The Tipping Point

THE RACE FOR END GAME ASSETS

WHITE PAPER

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Introduction

According to the 2020 PPF Purple Book 46% of UK Defined Benefit pension schemes are now closed to benefit accrual. Although the last member in those schemes may be over 80 years away from receiving their last pension payment, the thought of the End Game is becoming more and more crucial. That end game is similar for all schemes. Either by completing a buy-out with an insurer, or in run off. The assets used to pay UK pension by completing schemes' liabilities in either case will most likely be UK government bonds and UK credit. So, if pension schemes are all scrambling for the same assets, what does that mean for the investment markets and how should it affect Trustee actions today? More importantly how can trustees avoid being in a scenario where they reach the tipping point without being fully prepared for it.

The backstory

The manner in which UK DB pension schemes have operated in the past has been a function of triennial valuations targeting Technical Provisions full funding for mostly open schemes. Under this approach the focus was on growth investing, much like an endowment, to target and then maintain full funding versus the Technical Provisions discount rate. A process agreed by the trustees, the sponsoring employer and guided by the scheme actuary. The main output from this process for underfunded schemes was agreeing a pace of recovery with respect to deficit contributions to be paid by the Sponsor and required investment returns. Setting aside the risk of changes in interest rate and inflation which are returns provided by the investments inherent in scheme liabilities, trustees were agnostic on what assets they used to generate those returns. However, we would note that various biases resulted in UK pension schemes' asset allocation looking alike, with the 60% growth 40% bonds being the staple.

With many DB schemes now closed to new members and future accrual, the circumstances have fundamentally changed and therefore require a different approach – and this has been the regulatory focus in recent years. We now know with high likelihood who the last member will be in the scheme and can estimate the value of pension they will need to be paid. This provides some certainty and allows Trustees to change their focus to how they can make sure that all members are paid in full. The focus therefore changes to the End Game. The four options most often discussed are:

- Self-sufficiency or low-dependency – A funding position where the scheme is no longer reliant (or very unlikely to call) on the sponsor for further support in terms of additional contributions;
- Run off – A secure position where the scheme will pay members pensions until the final member leaves the scheme (which is essentially where low dependency will end up);
- Buy-out – pass the obligations of paying member's pensions to an insurer by settling all liabilities; or
- Consolidation – responsibility of paying members is passed to a third party. This is likely to be a faster route to either of the two options above – running off, or a stepping stone to buy-out.

Where are we going?

Although buy-out is seen as the 'gold standard' in terms of securing members' benefits, there are a number of reasons why the majority of trustees do not explicitly set it as their long term funding objective. It's currently too expensive for most schemes. They (and their sponsor) cannot afford to pay the premium to an insurer to pass liabilities over, or they have such a strong covenant that they can afford to attempt a run-off to keep 'value' from passing to insurers. It's also too far away for most schemes to worry about right now. By valuing liabilities on a buy-out basis the deficits look unscalable. Breaking up the journey into more achievable goals makes it more palatable for trustees and sponsors.

There are two things which we believe will change this way of thinking:

- The price is 'coming towards' pension schemes. Insuring the benefits of deferred members is expensive relative to pensioner members. For schemes with large deferred populations, it seems expensive today, but these members will become pensioners in the future; the price will reduce purely as a function of time.
- There has been a greater level of scrutiny of long-term funding objectives from the Pensions Regulator. This is forcing Trustees to look past Technical Provisions and have a greater level of clarity around self-sufficiency / run-off or buy-out. The first option implies that trustees are happy running and administering schemes for the next 50 plus years. This has a financial cost as well as a time and effort cost (as well as operational risks).

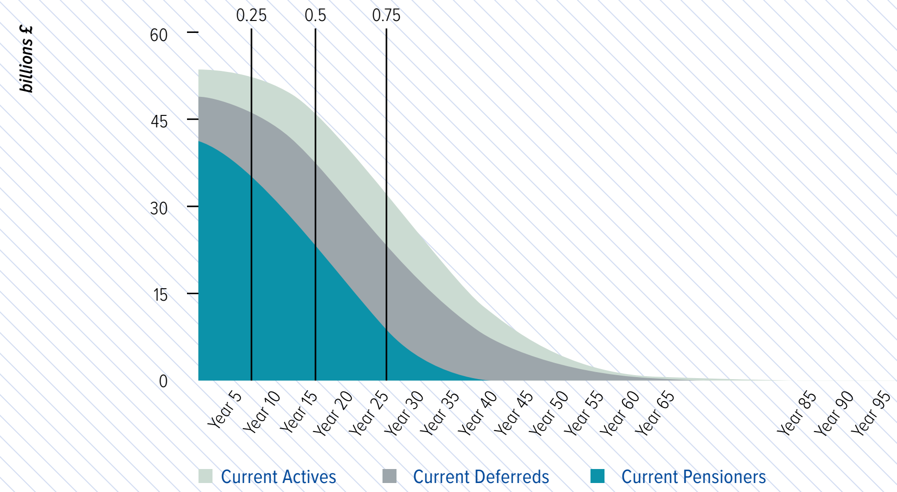
From our experience, we believe that most trustees and sponsors will eventually buy-out when they can afford it. For sponsors this would remove the pension scheme liability from their balance sheet. For trustees this will pass the administrative and operational risk burden to a third party where they can be confident their member payments will be met with a very high level of security (although still not absolutely protected – insurers can fail too).

So if buy-out is the end goal for many schemes, what does this mean for markets, and what timeframe are we working towards?

It is sooner than you think... 'The Tipping Point'

Analysis completed by The Pensions Regulator suggests that benefit outflows from most DB pension schemes may be close to reaching their peak, the point at which the highest amount of pensions are paid out of schemes. They estimate that almost one quarter of the accrued benefits of DB schemes will need to be settled by the end of the next decade due to the effect of ageing alone. This is what I call the tipping point.

FIGURE 1 Expected cash flow payments from DB schemes (constant money)



Source: TPR calculation at March 2019 based on scheme return data

Once a closed scheme reaches peak cashflows, it is important that they are well funded on a low-risk basis. If a closed scheme is not well funded at that point (the tipping point), the scheme's funding level would deteriorate just through the process of paying pensions. An increasing proportion of assets would be used to meet benefit payments and the deficit will grow. In the example below we compare the impact of scheme B which has passed the tipping point, against A which still has time to grow the funding level.

A scheme has assets of £80m, is earning a return of 2% and has liabilities of £100m. In example A), the size of pension payments are growing by £1m annually between year 1 and year 3. In example B), payments have peaked and are decreasing by £1m annually between year 1 and year 3. Although the total payment is the same of £12m between year 1 and year 3, the scheme which has peaked has a 0.4% worse funding level.

A)	*T1*	*T2*	*T3*
Assets (£m)	80	78.6	76.2
Return	2%	2%	2%
Liabilities (£m)	100	97	93
Payment (£m)	3	4	5
Funding level	80.0%	81.0%	81.9%

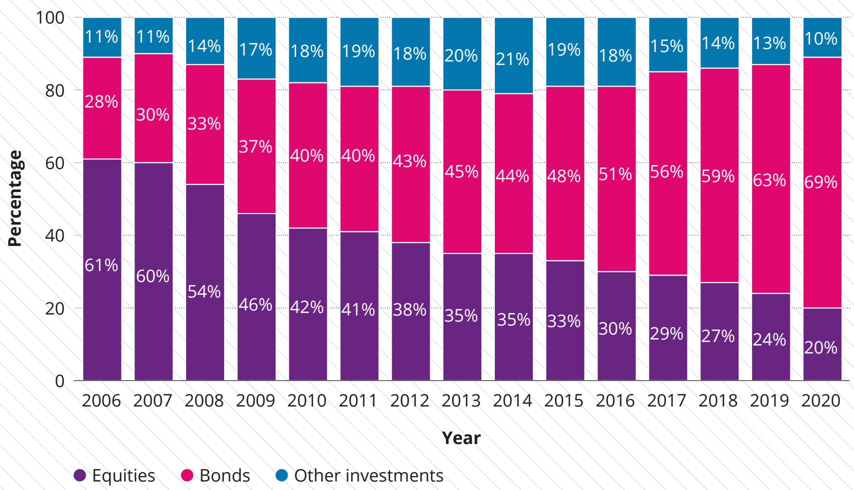
B)	*T1*	*T2*	*T3*
Assets (£m)	80	76.6	74.1
Return	2%	2%	2%
Liabilities (£m)	100	95	91
Payment (£m)	5	4	3
Funding level	80.0%	80.6%	81.5%

It is prudent for trustees to manage this risk by planning to reach full funding on a low dependency basis well before the scheme reaches peak cashflows, what we call the 'Tipping Point'. If not at a secure level of funding before the scheme reaches the tipping point, the risk may become unmanageable well before the scheme reaches the tipping point. If this tipping point is within 10 years (as indicated by TPR research), schemes need to get to full funding in a relatively short period of time, but also need to consider the assets they will need to hold when they reach peak cashflows in order to have a high likelihood of remaining fully funded thereafter.

What is the size of the problem?

UK pension schemes have been on a de-risking journey for some time. Switching out of growth assets, particularly equities, and buying government and corporate bonds as illustrated in the chart below. Assuming this trend continues, the average weighted allocation to bonds is expected to increase from 63% currently to around 80% within the next five years. This is a faster rate than we have seen in the last decade and aligns with schemes getting their asset allocation in place as they reach their respective tipping points.

FIGURE 2 Evolution in asset allocation



Source: PPF Purple Book 2020

Once a scheme has reached full funding on a low risk basis, they will typically look to manage risk by investing in a strategy which broadly aligns their assets with their liability basis. This will mean matching sensitivity to changes in interest rate and inflation and cashflows to some degree, and therefore aiming to hedge a significant proportion of those remaining liabilities.

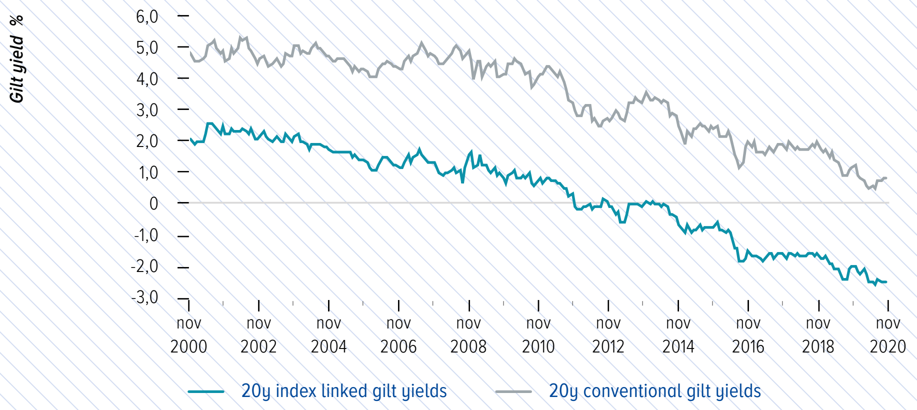
As at 30 September 2020, we have estimated the size of UK DB pension scheme liabilities to be approximately £2.4 trillion on a buy-out basis. Of this value, we believe that around 55% has been hedged for exposure to interest rate and inflation. That means there is still c. £1.1 trillion of liabilities outstanding which are exposed to changes in interest rates and inflation, and cashflow risk.

Musical chairs

Our working assumption is that a large proportion of that hedging will be met by purchasing UK government bonds and sterling credit. If this is the case, how will this play out and what are the potential ramifications?

For some time now it has been the norm for investors to receive a negative yield from index linked gilts, in order to receive payments which are linked to inflation. The average yield for long dated index-linked gilts are in the region of -2.5%, with this oddity mainly being driven by UK pension schemes' relentless demand for these bonds in order to hedge inflation-linked liability risk. Typically index-linked gilts at auction are 2-3 times oversubscribed. This demand is structural and the capacity issue is a real and present danger.

FIGURE 3 20 year gilt yield evolution



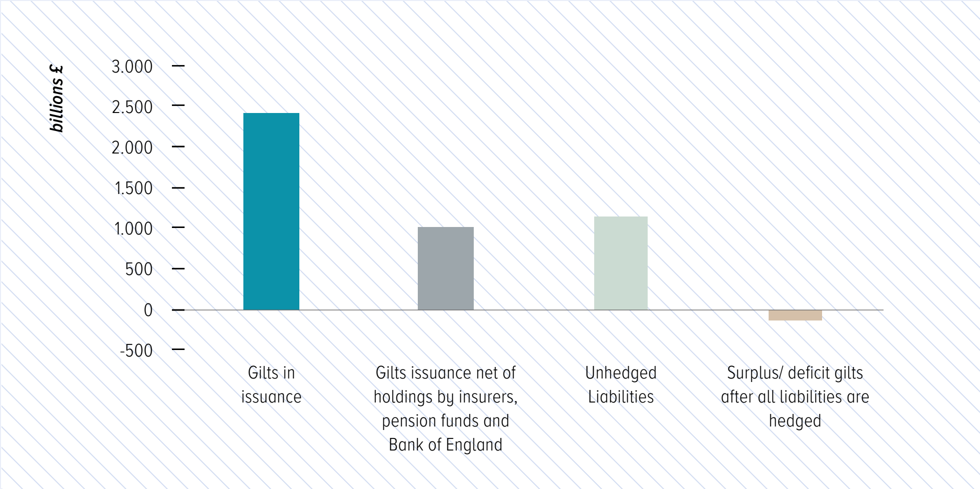
Source: Kempen

Purely from a demand perspective, this will drive up prices – UK bonds will be more expensive to buy. Combine this with how soon they need to be purchased, as most UK schemes are maturing and de-risking rapidly together, and prices will be driven higher still. It will therefore be even more expensive to buy UK government bonds, particularly index-linked gilts which are used to hedge liabilities which are linked to inflation and which constitute the majority of scheme liabilities.

The position is particularly acute in index-linked gilts. Only 32% of gilts in issuance are index-linked, with a significant proportion of this already owned by pension schemes and insurance companies. The UK already has double the amount of inflation-linked bonds than anywhere else in Europe, but this is still not enough. Of the £1.1 trillion of liabilities unhedged, approximately 60% to 70% are real in nature and therefore the significant demand for these assets will continue, not to mention the demand from other asset owners.

At the headline level, there are currently c. £2.4 trillion of gilts and index-linked gilts in issue, so there's no problem, right?

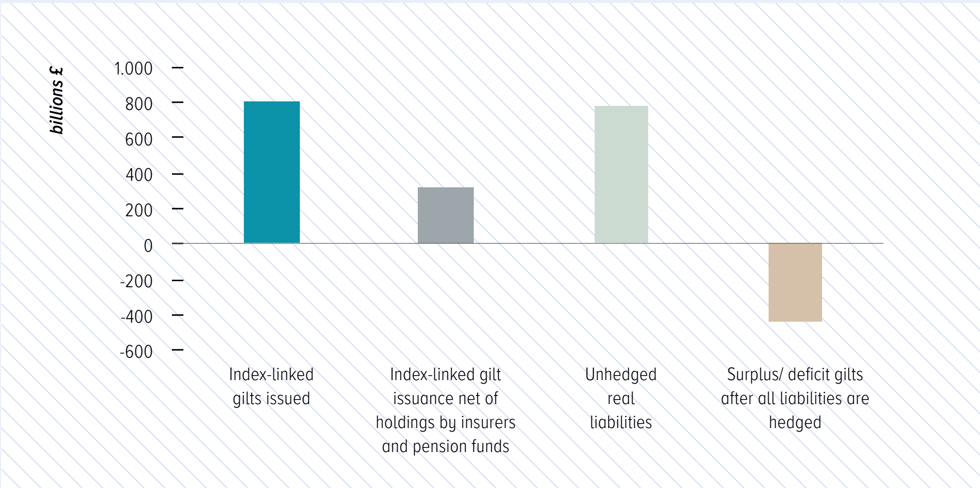
FIGURE 4 Gilts in issuance



Source: Kempen, using data from PPF Purple Book 2020 and the DMO quarterly review June – September 2020

It's not so straightforward. When looking at hedging liabilities which are inflation linked (which are the majority of UK DB pension scheme liabilities), there is a large deficit of index-linked gilts to meet demand.

FIGURE 5 Index-linked gilts issued



Source: Kempen, using data from PPF Purple Book 2020 and the DMO quarterly review June – September 2020

Assumes unhedged liabilities are 2/3rd real in nature. Assumes gilts held by insurers and pension funds are also 2/3rd

The current issuance schedule is £225 billion for the remainder of the year from July 2020. However, the majority of this is due to be bought by the Bank of England as part of quantitative easing which is likely to further distort prices. Over the next five years, some estimates suggest the UK government will need to issue £1.25 trillion of gilts to meet expenditure of the current COVID crisis. Although this new issuance could be useful for pension funds and insurers, the reality is that underfunded UK pension schemes cannot afford to buy only gilts as they need to close the deficit by investing in risk assets.

What about UK credit?

The size of the sterling investment grade credit market is c. £375 billion in size, with c. £60 billion issued in new corporate debt last year. Debt issuance has exploded in recent years with the cost of issuance being particularly cheap due to historically low interest rates. In addition, quantitative easing programmes in the UK, US and Europe have been widened to include the purchase of corporate bonds. To put the sterling credit market into context, the euro investment grade credit markets is €2.4 trillion in size and with over €660 billion of new issuance last year, and both pale in comparison to the US.

Credit is very likely to be the source which can help fill this exposure gap for pension funds and provide the additional yield required. However, our initial analysis shows that the race to purchase high quality credit, which is exactly the type of assets a scheme would want in the latter stages of de-risking, may have already begun. The largest issuers in the Markit iBoxx GBP Non-Gilts ex-BBB are KFW (a German state-owned development bank), the European Investment Bank (the lending arm of the European Union) and EDF (the French multinational utility company, largely owned by the French state). These are very large, multinational companies whose outstanding debt is highly rated by rating agencies and is the type of debt which forms a core part of a de-risked scheme's asset allocation.

What is left for those pension schemes who are looking to purchase credit as part of their de-risking portfolio now appears to be lower quality credit.

You can see this in the table below which shows the rating breakdown of the Sterling non-gilts index in November 2010 compared to November 2020. The downward ratings migration has been well documented. As pension schemes have been allocating more to credit in the past decade, they will have increased their allocation to BBB rated.

NOVEMBER 2010

RATING	WEIGHT
AAA	4%
AA	18%
A	50%
BBB	28%
Total	**100%**

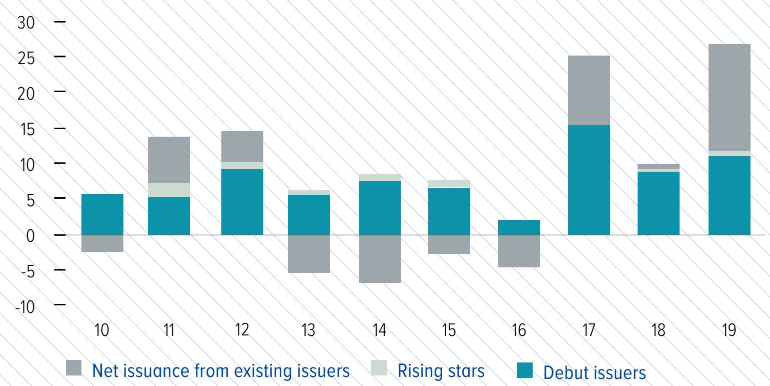
NOVEMBER 2020

RATING	WEIGHT
AAA	1%
AA	8%
A	40%
BBB	50%
Total	**100%**

Source: ICE bond indices

This is because the quality of marginal issuance relative to debt outstanding is worsening. The EDFs and KFWs of the world are issuing less debt today and there has been an increase in debt issuance by new companies at a lower quality. This is seen in the chart below where over the last decade debut issues (dark blue) have out-stripped net issuance from existing issuers (green). In 2019 there was £11 billion of new issuance from debut issuers in sterling investment grade.

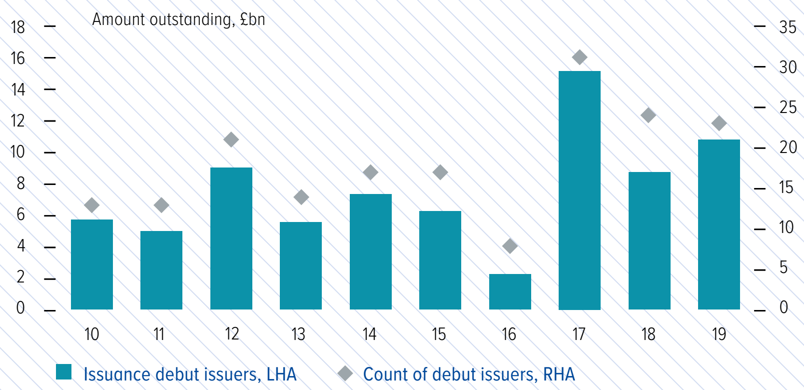
FIGURE 6 Debt issuance of sterling investment grade credit



Source: Bloomberg, Barclays Research

We define debut issuers as companies issuing benchmark size sterling investment grade bonds which did not previously have sterling investment grade benchmark size corporate bonds outstanding.

FIGURE 7 2019 saw c.£11bn of supply from debut sterling investment grade issuers



Source: Bloomberg, Barclays Research

Index-eligible issuance per year from companies which did not previously have sterling investment grade index eligible corporate bonds outstanding.

The race to purchase high quality sterling credit assets is intensified by UK insurers having a significant demand for the same type of assets. Sterling credit forms a core part of an insurer's bulk annuity book and we have seen a strong correlation between net sterling corporate bond insurance and buy-in and buy-out transactions in the past five years.

UK firms issuing more debt is unlikely to be the answer. Non-UK issuers already account for around 50% of sterling issuance and we are likely to see more in the future in order to meet the wall of demand from UK pension schemes. However, Brexit does put a cloud over this, with sterling issuance being expensive relative to US and European firms issuing debt in their domestic markets in the second half of 2020 as Brexit concerns have weighed on the relative performance of sterling. It appears that issuers are waiting until after the Brexit transition dust clears before deciding whether sterling is the market in which they want to issue long-dated credit.

What about the derivatives market?

Nominal and inflation swaps are readily issued by investment banks and are used to hedge interest rate and inflation risk. Where schemes need leverage, these assets have been of help. However, this may not be the panacea to our problems:

Firstly, these are not an exact match for scheme liabilities. As actuaries predominantly value liabilities using UK government bonds to underpin their discount rates, there is a basis risk (between buying swaps to hedge gilt liabilities). The spread between swaps and gilts currently stands at almost 0.5% at the 30 year point. As you approach the end game, where the aim is to match the sensitivity of liabilities (and if possible, match cashflows), this is not immaterial.

UK pension scheme trustees are still wary of using significant amounts of derivatives in their portfolio. With the advent of central clearing and better counterparty management, investment markets are a safer place than they were before the global financial crisis, however the additional complexity means many lay trustees still remain wary – and derivatives are not 'free' of course.

Therefore, although derivatives are significantly helpful in helping to mitigate interest rate and inflation risk, as schemes approach the end game and consider passing assets to an insurer, they will need to deleverage their derivative portfolios. We estimate there is in the region of £250 - £300 billion of derivative exposure which needs to be converted to physical bonds as schemes deleverage their LDI portfolios.

Other investors

The Pension Protection Fund (PPF), the UK pension scheme lifeboat, invests in a similar manner. In order to provide security to the agreed members' pots, they invest assets using a cashflow-aware approach. The PPF currently has 40% of its c. £32 billion assets invested in UK government bonds, corporate bonds and LDI (with the LDI providing a substantial overlay over the wider portfolio).

For those insurers and consolidators who have taken on liabilities from UK pension schemes, they are also likely to have a proportion of their assets in UK bonds alongside private market investments to match cash-flows. There is a positive rotation in play here. De-risked pension schemes are likely to have more of their assets invested in UK government bonds and insurers are more likely to have assets invested in sterling credit. Therefore, when a scheme buys out, the insurer will sell gilt assets back to the market and buy credit assets. In part this should help balance the supply and demand between the two assets.

WHERE DOES THIS LEAVE US?

If there is an acknowledgement that these bond assets will be needed in the future, there will be a desire to buy these sooner.

This is particularly important if investors think these assets will be much more expensive in the future and/or of lower quality. As schemes become cashflow negative and approach the tipping point, being cashflow -aware will become more relevant as schemes mature. What is clear is that a large proportion of the UK investment industry linked to UK pension funds, will need low risk sterling bond assets in the future. Thus the number of players in the game of musical chairs increases. This crowded playing field comes with its own set of ramifi-cations.

What implications are there for the wider industry?

1) Greater issuance of sterling credit by overseas multinationals

Our analysis shows that there will be significant demand for sterling denominated credit by UK pension schemes. What we haven't seen to date is American and European issuers meeting that demand with significant supply. This may be due to several factors. It is currently cheaper to issue in Europe at current interest rates and with a ready buyer in the ECB as part of their quantitative easing programme. Similarly, due to the depth of the dollar bond market, it is more straightforward to issue debt in their home market than issuing in sterling and hedging back the currency and interest rate exposure. Present issues such as Brexit and the cost of sterling are also barriers to increased issuance. However, in the long term we think the demand for these assets will make it attractive for overseas issuers to enter the UK market in greater size.

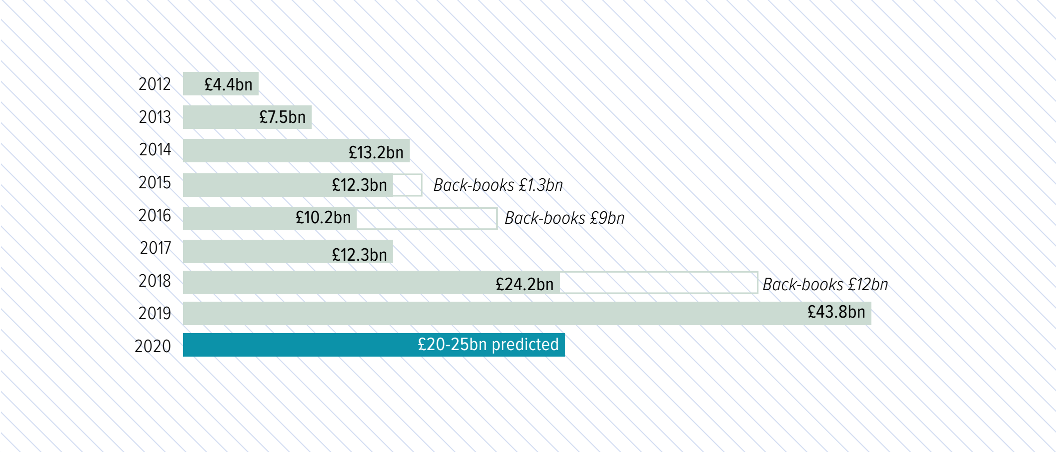
We would note that when international companies consider issuing credit in sterling, they also have to consider the 'cross-currency basis'. This is because they issue in sterling but want their return to be in their domestic currency. When a company is deciding whether to issue outside of its home market, it will calculate the additional yield they will earn net of interest rate and currency hedging costs. For example, in order to hedge this sterling exposure, a US corporate would borrow sterling today and return it back in the future in line with its coupon and principle repayments on the bond issued. The basis is the additional hedging cost to manage the interest rate differential between the two currencies. When the debt to be issued is long dated, it introduces a level of volatility that is difficult to predict. The volatility of this cross-currency basis could therefore have a significant effect on whether foreign investors choose to issue in sterling, regardless of the strong demand and potential credit spread they could earn in the UK market.

2) Insurers are well placed, but so are consolidators

We believe that the number of schemes who will be willing to run-off their scheme until the last member is paid, is actually likely to be a small percentage, and will be the preserve of the mega-sized schemes who have the governance, administration and operational capabilities to do so. Therefore insurers are likely to garner a larger proportion of UK pension scheme assets. Those schemes which have got to the end game and bought out are still a small percentage. Legal & General estimates, of all DB liabilities in the U.K., only 8% have transacted pension-risk transfers.

The volume of settlement activity has been steadily climbing over recent years and doesn't seem to be abating. Current activity is in line with that predicted by LCP in the chart below with £12.6 billion of bulk annuity volume in the first half of 2020.

FIGURE 8 Market activity: Buy-in, buy-out and annuity back-book volumes



Source: LCP pensions de-risking report 2020

With the clear direction of travel, there may be a first mover advantage in insuring. If there is a limit to the capacity that the bulk annuity industry can insure, pension schemes looking to complete a buy-out deal later, may find that capacity has already been taken up. Anecdotally many pension scheme trustees have talked of wanting to reach self-sufficiency in the next decade. As a result, some have voiced concerns about the flood of demand for risk transfer transactions around that time and the potential negative impact on pricing. Building up relationships with insurers today may become more important in order get a proportion of that capacity. Perhaps buy-ins will grow in popularity as a way of adding your scheme to the queue early.

The approval of consolidators by The Pensions Regulator in June 2020 means there is another player in the game. If passing pension scheme liabilities off corporate balance sheets is the direction of travel, it is likely that this part of the market will also see significant growth. With the cost of passing liabilities to a consolidator likely to be cheaper than to an insurer, this is likely to be a real alternative to settling liabilities with an insurer, or a stepping stone to that approach. Consolidators will be designed to cope with the governance, administration and operational needs, and will have the scale to do so cost effectively in a way that few individual schemes can manage.

Conclusions

Closed UK pension schemes are maturing and need to reach full funding on a low risk basis before they reach peak cashflows. We believe this is sooner than people may think, and for some schemes 'the tipping point' may be in the next 10 years. In order to lock down investment risk, schemes will be switching from growth assets to UK bond assets, however there is clearly not enough supply to meet this demand.

The implication of this is that de-risking is not just about setting a suitable journey plan or glide-path. We need an even wider lens through which to consider a truly integrated risk management framework, one that includes opportunistic de-risking ahead of plan as circumstances permit to get better quality assets sooner. De-risking later may cost scheme sponsors far more than biting the bullet sooner, as credit spreads fall, and schemes are forced to buy more gilts than expected.

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