme funding position and/or in the financial state of the employer. Specifically, members could end up with a lower level of PPF+ benefits or indeed PPF compensation should the scheme transfer to the PPF.

Ultimately, it is the scheme members who bear the risk of the employer's business under the second option. In more extreme cases, trustees are more likely to reach the view that this is inappropriate, and they will prefer instead to crystallise the value of the employer covenant.

One of the considerations will be the trustees' view of the employer and whether they believe it has a future, which could mean there will be more value that could be extracted from the employer if it continues. Trustees are likely to need to take advice from a professional covenant adviser (most are also restructuring experts or have access to these experts within their firms), who will be able to provide an objective view of the financial strength of the operating business supporting the scheme, in the context of the employer's other obligations and the overall group structure. Even so, it will not be an easy decision to take.

Where the second option is preferred but the employer is too weak to have the longevity and financial capacity for delivery of the strategy, a transfer to a superfund might be attractive instead.

PPF drift is critical for such schemes if the trustees continue to run the scheme. PPF drift means that over time there might be fewer assets available to provide benefits in excess of PPF compensation. As PPF drift takes place, assets previously covering members' above-PPF compensation benefits are notionally reallocated to cover the now higher PPF compensation levels (for example non-statutory pension increases and members reaching Normal Retirement Age), potentially to the detriment of other members. In other words, the coverage of members' above-

PPF benefits falls, meaning some members will receive lower benefits on insolvency of the employer.

Trustees will therefore need to think carefully about the impact of PPF drift. It may of course be possible to invest the scheme assets such that their returns are expected to offset or exceed the impact of PPF drift, but those returns will never be assured so there will always be a risk.

9.5. Scheme(s) Without a Substantive Sponsor (“SWOSS”)

This section examines schemes that, for all intents and purposes, do not have an employer covenant. This topic is important because member outcomes might be enhanced by continuing to run such a scheme as a SWOSS rather than winding up and securing a PPF+ buyout or transferring to a superfund if that can be afforded. It is important to schemes selecting low- low-dependency as their TES as a SWOSS may be the route through which the scheme can continue running in a low-dependency state but now with no support from the employer.

It is useful to introduce this topic by outlining how the PPF defines a SWOSS for PPF levy purposes. Broadly speaking, it is a scheme whose employer has failed and through one means or another (depending on the legal route used), the scheme continues running on a closed basis with a nominal employer in place and requires consent from either (or both) the PPF and TPR, given the need for a legally binding “Ongoing Governance Arrangement” with either (or both) the PPF and TPR.

The PPF has acknowledged that these situations will arise and perhaps become more common in future. In future, the capital adequacy levels and wind-up triggers for these arrangements may align with the requirements of superfunds as described in Section 6.

In the 2017/18 Consultation on PPF levy rules for SWOSS (February 2017), the PPF gave insights into some of the issues as the PPF sees them. In summary, the PPF responded to the possibility that, through some form of restructuring, a scheme may be able to continue running off on a closed basis without a bona fide employer; rather than going through a PPF assessment period, after which the scheme would either be transferred into the PPF or wind up having secured reduced benefits for members through a “PPF+” buyout. The PPF states that SWOSS introduce different risks to the PPF and levy payers and so should be charged a PPF levy taking this into account.

Although TPR has a role in relation to SWOSS, unlike PPF it has not published significant material on how it would define a SWOSS and expectations on trustees of a SWOSS.

Where a scheme is looking to run as a SWOSS then TPR and PPF will naturally expect this to be within a properly regulated environment and with an appropriate PPF levy being paid.

In that context, we understand that TPR’ and PPF’s view is that SWOSS should operate within a differentiated regulatory environment and that the interim regime introduced in The Pensions Regulator (2020b) for superfunds, which includes (for example) intervention triggers in the event funding levels decline, offers appropriate protections for both the members of a SWOSS and the PPF. That guidance notes that “*if a scheme is transferred to a model where the original employer could be replaced at some point in the future, arrangements should be put in place to ensure that our [superfunds] guidance can be followed when the replacement occurs.*”

This reference is targeted at situations in which the trustees/employer actively take action to introduce a mechanism to run as a SWOSS where the scheme would otherwise go through PPF assessment and/or wind up with a shortfall. Importantly, it does not refer to situations in which a bona fide sponsor employer dwindles to a shell of its past self so that for all intents and purposes the covenant is non-existent. In that scenario, the regular pensions regulatory framework applies and the issues on stressed schemes set out earlier in this section are relevant.

As noted in Section 6, The Pensions Regulator (2020b) sets out a capital adequacy requirement for superfunds that, in most cases, will be well in excess of the PPF funding level. This could create meaningfully different member outcomes between schemes that can meet TPR’s capital adequacy

requirements for superfunds, and those that cannot meet those capital adequacy requirements but nevertheless have healthy funding positions well above 100% of the cost of insuring PPF Compensation. Trustees of the latter types of scheme are then in a difficult position if they believe member outcomes are best served by continuing to run the scheme (with only very low risk to the PPF), because TPR's and PPF's positions on whether they will be permitted to do so may not be crystal clear⁸. Such schemes might, of course, still be able to afford a transfer to a superfund, which is a different means through which to continue running off the liabilities with full benefits continuing to be paid.

In some circumstances, TPR and PPF approval may not be required if a mechanism is established, which means a scheme can continue to run-off even though the original employer has become insolvent. Such schemes would not be a SWOSS as defined above, but would instead continue to operate within the regular pensions regulatory framework. The thinking might be that this is in the best interests of members. However, the trustees of such a scheme (and the members) would not benefit from the diligence and guidance from TPR and PPF that would happen when they consider a potential SWOSS and may find themselves at odds with future regulatory developments in this area.

Ultimately, trustees of a scheme aiming for a low-dependency TES may choose to establish a means through which to continue running the scheme should the employer fail (so that they have a more robust low-dependency strategy). However, it would appear prudent to assume that will require a process of TPR and PPF engagement and, should the employer become insolvent, formalisation as a SWOSS and operation within a differentiated regulatory environment as explained briefly in *The Pensions Regulator (2020b)*. However, if at the time of employer insolvency, the scheme is unable to meet some of the expectations of TPR and PPF, but the trustees believe member outcomes are best served by running as a SWOSS and that would not cause undue risk to members of the PPF, they would need to discuss that with TPR and PPF.

The likelihood is that smaller schemes will never have the economies of scale and access to tools such as longevity swaps to be able to justify continuing as a SWOSS. For such schemes, where they are well-funded, on employer failure the choices will be a PPF+ buyout or transfer to a superfund if affordable. Larger schemes, perhaps from several hundred million pounds upwards, should, if they choose, be of a size where they could efficiently run as a SWOSS if they are sufficiently well funded. However, whether the trustees of larger schemes would generally do so if they could afford a transfer to a superfund remains to be seen.

9.6. What should Trustees Be Doing?

We have already explained in this section why it can be advantageous to members of a stressed scheme to be able to continue running for as long as possible. In fact, running off at least some stressed schemes could be expected to be sufficiently successful so as to eventually achieve a funding level that allows them to transfer to a superfund or buy out benefits in full, each of these scenarios being a significantly improved outcome for members than what might have been originally expected.

However, being able to run as a SWOSS is not always assured. When it becomes essential to become a SWOSS the trustees may find that events have overtaken them, or they may find that PPF and/or TPR will not support the proposal.

As part of their contingency plans, trustees could assess if it would be appropriate to work with their employer (or perhaps even independently of the employer) to put in place legal structures that provide the scheme with the option to more easily operate on a SWOSS basis should the

⁸One of the superfund capital adequacy requirements is a projected 99% likelihood of being fully funded after 5 years on the prescribed technical provisions basis. A scheme however might have only a 95% such likelihood (which is still very high) and an extremely healthy PPF funding level, but yet not satisfy these capital adequacy requirements unless they are relax.

employer later fail. In such situations, where active decisions are being made to enable a SWOSS, TPR would expect to be engaged.

A SWOSS is not likely to be a solution for every stressed scheme. The funding level of the scheme will be an important factor, as would the cost of implementing changes and operating on a SWOSS basis relative to the size of the scheme. Appendix A of the Pensions Regulator (2020c) offers useful considerations for trustees evaluating such mechanisms.

This whole area raises issues for which there is no easy answer, noting that detailed and specific guidance from TPR is not yet available. If superfunds are successful then a question is whether SWOSS will ever be more than a niche area given that, in practice, if a stressed scheme is sufficiently well funded to be a SWOSS it will almost always be able to afford (and perhaps encouraged) to transfer to a superfund and so that will be the pathway such schemes will need to travel.

9.7. Policy Considerations

The potential conflicts and legal balancing highlighted arise from a clash of rules designed to both protect member benefit security and reduce calls on the PPF (which, importantly, reduces PPF levies overall and increases the chance that the PPF is self-sufficient by its target of 2030). There are no easy answers here.

The benefit to members of a scheme being able to continue as a SWOSS, paying all the benefits, is not to be ignored.

There are unintended consequences in allowing stressed schemes and SWOSS to continue to operate in the absence of bespoke and comprehensive guidance that enables trustees to manage the full range of issues highlighted. The Pensions Regulator (2020c) offers a useful pathway, particularly for very well-funded stressed schemes. In our view, it does not go far enough to address the needs of members of schemes with funding levels below the capital adequacy requirements for superfunds but with a funding level that is, nevertheless, still well above the cost of insuring PPF Compensation.

It is difficult for trustees keen to explore options for managing a scheme in the event of employer failure to plan ahead when the frameworks under which a SWOSS would operate (and make sense) remain to be set out in full by TPR and PPF. This may have been proportionate in the past when the number of larger well-funded schemes was small. However, many schemes are now better funded and the pension industry's expertise in run-offs is more developed. Hence, given the increasing number of schemes that are expected to find themselves with failing or failed employers due to the current Covid situation, this is now a more pressing need.

Section 10: Recommendations

Our paper shows throughout that the development of a desirable TES and journey plan requires an adviser with broad cross-disciplinary knowledge and understanding, who can work with subject matter experts across different disciplines. Actuaries are ideally placed to step into these roles but that is not assured – not all roles are purely actuarial in nature and other professionals are already starting to operate in this area.

The methodologies in this paper offer actuaries a step-by-step approach to help clients navigate to their TES and journey plan. By adopting these methodologies and tailoring and improving them, actuaries can springboard to a significant role in this critical area and be central to better member outcomes across the industry. We hope that these methodologies or similar become commonplace.

Within the paper, we have highlighted various observations and conclusions. For example, the enormous potential for actuaries to take the role of the expert generalist to help clients navigate to their TES, the merits of not using the triennial actuarial valuation process as the mechanism to set or review the TES and journey plan, and some of the challenges for smaller schemes.

However, we have eight specific recommendations that we believe would make a material difference:

1. Actuaries should press trustee boards to take appropriate legal advice on their powers under their scheme rules and on the detailed benefit entitlements of members. Too many schemes do not explore this even though in practice the advisory costs are immaterial compared to the scheme liabilities. Actuaries should consider whether stronger qualifications for advice are warranted where such legal work has not been undertaken.
2. Schemes should develop and understand their Plan B in the event of employer distress or insolvency and, as appropriate, start getting components of that Plan B ready in advance. The exceptions might be only the very small minority with the absolute strongest employers. A scheme in a comfortable position today might be a stressed scheme tomorrow. Contingency planning and realistic fallback positions are analogous to recovery and resolution plans that insurers develop.
3. Upcoming legislation will require all schemes to document their “funding and investment strategy” (amongst other things) in a “statement of strategy.” That is welcome, but schemes should go beyond the bare minimum, avoid relatively sanguine wording and instead clearly specify what their TES means in practice. In other words, they should provide narrative around what it will look like once attained. This paper sets out in some detail how that can be done. At present very few pension schemes have properly defined what their TES means in practice and this means sub-optimal planning and will unfortunately, in some situations, mean members are worse off.
4. The actuarial profession should sponsor research into the use of dynamic discount rates for the technical provisions of schemes. This will help remove funding volatility that is artificial in nature and will become increasingly relevant for schemes with a low-dependency TES that adopt asset strategies that more closely address matching of assets and cashflow liabilities. Gilts+ type discount rates can achieve this, as long as all agree the “+” is variable.
5. An employer’s view on investment strategy and journey plan is sometimes driven by the impact on the employer’s financial statements and this in turn can be driven by accounting standards. This can lead to sub-optimal decision-making and sub-optimal member outcomes. We recommend that TPR considers how it can identify and assist trustees in the situations in which the employer’s GAAP approach is most likely to lead to distorted management of scheme liabilities. The actuarial profession could help here by preparing analysis that highlights the features in financial statements that typically lead to a disconnect to how a trustee board may manage scheme liabilities.
6. Assessing member outcomes offers very new insights into the impacts of the risks inherent in schemes and hence impacts decision-making. Although not the only way in which to assess risks, the topic of member outcomes is capable of significant refinement and development and can assist decision-makers in ways that current tools are incapable of doing. Specifically, we recommend that actuaries should help clients focus on member outcomes that look at the level of benefits members are projected to receive, compared with their full benefit entitlements, and how those outcomes vary by different categories of members, over different timeframes, and under different TES. The analysis will help determine the most desirable TES and the relevance of different journey plans to achieve that TES.
7. Member outcomes analysis is very dependent on assumptions and models, and this will become increasingly important as such models are used to inform major decisions, such as whether a bulk transfer without consent is in members’ best interests. The actuarial profession should consider research into assumptions and models behind member outcome models, given their technical and developing nature.

8. We believe it is in the public interest of the actuarial profession to promote the need for clear and consistent legislation and/or detailed guidance for schemes that are sufficiently well funded and with sufficient economies of scale to operate as a SWOSS in the event of employer failure. The current legislative framework does not offer all schemes in this situation a wide enough range of options to promote good member outcomes. Current law was designed at a time when the majority of schemes were heavily in deficit and expected to transfer into the PPF on employer failure. Things have now moved on – many schemes are better funded the ways in which schemes are run are more sophisticated and there are new options available such as superfunds. The Pensions Regulator (2020c) is a step in the right direction, but there is still significantly more detail to be addressed. Legislation is expected at some point to lay the framework for superfunds and that may very well be a convenient opportunity to legislate to cover some forms of SWOSS.

The UK-defined pension scheme market has come through a long and sometimes painful journey over the years. We believe that a broad-based uptake of the recommendations above would lead to significantly improved outcomes for members of such schemes which can only be good for retirement security, the economy and the profession.

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References

- Aon** (2013). Global pension risk survey 2013: UK survey findings, available at <https://www.aon.com/unitedkingdom/pension-risk/global-risk.jsp> (Accessed 11 February 2021).
- Aon** (2019). Global pension risk survey 2019: UK survey findings, available at <https://www.aon.com/unitedkingdom/retirement-investment/defined-benefit-pensions/global-pension-risk-survey-2019.jsp> (Accessed 11 February 2021).
- Cowling, C.A., Fisher, H.J., Powe, K.J., et al.** (2017). Funding defined benefit pension schemes: an integrated risk management approach. *British Actuarial Journal*, **24**, E7. <https://doi.org/10.1017/S135732171800034X>
- Department for Work & Pensions [DWP]** (2018). Consolidation of defined benefit pension schemes. Public consultation, available at <https://www.gov.uk/government/consultations/defined-benefit-pension-scheme-consolidation/consolidation-of-defined-benefit-pension-schemes> (Accessed 10 February 2021).
- DWP** (2019). Government response to the consultation on protecting defined benefit pension schemes – A stronger pensions regulator, available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/777758/response-protecting-defined-benefit-pension-schemes.pdf (Accessed 10 February 2021).
- Employer Covenant Working Group** (2016). Principles of covenant assessment for scheme valuations. A practical guide for advisors, trustees and sponsors, available at <https://ecpa.org.uk/wp-content/uploads/ECWGPPrinciples.pdf> (Accessed 10 February 2021).
- Hymans Robertson** (2020). *A closer look at Clara-Pensions: exploring DB scheme consolidation*, available at https://www.hymans.co.uk/media/uploads/A_Closer_Look_At_Clara_final.pdf (Accessed 10 February 2021).
- Institute and Faculty of Actuaries [IFoA]** (2018). Mature pension schemes: onwards and forwards. Analysis by the running off mature schemes working party, available at <https://www.actuaries.org.uk/system/files/field/document/Running%20Off%20Mature%20Schemes%20Working%20Party%20slide%20pack%20vFINAL%20FINAL%2020180614.pdf> (Accessed 12 February 2021).
- Lane Clark & Peacock LLP** (2020). A fast track to problems? Why TPR's new DB funding code needs to be flexible, available at <https://insight.lcp.uk.com/acton/attachment/20628/f-90cb88ad-34e4-4e28-a20d-8a7c9ff9565e/1/-/-/A%20Fast%20Track%20to%20problems%20Why%20TPR%E2%80%99s%20new%20DB%20funding%20code%20needs%20to%20be%20flexible%20.pdf> (Accessed 10 February 2021).
- Mercer** (2016). Cashflow-driven financing, available at <https://www.uk.mercer.com/content/dam/mercer/attachments/europe/uk/uk-2017-cashflow-driven-financing-point-of-view.pdf> (Accessed 12 February 2021).

- Mercer** (2020). European asset allocation survey 2019, available at <https://www.uk.mercer.com/our-thinking/wealth/european-asset-allocation-survey-2019-e.html> (Accessed 12 February 2021).
- Moody's** (1970-2017). Average one-year letter rating migration rates, available at <https://www.scribd.com/document/465223698/Moodys-default-rate-pdf>
- Pension Protection Fund** (2020a). PPF 1000th scheme, available at <https://www.ppf.co.uk/press-releases/ppf-1000th-scheme> (Accessed 11 February 2021).
- Pension Protection Fund** (2020b). The purple book 2020, available at <https://www.ppf.co.uk/news/purple-book-2020> (Accessed 11 February 2021).
- Pensions and Lifetime Savings Association** (2017). DB Taskforce: The case for consolidation, available at <https://www.plsa.co.uk/portals/0/Documents/0622-The-Case-for-Consolidation.pdf> (Accessed 11 February 2021).
- Pensions Schemes Bill** (2020). Parliament: house of commons.
- The Pensions Regulator [TPR]** (2016). A quick guide to integrated risk management, available at <https://www.thepensionsregulator.gov.uk/-/media/thepensionsregulator/files/import/pdf/irm-quick-guide.ashx> (Accessed 11 February 2021).
- The Pensions Regulator** (2018). Transfer to a DB superfund.
- Prudential Regulation Authority [PRA]** (2019). PRA response to DWP consultation paper: Defined benefit pension scheme consolidation, available at <https://www.bankofengland.co.uk/prudential-regulation/publication/2019/pr-a-response-to-dwp-consultation-paper-defined-benefit-pension-scheme-consolidation> (Accessed 19 November 2021).
- TPR** (2019a). Scheme funding analysis 2019: annex, available at <https://www.thepensionsregulator.gov.uk/en/document-library/research-and-analysis/scheme-funding-analysis-2019/scheme-funding-analysis-2019-annex> (Accessed 11 February 2021).
- TPR** (2019b). Annual funding statement 2019 for defined benefit pension schemes, available at <https://www.thepensionsregulator.gov.uk/-/media/thepensionsregulator/files/import/pdf/db-annual-funding-statement-2019.ashx> (Accessed 11 February 2021).
- TPR** (2020a). Defined benefit pensions code of practice consultation, available at <https://www.thepensionsregulator.gov.uk/en/document-library/consultations/defined-benefit-funding-code-of-practice-consultation> (Accessed 11 February 2021).
- TPR** (2020b). DB superfunds guidance, available at <https://www.thepensionsregulator.gov.uk/en/document-library/regulatory-guidance/db-superfunds> (Accessed 11 February 2021).
- TPR** (2020c). Superfund guidance for prospective ceding trustees and employers, available at <https://www.thepensionsregulator.gov.uk/en/trustees/managing-db-benefits/db-superfunds/superfund-guidance-for-prospective-ceding-trustees-and-employers> (Accessed 11 February 2021).

Appendix 1. Impact of TPR's new Defined Benefit Funding Code of Practice

A1.1. Introduction

TPR consulted on a new defined benefit funding code of practice issued on 3 March 2020 with a closing date of 2 September 2020. Its proposals are centred around greater focus on long-term planning and a clearer framework for Trustees to follow. It also intends to simplify the mechanics by which it monitor schemes. TPR's response to the consultation has not been issued.

This Appendix describes the proposals in more detail. We consider the ways in which the proposals could compel changes in how schemes are managed. We also consider how the new Code, if implemented in its current form, might affect the behaviour of trustees and employers through implicit incentives and/or disincentives. For example, driving schemes towards a framework that fits within the fast track model to avoid the additional governance associated with the bespoke model. We consider the advantages and potential drawbacks of these consequences on the long-term security of schemes and potential outcomes for members. We also consider how the Code, if implemented, might drive the choice of TES for employers, looking in particular at schemes with certain characteristics (e.g. sub £100M schemes).

A1.2. Proposed New Approach

The initial Consultation on its revised Code of Funding Practice closed on 2 September 2020. Expectations are that it will be followed up with a 2nd consultation the timing of which is unclear as of the date of this paper. The initial consultation continues in the direction steered by TPR's 2018 and 2019 Annual Funding Statements, which highlighted its desire that, where schemes are running significant levels of risk, trustees put contingency plans in place with their sponsoring employer that support future funding in the event of certain downside risks materialising. Ideally, these plans should be legally enforceable.

Situations, where this would be expected, include schemes that hold a high proportion of growth assets in their investment portfolio.

Key to the proposals is grouping schemes according to their covenant, and maturity, consistent with the earlier integrated risk management paradigm launched formally in December 2015, and discussed in the Annual Funding Statements of 2018 and 2019.

Classifying your scheme



Ten classifications for different scheme circumstances

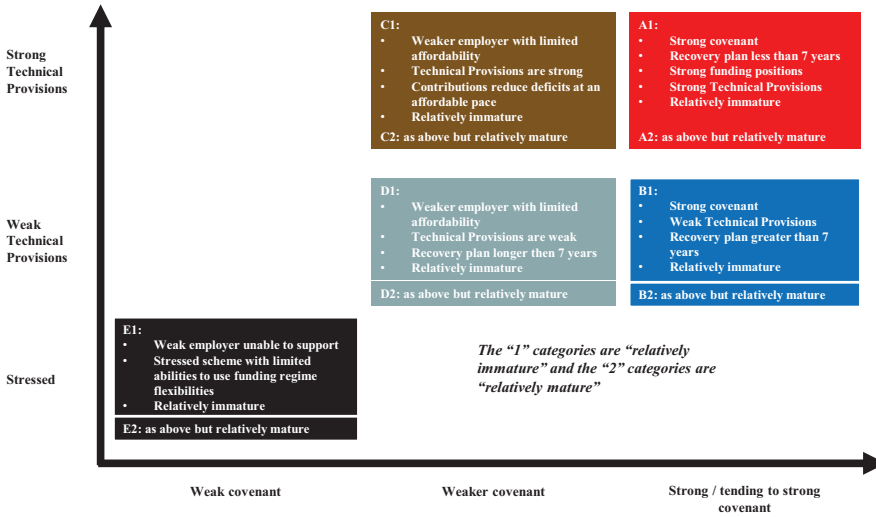


Figure 18. Ten classifications for different scheme circumstances. Source: Lane Clark & Peacock LLP, illustrating classifications set out in The Pensions Regulator (2019b)

TPR outlined its expectations for acceptable investment risk and funding assumptions according to the employer’s strength and the maturity of the scheme. Its 2019 Annual Funding statement outlines these in more detail.

Schemes in the bottom left quadrant of Figure 18 can expect a much higher degree of TPR involvement than those in the top right corner; and for these schemes, the appointment of professional trustees is highly recommended.

A1.3. Long-Term Funding Objective

In addition, TPR’s 2019 Annual Funding Statement formally introduced the concept of an LTFT. This followed the Government’s March 2018 white paper “Protecting defined benefit pension schemes” and set out TPR’s intent to make it a requirement that schemes have specific long-term destinations. TPR expects trustees to set a LTFT, which looks beyond achieving full funding on a technical provisions basis and represents a stronger level of funding to be reached before the scheme becomes “significantly mature” as defined by TPR.

To further reduce the link with the employer, the LTFT should also include allowance for the future expenses of running the scheme.

TPR will also expect to see investment strategies being set in line with this LTFT, allowing the scheme to be managed thereafter with a high degree of resilience to investment risks.

An important consideration here is the appropriate timeframe for achieving this adjusted risk profile. A clear series of stages along the long-term journey should be agreed upon that recognises how the balance between investment risk, contributions and covenant support is anticipated to change over time as a scheme matures.

A1.4. The Pensions Regulator’s Clearer Framework

TPR expects trustees and employers to be able to understand their scheme-specific funding and investment risks. When these risks are understood they will need to be able to evidence how these risks can be supported. When showing how risks are supported, trustees should be able to compare the risks they have taken to a baseline position and then demonstrate the mitigation work or risk underwriting available from the employer or insurance.

The Pensions Regulator (2020a) proposed twin-track approaches to demonstrating compliance with its revised Funding Code of Practice, which are described as “Fast Track” and “Bespoke.”

A1.5. Fast Track Approval

This route minimises interaction with TPR and is likely to be most attractive to those schemes that have already considered and made substantial progress towards their TES.

To successfully achieve fast-track compliance, it is anticipated schemes will need to demonstrate that their funding and investment strategies contain a sufficiently low risk of failing to meet the benefits in full and adequate resilience to the wide range of possible adverse future experiences. TPR is expected to set out very clear guidelines in relation to the standards that it requires in relation to:

1. Strength of technical provisions
2. Length and shape of recovery plan
3. Investment strategy

The proposed long-term funding target is still to be fully defined but it is clear that the target will be based on a low-risk framework from an integrated funding and investment perspective. Schemes complying with the fast-track principles would expect a low level of regulatory scrutiny.

A1.6. Bespoke Approach

Other funding approaches will be open to schemes that cannot, or would prefer not to, comply with Fast Track. These schemes will face a higher level of regulatory scrutiny. It is expected that TPR's approval of these alternatives will be principles-based, and TPR's recent consultation seeks views on how these principles may be established.

There are five principles to the evidencing of risk that will underpin the fast track and bespoke frameworks

1. Principle 1: The LTO has been set relative to maturity, funding basis (proximity to low dependency) and investment profile's ability to withstand risk.
2. Principles 2 & 3: A clear plan for risks to decrease. This should be a clear journey plan for LTO including a reduction in investment risk as the scheme approaches significant maturity.
3. Principle 4: Appropriate recovery plan lengths. Recovery plans should be based on affordability. This will mean that stronger covenants will be expected to have shorter recovery periods with the expectation that, where longer recovery plans are agreed upon, these are supported by contingent assets.
4. Principle 5: Investment strategy should be set relative to the scheme's maturity. For instance, where significantly mature the investment strategy should be set with a resilience to risk and low dependency on funding. The trustees should have a plan for reducing risk in line with the LTO and also aligned with the technical provisions and recovery period. Trustees will be expected to demonstrate how the risk in the strategy can be supported.

A1.7. Understanding the Employer Covenant

TPR expects trustees to have an accurate assessment of their employer's covenant. This will act as a base for them to take appropriate decisions and actions on funding assumptions, investment allocation and recovery plan shape and duration (taking into account the need for employer agreement, which is a legal requirement for most schemes).

As part of this assessment trustees should be able to demonstrate they understand how important the covenant is to their plan and their objectives.

TPR is increasing the pressure on schemes that determine they do not need to have a specialist covenant assessment. TPR will expect a thorough assessment of the trustee board to demonstrate it has the necessary skills. These skills could include the ability to understand the effect of factors on employer financial performance, wider group and corporate structure (including the employer's position), experience in analysing performance and that the trustee board is not conflicted.

Regarding specialised assistance to fill skill gaps or provide full advice on covenant, TPR will expect the covenant adviser to have the ability to understand the legal position as well as financial. The adviser should be appointed following a formal selection process.

To avoid the bespoke route trustees will need to be able to demonstrate they have gone through this process of understanding, skills assessment, selection and appointment of an adviser when assessing the covenant strength.

A1.8. Implications of New Code

For well-funded schemes already targeting a long-term objective with a strong employer covenant and a good governance structure in place, the impact of a new Code in the form proposed is likely to be fairly limited.

Where allowance for the future expenses of running the scheme has not previously been allowed for in the technical provisions, this may present a potential unanticipated cost. Schemes targeting buyouts are likely to have made allowances for an insurer's expenses, albeit in an approximate manner.

The more material impact is expected to be on schemes currently operating on an ongoing basis with little previous thought given to a LTO, other than indirectly via a dual discount rate. Trustees will need to balance the costs and time of potential TPR intervention against the cost of compliance with the proposed Code. In the majority of cases, trustees are expected to adopt a compliant approach, either voluntarily or due to regulatory pressure. Trustee thinking is therefore expected to be increasingly focused on an LTO and associated journey plan.

Increasing focus on LTO is expected to drive increased demand for suitable LTOs and may increase the attractiveness of consolidator propositions, particularly where the costs of an insurance solution are deemed to be unaffordable.

Appendix 2. The Pension Protection Fund

A2.1. Assessment by the Pension Protection Fund (PPF)

Within this paper, we refer to the PPF without delving into any detail on the practical impacts. We have mentioned that entry into the PPF is not desirable versus benefits being continued to be paid in full by a pension scheme because, broadly speaking, the compensation paid by the PPF to members whose schemes are transferred into the PPF is lower than their scheme benefit entitlements (and in some cases materially lower).

Accordingly, the TES strategies covered focus on delivery of full benefits with default and hence involvement of the PPF being an unlikely outcome. It is for that reason that the detail of what PPF entry involves has not been covered – it has sufficed to assume that it is an undesirable outcome to be avoided.

(For the avoidance of doubt, the prior paragraph is not a criticism of the PPF. Prior to the establishment of the PPF in 2005, there was no safety net for underfunded schemes of employers that became insolvent. Consequently, the reductions in pensions payable to members of the most poorly funded schemes, especially to deferred pensioners, were often extremely severe and personally devastating for many individuals.)

The schemes being considered in Section 9 have a high likelihood of involvement with the PPF and so in this Appendix, we explain what this means in practice for members. This equips readers with key background for the content covered in Section 9. What we set out here is a summary only for the purposes of this paper. When advising an actual client on the issues we cover in this Appendix a practitioner will require a much more in-depth knowledge than we set out here.

A2.2. When does the PPF Become Involved?

When the employer(s) of a scheme become insolvent the PPF assesses the scheme and whether it should be transferred into the PPF. This is called the “assessment period” and from a practical perspective will normally last at least 18 months but often longer.

A2.3. What Happens in Assessment?

During the assessment period, the PPF (or the trustee advisers) will:

1. Check the scheme for eligibility for the PPF – from a practical perspective almost all UK DB schemes will be eligible;
2. Validate the membership and the benefit structure and the data;
3. Where necessary, reduce the benefits being received by members to the PPF Compensation level, pending completion of the PPF assessment period;
4. Confirm the assets including any insolvency recoveries; and
5. Arrange for an actuarial valuation on a prescribed basis (the Section 143 basis) to estimate the funding level against the cost of securing benefits equivalent to PPF Compensation with a bulk annuity.

During the assessment period, trustee powers are heavily restricted and most decisions that impact the financial situation of the scheme require PPF agreement. It is normal practice for the PPF to appoint professional trustees and scheme advisers from its panels to operate the scheme in order to make the assessment period more efficient.

There are two key outcomes after the Section 143 valuation has been submitted and determined as binding by the PPF:

1. The scheme is less than 100% funded on the Section 143 basis. The scheme is transferred to the PPF and members receive PPF Compensation from the PPF; or
2. The scheme is more than 100% funded on the Section 143 basis. The trustees must secure benefits for members with a bulk annuity within 6 months. Given the funding level, members on average will receive benefits from the bulk annuity that are more valuable than PPF Compensation. This is often called a “PPF+” buyout. It might be difficult for trustees to secure benefits with a superfund in these circumstances, especially if they are unable to afford to secure full benefit entitlements with the superfund.

Schemes can also exit an assessment period and go back to normal operations if they are subject to a scheme rescue. This means that the employer is able to exit insolvency as a re-structured trading entity and it or another associated party is able to continue to employ the scheme.

A2.4. What is PPF Compensation?

PPF Compensation is what a member receives if their scheme is transferred into the PPF. Key differences in the benefits payable under a defined benefit pension scheme are as follows:

1. Pensioners in receipt of a pension:
 1. They receive their full pension in payment unless they retired early in good health and at the date of the assessment period commencing are under normal pension age⁹ in which case their benefits are reduced to reflect the deferred pensioner compensation level which applies (see below);
 2. They receive no annual indexation on pension accrued before 1 April 1997. It is common for schemes to pay at least some indexation on pension accrued before 1 April 1997 so this involves a loss for many members;
 3. Annual indexation in payment at CPI(0,2.5) on pension accrued from 1 April 1997. It is universal for schemes to offer indexation on such pensions – some schemes do so at better rates than CPI(0,2.5);
 4. No 5-year guarantee on death within 5 years of retirement – it is common for schemes to offer a 5-year guarantee; and
 5. On death in retirement a pension to a qualifying dependent (e.g. spouse) of 50% of the member’s pension at death. Most schemes offer 50% of the member’s pension but ignore any pension reduction due to commutation for cash at retirement (and most members do commute pension for cash), so the PPF will usually be worse.
2. Dependents in receipt of a pension:
 1. Similar to a pensioner, there is no 10% reduction and, of course, the death in retirement benefits are not applicable.
3. Deferred pensioner (similar as described above for a pensioner except):
 1. Deferred pensioners under normal pension age will receive a 10% reduction in the starting pension as described above for pensioners subject to a maximum benefit cap which is determined on an age-related basis. For the period 1 April 2020 to 31 March 2021, the compensation cap for a person who is 65 years old is £41,461.07 per annum for the year 2019/2020¹⁰.
 2. Revaluation before retirement is CPI(0,5) on pension accrued before 1 April 2009 and CPI(0,2.5) on pension accrued from 1 April 2009. Some schemes offer better than this so some members would be worse off; and
 3. Transfer values are not payable by the PPF so deferred pensioners lose a key option.

Some member categories can be better off under the PPF. For example, deferred pensioners who left their scheme some time ago (e.g. before 1986) may have no revaluation prior to retirement under their scheme and so would gain such

⁹The earliest age at which the member is entitled to their full benefits in payment as of right, without actuarial reduction.

¹⁰Recent case law has challenged the legality of the impact of the compensation cap on larger benefits, the legality of PPF Compensation being lower than 50% of the value of original benefit payable from the scheme, and the legality of PPF Compensation being lower than the full value of original benefit payable from the scheme where the member’s income is below the poverty threshold (Hampshire v PPF ECJ Case C17/17 [2018] and PSV v Bauer – ECJ Case C569/16]).

reevaluation on the transfer of their scheme into the PPF. Also, the terms for converting pension into cash at retirement are usually much better than what schemes offer so deferred pensioners taking this option are better off (at least when looking at that in isolation).

A2.5. What is the Loss in Benefit Value If a Scheme is Transferred into the PPF?

Generally speaking, members are no better off and the vast majority will lose at least some pension value should their scheme be transferred into the PPF. The Purple Book states estimated aggregate PPF Compensation and full buyout funding levels for UK schemes. These figures suggest an average loss in pension value of 22% across scheme members.

Unfortunately averages hide significant variation amongst individual members as the impact at individual member level depends significantly on their own specific pension details. As shown by Figure 10 in Section 7, some members can see very severe losses in pension.

A2.6. PPF Drift

“PPF drift” is a phrase that is commonly used to describe how, as members get older, the value of the PPF Compensation to which they would be entitled as a percentage of the value of their scheme benefits increases on average. This means that for a typical pension scheme, the PPF funding level will worsen over time unless the asset returns (and any employer funding) can “outperform” the impact of the drift.

The pace of drift can vary depending on the age and benefits profile of members and the scheme benefit structure. It can, for example, quite plausibly be of the order of 1-2% a year. Hence, a scheme that is say 105% funded on PPF basis might find that it drifts below 100% over just a few years.

The impact on individual members can be profound. Consider the following examples comparing the impact on specific member examples of the commencement of PPF assessment being deferred a year:

1. Pensioners over normal pension age with a pension of £10,000 a year:
 1. £2,500 a year of this pension was accrued before 1 April 1997 and has indexation applied of 3% pa. £5,000 was accrued from 1 April 1997 and has indexation of CPI(0,5) – assume the CPI is 3.5%.
 2. On immediate entry into the PPF, the pensioner receives PPF Compensation of £10,000 a year of which £5,000 increases at CPI(0,2.5) so in 12 months their PPF Compensation is £10,000 plus 2.5% of £5,000 = £10,125 a year.
 3. If the scheme in fact entered PPF assessment a year later the member’s PPF Compensation would at that time be £10,000 plus 3% on £2,500 plus 3.5% on £5,000 = £10,250 a year. So the pensioner is circa 1% better off – and extrapolating, if the scheme entered PPF assessment say 5 years later they would be c. 5-6% better off.
2. Pensioner one year before normal pension age with a pension of £10,000 a year:
 1. Assume the same details as above. As they are under normal pension age when the PPF assessment period started they incur a 10% reduction to determine PPF Compensation. So their PPF Compensation a year later is 90% of £10,125 = £9,113 a year.
 2. If the scheme in fact entered PPF assessment a year later they avoid the 10% reduction as they are at normal pension age when the PPF assessment period started. Their PPF Compensation at the time would again be £10,250 a year, so they are some 12% better off.
3. Deferred pensioners are some years away from normal pension age
 1. Ignoring differences in pre-retirement revaluation, and deferral of the commencement of the PPF assessment period by a year will make no difference to this member in terms of what PPF Compensation they receive.
 2. However, if commencement of the PPF assessment period can be deferred materially, until the deferred pensioner attains normal pension age, they will avoid the 10% reduction.

It is not just member pensions that are subject to drift effects. Other benefit components can be subject to drift, sometimes materially. For example, the contingent pension payable to the spouse of a pensioner might be 20% or higher if the member dies before PPF assessment commences¹¹.

These examples illustrate that for members, generally speaking, their PPF Compensation entitlement gets better (as a percentage of the value of their scheme benefits) the longer the period before the scheme enters a PPF assessment period. However, PPF drift is not always a positive factor.

¹¹This is because most schemes calculate the contingent spouse pension as a % of the pre commutation pension whereas PPF Compensation is based on the lower post commutation pension.

For schemes that are better funded than the PPF and so that would, on completion of a PPF assessment period, purchase a PPF+ buyout for members, some member benefit categories can be worse off all things equal. Consider such a scheme and assume its PPF funding level is 115% but that in 3 years due to PPF drift it would be 110%.

In this example, the big winners after 3 years will be pensioners who have received full benefits and annual indexation for 3 years and will consequently have higher PPF Compensation and similarly all the members who passed normal pension age over those 3 years. Although their top-up (to determine the PPF+ buyout) is now only 15% rather than 10%, they are starting from a higher level of PPF Compensation value.

The losers will be deferred pensioners whose PPF Compensation value will be unchanged all things equal but now only have a top-up of 10%.

The actual way in which assets are distributed across members to determine benefits under a PPF+ buyout is far more complex than described here but this simple explanation hopefully illustrates the point that PPF drift can result in winners and losers.