

The Consolidator Conundrum

As defined benefit (DB) pension schemes mature and become better funded, they are increasingly considering various different end-game approaches.



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In previous papers, we have explored new developments in ways of thinking about pension scheme risk¹ in end-game and on the incorporation of sponsor covenant risk².

Consolidators introduce another dimension to end-game pension scheme management. Despite some regulatory uncertainty, there is a possibility that many trustees will find themselves facing the following question: **When might a consolidator be right for my scheme?**

Three questions for trustee boards

We propose three questions a trustee board should ask when considering a consolidator; these correspond to the three pillars of our decision-making framework. The first two relate to the potential improvement in support and likelihood of receiving benefits. The third seeks to understand the future sustainability of the consolidators business.

1. When would moving to the consolidator improve the covenant? (Pillar I)
2. When would the consolidator improve the range of outcomes for members? (Pillar II)
3. What underlying investment strategy is required for the consolidator to be sustainable? (Pillar III)

Our analysis uses stochastic projections and compares consolidator models that take varying degrees of risk with their investment strategy.

To answer the first question, we calculate the value of the support given up versus that received.

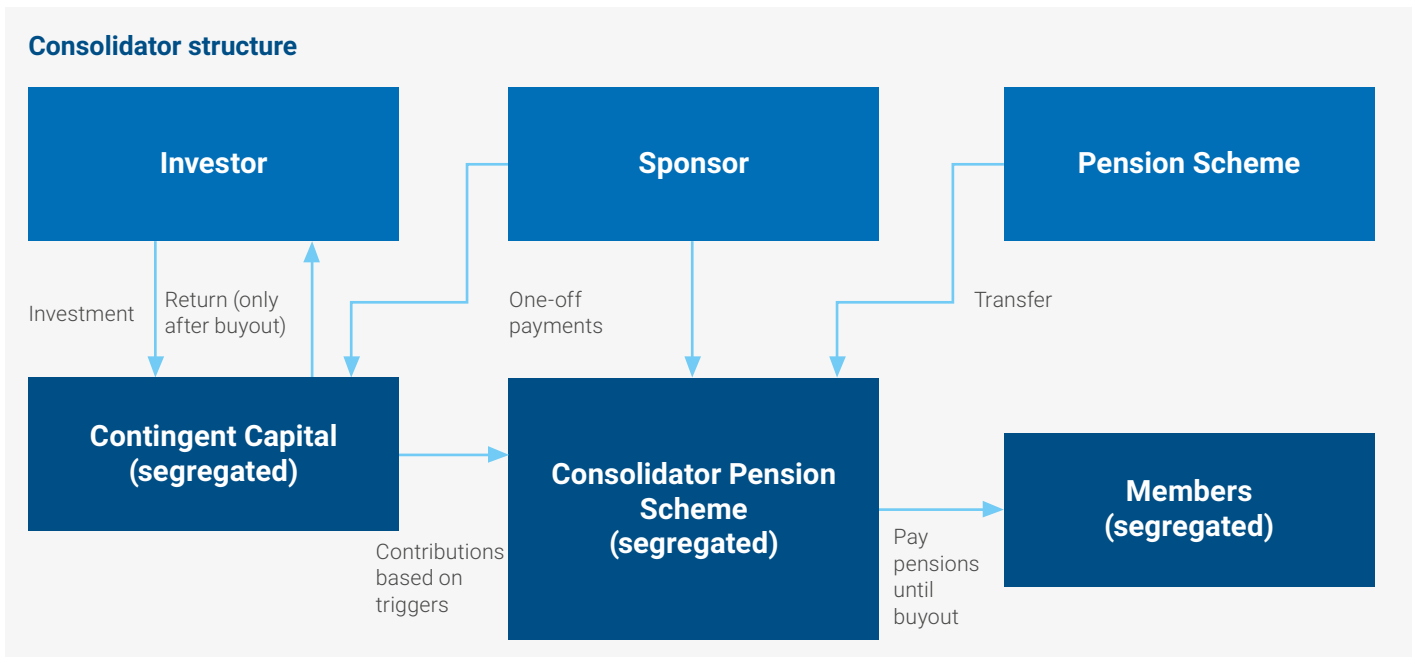
To answer the second question, we look at the chance of paying all pensions.

Our third question highlights the need for trustees to understand how consolidators will produce shareholder profit, whilst simultaneously increasing the security of members' benefits. This is potentially important for trustees and regulators to understand so that they can either feel comfortable that incentives are aligned, or ensure there are strong enough rules in place to prevent misaligned incentives from compromising benefit security.

Our analysis is based on the assumed consolidator structure shown on the next page. In practice there is also a range of broader considerations and assumptions that could impact the appeal of consolidation to both schemes and commercial investors beyond the scope of this analysis.

1. http://www.lgim.com/files/_document-library/knowledge/thought-leadership-content/foresight/lgim-foresight-mar-2016.pdf

2. <https://www.lgim.com/es/en/insights/our-thinking/client-solutions/covenant-risk-modelling-managing-and-mitigating-a-key-risk.html>



Overview of our decision-making framework

Pillar I: Valuing the covenant from a scheme or consolidator

Quantifying the value for sponsor covenant or a consolidator structure is no easy matter, but our approach allows us to assign a value to different support structures. This is assessed using a projection model as described in the appendix. Using this model, we simulate the position of the scheme under many scenarios³. As we shall see, the value of support from a consolidator changes with the riskiness of the investment strategy adopted⁴.

Pillar II: Assessing the chance of paying all pensions

The chance of paying all pensions is one measure of particular interest – the DWP suggested that commercial consolidators might need to hold financial resources to have a 99% probability of paying or securing full benefits over the lifetime of the scheme.

For ease of comparison, we focus on the 99% threshold although, in general, there are other (more refined) measures that we prefer to use⁵. Unlike our other pillars I and III, the results depend on making appropriate assumptions for expected returns which are more subjective in nature⁶.

Pillar III: Assessing future sustainability

Our final pillar looks at future sustainability of the consolidator by considering the perspective of the investor backing the venture. This can be achieved by viewing the transaction as the scheme selling a call option on its funding position to a commercial investor, i.e. the commercial investor makes money if the funding position exceeds 100%.

3. Under a risk-neutral probability measure.

4. In terms of funding level volatility

5. We like measures that also take into account the degree of shortfall should it occur such as “EPBM” described [here](#)

6. For a discussion of the uncertainty involved in expected returns see [here](#)

The key question is how the cost (the price of this option) compares with the long term value of this consolidated account (the value of the option).

Case study: comparing a bridge-to-buyout consolidator with self sufficiency

We compare traditional self-sufficiency against a consolidator that acts as a sectionalised bridge to buyout and assume:

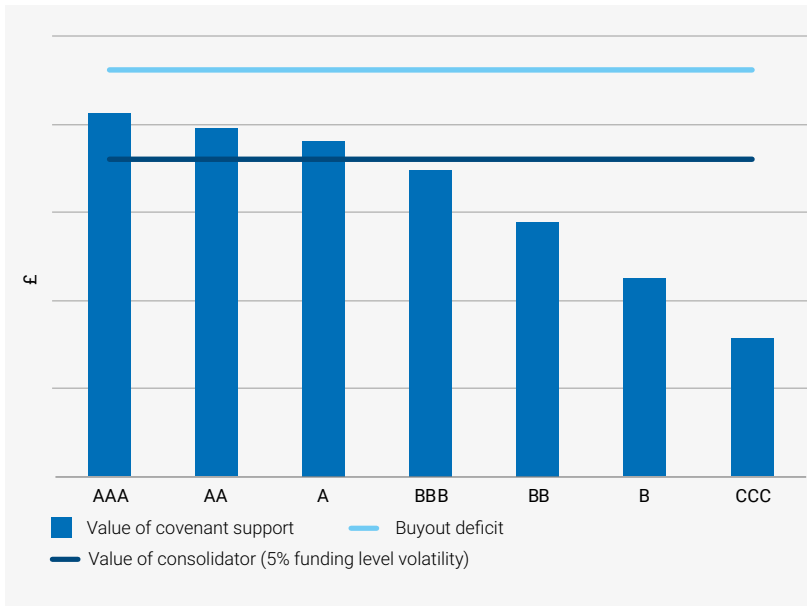
- A. Under consolidation, the consolidator receives scheme assets equivalent to 80% of buyout liabilities and an additional 10% of buyout liabilities in the form of contingent capital from the sponsor. The backing investors contribute additional contingent capital of around 10% which means that the ‘day one’ total capital (scheme assets plus all contingent capital) is 100% of buyout liabilities.
- B. For self-sufficiency, in order to make a fair comparison with consolidation, the scheme is initially 90% funded on a buyout basis, i.e. the sponsor contributes as much into the scheme as they would have done had the scheme entered consolidation.

Please see the Appendix for further assumptions.

Pillar I:

The following chart shows the value of the sponsor covenant for different initial credit ratings of the sponsor for an example

scheme. The dark blue line shows the value of the consolidator structure, assuming a 5% funding level volatility⁷ in that structure.

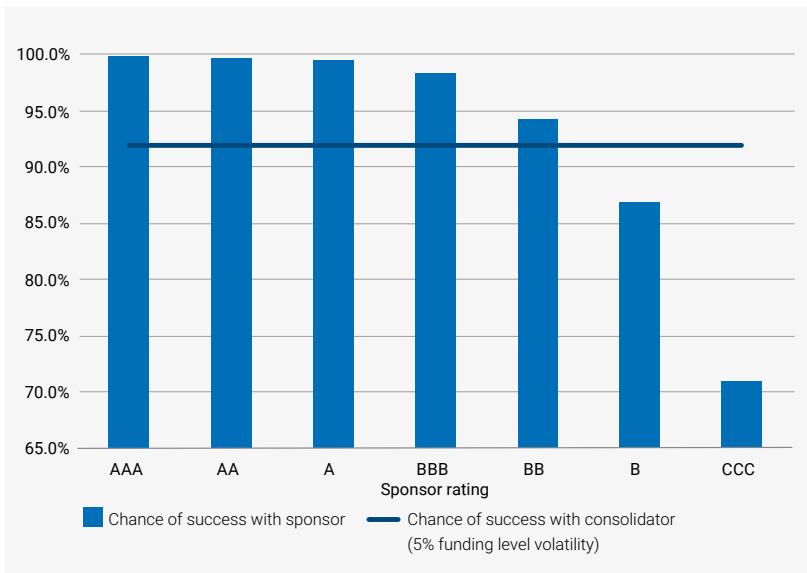


For an AAA-rated sponsor, the value of sponsor support is almost as large as the buyout deficit. As you would expect, as the rating drops, so does the value of sponsor support. This metric suggests that schemes with sponsors of rating BBB or lower consider transferring to a bridge-to-buyout consolidator.

This chart is for illustrative purposes only.

Pillar II:

The following chart shows how the chances of success vary for different initial credit ratings of the sponsor. The dark blue line shows the chances of success in the consolidator structure, assuming a 5% funding level volatility in that structure.



We find that schemes with B or lower rated sponsors might increase their chance of success by transferring⁸ but that this changes depending on the return estimates. However, this is still significantly lower than the 99% chance suggested by the DWP.

This chart is for illustrative purposes only.

7. Defined as the annualised standard deviation of the ratio of 1 + asset returns divided by 1 + liability returns

8. And note that (unlike the other two pillars) results are sensitive to estimates for risk premia.

Pillar III:

Our calculations indicate that expected returns to commercial investors are reasonable, with a median annualised return of around 6.5%⁹. However, the tail risks involved must not be ignored - indeed, we estimate there is around an 8% chance of commercial investors losing all their capital.

As one would expect, the value of the call option (that the investors effectively own) increases with the volatility of the consolidator’s investment strategy¹⁰. We highlight in the table to the right¹¹ the ratio of the value of option divided by the price of the option, which we have called the "Value Ratio".

We found that when analysing investment strategies designed to ensure low volatility in the funding level, the cost of providing benefits (the cost of the option) outweighs the long term value, ie. this ratio was below 100% .

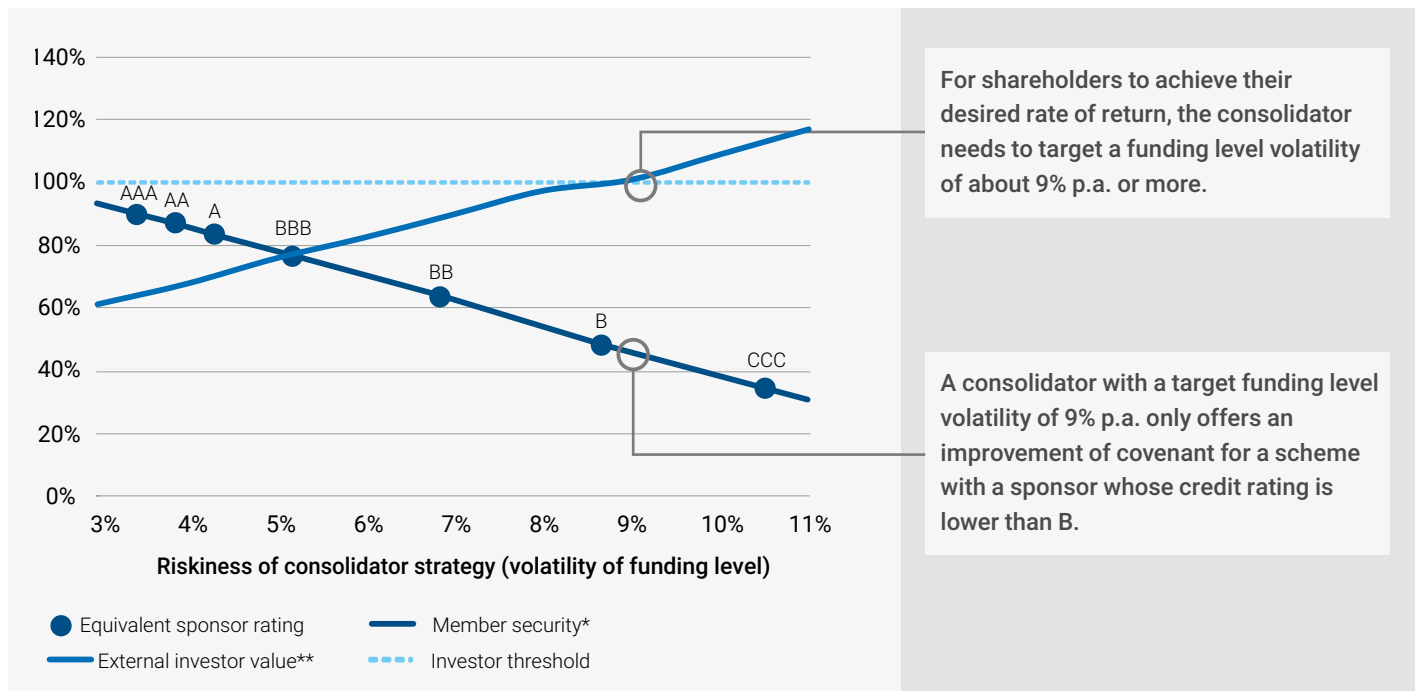
Our calculations indicate that the funding level volatility needs to exceed roughly 9% per annum for the structure to make sense to commercial investors.

Volatility of funding level within consolidator (% pa)	Value Ratio (%)
4	68
5	76
6	83
7	90
8	97
9	101

As such, our results suggest the ‘call option’ is likely to be overpriced in many situations so, at least in theory, this may not be an attractive proposition to commercial investors.

Bringing it together

In the chart below we combine the analyses from Pillars I and III.



For shareholders to achieve their desired rate of return, the consolidator needs to target a funding level volatility of about 9% p.a. or more.

A consolidator with a target funding level volatility of 9% p.a. only offers an improvement of covenant for a scheme with a sponsor whose credit rating is lower than B.

* the estimated value of consolidator support expressed as a fraction of the buyout deficit before entering consolidator. The equivalent sponsor ratings show how strong a sponsor would need to be to offer the same value of support as the consolidator

** this is the value ratio representing value-for-money for commercial investors defined above.

9. Again assumed a funding level volatility of 5% p.a. and an expected return of 1.5% over gilts

10. Excluding contingent assets; we assume the contingent assets are invested in cash

11. The calculation of the option value involves de-trending returns so that their expectation is in line with a gilt return and discounting payoffs with risk-free rates. One then subtracts the initial investment to see the net risk-adjusted value to the external investor.

As you make the consolidator strategy more risky, it becomes more profitable (reflected by the solid light blue line sloping upwards) but it also becomes less attractive to members (reflected by the downward-sloping solid dark blue line).

Overall, consolidators face potential conflicts of interest, insofar as riskier strategies increase the value of the arrangement to commercial investors, but at the expense of member security. This will be a focus for the Pensions Regulator.

Conclusion

Our analysis suggests that a consolidator targeting funding level volatility of 5% p.a. (and structured as assumed) may offer a superior covenant than a sponsor with a BBB rating. However, for our assumed consolidator structure to be sustainable, it needs to run funding level volatility of 9% p.a. At this volatility level it would only offer a greater covenant than a sponsor whose credit rating is less than B.

The precise structure of the consolidation arrangement is paramount. A range of other considerations and assumptions

could also impact the appeal of consolidation to both schemes and commercial investors, such as:

- Flexibility for the scheme to avoid buyout for more than 10 years, to benefit from an improvement in buyout terms as the scheme has proportionately more pensioner members.
- Allowance for economies of scale/ reduction in costs and investment opportunities and illiquidity premia that are otherwise challenging to access for schemes directly.

The use of consolidators may become increasingly prevalent in the market with a growing number of schemes needing to decide if a consolidator is right for them. While each scheme will have its own features, the framework which we have constructed, focusing on the value of support given up versus that received, the range of ultimate outcomes, and the value of the structure to commercial investors, are three points which will be important to schemes' decision-making. We anticipate this area of the market will evolve, and we will continue to update our research, methodology and conclusions as it does.

Appendix: Modelling details

Quantifying support/covenant

We apply ideas from financial economics to place a value on the sponsor covenant, or on the value of the consolidator as follows:

1. We *de-trend* simulated asset returns so the mean is always in line with the mean return of the risk-free instruments (gilts)¹²
2. We project returns using the asset returns from step 1. For those scenarios where backing exists throughout the projection, we record the initial buyout deficit. For those scenarios in which backing ceases at some point or there is forced buyout/PPF-entry, we record the initial buyout deficit less the discounted buyout deficit at the time of cessation (e.g. because of sponsor default)
3. We take the mean average of the answers across scenarios from step 2

This calculation implicitly assumes that in the scenarios where the sponsor defaults, there are no further deficit contributions at any time. The understatement in sponsor support is unlikely to be huge given the scheme is initially well-funded on a self-sufficiency basis so is probably not paying contributions and instead relying on a combination of investment returns and a weakening buyout basis¹³ to close the deficit.

For commercial investors (pillar III) the same idea applies, but is relatively straightforward in comparison - they are effectively buying a call option on the future funding position of the scheme. We can use these ideas (the same ideas underpinning the Black-Scholes formula) to compare the theoretical value of the option with its cost (the initial capital injected by the commercial investor). In both cases these value calculations are different to 'chance of success' calculations, in that they don't depend on risk premia in the same way that the Black-Scholes formula doesn't.

12. Our calculation doesn't depend on any risk premia on the assets. The chances of credit rating changes of the sponsor are also adjusted for this calculation so they are risk-neutral probabilities.

13. Our buyout basis is assumed to weaken as the scheme matures from a c.gilts – 0.5% discount rate when the duration 20 years to a c. gilts discount rate at very low durations. In the absence of assumed deficit contributions, this weakening of the basis is critical to the support from higher-rated sponsors being more valuable under our calculation, since they tend to default later when the deficit is smaller. With asset returns in line with gilts, the buyout deficit of our initially-90%-funded-scheme halves over c.10 years. Without this weakening, it would be more important to allow for possible deficit contributions in the future.

Consolidator assumptions

Feature	Description
Assets for entry	80% of liabilities on a buyout basis, PLUS 20% capital buffer - 10% from sponsor - 10% from commercial investors
Price of entry	90% of buyout liabilities
Profit release	Profits only taken when members' benefits have been secured via buyout
Triggers to use buffer	We assume the scheme tries to remain, excluding the buffers, at least 80% funded on a buyout basis. Buffer is allowed to only flow in one direction ¹⁴ (into the scheme, not out) with yearly reviews.
Maximum period in consolidator	We assume buyout occurs after 10 years if it has not already happened, given that it is only meant to be a bridge to buyout
Trigger for early buyout if good experience	If the scheme (excluding capital buffers) reaches full buyout funding then we assume early buyout occurs
PPF levies	Ignored
Potential for member upside (i.e. receive more than 100% of promised benefits)	No

14. We also tested a 'two-way' buffer and the results are similar; it does not appear to be a critical assumption

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