



DB run-off

The demand for inflation-linked assets

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Executive Summary

Defined benefit (DB) pension schemes in the UK are increasingly moving assets from a pure equity/fixed income split towards higher allocations to index-linked gilts and a more diversified range of return-seeking assets. This move out of equities into other assets has been fuelled by the continued closure of DB schemes in favour of defined contribution (DC) schemes and a move towards liability-driven investment strategies that better match DB assets to future cash flows (the DB run-off).

As DB pension schemes mature their tolerance for funding risk falls, leading to a demand for assets that move more in line with their liabilities and potentially generate more stable cash flows. Four in ten respondents to the NAPF's Annual Survey¹ in 2013 reported their appetite for liability-matching investments had increased in the previous 12 months.

Primarily, DB schemes have historically invested in index-linked gilts in order to better hedge their liabilities. However, yields on index-linked gilts have been on a declining trend for the past 20 years, making it more expensive for schemes to purchase them as part of a de-risking strategy. There has been increasing frustration from schemes that, in order to reduce their interest rate and inflation risks, they are effectively 'forced' buyers of gilts with low or negative real yields: assets that are expected to produce low real returns for the buyer over the long term.

Expected levels of index-linked gilt issuance are far below the likely levels of demand when demand is only likely to increase over time. As a result, DB pension schemes have been looking for alternatives to index-linked gilts and for assets that provide some form of inflation-linked cash flows over the long term and/or provide them with a balance sheet hedge. The most common alternatives schemes are investing in are commercial real estate and infrastructure, both of which offer potential markets of significant size if issues of accessibility can be addressed. Other alternatives, such as corporate inflation-linked bonds, ground rents and social housing have much more limited availability and are likely to be an option only for the largest and most sophisticated DB schemes.

Alternatives to index-linked gilts also offer significant challenges to investors as their markets are generally less well developed and accessibility is a problem. Liquidity can be poor and the valuations can be volatile, making schemes cautious to invest in them. It is unrealistic to believe these asset classes will be able to fill the gap between demand and supply that continues to develop in the index-linked gilt market, although they are important complementary asset classes.

The reality is that pension schemes will need much higher levels of index-linked gilt issuance if they are to navigate the DB run-off smoothly and manage risk efficiently. As there is no indication at present this is likely to occur, schemes may feel added pressure to de-risk before the cost increases even further, thus accelerating the speed of the run-off.

To help schemes manage the DB run-off in the manner most likely to result in the best outcome for scheme members we are calling for:

• Increased index-linked gilt issuance, provided it can occur in a manner that does not impede the

¹ NAPF Annual Survey 2013. A survey of 263 DB, DC and Local Authority funds



smooth functioning of the gilt market.

- Where possible, increased supply and availability of suitable alternative inflation matching assets; and
- The development of a framework that allows for more flexible models of DB pension provision; in particular the removal of the requirement to provide an index-linked pension in payment for future accruals.

Small schemes are likely to face an even greater challenge as they have limited access to some of the more illiquid alternatives and more limited ability to directly use the derivatives market to hedge the risks in their schemes.

There is no quick solution to the problem of securing member benefits in a market that is fundamentally lacking in the assets appropriate to guarantee those benefits are paid. Unless the supply of assets is addressed the costs of providing member benefits could escalate and cause even greater pressure on scheme sponsors at a time when the Government is looking to corporate sponsors and pension funds to help sustain wider economic growth.



The roots of the DB run-off

- The defined benefit (DB) pension landscape in the UK is maturing as more and more sponsoring employers are choosing to close their DB scheme to new members and/or to future accrual, and move to a defined contribution (DC) arrangement for new, or even for their existing, employees (the DB run-off). As scheme membership matures, and a greater proportion of scheme liabilities is accounted for by pensioners, incoming contributions fall at the same time the level of cash the scheme needs to pay out to pensioners rises.
- 2. No single factor is responsible for the closure of DB schemes but a study undertaken for the NAPF by Leeds University Business School in 2011² concluded accounting standards had had a significant impact.
- 3. Until the 1980s there was relatively light-touch regulatory approach to UK DB pensions. And, until the Social Security Act of 1973, there was not even a legal obligation on the employer to preserve the benefits of deferred members. The Social Security Act 1985 went further and introduced the idea of indexing preserved accrued benefits at 5% a year or RPI, whichever was lower. These changes significantly increased the value of pension promises and ultimately the burden on the sponsoring employer. Then, in 1988 the Income and Corporation Taxes Act 1988 required that any pension surplus be eliminated. In response to this and given the good funding position of many schemes, sponsors either took contribution holidays or increased benefits, the latter further increasing the liability on the scheme.
- 4. Finally, in 2000 FRS17 was introduced as the standard for pension fund accounting. FRS17 required, among other things, that DB accounting standards use market prices to value pension assets and a market-determined discount rate to estimate pension liabilities.
- 5. As the pressure on employers to remove deficits increased, DB schemes in the private sector began to close. According to the NAPF's Annual Survey of fund members, in 2004 nearly 60% of schemes remained open to new members³. By 2012 only 13% of schemes remained open to new members⁴. The rate of closure slowed in 2013 with 12% of private sector schemes responding to the survey still remaining open to new members. This might reflect the fact that the list of open schemes is concentrated on a core set of employers that are either highly dedicated to retaining their DB scheme or have a statutory requirement to do so. The number of schemes closed to new members but still open to future accrual continued to fall and now stands at 53%.

² Accounting for Pensions, Leeds University Business School, September 2011

³ NAPF Annual Survey 2005

⁴ NAPF Annual Survey 2012



Figure 1: Scheme status 2009-2013 (private sector only)⁵



Source: NAPF Annual Survey 2013

6. In its 2013 annual report⁶, the Pension Protection Fund predicted the level of cash flows that will need to be paid in connection with DB schemes transferred to the PPF prior to 31 March 2013 in order to match their pensions in payment in the coming years (Figure 2). Whilst this is not representative of the entire DB market, it is helpful to illustrate the changing shape of the total cash flows that will be faced by schemes across the sector during the DB run-off.





Source: Pension Protection Fund

7. Payments to individuals that are currently deferred members of schemes will increase over time as more and more deferred members reach retirement age. Cash flows continue to increase until the number of scheme members dying exceeds the number retiring. Payments to pensioners then start to fall as the

⁵Private sector figures are directly comparable to previous annual surveys

⁶ Annual Report and Accounts 2012/2013, PPF



number of pensioner members gradually decreases until liabilities reach zero at the point there are no scheme members still living.

- 8. The continuing scheme closures have resulted in the increased demand we are seeing for assets which better match the movement in the present value of pension liabilities, and has contributed to the move out of equities into longer-dated index-linked gilts and corporate bonds .
- 9. As the cash outflows required to meet liabilities due represent an increasing proportion of a scheme's assets, there are two issues to be addressed:
 - as the level of cash coming into the scheme through active member contributions reduces and eventually falls to zero, schemes will need to increase investment in assets that are able to provide cash flows that more closely match their liabilities (Figure 3); and
 - they will need to a make a judgement on how accurate the hedge between scheme assets and liabilities should be in the short term, as there is likely to be a be a trade-off between relative investment returns and the amount and accuracy of hedging undertaken.



Figure 3: Impact of the increase in pensioner members on appetite for investment volatility

10. Schemes that are not invested to perfectly match their future cash flows will expose the fund (and sponsor) to volatility in the value of assets and changes in the value of schemes liabilities, which could lead to volatility in the scheme's deficit. Many schemes suffered a severe deterioration in their funding position during the volatile equity markets of the early 21st century. The appetite of most sponsoring employers to ride the volatility of pension scheme deficits has fallen. Trustees have also become more aware of the risks being run and may be more likely to wish to de-risk in times of financial and economic uncertainty⁷.

⁷ Procyclicality of Insurance Companies and Pension Funds (ICPFS) – Evidence and Implications, Bank of England, 2013



- 11. Certain scheme sponsors, particularly those with strong covenants, may have some remaining appetite to tolerate the investment risk associated with imperfect liability hedging, particularly if there is greater potential return from that investment choice in the longer term. In this case schemes are likely to have more appetite to 'buy and hold' relatively illiquid assets, despite the short-term volatility, particularly if they offer some form of inflation-linked cash flows. Those schemes whose sponsors have no appetite for volatility are likely to want to de-risk at a faster rate.
- 12. Whilst the speed of de-risking will vary from scheme to scheme depending on their ability to tolerate risk, the ultimate goal of all schemes to invest in a way that hedges them against their future liabilities, will be similar. Ultimately, as sponsors close their DB schemes to new members and future accrual, they will eventually look at ways to fully detach themselves from all risks associated with the DB scheme and trustees will be looking to be able to operate with no or limited reliance on the sponsoring employer.
- 13. This report examines the strategic investment behaviour of DB pension schemes as they manage the transition to a de-risked portfolio. It considers the ramifications of the DB run-off and the impact increased de-risking by DB schemes will have on the market for asset classes that could be used to match scheme liabilities.

Asset allocation trends

- 14. Twenty-five years ago, a typical defined benefit (DB) pension scheme in the UK would probably have been invested almost entirely in equities, with a small allocation to fixed income assets and other asset types, mainly property.
- 15. The growing appetite to hold assets that behave in a similar way to liabilities has led schemes to re-assess their investment strategies. Many DB schemes are evolving from using traditional scheme-specific asset allocation benchmarks to those that more closely match their projected cash flows. In particular, these 'liability driven' benchmarks will tend to have a much longer duration and they will include appropriate inflation-linkage.
- 16. Consequently, there has been a significant rise in pension schemes' allocation to index-linked gilts and today, whilst equities and bonds remain the main drivers of UK pension fund returns, there is a growing emphasis on index-linked gilts and a more diversified range of asset classes, which can be seen by the growth in total 'other' assets over the last decade.







Source: State Street Global Services

17. If this trend continues, eventually this will lead to pension schemes becoming net dis-investors of returnseeking assets. According to the ONS MQ5 data on Investment by Pension Funds, in 2013 they were already net dis-investors in a number of asset classes, most notably UK shares. As schemes continue to derisk, return-seeking assets are likely to become an increasingly smaller part of their overall asset allocation.

Changes in asset allocation as the number of pensioner members increases

- 18. As DB pension schemes' liabilities mature, their tolerance for funding level volatility falls, leading to their need for lower risk assets and more stable income streams. The value of assets required for pensions in payment increases as a percentage of their total assets. They therefore typically shift their investments into assets that better match their cash flow needs.
- 19. This is borne out by the data from the NAPF Annual Survey 2013, which shows DB schemes with 60% to 80% pensioner members have a significantly lower appetite for equities than those with fewer than 20% pensioner members (26% compared to 43%). Instead, they tend to favour fixed income assets (including index-linked). No respondents to the 2013 survey had more than 80% pensioner members. However this preference for fixed income is likely to continue to increase in future alongside the inevitable growth in the proportion of pensions in payment.





Figure 5: Asset allocation by percentage of members in receipt of pension

20. Looking at the individual asset classes more closely, there is clearly higher demand for both UK index-linked gilts, where the average allocation is 23% in schemes with 60% to 80% pensioner members and 5% in schemes with fewer than 20% pensioner members, and corporate bonds where the allocation is 15% in schemes with 60% to 80% pensioner members and 7% in schemes with fewer than 20% of pensioner members.

Inflation and liability hedging in DB schemes

- 21. Schemes that are looking to de-risk have a number of options available to them, from buyouts or buy-ins, whereby an insurance company takes over the responsibility for meeting some or all of the pension promises, to internal hedging of longevity and inflation using physical assets such as index-linked gilts or derivatives.
- 22. Typically index-linked gilts have been the instrument of choice of DB pension schemes. However, yields on index-linked gilts have been pushed lower by a variety of factors including but not limited to the impacts of quantitative easing and a flight to quality following the economic crisis. This has meant pension schemes with liabilities that are not fully hedged have seen their deficits increase significantly.
- 23. The NAPF Annual Survey does not collect data on the precise level of hedging being undertaken by DB schemes. However, other data sources do provide some insight. Data from KPMG's 2013 LDI Survey⁸ showed UK funds now have around £446bn notional of hedged liabilities, with inflation hedging growing at more than twice the rate of interest rate hedging over 2012. This represents an increase of 11% during the year and equates to 39% of total DB assets reported in the PPF 7800 Index in November 2013 (£1,139.1bn).

⁸2013 KPMG LDI Survey Exploring the Evolution of the UK LDI Market



- 24. Similarly, Towers Watson estimates that between 40-50% of DB liabilities have been hedged. As the DB run-off plays out, we can expect potential demand for up to an additional £1th of inflation-linked hedging assets.
- 25. Most recently, in March 2014, analysis by Aon Hewitt, showed that UK pension schemes are under-hedged against movements in long term interest rates by more than £400bn. The analysis suggested that closed and frozen schemes should be protecting themselves against at least 70% of their interest rate risk on average. In reality the amount hedged was closer to 30% to 40%.
- 26. The Purple Book 2013 reported the quarterly F&C Asset Management surveys of volumes traded by investment banks suggest reductions in hedging activity via inflation and interest rate derivatives as:
 - £53.2bn of liabilities were hedged using inflation derivatives in the year to March 31 2013, a reduction from the record levels observed in the second quarter of 2012; and
 - £47.8bn of liabilities were hedged via interest rate derivatives, a 4% drop on 2012.
- 27. This apparent reduction in hedging activity may be a result of continuing falls in real interest rates and the consequent perception hedging is becoming increasingly expensive. In addition, up until recently funding levels had been generally less supportive of switches from return-seeking to liability matching assets. However, the reduction in hedging activity is relatively small. The average quarterly flow of liabilities being hedged against interest and inflation movements was £13.1bn and £12.2bn in the year to 31 March 2013, compared to £13.3bn and £12.9bn in the year to March 2012. Given movements in equity markets and bond yields in 2013, there has more recently been an increase in the number of funds de-risking by switching from return-seeking assets into more liability matching assets.

The role of derivatives in improving liability hedging

28. The use of derivatives may offer an attractive alternative way of providing liability matching strategies to schemes. However, only around half of NAPF members report using any type of derivative at all. 43% used interest rate swaps and inflation swaps, which may be an indication those schemes are using derivatives for inflation hedging LDI activity.



Figure 6: Derivative types in use by UK pension schemes



Source: NAPF Annual Survey 2013, base: 203 respondents

29. Derivatives are not the panacea for pension scheme problems. In particular, according to feedback received from our members, they are specifically not the answer for smaller schemes, although some smaller schemes may invest indirectly in equities via the use of pooled funds that utilise them. The survey results indicate larger schemes are more likely to invest directly in derivatives, with almost all schemes over £2bn investing in derivatives in some form or other.

	Equity	Bond		Interest rate	Inflation	Gilt total return	Equity total return	
	futures	futures	Options	swaps	swaps	swaps	swaps	Other
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Less than £100m (37)	3	3	9	9	9	3	0	0
£100m to £300m (35)	0	0	0	13	8	0	0	0
£300m to £500m (28)	0	4	21	38	33	0	0	4
£500m to £1bn (30)	21	17	24	38	35	17	10	10
£1bn to £2bn(35)	4	21	24	57	69	17	14	3
Over £2bn (48)	56	44	49	85	83	46	34	7

Table 1: Derivative use by size of scheme?

Base: numbers in brackets

30. Not only are derivatives not providing the answer for smaller schemes, but it is important to remember the use of derivatives by schemes does not remove the pressure on the demand for the underlying assets. Ultimately, whoever owns the obligation to meet the pension liabilities, appropriate assets to hedge those liabilities will need to be found, either by the scheme, insurer or investment bank.



The demand for inflation-matching assets

- 31. In 2013 40% of the NAPF fund members that responded to the NAPF Annual Survey stated their appetite for liability-matching investments had increased in the last 12 months. Only 4% reported their appetite had decreased. As expected, appetite for liability matching was greater among closed schemes compared to fully open schemes. 41% of fully closed schemes stated their appetite for liability matching investments had increased compared to 21% of fully open schemes.
- 32. In order to fully hedge scheme liabilities, pension schemes would need access to an inflation-linked market of approximately £1trn⁹. The solid line in **Figure 7** shows the value of inflation-linked assets that would be needed for a 100% hedge of liabilities as they gradually fall as the DB run-off plays out. The dotted line indicates the value of inflation-linked assets that will be needed if the hedge ratio (HR) increases smoothly from its current level, reaching a 100% hedge ratio in around 2038.



Figure 7: Projected real liability value

33. In the past DB schemes may have used index-linked gilts to match their liabilities. However, yields on index-linked gilts have declined over the last 20 years, albeit there has been a small rebound since May 2013, making it more expensive for schemes to purchase index-linked gilts as part of a de-risking strategy. Therefore, despite an increasing appetite for de-risking, there has been a sense of increasing frustration from schemes, that in order to reduce what are significant interest rate and inflation risks, they consider they are effectively 'forced' buyers of gilts with low or negative real yields.

⁹ On a S179 basis, Purple Book 2013.



Figure 8 UK 10-year zero coupon nominal and real yields (%)



Source: Bank of England

34. As the demand for index-linked assets has risen, and the cost of de-risking using index-linked gilts has increased, pension schemes have been looking for alternatives to index-linked gilts, in particular for assets that provide some form of (ideally) inflation-linked cash flows over the long term, not necessarily to provide a pure balance sheet hedge.

Demand for alternative inflation-matching assets

35. We have seen that derivatives can offer a potential solution, but may not be suitable for all schemes. This begs the question of what other options are open to schemes. We asked our members which alternatives to index-linked gilts they had considered or invested in. We found schemes are looking at a range of alternative assets that might be able to offer them stable cash flow or and/or an element of inflation hedging. In particular 23% had invested in infrastructure and a further 18% had considered investing in it. 34% has invested in commercial real estate and 11% had considered it.







Source: NAPF Annual Survey 2013, base: 203 respondents

36. However, this is having very little impact on the overall weighted asset allocation to these classes. For example, despite the fact almost a quarter of respondents in 2013 stated they had invested in infrastructure, the overall level of investment only increased to 1.4% compared to 1.2% in 2012.

37. There are a number of potential reasons for this.

- Primarily, there is limited supply in some of these markets and accessibility can be difficult as appropriate investment vehicles are in their infancy in many cases. Consequently, liquidity can be poor making these assets better suited to long term 'buy and hold' strategies;
- Investment fees and associated costs can be high. Therefore, although the cash flow attributes of these asset classes make them attractive to schemes looking to better match liabilities, the costs are still a significant obstacle to actual investment; and
- There is limited transparency in the valuation of some of these assets, leading to volatility in the marked to market pricing required by pension schemes. Whilst the cash flow match might be attractive, DB schemes are averse to valuation volatility.
- 38. The issues of the supply of alternatives to index-linked gilts and what the ramifications are for future pension scheme investment are explored in more detail in the next section of this report.

Demand for inflation matching assets from the growing defined contribution market

- 39. We also considered the impact the potential growth in defined contribution (DC) pensions could have on demand, as the run-off of DB schemes is inextricably linked with the growth in the DC market.
- 40. It is extremely difficult to quantify the probable growth of the DC market in the UK. The ONS estimates the current size of the workplace DC market is £385.9bn (excluding personal pensions). In December 2012,



research from Spence Johnson identified £110bn of this applied to assets in the decumulation phase. Spence Johnson predicted the DC market would grow at over 11% pa compound from now on, implying it could triple in size in 10 years¹⁰. However even by 2023, they still predict the DB market will be significantly larger than the DC market.

41. Moreover, when we consider the average asset allocation of DC schemes it is clear they are still much more heavily invested in return-seeking assets than DB schemes. According to the Annual Survey 2013 default funds are still allocating over 70% to equities during the growth phase.



Figure 10: Asset allocation of the default fund during the growth phase and at retirement (weighted by scheme asset value)

Source: NAPF Annual Survey 2013, base: 115 respondents

- 42. Whilst there is likely to be some demand for inflation-linked assets from DC schemes towards retirement (approximately 17%), almost no pensioners (4%)¹¹ in the current climate opt for index-linked annuities due to the additional cost of indexation, and the preference for income sooner rather than later. Therefore, even allowing for the expected growth of the DC market as a consequence of automatic enrolment, its impact on the demand for index-linked gilts is likely to be much smaller than the demand from the DB market which is expected to continue to increase for at least 25 years.
- 43. In the Budget statement in March 2014, the Chancellor of the Exchequer announced a package of radical measures affecting the way in which pension income can be drawn from April 2015. The reform includes the ability for DC scheme members to have the option to take their whole pension pot as a lump sum, 25% of which will be tax free and the remaining 75% will be subject to marginal tax rates. There will no longer be a requirement for any pensioner to purchase an annuity.
- 44. The Government is currently consulting on these reforms. Clearly the change in the requirement to purchase an annuity could impact the demand for index-linked gilts from the insurance market, potentially increasing the proportion of the index-linked gilt market available to pension schemes. However, the

¹⁰ Broad Brush, Spence Johnson, December 2012

¹¹ Retirement choices: baseline to measure effectiveness of the code of conduct, ABI, May 2013



market impact is still extremely uncertain and it is beyond the scope of this research to draw any conclusions on the impact of this reform at the present time.

45. The Government has also recently put forward proposals for 'Defined Ambition'¹² pensions (DA) as an alternative to plain DC. DA would introduce an element of risk sharing between the employee and employer. If this leads to a return to pensions that have an element of guarantee attached to them, it may well have some impact on the demand for inflation-matching assets in the coming years. However, these proposals are also still in their infancy and the impact of DA on the index-linked gilt market will not be quantifiable for the foreseeable future.

The supply of matching assets

Index-linked gilts

- 46. There is little doubt the demand for inflation-matching assets from DB schemes will be increasing for many years in the future. But how far will the supply of suitable assets be able to satisfy that demand?
- 47. In Budget 2014, as the UK economy continued to improve, the net financing requirement fell slightly from £147bn in 2013/14 to £145bn in 2014/15, which is likely to be met through gilt issuance of £128.4bn, down from £153bn in the previous year, and an increase of £16.5bn in the stock of Treasury bills.
- 48. As we have discussed, the primary assets in use by DB schemes to hedge their liabilities are index-linked gilts (or related derivatives). The total gross market value of index-linked gilts in issuance was £373bn¹³ at the end of December 2013, representing around a quarter of the total of UK government bonds outstanding. Issuance of index-linked gilts was £39bn in 2011/12, £36bn in 2012/13 and 39bn in 2012/13, at a time when demand for index-linked gilts is on the increase¹⁴.
- 49. Figure 11 shows the projected size of the index-linked gilt market, compared to the expected change in supply over the next 30 years. We have projected the supply of index-linked gilts on the basis of of current planned issuance, plus expected further issuance based on debt growing proportionately with GDP (See Annex A).
- 50. According to our projections, the supply of the index-linked gilt market available to pension schemes is expected to be less than demand until around 2038. The downward pressure on index-linked gilt yields is therefore likely to last for a further 25 years.

¹² Reshaping workplace pensions for future generations, DWP, November 2013

¹³ DMO, quarterly review 31 December 2013

¹⁴ DMO gilt market issuance, 2014



Figure 11: Asset Projected supply of index-linked gilts¹⁵



- 51. Supply is particularly scarce at the long end of the curve. The Government had previously removed the maturity cap on gilt issuance which was set at approximately 50 years and there are now both conventional and index-linked gilts maturing in 2068. This move is welcome but the level of supply is nowhere near the level needed to satisfy demand from pension schemes.
- 52. One outcome of this imbalance between supply and demand is an inflation risk premium. By calculating the difference between the nominal yield on a fixed-rate gilt and the real yield on an inflation-linked gilt of similar maturity it is possible to estimate the market-implied rate of inflation over the life of the bonds, equating to the real payoff from the two types of bonds.
- 53. These 'break-even' inflation rates are often used as a proxy for investors' expectations of future inflation. The current breakeven inflation implied in index-linked gilt market is approximately 3.5%¹⁶. The Bank of England's target inflation rate is 2% (for CPI), suggesting that RPI would stand at around 3.00%. This implies an inflation risk premium of around 0.5% is currently priced into the (RPI) index-linked gilt market.
- 54. If the gap between issuance and demand widens further, then the inflation risk premium could increase, meaning schemes would be assuming an inflation rate at a rate above the actual level of inflation. This has implications for actuarial valuations, as trustees using breakeven values to derive their inflation expectations and calculate future liabilities will be arguably utilising very prudent assumptions that could artificially inflate scheme deficits, putting even further pressure on supply.
- 55. The other outcome, as we have already identified, is schemes are effectively forced holders of assets that are expected to offer a low or negative return over as much as 30 to 50 years.

¹⁵ Assumes 75 % of index-linked gilt market is available to pension schemes

 $^{^{\}rm 16}$ Based on the yield of 30 year conventional and index-linked gilt on 29 May 2014



- 56. With no indication that supply will be able to match this demand, the implication is, if schemes want to derisk, any delay will make the process even more costly. This could contribute to an unnecessary acceleration of the DB run-off as schemes compete for an ever more limited supply of index-linked gilts.
- 57. In our consideration of supply it is also worth noting index-linked gilts are currently issued with a link to RPI. However, in practice scheme liabilities are linked to mixture of liabilities based on RPI, CPI and LPI (RPI capped at 5%) as well as other mixes. In order to better match the link to inflation it is usual for a series of overlays to be applied to non-RPI linkages. The impact of this is there is not a one for one link to RPI-linked liabilities. Pension schemes would welcome a choice of index-linked gilts (ie including those based on CPI inflation) that allows them to match pension liabilities more exactly, provided this could be achieved whilst ensuring there was no negative impact on the functioning of the index-linked gilts market because of fragmentation.

Supply of inflation-linked alternatives

- 58. In the absence of sufficient index-linked gilt issuance, the availability of alternative investments becomes even more important. The Government has called for pension schemes to play a part in supporting the UK economy through infrastructure investment. In December 2013 the UK Government announced a new National Infrastructure Plan confirming over £375bn of public and private sector infrastructure investment opportunities.
- 59. Some progress has been made in making infrastructure more accessible to pension schemes. The Pensions Infrastructure Platform (PIP), a not-for-profit infrastructure fund has been launched. The project currently involves a group of the largest UK schemes as founding investors but the aim is it will ultimately make infrastructure more accessible to schemes of all sizes.
- 60. However, initiatives like the PIP are not yet available for other types of assets that have inflation-matching characteristics, so investment is likely to remain accessible only to a small number of the very largest schemes. Moreover, these assets are likely to be complementary to index-linked gilts, rather than a replacement for them. They are unlikely to be able to fill the gap created by insufficient index-linked gilt issuance.
- 61. Real estate has the potential to offer the supply of some relevant assets (for example long leases with fixed or inflation-related uplifts). In February 2013, the British Property Federation valued the size of the UK commercial real estate market at £820bn, of which £292bn is held by institutional investors. Banks are no longer lending in adequate amounts, which suggests a funding gap of £30bn to £40bn in the next five years. In contrast institutions only have very small exposure to the potential residential property market, owning £2.3bn out of a total of £4,224bn¹⁷.
- 62. However, many of the other alternatives offer significantly less potential. Social housing has attracted increased attention from pension schemes. In 2012, housing associations raised £4bn in the capital markets. This was four times the previous annual record but is still a drop in the ocean in terms of the demand for inflation-matching assets. Similarly, there is limited supply in the corporate inflation-linked market with utility providers in the UK being the only significant issuers. There is a small but limited supply

¹⁷ Investing in Residential Property. A British Property Federation guide for asset allocators, February 2013



of Private Finance Initiative bonds, which were used to finance the building of schools and hospitals, and similarly had inflation-linked cash flows.

- 63. Potential from ground rents is even more limited. It is estimated the total potential market for ground rents is limited to only a few hundred million each year, equivalent to 0.02% of the assets of UK pension schemes.
- 64. And, with all of these asset classes, trustees need to build the confidence and governance structure to invest in them. This means they will need to show evidence of a track record and be accessible to a wide variety of schemes, not just the largest.



Conclusion

- 65. The future is likely to be dominated by a continuing increase in liability hedging among DB schemes and the gap between supply and demand of index-linked gilts. If schemes are unable to access the assets they need to adequately meet their cash flows and hedge their liabilities, this is likely to expose scheme sponsors to increases in deficit volatility and put more pressure on them to support funding levels. We are calling for three immediate actions to help schemes and scheme sponsors navigate the DB run-off as smoothly as possible:
 - Increased issuance of index-linked gilts. The ideal solution for pension schemes would be higher levels of index-linked gilts issuance from the Government, allowing them to more accurately match their liabilities. Greater issuance, particularly in longer-dated gilts would assist schemes in managing the run-off in a way that limits the impact on investment markets and the cost to sponsoring employers.
 - Better availability of alternative inflation-matching assets. Industry and Government must work together to ensure the markets in these assets are developed to their full potential. This will involve packaging these assets in a way that offers an attractive inflation match, improving levels of supply and offering pricing and valuation that is transparent and reliable. Asset managers will need to carefully consider the cost of investment in these assets and ensure they remain value for money after investment costs are taken into account.
 - Development of a framework that allows for more flexible models of DB pensions provision. Some pressure may be taken off demand in this way, in particular the removal of the requirement to provide an index-linked pension in payment for future accruals.
- 66. As a matter for further consideration, we have identified there are undoubtedly additional **implications for small schemes** that have limited access to the illiquid markets of index-linked alternatives and are not making direct use of the derivatives market to de-risk their schemes? Careful thought will need to be given to how they can best be helped to take advantage of the options available to them.
- 67. There is no quick solution to the problem of securing member benefits in a market fundamentally lacking in the assets appropriate to guarantee those benefits are paid. If schemes are forced buyers of liability matching assets with low or negative real yields in order to achieve the desired reduction in volatility, sponsors will be called upon to fill any shortfall that can no longer be met through scheme investments Unless the supply of assets is addressed, and quickly, the costs of providing member benefits could continue to increase and cause even greater pressure on scheme sponsors, with potential ramifications for their investment plans, at a time when the Government is looking to businesses and pension schemes to support wider economic growth.



Annex A

Projected supply of index-linked gilts



Source: Towers Watson

Expected further issuance is based on debt growing proportionately with GDP. GDP is assumed to grow at 2%pa, and debt to shrink by 0.5%pa relative to GDP.



Glossary

Absolute return fund: A fund which seeks to make positive returns by employing investment management techniques that differ from traditional mutual funds, such as short selling, derivatives and leverage.

Buy-in: An insurance policy that covers benefits for a selection of pensioners.

Buyout: The transfer of scheme assets and liabilities to an insurer such that liability is completely removed from the scheme sponsor.

Commercial real estate: Property that is used solely for business purposes such as offices.

Derivative: A contract between two or more parties whose value is determined by fluctuations in an underlying asset.

Diversified growth fund (DGF): A diversified portfolio of investments that targets capital appreciation as its primary goal over the medium to long term.

Ground rent: rent paid under the terms of a lease by the owner of a building to the owner of the land on which it is built.

Hedge: Reducing the risk of adverse price movements in an asset by taking an offsetting position in a related security.

Infrastructure: Basic national physical systems such as transportation, communication, water and electricity.

Liability-driven investment: A form of investing where a scheme's liability profile is used as the benchmark and a portfolio of assets is constructed to try and minimise risk relative to those liabilities.

Swap: A derivative in which two counterparties exchange the cash flows on two financial instruments.



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