Employer Covenant Enhancement on Centralisation

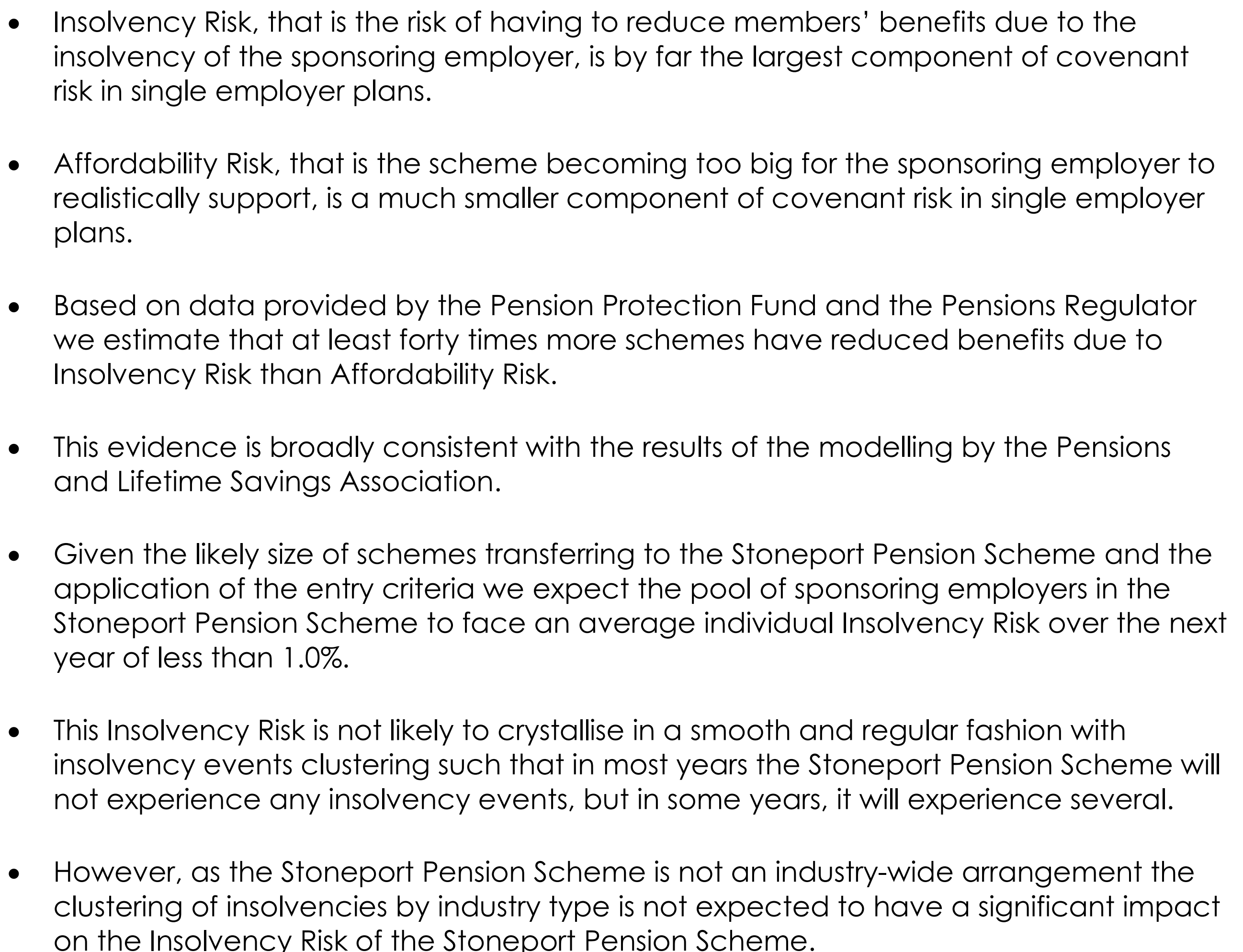
A primer for Trustees

STONEPORT
PENSIONS

Executive Summary

The purpose of this report is to provide trustees of defined benefit pension schemes considering transferring to the Stoneport Pension Scheme with a detailed explanation of the expected covenant enhancement that will be achieved by the centralisation of the Stoneport Pension Scheme.

In the event that centralisation does not occur because sufficient scale is not reached the Stoneport Pension Scheme will continue to operate as a de facto sectionalised defined benefit Master Trust. In this scenario the employer covenant supporting the liabilities of the schemes that transfer to the Stoneport Pension Scheme will be unchanged except through the modest impact of the single governance model.



Insolvency Risk dominates Affordability Risk in single employer plans

- Insolvency Risk, that is the risk of having to reduce members' benefits due to the insolvency of the sponsoring employer, is by far the largest component of covenant risk in single employer plans.

- Affordability Risk, that is the scheme becoming too big for the sponsoring employer to realistically support, is a much smaller component of covenant risk in single employer plans.

- Based on data provided by the Pension Protection Fund and the Pensions Regulator we estimate that at least forty times more schemes have reduced benefits due to Insolvency Risk than Affordability Risk.

- This evidence is broadly consistent with the results of the modelling by the Pensions and Lifetime Savings Association.

- Given the likely size of schemes transferring to the Stoneport Pension Scheme and the application of the entry criteria we expect the pool of sponsoring employers in the Stoneport Pension Scheme to face an average individual Insolvency Risk over the next year of less than 1.0%.

- This Insolvency Risk is not likely to crystallise in a smooth and regular fashion with insolvency events clustering such that in most years the Stoneport Pension Scheme will not experience any insolvency events, but in some years, it will experience several.

- However, as the Stoneport Pension Scheme is not an industry-wide arrangement the clustering of insolvencies by industry type is not expected to have a significant impact on the Insolvency Risk of the Stoneport Pension Scheme.

PPF recognises the reduction in Insolvency Risk in a centralised scheme

- The key benefit to members of a scheme that transfers to the Stoneport Pension Scheme is the large reduction in Insolvency Risk that can be achieved on centralisation thereby improving the security of their benefits.

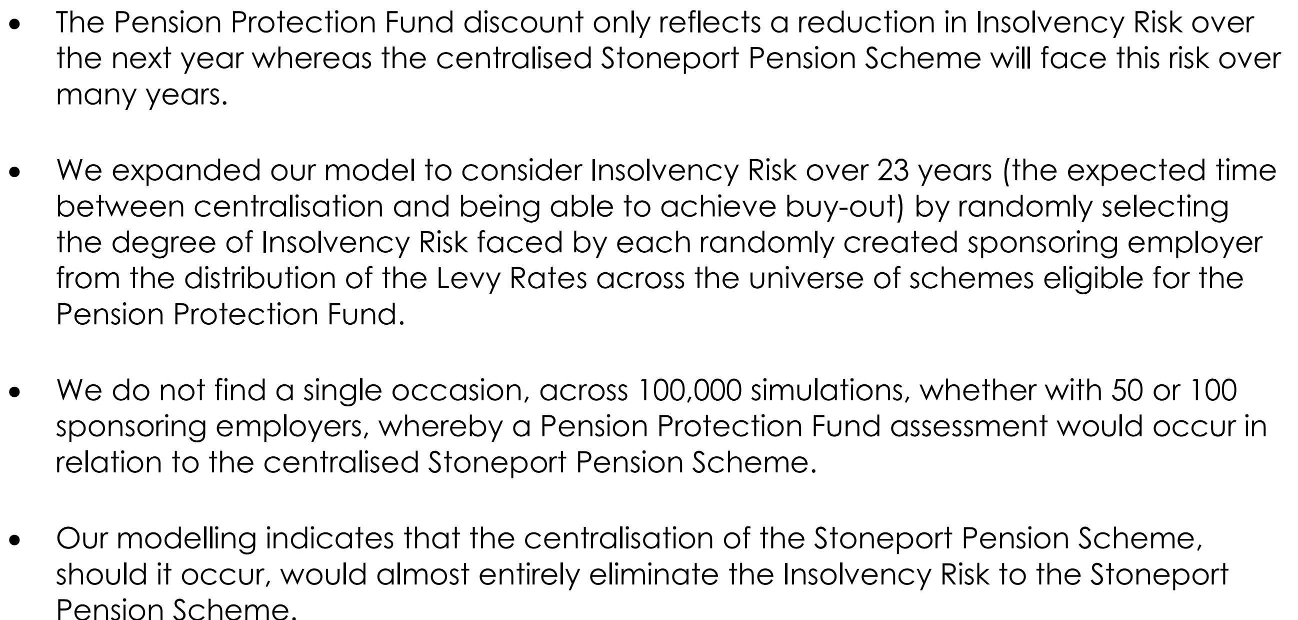
- The Pension Protection Fund recognises this reduction in risk through the discount it provides to centralised schemes on the risk-based levy.

- We have modelled a large number of randomly selected portfolios of potential sponsoring employers and schemes including the target size (100 sponsoring employers).

- This modelling suggests that the discount to the risk-based levy that will be applied by the Pension Protection Fund is almost certain to be in excess of 95%, reflecting the reduction in the Insolvency Risk that the Stoneport Pension Scheme is exposed to following centralisation.

- We note that the discount applied by the Pension Protection Fund is less than the theoretical reduction in Insolvency Risk. The theoretical probability of Insolvency Risk crystallising over one year following centralisation of the Stoneport Pension Scheme (i.e. all sponsoring employers becoming insolvent during just one year time period) is so small as to be considered inconsequential.

Insolvency Risk in the long term



- The Pension Protection Fund discount only reflects a reduction in Insolvency Risk over the next year whereas the centralised Stoneport Pension Scheme will face this risk over many years.

- We expanded our model to consider Insolvency Risk over 23 years (the expected time between centralisation and being able to achieve buy-out) by randomly selecting the degree of Insolvency Risk faced by each randomly created sponsoring employer from the distribution of the Levy Rates across the universe of schemes eligible for the Pension Protection Fund.

- We do not find a single occasion, across 100,000 simulations, whether with 50 or 100 sponsoring employers, whereby a Pension Protection Fund assessment would occur in relation to the centralised Stoneport Pension Scheme.

- Our modelling indicates that the centralisation of the Stoneport Pension Scheme, should it occur, would almost entirely eliminate the Insolvency Risk to the Stoneport Pension Scheme.

Does Affordability Risk increase?

- There are two forms of Affordability Risk in a centralised scheme: the traditional form of Affordability Risk and an additional form whereby the insolvencies of the sponsoring employers result in the Stoneport Pension Scheme's liabilities becoming unsupportable by the remaining sponsoring employers.

- The traditional form of Affordability Risk is very small based on evidence from the Pensions Regulator, the Pension Protection Fund and the Pensions and Lifetime Savings Association. This risk is expected to be further reduced by the cross collateralisation of the employer covenant achieved by the centralisation of the Stoneport Pension Scheme.

- We expanded our model to consider the additional form of Affordability Risk over the likely lifetime of the centralised Stoneport Pension Scheme by considering the amount of additional liabilities that each sponsoring employer could be required to support from insolvencies.

- This modelling shows over a 23-year period if the target size to centralise (100 sponsoring employers) is achieved the risk that assets and liabilities are increased by more than 50% for the remaining sponsoring employers is 0.4%.

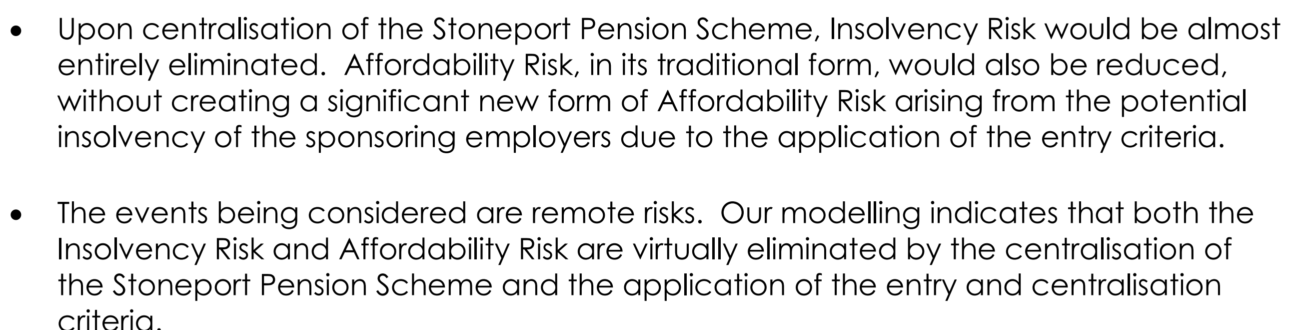
- By applying the Stoneport Pension Scheme's entry criteria to confirm that an immediate increase in the assets and liabilities of the sponsoring employer of 50% would be supportable we can be confident that this new form of Affordability Risk will not be material in the centralised Stoneport Pension Scheme.

- In undertaking our modelling we have used a number of simplifying assumptions which result in additional margins for prudence being incorporated. Additional modelling will be undertaken to ensure that the centralisation criteria are satisfied (in the form of the Combined Covenant Test). At this time, detail on the actual pool of sponsoring employers, their members, assets and liabilities will be available and will be incorporated into our analysis and the advice that we will prepare for the Trustees when deciding whether to proceed with centralisation.

Conclusion

- Upon centralisation of the Stoneport Pension Scheme, Insolvency Risk would be almost entirely eliminated. Affordability Risk, in its traditional form, would also be reduced, without creating a significant new form of Affordability Risk arising from the potential insolvency of the sponsoring employers due to the application of the entry criteria.

- The events being considered are remote risks. Our modelling indicates that both the Insolvency Risk and Affordability Risk are virtually eliminated by the centralisation of the Stoneport Pension Scheme and the application of the entry and centralisation criteria.



- Converting the Stoneport Pension Scheme to a centralised arrangement will therefore lead to a significant improvement in the security of member benefits such that the risk of benefit loss for members is likely to be less than 1% over the lifetime of the Stoneport Pension Scheme.

This summary demonstrates the extent of the expected covenant enhancement that the centralisation of the Stoneport Pension Scheme will deliver to its members.

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Disclaimers

This report has been prepared by Stoneport Pensions Management Limited ("SPML") primarily to provide trustees of defined benefit pension schemes considering transferring to the Stoneport Pension Scheme with information on the employer covenant supporting the Stoneport Pension Scheme following centralisation although it may be of interest to other parties interested in understanding the employer covenant of the Stoneport Pension Scheme.

This report contains no advice and is for information only. No parties may rely on or make decisions based on this report, and neither SPML nor any of its employees acknowledge any liability to any third parties. Trustees (and sponsoring employers) should request advice from their actuarial, legal and covenant advisors when considering whether to transfer to the Stoneport Pension Scheme. This report is up to date as at the date of writing and will not be updated unless we confirm otherwise. We retain all copyright and intellectual property rights.

This report and the work involved in preparing it are within the scope of and comply with Technical Actuarial Standard 100: Principles for Technical Actuarial Work (TAS 100).

We note that there is an increasing body of evidence demonstrating that climate-related issues represent a material risk to future economic stability affecting environmental, societal and governance matters. Sectors that are likely to be most heavily impacted by these risks include oil and gas, transport, power generation, and agriculture. As advisors to the Trustees of the Stoneport Pension Scheme we adopt a proportionate approach in considering climate risks in relation to assessing and monitoring the employer covenant. These risks are outside of the scope of this report

1. Introduction

This report is intended to provide trustees of defined benefit pension schemes considering transferring to the Stoneport Pension Scheme with an overview of the expected employer covenant enhancement that will be achieved by the centralisation of the Stoneport Pension Scheme.

The overwhelming majority of covenant enhancement for the Stoneport Pension Scheme will only occur when it becomes a centralised scheme and each sponsoring employer, in effect, cross guarantees the liabilities of the other sponsoring employers within the Stoneport Pension Scheme. Prior to this point there would be no change to the covenant supporting the liabilities of the schemes that transfer to the Stoneport Pension Scheme, except for the marginal second order gains arising from the lower running costs as part of the Stoneport Pension Scheme, which would act as a sectionalised defined benefit Master Trust.

Prior to centralisation and whilst running under a single governance model the Stoneport Pension Scheme will benefit from the lower running costs and the better governance available to such vehicles. However, work undertaken by the DB Taskforce of the Pensions and Lifetime Savings Association ("PLSA") in March 2017 (The Case for Consolidation) demonstrates that even the most integrated consolidation structures provide only a minor improvement in employer covenant strength because schemes can recoup most running costs from their sponsoring employers.

The PLSA modelling demonstrates the reduction in the risk of benefit loss for members from a single governance model as follows (see the Appendices for further details on the Pensions Regulator's covenant gradings):

Covenant Grade ("CG")	Standalone scheme	Single governance model	Improvement in risk of benefit loss
CG1: Strong	6%	6%	-
CG2: Tending to strong	20%	19%	1%
CG3: Tending to weak	40%	38%	2%
CG4: Weak	65%	63%	2%

Therefore, prior to becoming a centralised scheme any covenant enhancement achieved by transferring to the Stoneport Pension Scheme will be extremely modest.

The timing of the conversion of the Stoneport Pension Scheme to a centralised scheme is expected to be 31 December 2022. However, this will depend on the presence of a sufficiently strong and diverse pool of sponsoring employers to make centralisation effective. It also requires the agreement of Stoneport Pensions Alliance Limited, the Principal Employer, reflecting the outcome of a vote of the sponsoring employers.

The actual composition of the pool of sponsoring employers, either at the point of centralisation or at any point thereafter, cannot be known in advance. We therefore illustrate the long-term covenant enhancement expected from centralisation using various assumptions about the possible pools of sponsoring that could arise.

2. Background to Employer Covenant Risk

Before considering the specific situation of the Stoneport Pension Scheme we set out below some background information on employer covenant risk generally to provide a contextual framework for the analysis set out in this report.

2.1. The Employer Covenant

Defined benefit pension schemes are reliant on their sponsoring employer(s) to provide contributions towards any deficit that exists or might arise in the future. A scheme is reliant on its sponsoring employer(s) until such time as it has either paid all benefits due in full or has settled its liabilities with a life insurance company and wound-up.

The employer covenant is the ability of a sponsoring employer to meet these contribution requirements as and when they fall due. A sponsoring employer can fail to meet its obligations in these regards through two distinct routes, insolvency and (lack of) affordability.

2.1.1 The risk of insolvency of the sponsoring employer(s)

We define "Insolvency Risk" as the risk of having to reduce members' benefits due to the insolvency of the sponsoring employer(s) prior to the settlement in full of the liabilities of the scheme.

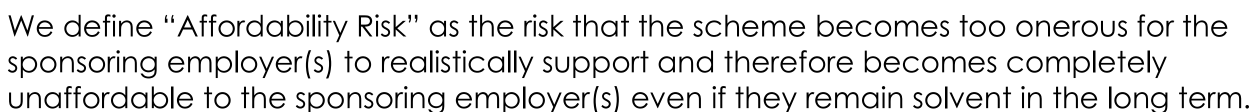
In the event of the insolvency of the sponsoring employer(s), a claim is made in the insolvency proceedings for the shortfall in the scheme relative to the cost of securing the scheme's benefits with a life insurance company under Section 75 of the Pensions Act 1995 (the "Section 75 debt"). It is very rare that this claim is settled in full (the Pension Protection Fund ("PPF") assumes a recovery rate of only 5% on the Section 75 debt falling on insolvent employers in its July 2018 Long Term Funding Strategy Update).

If the claim is not recovered in full, the benefits must be reduced either by securing a level of benefits with a life insurance company equal to or above the level of compensation provided by the PPF or, in the event that insufficient assets are available to the scheme to provide that level of benefits, entering the PPF.

In either event, if the sponsoring employer(s) becomes insolvent and the Section 75 debt is not recovered in full, benefits for the members will be reduced.

2.1.2 The risk of the scheme becoming unaffordable to the sponsoring employer(s)

We define "Affordability Risk" as the risk that the scheme becomes too onerous for the sponsoring employer(s) to realistically support and therefore becomes completely unaffordable to the sponsoring employer(s) even if they remain solvent in the long term.



Whilst solvent, the sponsoring employer(s) has to meet the funding requirements of the scheme from time to time. If these requirements become too onerous for the sponsoring employer(s), it is possible, with the approval of the Pensions Regulator and the PPF, that its obligations to the scheme can be "compromised". This is only possible if there is no conceivable way that the sponsoring employer(s) can agree a credible recovery plan to address the deficit (when measured appropriately).

Such a scenario results in members receiving a reduced level of benefits, in line with the rules of the PPF.

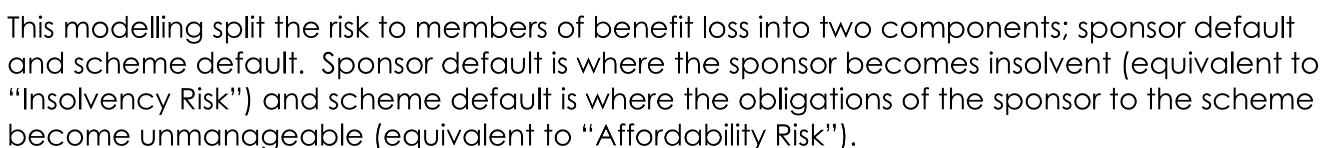
These scenarios (and therefore Affordability Risk) are entirely different to the more common experience of schemes with regards to cash flow affordability whereby the sponsoring employer(s) is constrained by near-term cash flows such that contributions need to be temporarily reduced or reshaped (for example by extending the period of the recovery plan).

We note that it is usually in the best interests of the members of the scheme for the trustees to grant leniency on cash contributions to any sponsoring employer(s) experiencing a short-term downturn in cash generation because the shortfall in cash contributions can be made good if and when the sponsoring employer(s) recovers.

In such situations the outcome is usually binary; either the sponsoring employer(s) recovers or they become insolvent (albeit with so called "zombie schemes" this period to insolvency may be significant). These sorts of cash flow affordability issues are either therefore temporary or part of the path of the sponsoring employer(s) to insolvency and are therefore separate from "Affordability Risk" as defined in this report.

2.1.3 The balance of risks

In October 2016, the DB Taskforce set up by the PLSA published its interim report. The report contained the results of a modelling exercise that had been commissioned to determine the risk to members of benefit loss over a 30-year period.



This modelling split the risk to members of benefit loss into two components; sponsor default and scheme default. Sponsor default is where the sponsor becomes insolvent (equivalent to "Insolvency Risk") and scheme default is where the obligations of the sponsor to the scheme become unmanageable (equivalent to "Affordability Risk").

The table that follows shows the results for each of the four covenant gradings used by the Pensions Regulator:

Covenant Grade ("CG")	Sponsor default ("Insolvency Risk")	Scheme default ("Affordability Risk")	Total risk of benefit loss
CG1: Strong	5%	1%	6%
CG2: Tending to strong	16%	4%	20%
CG3: Tending to weak	37%	3%	40%
CG4: Weak	64%	1%	65%

As can be seen, based on this model, Insolvency Risk dominates over Affordability Risk across all covenant grades.

We can also see this split between scheme default and sponsor default in practice from the data available from both the Pensions Regulator and the PPF:

- Only 28 schemes have been granted a Regulated Apportionment Arrangement ("RAA") whereby the Pensions Regulator has allowed a separation of the scheme from its sponsoring employer(s) in a compromise arrangement due to the scheme becoming unaffordable (based on a Freedom of Information request for the nine years 2009 – 2017 inclusive).

- A total of 1,277 schemes have suffered an insolvency event and entered assessment for the PPF between the introduction of the PPF in April 2005 and the accounts of the PPF for the year ending March 2019. (The data is not available on a consistent basis annually such that various simplifications are required in the early years of the PPF to produce these indicative figures.) As shown in the following table, nearly a thousand of these schemes entered the PPF with a smaller number finding an alternative way out of assessment such as securing benefits in excess of the PPF minimum with a purchase of annuities from a life insurance company.

	Number of schemes
Number of schemes entering assessment	1,277
Schemes that entered the PPF	(959)
Schemes that exited assessment in other ways	(245)
Schemes in assessment as at 31 March 2019	73

We can therefore see, across the PPF universe, that the number of schemes crystallising Insolvency Risk (approximately 1,277) as opposed to the number crystallising Affordability Risk (approximately 28, albeit over a shorter period) confirms the conclusion of the PLSA model that Insolvency Risk dominates over Affordability Risk. In particular, this data suggests that at least forty times more schemes have reduced benefits due to Insolvency Risk than Affordability Risk.

Where Insolvency Risk does arise, the data suggests that around 80% of cases lead to the payment of PPF benefits with a minority of cases leading to an alternative resolution resulting in higher benefits being paid i.e. with benefits being paid at a level somewhere between PPF benefits and full benefits.

We note that this analysis is based on single employer arrangements (or multi-employer arrangements where the employers are associated) rather than in a centralised scheme such as that proposed for the Stoneport Pension Scheme.

2.2. Insolvency Risk

The Insolvency Risk faced by schemes varies enormously and is difficult to consider with a high degree of accuracy given sponsoring employers vary considerably and the probability of insolvency is low in any one year.

The PPF produces some data that allows us to show the distribution of schemes by the "Levy Rate" used by the PPF in the calculation of the risk-based levy. The PPF allocates sponsoring employers into one of ten categories for the purposes of the risk-based levy. The Levy Rate is only a broad proxy for the Insolvency Risk faced by schemes with a sponsoring employer in the various Levy Bands. We note that in its own analysis of Insolvency Risk, the PPF uses the Levy Rate as a proxy for the probability of insolvency during the levy year.

The Levy Rate for each Levy Band is revised from time to time. However, the Levy Rates have remained unchanged between 2018/19 and 2020/21.

The following table shows the proportion of schemes covered by the PPF allocated to each Levy Band for the 2018/19 levy year alongside the Levy Rate applied for the 2018/19 levy year, as published by the PPF.

Levy Band	Proportion of Schemes 2018/19	Levy Rate 2018/19
1	14%	0.28%
2	7%	0.31%
3	11%	0.35%
4	11%	0.40%
5	14%	0.53%
6	15%	0.81%
7	12%	1.26%
8	6%	1.76%
9	6%	2.39%
10	4%	3.83%

The majority of schemes have a risk of facing an insolvency event over a one-year period of less than 1% (around 70% have a Levy Rate of under 1%). Only a small minority of schemes face a risk of insolvency over the next year of more than 2% (around 10% have a Levy Rate of more than 2%). The average Levy Rate across the PPF universe in 2018 / 19 weighted by number of schemes was 0.89% per annum.

The PPF also considers the average levy rate for schemes of different sizes weighted by number of members. For "Micro" schemes (those with between 2 and 99 members) the average levy rate was just below 1.2% for 2018/2019. For "Small" Schemes (those with between 100 and 999 members) the average levy rate was just below 0.8% for 2018/2019.

Given the target market of the Stoneport Pension Scheme it might be reasonable to assume the sponsoring employers within the Stoneport Pension Scheme will face an insolvency risk of around 1.0%, assuming the membership is split evenly between "Small" and "Micro" schemes.

However, the entry criteria for sponsoring employers (in the form of the Covenant Test described in the Appendix A) means that it is expected that those sponsoring employers that would be categorised as having "weak" employer covenants (using the Pensions Regulator's covenant gradings) will be unlikely to be eligible to join the Stoneport Pension Scheme. This means, broadly, that sponsoring employers in Levy Bands 8, 9 and 10 are unlikely to be accepted into the Stoneport Pension Scheme implying an average Levy Rate (weighted by number of schemes) of 0.58% per annum.

Whilst the Insolvency Risk has a relatively small probability of occurring in a single year this probability can scale quickly over the lifetime of a scheme.

The following table demonstrates how relatively low levels of Insolvency Risk over one year accumulate to significant overall probabilities over the long periods of time that are relevant for schemes:

Insolvency Risk over 1 year	**Cumulative over 10 years**	**Cumulative over 20 years**	**Cumulative over 30 years**
0.25% per annum	2.5%	4.9%	7.2%
0.5% per annum	4.9%	9.5%	14.0%
0.75% per annum	7.3%	14.0%	20.2%
1.0% per annum	9.6%	18.2%	26.0%
1.5% per annum	14.0%	26.1%	36.5%
2.0% per annum	18.3%	33.2%	45.5%

As expected, those sponsoring employers facing a relatively high rate of insolvency (in a Levy Band towards the bottom of the scale) have cumulative probabilities of defaulting that scale quickly and become highly significant over long time periods.

However, even the strongest sponsoring employers, facing insolvency probabilities that would put them in the highest Levy Bands have a cumulative probability of failing that becomes significant to their trustees over the long term. This analysis demonstrates, quite simply, how even a modest probability of failure in the short term builds up to a substantial and significant probability of failure in the longer term.

2.3. Historic data on Insolvency Risk

Whilst the PPF has been operating since 2005 and provides some excellent data on its experience of Insolvency Risk this data is limited in time and scope.

2.3.1 Moody data

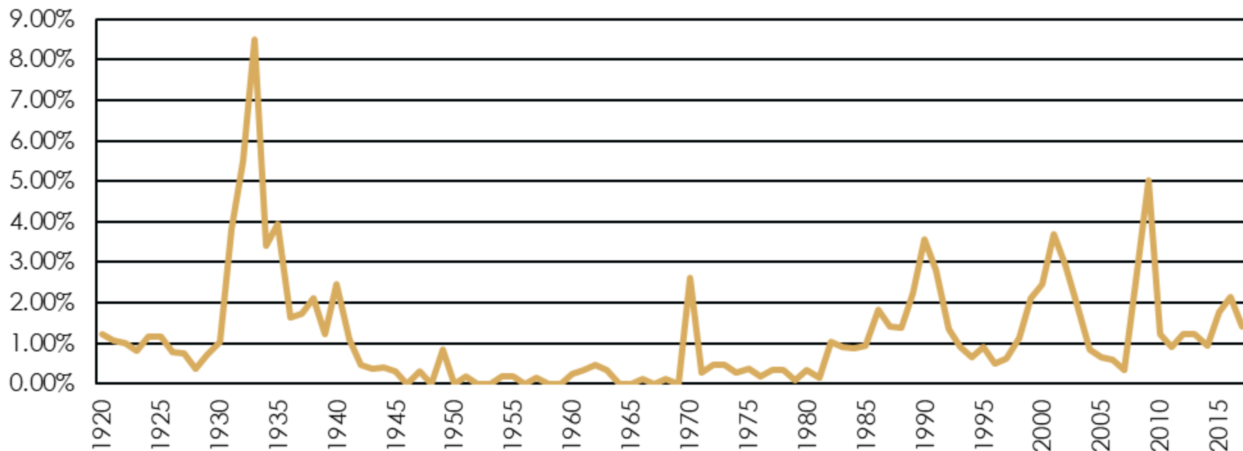
The credit rating agency Moody's Investor Services ("Moody") produces a historic data set (Moody's Investor Services Annual Default Study: Corporate Default & Recovery Rates, 1920 – 2017 dated 15 February 2018) of the companies for which it has provided ratings from 1920 to date which allows us to consider the variability of Insolvency Risk through time. This data is commonly broken into two components depending on the type of the issuer, which when combined create a data set that Moody designate as being "All Corporates":

- Investment grade companies, who are rated at Baa or above, who face a short-term Insolvency Risk towards the top of the Levy Band rankings.

- Speculative grade companies, who are rated below Baa, who face a short-term Insolvency Risk towards the bottom of the Levy Band rankings.

From this data Moody calculate various estimates of the probability of a rated issuer defaulting on their debt which is typically the result of an insolvency event (albeit it is possible for a corporate to default on their debt without triggering an insolvency event and the PPF assumes that the probability of a company in default becoming insolvent is 60% in its July 2018 Long Term Funding Strategy Update).

Moody show the actual experienced default rate (the proportion of bond issuers that fail to meet their debt obligations) since 1920 on "All Corporates" as follows:



Over the long-term default rates for All Corporates are low. The mean annual default rate over the period was 1.16% per annum which, when allowing for 60% of defaults to result in solvency (in line with the assumptions adopted by the PPF) implies a long term average insolvency rate for rated companies (whether investment grade or sub-investment grade) of around 0.7% per annum.

However, the actual experience from year to year is highly variable with periods of relatively benign conditions (there were 40 years with default rates lower than 0.5% per annum) and times of financial distress leading to significant volumes of defaults (the maximum annual default rate during the period was 8.49% during the Great Depression).

This means that for the Stoneport Pension Scheme the Insolvency Risk is not likely to crystallise in a smooth and regular fashion. Rather than a regular number of insolvency events each year it is more likely that these events will cluster such that in most years the Stoneport Pension Scheme will not experience any insolvency events, but in some years, it will experience several.

2.3.2 Short term versus long term in the Moody data

Moody also produce data that allow us to see the long-term default rate from an initial credit assessment. That is to say, assuming that we can categorise the issuer of a bond into a credit assessment category on day one, how likely is default over the next twenty years (based on the complete data set available to Moody from 1920 to 2017).

Moody credit rating	Actual over first year	Cumulative over 20 years	Average over 20 years
Aaa	0.0%	1.4%	0.1% p.a.
Aa	0.1%	4.5%	0.2% p.a.
A	0.1%	6.6%	0.3% p.a.
Baa	0.3%	11.3%	0.6% p.a.
Ba	1.2%	27.9%	1.6% p.a.
B	3.4%	44.5%	2.9% p.a.
Caa-C	10.1%	61.7%	4.7% p.a.

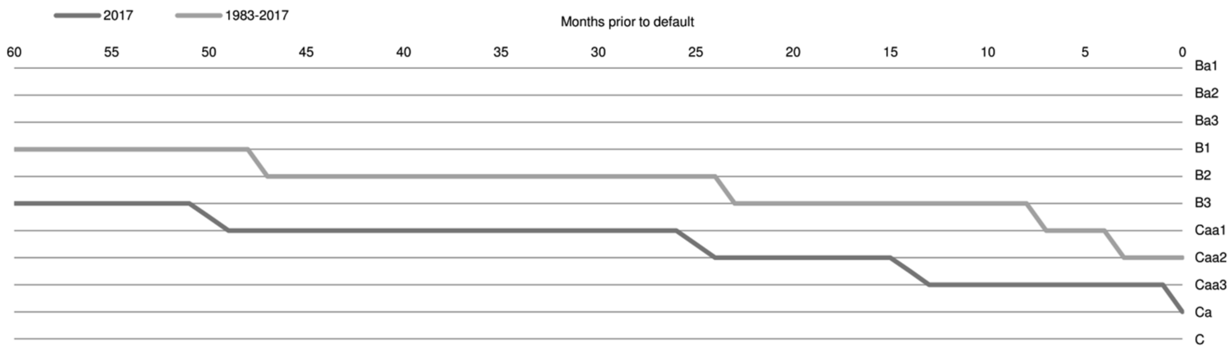
As noted earlier we expect the pool of sponsoring employers in the Stoneport Pension Scheme to face an average Insolvency Risk over the next year of less than 1.0%, due to the entry criteria applied. This broadly maps to those companies with a credit rating of Ba or above (allowing for the probability of a company in default becoming insolvent). However, we would expect those sponsoring employers with a Ba rating to require a higher level of due diligence to enable them to join the Stoneport Pension Scheme.

Those companies with a B rating or below are unlikely to be able to enter the Stoneport Pension Scheme even with additional due diligence.

Broadly this shows that for the highest rated companies there is an extremely low probability of default shortly after having been assessed but that, as time passes, they are expected to weaken slightly in credit quality such that the average default rate experienced over a long period will be slightly higher than that experienced in the short term (as shown by the long-term average being higher than the short-term average).

The weaker companies experience a different profile. They face a high probability of failure in the near term but, if they survive through this period, in the longer term they improve in credit quality (as shown by the long-term average being lower than the short-term average).

Moody also produce data on the creditworthiness of rated companies in the period prior to insolvency. The following chart, produced by Moody, indicates that the median credit rating was below Ba up to five years prior to default in 2017 and over a longer term average which demonstrates, as expected, that in the short to medium term covenant visibility provides a good indication of the likely risk of default.



As previously noted, the application of the Covenant Test at entry and at centralisation (as described in the Appendix A) suggests that the sponsoring employers in the target market are likely to have a creditworthiness broadly equivalent to a credit rating of Ba or above. Therefore, the risk of default (and subsequent insolvency) for any of the sponsoring employers can be expected to be very low in the five years immediately following entry and centralisation.

2.3.3 Sectoral influence on Insolvency Risk

One of the drivers of the time-based variability of Insolvency Risk in the Moody data (i.e. that defaults are likely to cluster through time) is the influence of industry sector on Insolvency Risk.

The Moody's data shows the experience of Insolvency Risk within a particular sector of the economy follows an extreme version of the time-based variability whereby some sectors can see no insolvencies for many years followed by periods of extremely high insolvencies.

For example, between 1970 and 1986 inclusive, no insolvency events were recorded in the Moody data in the Banking, Energy: Electricity, or Forest Products & Paper sectors. Over the same period of time around 20% of the issuers in the Automotive and Energy: Oil & Gas sectors experienced a default.

However, as the Stoneport Pension Scheme is not an industry-wide arrangement and will accept sponsoring employers from any industry, subject to satisfying the entry criteria and centralisation criteria, clustering of this sort is not expected to have a significant impact on the Insolvency Risk of the Stoneport Pension Scheme.

2.4. Summary

Data provided by the PPF and the Pensions Regulator indicates that Insolvency Risk dominates Affordability Risk. This evidence is broadly consistent with the results of the modelling by the PLSA.

The PPF produces some data that allows us to show the distribution of schemes by the "Levy Rate" used by the PPF in the calculation of the risk-based levy, which the PPF use as a proxy for the probability of insolvency during the levy year. Given the target market of the Stoneport Pension Scheme and the application of the entry criteria we would expect the pool of sponsoring employers in the Stoneport Pension Scheme to face an average Insolvency Risk over the next year of less than 1.0%.

Further, we expect this average Insolvency Risk to be lower than the DB universe average (currently 0.89% per annum) but it will depend on the actual pool of sponsoring employers which is currently unknown.

Data from Moody indicates that this Insolvency Risk is not likely to crystallise in a smooth and regular fashion. Rather than a regular number of insolvency events each year it is more likely that these events will cluster such that in most years the Stoneport Pension Scheme will not experience any insolvency events, but in some years, it will experience several.

As the Stoneport Pension Scheme is not an industry-wide arrangement the clustering of insolvencies by industry type is not expected to have a significant impact on the Insolvency Risk of the Stoneport Pension Scheme.

3. The PPF Levy Discount on Centralisation

One relevant indicator of the enhancement of the employer covenant that can be expected when the Stoneport Pension Scheme centralises is the significant reduction in the risk-based levy payable to the PPF available to centralised schemes.

3.1. Risk-based Levy discount

The risk-based element of the PPF levy makes up the majority of the levy raised each year and accounted for 94% of the £566 million raised in the 2018 / 19 levy year (according to the accounts of the PPF for the year ending March 2019). The PPF is required under Section 177 of the Pensions Act 2004 to have at least 80% of the levy being risk-based.

The risk-based levy takes account of two factors in determining the levy payable by a specific scheme each year:

- the funding position of that scheme on the PPF basis at the beginning of the levy year and the short-term risk contained within its specific investment strategy (the PPF has introduced various measures to stabilise this element of the PPF levy calculation to assist schemes and sponsors with financial planning); and

- the probability of the scheme suffering the required sponsor insolvencies during the coming year to cause a PPF entry.

The discount available to centralised schemes is derived from the second of these two factors; the reduction in the probability of PPF entry over the coming year. For a centralised scheme PPF entry only arises when there are no participating employers remaining or, equivalently, it happens on the insolvency of the last remaining participating employer.

The calculation of the discount for a centralised scheme is based on assuming that the risk of each participating employer within the scheme is independent of the risk of any of the other sponsors becoming insolvent. The calculation (as set out by the PPF) makes a simplified allowance for the distribution of the liabilities across the various participating employers reflecting the fact that, in centralised schemes with a highly disparate distribution of the liabilities between employers, some employers can be more significant than others.

The calculated probability of a PPF entry is based on taking the weighted average of the probability of each of the participating employers becoming insolvent and applying a "concentration index" (Hf) calculated as follows:

Hf = $\sum_{i=1}^{n}(s_i \div T)^2$

Where:

- n is the number of the participating employers;

- s is the number of members allocated to each participating employer; and
- T is the total number of members in the scheme.

The formula is therefore attempting to allow for the potential for a highly disparate allocation of the liabilities in which case a lower discount will be provided by the PPF.

The discount payable is therefore a good proxy for the reduction in short term risk of experiencing a PPF entry event, almost certainly requiring a reduction in benefits, but provides limited longer-term information (being explicitly a one-year measure).

3.2. The Stoneport Pension Scheme one-year discount

The discount for any centralised scheme increases with the number of participating employers within that scheme. The amount of the discount, for any given number of identical participating employers, varies depending on how evenly the membership of the scheme splits between the identical participating employers.

The maximum discount arises when the participating employers have equal numbers of members for whom they are responsible and can be calculated using the PPF formula as follows:

Number of employers	**Discount to risk-based levy**	**Number of employers**	**Discount to risk-based levy**
1	None	30	96%
2	50%	50	98%
5	80%	100	99%
10	90%	250	99.6%

The above table shows the maximum discount that is available to the Stoneport Pension Scheme for a given number of sponsoring employers and assumes that each sponsoring employer is responsible for the exact same number of members and has the exact same Levy Band. In practice this will not be the case as the Stoneport Pension Scheme is likely to be available for all schemes with between 20 and 999 members with sponsoring employers in different Levy Bands.

The discount reflects the fact that, as the risk of default for each sponsoring employer is low (as demonstrated earlier) it is extremely unlikely that, with a large pool of sponsors, a PPF assessment could start for a centralised scheme over the next year.

The Stoneport Pension Scheme will not become a centralised scheme until there is sufficient covenant diversity within the pool of sponsoring employers. Prior to this point no discount will be available on the PPF levy as the Stoneport Pension Scheme will not be a centralised scheme but a defined benefit Master Trust with segregated sections.

If a centralised scheme had 50 equal employers, each with an insolvency probability equal to the average Levy Rate of 0.89%, the approach used by the PPF (i.e. providing a discount of 96%) would imply the chance of a PPF assessment arising over the next year would be below 2 in 10,000 (calculated as (1 – 98%) x 0.89%). If such a centralised scheme could be observed for 5,000 years, we would expect the insolvency of all 50 employers in one year (resulting in a PPF assessment) to have occurred only once in that 5,000 year period.

The theoretical risk of 50 completely independent sponsoring employers with an average risk of insolvency (using the average Levy Rate as a proxy) becoming insolvent over one year is actually considerably lower than this. In fact, 50 completely independent events with a probability of occurring of 0.89% per annum all happening in one year would be calculated as 0.89% ^50. The probability is so small, such an occurrence would have been unlikely ever to have arisen over the entire 14-billion-year history of the universe.

The discount provided by the PPF is therefore somewhat lower than the theoretical reduction in risk to the PPF achieved in a centralised scheme. That is to say the PPF requires payment of levies in excess of those theoretically required on the assumption of complete independence and thus profits (in the broadest sense) from a greater reduction in risk it is exposed to than the reduction in premiums it grants. This is no doubt to reflect a conservative approach to managing the liabilities of the PPF and to account for the fact that any theoretical model of this type has significant deficiencies.

3.3. Modelling the possible discount

We have considered above the maximum discount that is available from a pool of equal sponsoring employers assuming that the PPF discount is a reasonable proxy for the degree of short-term (one-year) Insolvency Risk that the centralised Stoneport Pension Scheme is exposed to. However, the actual sponsoring employers who join the Stoneport Pension Scheme cannot be predicted and the size of each scheme transferred is also unpredictable.

We have therefore sought, at this stage, to consider the range and variability of the discount for the Stoneport Pension Scheme on centralisation as it might arise based on our stated target market.

The target market is all those schemes segmented by the PPF as "Small" or "Micro" schemes. The scope and scale of these arrangements can be seen from the following data prepared by the PPF:

	Micro schemes (less than 100 members)	**Small schemes (100 to 999 members)**
Number of schemes	1,964	2,377
Number of members	85,000	837,000
Assets (£ billion)	£16.8 billion	£147.6 billion
Average assets per scheme	£8.6 million	£62.1 million
Members per scheme	43	352

In order to consider the potential variability in the discount we have undertaken a simple modelling exercise based on the earliest point at which the discount becomes relevant i.e. when centralisation becomes possible. The target size for centralisation is 100 sponsoring employers.

At this point there is the possibility for the greatest variation from the maximum available discount for that number of employees due to the methodology of the "concentration index".

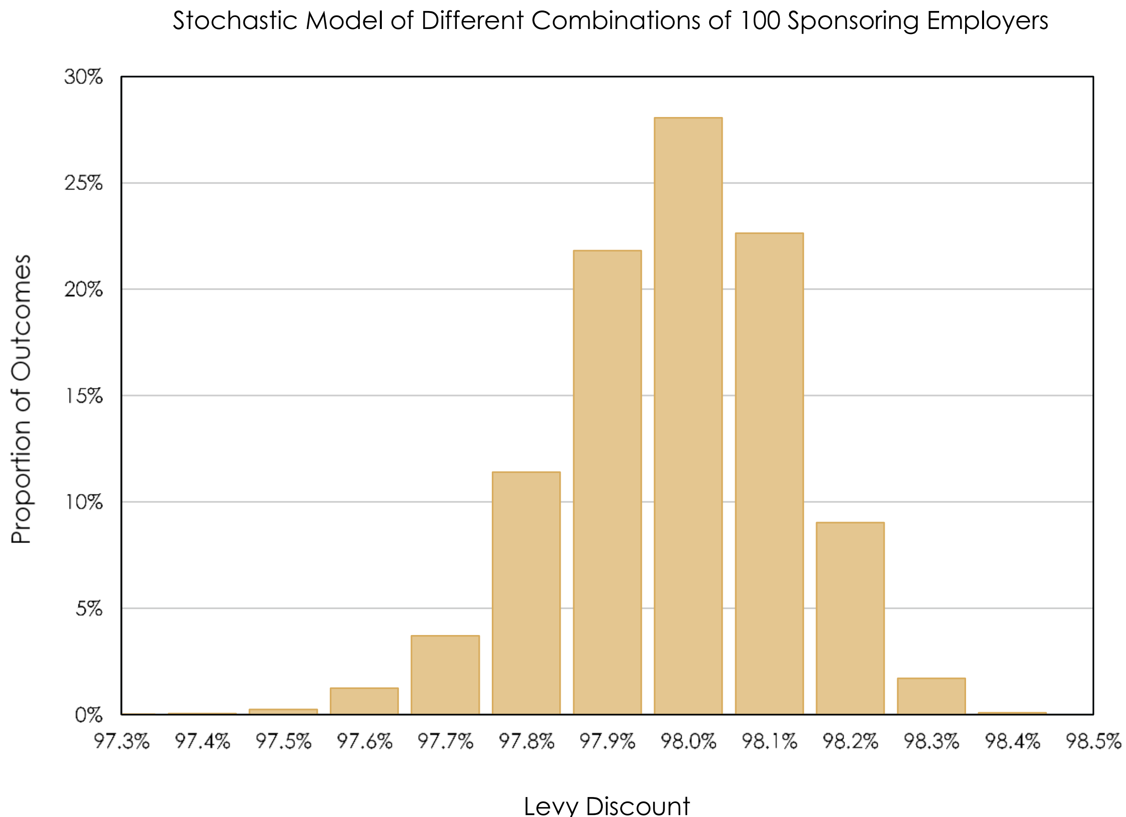
We modelled the discount available to the 100 sponsoring employers by stochastically creating different sets of characteristics as follows:

- There is a 50 percent chance that any one of the sponsoring employers will have a Micro scheme and a 50 percent chance that they will have a Small scheme;

- If they have a Small scheme, they will have a random number of members between 100 and 999 and if they have a Micro scheme, they will have a random number of members between 20 and 99. (The Micro scheme universe contains schemes from 2 to 99 members, but we do not expect the very smallest schemes to join the Stoneport Pension Scheme).

We repeat this process ten thousand times creating different groups of sponsoring employers with different mixes of varying size Small and Micro schemes. For each of these different randomly selected pools of 100 sponsoring employers we calculate the "concentration index" and therefore the available discount.

For 100 sponsoring employers the maximum discount available is 99% and the variability in that discount using our simple model can be seen in the results as follows:



The output from the simple stochastic model shows that whilst there is some variability in the discount due to the variation in the pool of sponsoring employers, it is not likely to lead to a significantly diminished discount. In particular:

- The maximum theoretical discount (from a pool of equal 100 sponsoring employers) of 99% compares well with the average (mean) discount in the model of 98.0%;
- The maximum discount from our model was 98.4% and the minimum discount was 97.3%; and
- The model suggests that there is a very high probability that the discount will be within the range of 97.6% - 98.3%.

The discount provided by the PPF therefore suggests that the benefits of the centralised structure of the Stoneport Pension Scheme in reducing short-term Insolvency Risk leading to PPF entry are not particularly sensitive to the composition of the group of sponsoring employers.

We can expand the model above to consider the likely discount applicable with a range of different sizes of pools of sponsoring employers. Even with only 50 sponsoring employers, the maximum discount is 98% and running our model for 50 sponsoring employers gives a range for the discount of between 94.0% and 97.0% with an average of 96.0%. This confirms the expectation that as the number of sponsoring employers increases the variation from the maximum available discount will be expected to fall.

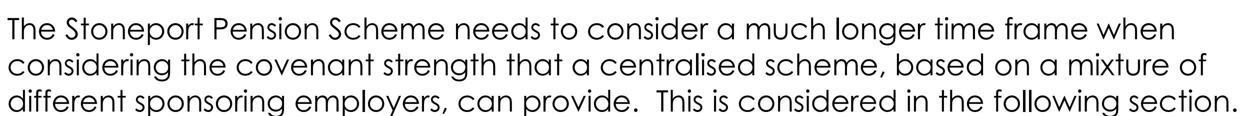
3.4. Summary

The discount available on the PPF levy can be considered as an independent third-party measure representing the reduction in Insolvency Risk from a centralised scheme as opposed to a segregated scheme.

The modelled discount is not particularly sensitive to the mix of sponsoring employers reflecting the fact that the short-term Insolvency Risk of the Stoneport Pension Scheme is driven more by the number of sponsoring employers rather than the underlying composition of the group of sponsoring employers as a whole.

This reflects the range of the size of schemes within the target market which, in effect, serves to limit the impact of any skewness in membership numbers.

Our modelling suggests that the discount to the risk-based levy that will be applied by the PPF is almost certain to be in excess of 95% once sufficient scale is achieved to centralise. However, the reduction in the PPF levy only reflects the expectation of the almost impossible scenario whereby all the sponsoring employers could become insolvent in one year.



The Stoneport Pension Scheme needs to consider a much longer time frame when considering the covenant strength that a centralised scheme, based on a mixture of different sponsoring employers, can provide. This is considered in the following section.

4. Longer term Insolvency Risk

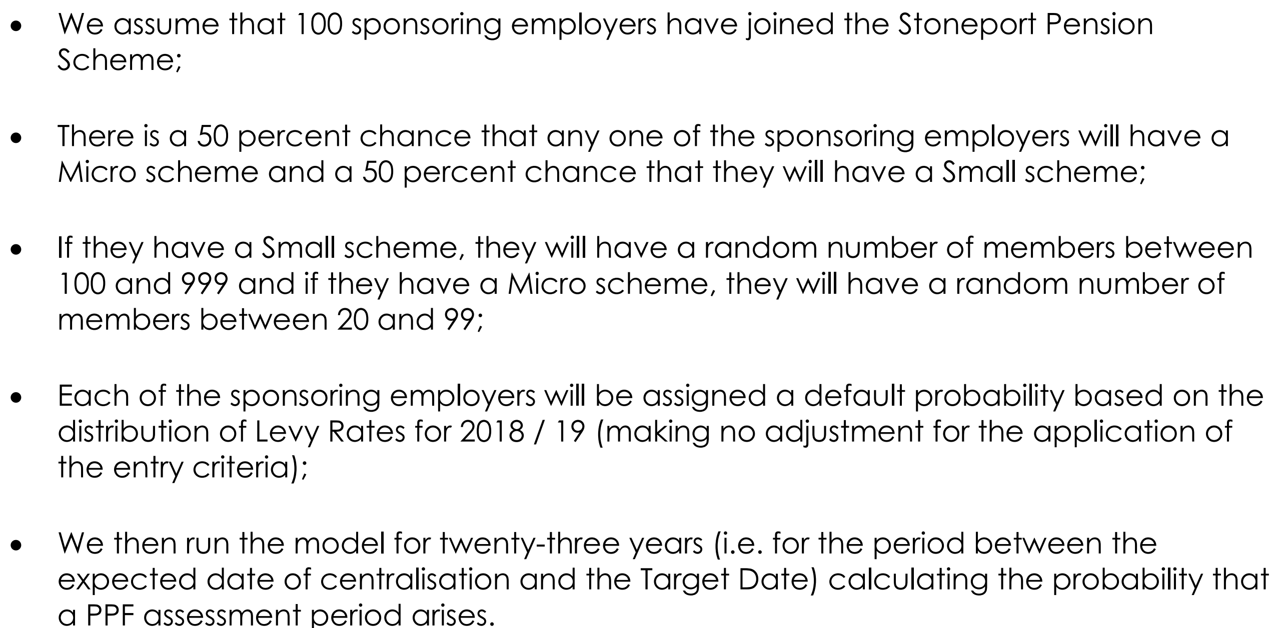
The analysis of the PPF levy discount in the previous section demonstrates that the risk of Stoneport Pension Scheme entering a PPF assessment period in the short term (considered by looking at the Insolvency Risk over a one-year period) is virtually eliminated, whatever the composition of the pool of sponsoring employers once it has become a centralised scheme.

However, the Stoneport Pension Scheme will be exposed to Insolvency Risk until a full buy-out of the liabilities is achievable i.e. during the period prior to the Target Date, which is expected to be 31 December 2045. As demonstrated earlier we can see that even small risks, if repeated over a number of years, can accumulate to a significant overall risk.

4.1. Modelling the long term

To assess the risk of a PPF assessment period arising in the future for the Stoneport Pension Scheme we have built a stochastic model to consider the probabilities allowing for the currently unknown mix of sponsoring employers that will join the Stoneport Pension Scheme in the future.

The model is an expansion of that used to consider the likely discount available on the PPF levy in the face of an uncertain group of sponsoring employers as detailed earlier. For this more advanced model:



- We assume that 100 sponsoring employers have joined the Stoneport Pension Scheme;
- There is a 50 percent chance that any one of the sponsoring employers will have a Micro scheme and a 50 percent chance that they will have a Small scheme;
- If they have a Small scheme, they will have a random number of members between 100 and 999 and if they have a Micro scheme, they will have a random number of members between 20 and 99;
- Each of the sponsoring employers will be assigned a default probability based on the distribution of Levy Rates for 2018 / 19 (making no adjustment for the application of the entry criteria);
- We then run the model for twenty-three years (i.e. for the period between the expected date of centralisation and the Target Date) calculating the probability that a PPF assessment period arises.

We ran this model a total of 100,000 times and we found that there are no events arising where all the sponsoring employers became insolvent and thus a PPF assessment period would have arisen.

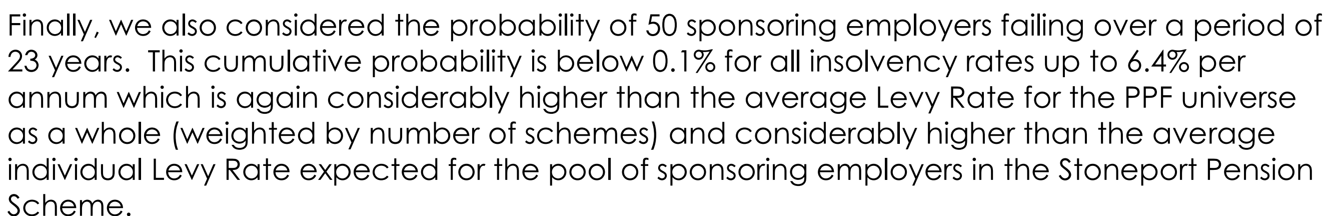
We then re-ran the model, reducing the number of sponsoring employers to 75 and find once again that there were no events resulting in a PPF assessment period in the output of over 100,000 different stochastic scenarios.

We note that the model assumes that the pool of sponsoring employers in the Stoneport Pension Scheme is exactly in line with the defined benefit universe making no allowance for the entry criteria which will prevent weaker employers from joining the Stoneport Pension Scheme.

Therefore, we have considered simplistically a fixed rate of insolvency for a group of 100 sponsoring employers and considering the probability of all 100 sponsoring employers failing over a period of 23 years (i.e. between centralisation on 31 December 2022 and the Target Date expected to be 31 December 2045). In order to get a probability of all the sponsoring employers going insolvent over a 23-year period in excess of 1 in 1,000 would require the average annual insolvency rate of the sponsoring employers to be in excess of 11% per annum. We note that we expect that the average annual insolvency rate of the sponsoring employers who can join Stoneport will be an order of magnitude lower than this level at less than 1% per annum.

This is considerably higher than the average Levy Rate for the PPF universe as a whole (weighted by number of schemes) and considerably higher than the average Insolvency Risk expected for the pool of sponsoring employers in the Stoneport Pension Scheme. In practice, no sponsoring employers with an expected insolvency rate in excess of 2% per annum would ever be allowed to join the Stoneport Pension Scheme.

We also extended the period under consideration to 40 years, rather than 23 years, for a group of 100 sponsoring employers. The probability of PPF assessment occurring within a 40-year period is below 0.1% for all insolvency rates up to 6.4% per annum.



Finally, we also considered the probability of 50 sponsoring employers failing over a period of 23 years. This cumulative probability is below 0.1% for all insolvency rates up to 6.4% per annum which is again considerably higher than the average Levy Rate for the PPF universe as a whole (weighted by number of schemes) and considerably higher than the average individual Levy Rate expected for the pool of sponsoring employers in the Stoneport Pension Scheme.

4.2. Summary

The PPF discount only reflects a reduction in Insolvency Risk over the next year whereas the centralised Stoneport Pension Scheme will face this risk over many years.

Subject to the application of the proposed entry criteria leading to a reasonably strong and diversified pool of sponsoring employers, our modelling indicates there is no observable risk of the Stoneport Pension Scheme seeing all of its sponsoring employers independently become insolvent, leading to a PPF assessment between centralising and the Target Date (which is expected to be a period of 23 years).

Therefore, we expect the centralisation of the Stoneport Pension Scheme to almost entirely eliminate the Insolvency Risk to the Stoneport Pension Scheme.

5. Affordability Risk

We have demonstrated that the Insolvency Risk faced by the Stoneport Pension Scheme is practically eliminated and that Affordability Risk for single employer arrangements is considerably less significant than Insolvency Risk. This indicates that the Stoneport Pension Scheme will have a very strong covenant following centralisation.

However, the nature of Affordability Risk changes in a centralised scheme compared to a single employer scheme due to the support provided to insolvent sponsoring employers' liabilities by the remaining solvent sponsoring employers. We therefore need to consider whether Affordability Risk increases following centralisation potentially offsetting the significant reduction in Insolvency Risk.

There are two forms of Affordability Risk in a centralised scheme: Traditional Affordability Risk and Additional Affordability Risk. These are considered in turn below.

5.1. Traditional Affordability Risk

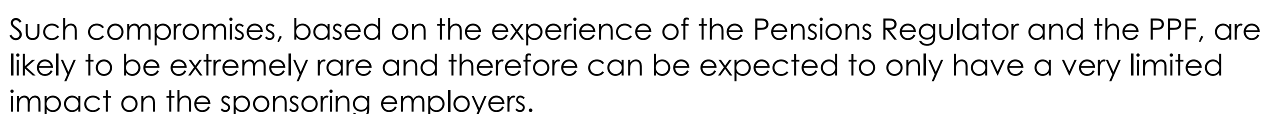
In a single employer scheme, Affordability Risk crystallises either when the sponsoring employer shrinks relative to its pension liabilities or adverse deviation arises in respect of the pension liabilities, leaving the sponsoring employer unable to provide the necessary support to its scheme. In such scenarios a compromise is required with a RAA used to transfer the liabilities to the PPF. As demonstrated earlier, such compromises are rare.

Provisions in the Trust Deed & Rules for the Stoneport Pension Scheme permit a similar mechanism to be operated for sponsoring employers unable to meet their obligations in the Stoneport Pension Scheme. If one of the sponsoring employers has no realistic prospect of making good its liabilities then the Trustees and their advisors may negotiate a compromise with that the sponsoring employer. The Trustees will act to protect the remaining sponsoring employers from the "dumping" of liabilities in the same way that the PPF and the Pensions Regulator acts to protect levy payers when negotiating an RAA.

Any such compromise will mean that the remaining sponsoring employers have to support the departing sponsoring employer's liabilities. However, it may be the case that the assets received in the compromise from the departing sponsoring employer may be such that the departing sponsoring employer's liabilities are fully funded on a Technical Provisions measure or above, with sufficient margin for future adverse deviation on these liabilities without additional contribution requirements being passed onto the remaining sponsoring employers.

This is more likely to be the case when the Affordability Risk crystallises further along the timeline to the Target Date as the departing sponsoring employers become better funded on a Technical Provisions basis through the payment of deficit recovery contributions and as the liabilities are run off over time.

Such compromises, based on the experience of the Pensions Regulator and the PPF, are likely to be extremely rare and therefore can be expected to only have a very limited impact on the sponsoring employers.



Further due to the entry and centralisation criteria applied to the sponsoring employers (the Covenant Test and the Combined Covenant Test respectively, which are described in Appendix A) and in particular the protections this provides in the short term when covenant visibility is the greatest (thereby providing a higher level of protection to the remaining sponsoring employers when their risk exposure is highest), we expect that any such impact can be absorbed within the centralised employer covenant.

Therefore, the Stoneport Pension Scheme is much better placed for dealing with these rare events than a single employer scheme where such scenarios lead to PPF entry and benefit reductions.

It has already been noted that Affordability Risk is less significant than Insolvency Risk as demonstrated by the very small number of RAAs granted between 2009 and 2017. The centralisation of the Stoneport Pension Scheme will diminish this traditional form of Affordability Risk further.

5.2. Additional Affordability Risk

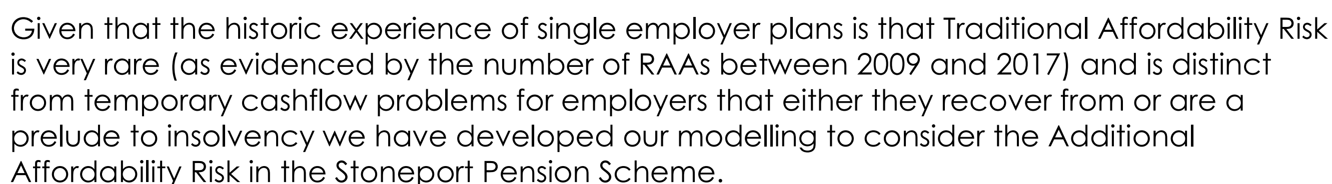
A different form of Affordability Risk arises in relation to centralised schemes that is not present in a single employer scheme due to the nature of the system, whereby the remaining solvent employers support the liabilities of employers who become insolvent. Historically, in some centralised schemes exits by other sponsoring employers have led to the burden on the remaining sponsoring employers spiralling out of control.

The majority of these issues caused by voluntary exits are precluded by the introduction of Section 75 of the Pensions Act 1995, its subsequent extension in 2003 to cover the full share of the buy-out liabilities and the expansion of this regime to cover exits from multi-employer schemes (such as centralised schemes) in 2005.

This issue of potentially spiralling liabilities caused by insolvencies amongst the sponsoring employers has been addressed further by the application of the entry and centralisation criteria (the Covenant Test and the Combined Covenant Test respectively, which are described in the Appendices).

Whilst the modelling outlined earlier shows the probability of all the sponsoring employers becoming insolvent over the lifetime of the Stoneport Pension Scheme is practically zero, we also need to consider the possibility that a significant proportion of the sponsoring employers become insolvent such that the liabilities allocated to the remaining sponsoring employers become unsupportable and Affordability Risk arises that might require a compromise across the whole of the Stoneport Pension Scheme. We refer to this as "Additional Affordability Risk".

Given that the historic experience of single employer plans is that Traditional Affordability Risk is very rare (as evidenced by the number of RAAs between 2009 and 2017) and is distinct from temporary cashflow problems for employers that either they recover from or are a prelude to insolvency we have developed our modelling to consider the Additional Affordability Risk in the Stoneport Pension Scheme.



That is, we consider the probability that insolvencies within the pool of sponsoring employers following centralisation lead to an escalation in the liabilities of each remaining sponsoring employer which are beyond the level that they could be expected to support having satisfied the entry criteria for joining the Stoneport Pension Scheme and the centralisation criteria having been subsequently met. If this Additional Affordability Risk materialises for all of the remaining sponsoring employers a compromise would become necessary in respect of the whole Stoneport Pension Scheme.

5.3. Expanding the model

Taking the model discussed earlier we have calculated, instead of the risk of a PPF assessment period occurring, the range of impacts on the sponsoring employers from insolvency events occurring which increase the overall amount of liabilities that each of the sponsoring employers are supporting.

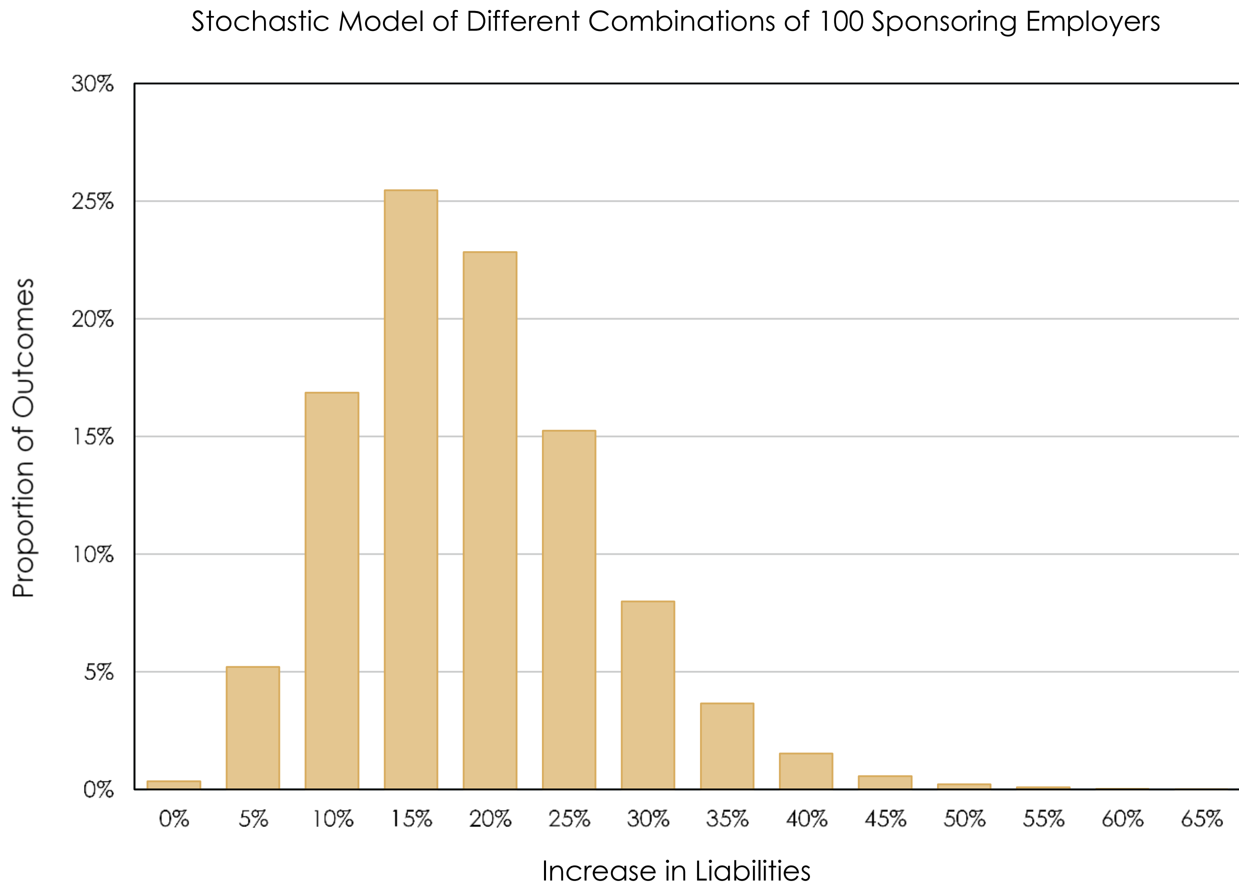
In each of the runs from the model we take the opening random membership number (based on the randomly generated split between Small and Micro schemes and the randomly generated number of members for each Small or Micro scheme outlined earlier) and compare this to the number of members allocated to those sponsoring employers remaining solvent at the end of the projection period.

Using our model of 100 sponsoring employers, the average number of members across all runs was around 30,000 members. If, by way of an example, only 20,000 members were allocated to the remaining solvent sponsoring employers at the end of the projection (that is sponsoring employers originally responsible for 10,000 members in total became insolvent during the period), then each remaining solvent sponsoring employer would be responsible for 50% more liabilities than they entered the Stoneport Pension Scheme with (30,000 / 20,000 – 1 = 50%).

The purpose of the model is to simulate the possible range over which liabilities could grow due to this impact and hence to assess the probability of a spiral of the type contemplated above arising in practice. By basing our analysis on the number of members we are implicitly assuming that the average liability in respect of the members of the remaining solvent sponsoring employers is equal to the average liability in respect of the members of the insolvent sponsoring employers. This is consistent with the approach used by the PPF to set the risk-based levy and hence the modelling of Insolvency Risk in sections 3 and 4.

Additional modelling will be undertaken to ensure that the centralisation criteria are satisfied (in the form of the Combined Covenant Test) at which point detail on the actual pool of sponsoring employers, their members, assets and liabilities will be known and will be incorporated into our analysis and advice that will be prepared for the Trustees when deciding whether to proceed with centralisation. However, at the current time we consider the above approximations to be appropriate to demonstrate the extent of any potential Additional Affordability Risk.

The results of the model are illustrated in the graph below, which shows the distribution of the increase in liabilities from the model at the end of a 23-year projection, based on 100,000 simulations.



The graph shows that in nearly all circumstances some insolvencies are to be expected over the 23-year period between centralisation and the Target Date. Sponsoring employers entering the system should expect this to occur. Our model showed that the increase in liabilities transferred to the remaining sponsoring employers will be less than 25% in 70.7% of scenarios at the Target Date (expected to be 23 years from centralisation).

The entry criteria applied to each sponsoring employer (via the Covenant Test requiring each sponsoring employer to be able to support an immediate increase of 50% in the assets and the liabilities of its scheme) confirms that an immediate increase in the assets and liabilities of the sponsoring employer of 50% would be supportable. Our model showed that the increase in liabilities transferred to the remaining sponsoring employers will be more than 50% in less than 0.4% of scenarios at the Target Date.

This means that the Additional Affordability Risk (the risk that the additional liabilities of each sponsoring employer become unsupportable) is less than 1 in 250.

As set out in Section 4 covenant risk because more significant over longer time horizons. If the Target Date were to be delayed by 2 years due to adverse experience (either scheme or sponsor experience) then our model shows that the increase in liabilities transferred to the remaining sponsoring employers will be more than 50% less than 0.7% of the time, which indicates that the Additional Affordability Risk is less than 1 in 140.

In undertaking this analysis, we have used a number of simplifying assumptions which result in additional margins for prudence being incorporated. In particular:

- We have made no allowance in our modelling for the application of the entry criteria which means that those sponsoring employers falling in Levy Bands 8, 9 and 10 are unlikely to be eligible to join the Stoneport Pension Scheme and therefore the average Levy Rate for the sponsoring employers is expected to be below that for the full distribution of Levy Rates for 2018/2019 for the DB universe as a whole (at 0.58% p.a. rather than 0.89% p.a.). This impact is likely to be somewhat offset by the slight increase in insolvency rates expected in the longer term as demonstrated in Section 2. However, we have carried out sensitivity analysis of our model to the underlying distribution of insolvency probabilities assumed (as shown in Appendix C) and are satisfied that the model is relatively insensitive to these points.

- The liabilities from the insolvent sponsoring employers will already be funded to a greater or lesser degree and it may be the case that at the point of insolvency no additional support in the form of cash contributions are expected to be required to meet the buy-out target. This is expected to be the case when any agreed recovery plan has ended. We expect that the average recovery plan length for each sponsoring employer will be below 8 years following centralisation. Our modelling shows that the increase in liabilities transferred to the remaining sponsoring employers 8 years after centralisation will be more than 25% less than 0.1% of the time, and therefore will be comfortably supportable by the remaining sponsoring employers (due to the application of the entry criteria).

- We expect some recoveries to be made against the Section 75 debt to minimise any allocation of deficit to solvent sponsoring employers. This modelling makes no allowance for any such recoveries. Whilst these recoveries are unlikely to be significant we note that the PPF assumes a recovery rate of 5% on the Section 75 debt falling on insolvent employers in its July 2018 Long Term Funding Strategy Update.

- The liabilities will run-off to a significant degree during the period between centralisation and the Target Date. As a result, the Stoneport Pension Scheme will be much reduced in scale and likely to be much better funded due to a combination of deficit contributions and investment returns by the Target Date. Therefore, any increase in the assets and liabilities of the sponsoring employer in the later years will likely be diminished when compared to those immediately following centralisation. Our modelling makes no allowance for the liabilities being run-off over time.

- The sponsoring employers and the Stoneport Pension Scheme will have benefited from 23 years of more efficient operation such that any additional liabilities that need to be supported are offset by these positive effects.

Allowing for these factors would demonstrate that the issue of Additional Affordability Risk is even lower than 0.4% shown by our modelling and is easily manageable within the Stoneport Pension Scheme due to the application of the entry criteria and centralisation criteria, including in the event that the Target Date is delayed by two years due to adverse scheme or sponsor experience.

A similar analysis has been undertaken for a centralised structure with 75 and 125 sponsoring employers. The results are shown in the Appendices. In both cases the model shows that the increase in liabilities transferred to the remaining sponsoring employers will be more than 50% in less than 1% of scenarios at the Target Date. This shows that even with a smaller pool of sponsoring employers the Additional Affordability Risk will be easily manageable within the Stoneport Pension Scheme structure.

5.4. Summary

There are two forms of Affordability Risk in a centralised scheme: the traditional form of Affordability Risk and an additional form whereby the insolvencies of the sponsoring employers result in the Stoneport Pension Scheme's liabilities becoming unsupportable by the remaining sponsoring employers.

We expanded our model to consider this additional form of Affordability Risk over the likely lifetime of the centralised Stoneport Pension Scheme by considering the amount of additional liabilities that each sponsoring employer could be required to support from insolvencies.

However, by applying the Stoneport Pension Scheme's entry criteria to confirm that an immediate increase in the assets and liabilities of the sponsoring employer of 50% our modelling shows that we can be confident that this new form of Affordability Risk will not be material in the centralised Stoneport Pension Scheme.

Additional modelling will be undertaken to ensure that the centralisation criteria are satisfied (in the form of the Combined Covenant Test) at which point detail on the actual pool of sponsoring employers, their members, assets and liabilities will be known and will be incorporated into our analysis and advice that will be prepared for the Trustees when deciding whether to proceed with centralisation. However, at the current time we consider the above approximations to be appropriate to demonstrate the extent of any potential Additional Affordability Risk.

6. Conclusion

It is intended that the Stoneport Pension Scheme will become a centralised scheme, which will operate on a non-sectionalised basis, bringing the benefits of consolidation to small schemes.

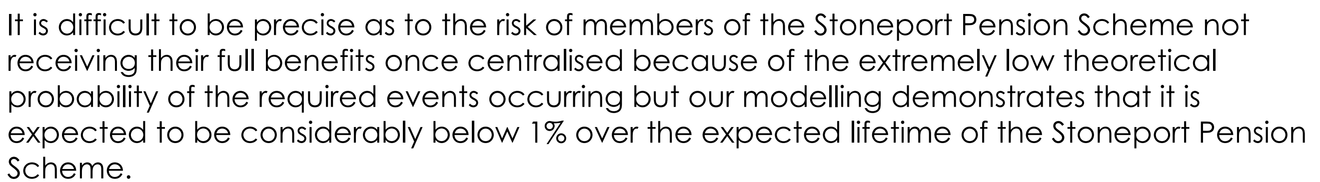
Until sufficient numbers of sponsoring employers join and centralisation is achieved, the employer covenant supporting the liabilities of the schemes that transfer to the Stoneport Pension Scheme will remain broadly unchanged except for the modest impact of a single governance model.

Once sufficient scale is reached and the Stoneport Pension Scheme becomes a centralised scheme, the covenant will be substantially enhanced. In particular:

- Insolvency Risk will be almost entirely eliminated; and

- Traditional Affordability Risk will be reduced and the Additional Affordability Risk arising from the potential insolvency of the sponsoring employers will not be significant due to the application of the entry criteria and the centralisation criteria (via the Covenant Test and the Combined Covenant Test).

As a result, the probability of the members of the schemes that transfer to the Stoneport Pension Scheme failing to receive their benefits in full will be significantly reduced.



It is difficult to be precise as to the risk of members of the Stoneport Pension Scheme not receiving their full benefits once centralised because of the extremely low theoretical probability of the required events occurring but our modelling demonstrates that it is expected to be considerably below 1% over the expected lifetime of the Stoneport Pension Scheme.

Appendix A: The Covenant Tests

The Stoneport Pension Scheme has strict entry criteria in the form of the Covenant Test. The Covenant Test has been designed to facilitate the creation of a sufficiently strong and diverse pool of sponsoring employers to allow covenant risks to be pooled effectively whilst protecting the interests of all sponsoring employers and ensuring fairness between those who join.

The Covenant Test will be performed as a condition of entry and again for each sponsoring employer when the Stoneport Pension Scheme becomes a centralised scheme. Any sponsoring employer failing the Covenant Test at the time of centralisation will be excluded from centralisation, remaining in their own fully segregated section.

For centralisation to occur the Trustees and the sponsoring employers must agree that the Combined Covenant Test is satisfied. The sponsoring employers are required to vote on centralisation and may veto it if they consider that the covenant pool is not sufficiently strong and diverse.

The Covenant Test is defined as follows in the Stoneport Pension Scheme's Rules:

"Covenant Test" means an assessment as to whether the Employer is of sufficient size and financial strength such that an immediate increase of 50% in the assets and the liabilities (as measured on a range of underlying assumptions which the Trustees deem appropriate):

(a) in its Section (or Sections, if more than one) where the Covenant Test is applied pursuant to Rule 11.2; or

(b) that are intended to be transferred to the Scheme at the Participation Date where the Covenant Test is applied pursuant to Rule 21(a)

would not result in a short term risk of the Employer being unable to support such increased liabilities and manage the risks relating to those liabilities, taking into account such factors as the Trustees shall decide, including the Employer's proposed Investment Allocation through time up to the Target Date and the extent of any potential recovery of the Section 75 Debt in the event of the immediate insolvency of the Employer."

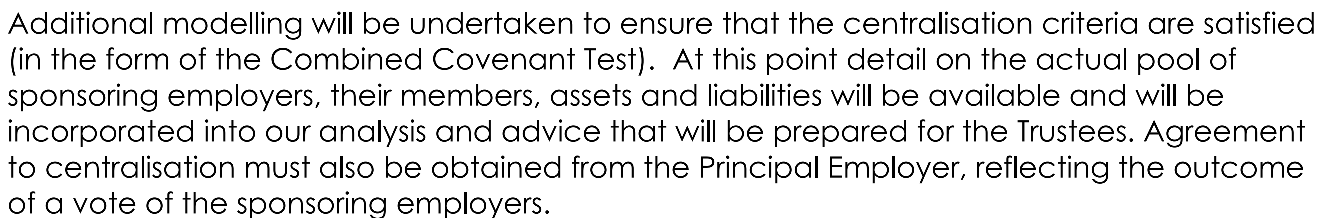
The Covenant Test has been designed to ensure that each sponsoring employer is of sufficient strength that it is well placed to support its own liabilities as well as cope with any adverse deviation that could be expected to arise under the centralised Stoneport Pension Scheme structure, addressing both Insolvency Risk and Affordability Risk, including Additional Affordability Risk post centralisation.

The Combined Covenant Test is defined as follows in the Stoneport Pension Scheme's Rules:

"Combined Covenant Test" means an assessment as to whether the aggregate Employer Covenant of the Employers which meet the Covenant Test under Rule 11.2 is sufficiently strong and diversified to mitigate, to a manageable extent, the impact on the Main Section and on the other Employers, of the risk of Employer Insolvency Events, taking account of any Covenant Insurance which will be in place on such date."

The Combined Covenant Test has been designed to ensure that centralisation only goes ahead when the pool of sponsoring employer is sufficiently strong and diverse such that the Insolvency Risk of the sponsoring employers and the impact that this would have on the remaining, solvent sponsoring employers is manageable, as agreed by both the Trustees and the Principal Employer.

The modelling outlined in this paper summarises some of the modelling undertaken when designing the Covenant Test and the Combined Covenant Test and demonstrates the effectiveness of the protections they provide.



Additional modelling will be undertaken to ensure that the centralisation criteria are satisfied (in the form of the Combined Covenant Test). At this point detail on the actual pool of sponsoring employers, their members, assets and liabilities will be available and will be incorporated into our analysis and advice that will be prepared for the Trustees. Agreement to centralisation must also be obtained from the Principal Employer, reflecting the outcome of a vote of the sponsoring employers.

Appendix B: The Pensions Regulator's Covenant Gradings

The Pensions Regulator categorises the strength of a scheme covenant into one of four different grades (in its Defined benefit funding regulatory and enforcement policy) as set out in the following table alongside the proportion of all defined benefit pension schemes in deficit on a Technical Provisions basis in each covenant category based on the latest data published by the Pension Regulator (Scheme funding analysis 2019):

Covenant Grade ("CG")	Description from the Pensions Regulator	Proportion of Schemes
CG1 Strong	Very strong trading, cash generation and asset position relative to the size of the scheme and the scheme's deficits. The employer has a strong market presence (or is a market leader) with good growth prospects for the employer and the market. The scheme has good access to trading and value if the employer is part of a wider group. Overall low risk of the employer not being able to support the scheme to the extent required in the short/medium term.	11%
CG2 Tending to Strong	Good trading, cash generation and asset position relative to the size of the scheme and deficits. Operates in a market with a reasonably positive outlook and the employer has a stable market share. Outlook is generally positive but medium-term risk of employer not being able to support the scheme and manage its risks.	47%
CG3 Tending to Weak	Concerns over employer strength relative to the size of the scheme and deficits and/or signs of significant decline, weak profitability or balance sheet concerns and/or high vulnerability to the economic cycle. No immediate concerns over insolvency but potential risk of decline.	28%
CG4 Weak	Employer is weak, to the degree that there are concerns over potential insolvency, or where the scheme is so large that, without fundamental change to the strength of the employer, it is unlikely ever to be in a position to adequately support the scheme.	14%

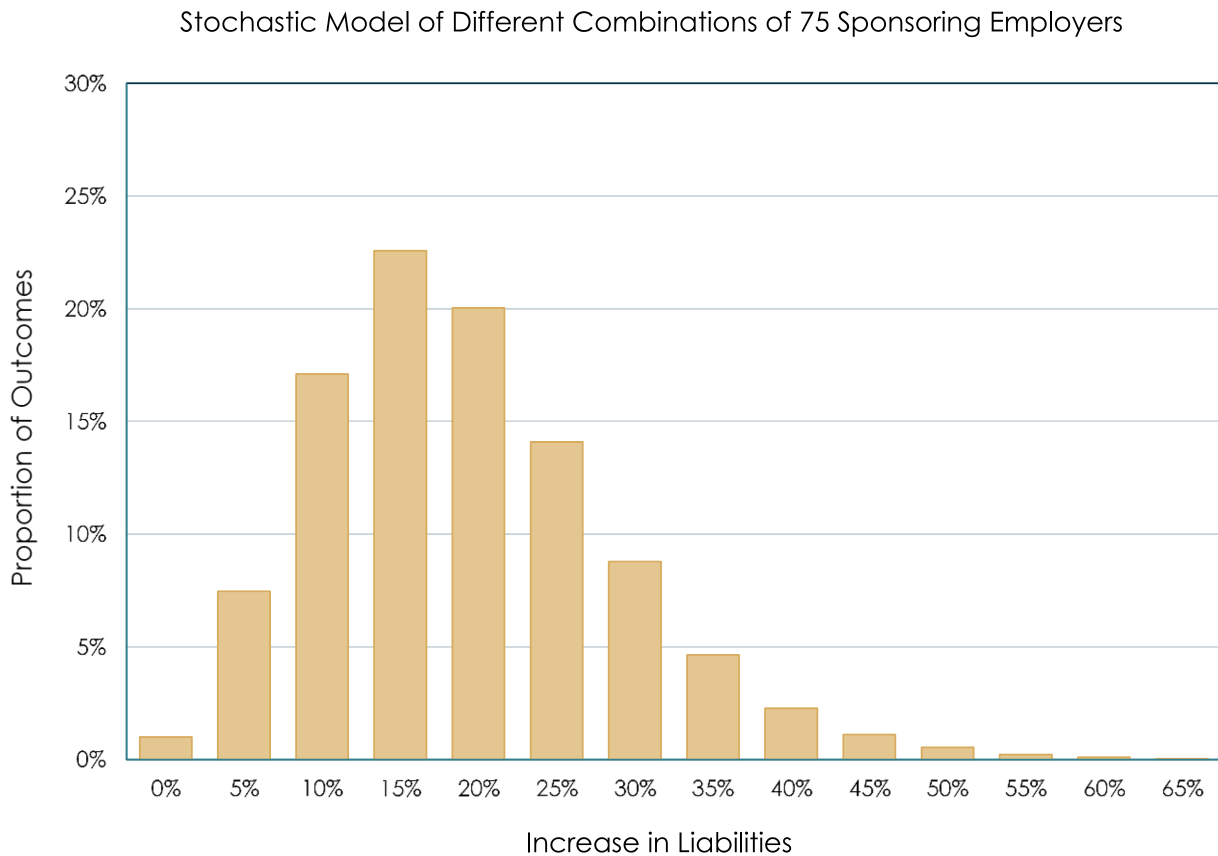
Appendix C: Affordability Risk – Further Modelling

This Appendix contains the results of some of the additional modelling completed on Affordability Risk for the Stoneport Pension Scheme as discussed in Section 6.

The Stoneport Pension Scheme will not become a centralised scheme until sufficient sponsoring employers have joined to make it practicable for the sponsoring employers to cross guarantee each other's liabilities. The target size is 100 sponsoring employers.

However, we have repeated the model from Section 6 with a lower number of sponsoring employers (75) to consider the implications for the Additional Affordability Risk.

The results of our analysis at the Target Date are shown in the graph below:



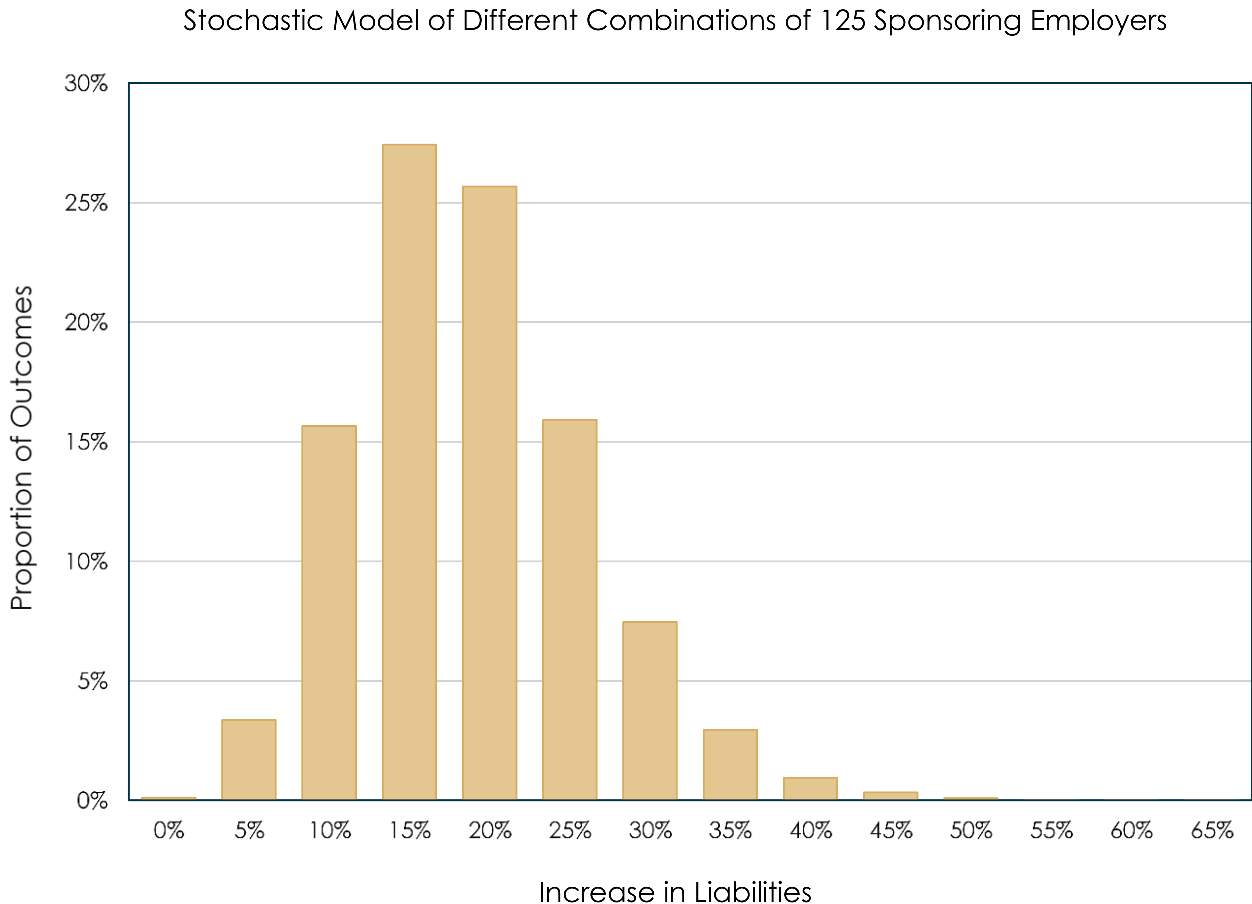
Unsurprisingly, with a smaller group of sponsoring employers, the range of possible and credible outcomes is somewhat wider. In particular:

- In 68.2% of scenarios the increase is less than 25%; and
- In 0.9% of scenarios the increase is more than 50%.

In broad terms however the fundamental picture is unchanged at these lower numbers of sponsoring employers.

We have also repeated the model from Section 6 with a higher number of sponsoring employers (125) to consider the implications for the Additional Affordability Risk.

The results of our analysis at the Target Date are shown in the graph below:



Unsurprisingly, with a larger group of sponsoring employers, the range of possible and credible outcomes is somewhat narrower. In particular:

- In 72.2% of scenarios the increase is less than 25%; and
- In 0.1% of scenarios the increase is more than 50%;

In broad terms however the fundamental picture is unchanged at these higher numbers of sponsoring employers.

We have also repeated the model from Section 6 with allowance for the application of the entry criteria which means that those sponsoring employers falling in Lev Bands 8,9 and 10 are unlikely to be eligible to join the Stoneport Pension Scheme and therefore the average Levy Rate of the sponsoring employers is expected to be below that for the full distribution of Levy Rates for 2018/2019 for the DB universe as a whole (at 0.58% p.a. rather than 0.89% p.a.).

The results of our analysis at the Target Date are shown in the following graph:

Unsurprisingly, with a group of sponsoring employers with a lower average Levy Rate, the range of possible and credible outcomes is somewhat narrower. In particular:

- In 71.1% of scenarios the increase is less than 25%; and
- In 0.3% of scenarios the increase is more than 50%.

In broad terms however the fundamental picture is unchanged at these assumed lower Levy Rates for sponsoring employers.