Trends in defined benefit asset allocation:

the changing shape of UK pension investment

July **2013**

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Executive Summary

The asset allocation of the UK's defined benefit (DB) pension funds is changing markedly. The evolving landscape for DB pensions that has been influenced by a combination of financial market performance, regulation, changes to accounting standards and increasing longevity has driven many schemes to de-risk and fundamentally rethink their investment strategies. With UK DB pension funds holding over £1 trillion in assets under management their investment strategies have important ramifications, not just for their corporate sponsors, but also for the wider economy and financial markets. Going forward, the growing assets under management of defined contribution (DC) pension funds will shift the balance in the investment landscape and throw up new challenges and opportunities for institutional investors.

This paper uses data from the NAPF Annual Survey to explore some of the underlying trends in the changing nature of pension scheme investment. Detailed asset allocation data for DB pension funds has been collected by the NAPF since 2005 and this report identifies some of the key trends and drivers in recent years. The DC landscape is rapidly evolving with the introduction of auto-enrolment and a renewed focus on investment strategies and default fund design. This is an area that will be covered in more detail in future Annual Surveys and NAPF research reports.

The NAPF Annual Survey 2012 included 217 fund members with one or more private sector DB schemes and a total of £531 billion DB assets under management. Unsurprisingly, the number of DB schemes either closed to new members but open to future accrual (55%) or closed to all members (31%)[1] had increased on the previous year, reflecting the pressures on corporate sponsors and the increased costs and burdens of running DB pensions.

Against this backdrop we are seeing a seismic shift in asset allocation by DB schemes, with the average weighted UK equity allocation of DB pension schemes in the Survey falling below 10% for the first time in 2012. In 2005 the average weighted UK equity allocation for DB schemes was 32%. The fall in DB schemes' overall holdings of equities (including UK equities) was similarly dramatic, falling from 61% in 2005 to 35% in 2012, and is likely to reflect both the drive to de-risk and the desire to diversify given recent financial market experience.

Drilling down into the data from the Annual Surveys we find that:

- The rapid pace of private sector DB scheme closures is exacerbating recent trends in asset allocation. Closed schemes now hold an average of 7% in UK equities compared to 13% in open schemes.
- Based purely on a static analysis, if schemes continue to close at this rapid pace then we estimate that DB schemes could shift a total of £31bn out of UK equities and towards other assets between now and 2020.[2]
- Pension funds are increasing their allocations to index-linked gilts and corporate bonds once schemes close to either new members or to both new members and future accrual. Closed schemes now hold 21% in index-linked gilts, compared to 8% for open schemes, and 19% in corporate bonds, compared to an average of 9% in open schemes.
- Similarly, by 2020 we estimate the extra demand for index-linked gilts could be an additional £70bn.
- Smaller schemes remain far more reliant on UK equities than the largest schemes. Half of equity holdings in the smallest schemes remained in UK equities in 2012, compared to a quarter in the very

[1] Private sector only, figures for private and 'other public sector' are 30% fully closed and 52% open to future accrual, 18% open to new members

[2] Based on total private sector DB pension assets of £1,084bn reported by PPF index in February 2013.

largest schemes.

- Allocations to 'other' assets such as property, infrastructure and hedge funds have increased as DB schemes search for alternative assets that can deliver attractive returns whilst providing a good match for liabilities or reducing exposure to risk.

What have been the driving forces behind these shifts, where is this all heading and what does this mean for pension funds as institutional investors? And what are the challenges for policymakers, regulators, the investment industry and schemes going forward?

These are all significant questions that the NAPF will be exploring over the coming months and we need your views. We will be running member seminars, surveys and discussion forums to get your insight into what these trends and developments mean. We will take this forward under 3 strategic themes:

- **The evolution of funding regulations and accounting standards and the impact on today's DB investment strategies** – How strong is the interaction between accounting standards and funding valuations, discount rate assumptions, schemes' investment strategies and their desire to hedge liability movements? To what extent is the regulatory landscape pushing schemes away from more traditional growth assets and other higher risk/return strategies and how does this vary across different groups? Will the Pension Regulator's new statutory objective have any noticeable impact here?

- **Navigating the DB 'run-off' and the future demand for different asset classes** – Will the demand for gilts from DB schemes rise ever higher as more schemes look to de-risk? What would the impact of rising demand be on prices and yields and how does this interact with the DMO's gilt issuance policy and the Bank of England's monetary policy? Do schemes have sufficient access to other assets that allow them to hedge and de-risk and how constrained will they be going forward as more schemes mature? How does this interact with the anticipated growth in the DC market and likely investment strategies and asset allocation in a world of auto-enrolment?

- **The role of pension funds as institutional investors and the stewardship of the economy** – What impact will DB schemes' falling asset allocation to UK equities have on the mechanisms of corporate control and accountability through the UK equity markets and the long-term competitive performance of UK businesses? How prominent a role might larger DC schemes play in future as institutional investors and equity owners in the UK market? Pension funds as institutional investors are in a position to exert significant influence over the assets in which they invest. However the standards of governance in individual schemes will unavoidably affect the degree to which they are fully engaged with their investments.

Recent trends in the asset allocation of DB pension schemes

Fifty years ago, funded DB pension schemes in the UK generally invested in a straightforward mix of UK equities and bonds. According to UBS, in 1962 the average funded pension scheme (private and public sector) held 47% of its assets in UK equities and 51% in UK fixed income[3]. The allocation to UK equities hovered around 50% until as recently as 2000 although the UK fixed income allocation fell consistently throughout the 60s, 70s and 80s, dropping as low as 7% in 1993. This took place as funds were diversifying their investment portfolios, initially into real estate and later into overseas assets, almost entirely comprised of overseas equities.

In recent years, fixed income assets have returned to favour. However, although equities and bonds remain the main drivers of UK pension fund returns, there is a growing emphasis on a far more diversified range of asset classes and sub classes, as has been evidenced by the growth in total "other" assets over the last decade.

Figure 1: Asset allocation of the average pension fund according to UBS Pension Fund Indicators 2012

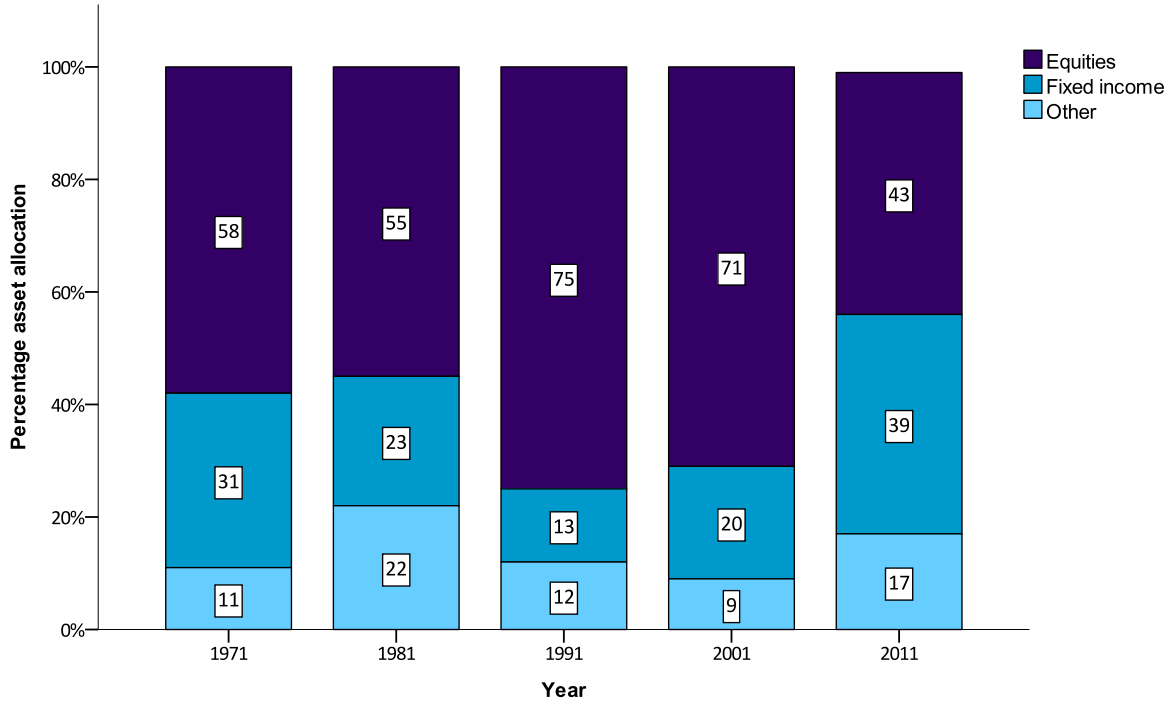


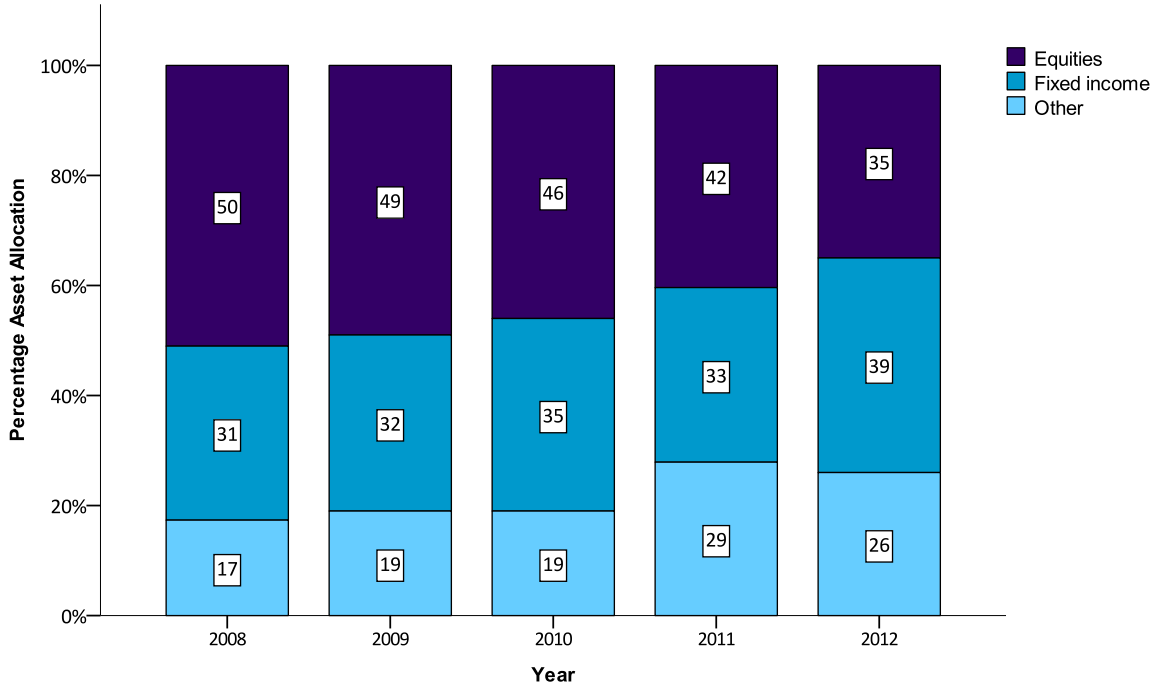
Figure 2 shows that, in 2008, DB schemes still held half of their assets in equities but this had fallen dramatically to 35% by 2012. Over the same period, the allocation to fixed income products increased by more than a quarter, from 31% to 39%. Allocation to 'other' categories, which includes asset classes such as hedge funds, property, private equity and infrastructure among others, had increased from 17% to 26%.

These changes will be influenced by two factors. Firstly, a fund may decide to actively sell one asset class, such as equities, in favour of another. Secondly, asset values will fluctuate to reflect movements in market prices. If investors chose to move money away from equities, while at the same time equity prices were rising faster

[3] UBS, Pension Fund Indicators 2012, figures quoted based on funded private and public sector self-administered occupational pensions, including LGPS. Allocations may therefore differ significantly from the holdings reported by NAPF fund members responding to the NAPF Annual Survey 2012 as illustrated in subsequent figures

than other asset classes, the share of investment in equity could stay the same or even increase, even though investors were shifting their allocations away from equities. In practice over the long term, as market prices naturally fluctuate up and down, active re-allocation and diversification to other assets is likely to be the dominant factor.

Figure 2: Asset allocation of Private and 'Other Public Sector' DB pension schemes 2008-2012 (weighted by size of scheme)[4]



Since 2008 we have seen the number of DB schemes closing to either new members or to future accrual continue to increase. The NAPF Annual Survey 2012 indicated that there had been the largest annual rate of fall in open schemes since comparable records began in 2005. The acceleration in closures is particularly evident amongst private sector schemes (excluding those classified as 'other public sector') where only 13% of schemes are now open to new members.

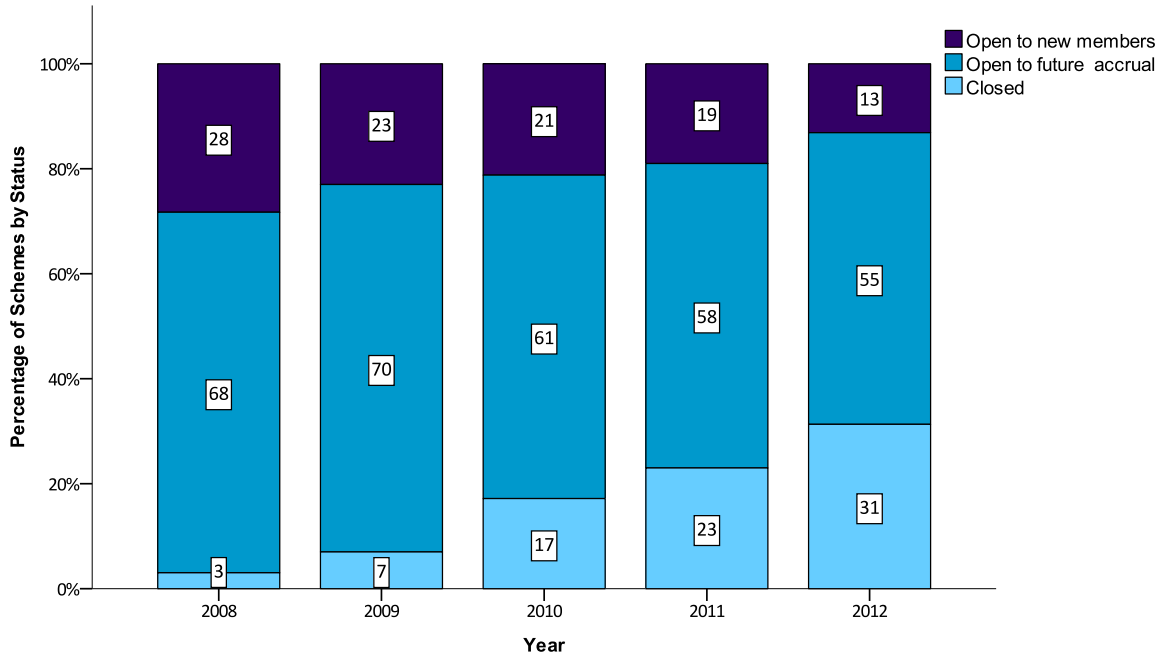
This is important as private sector schemes hold over 98% of the assets held by funded DB schemes responding to the NAPF Survey in 2012, excluding the Local Government Pension Scheme (LGPS). Their behaviour is therefore likely to dominate the changes in the overall weighted asset allocation of DB schemes.

The LGPS has also shown a reduction in equity allocation but the change has been much more gradual and started from a significantly higher base. Between 2000 and 2010 the equity allocation in the LGPS fell from 65% to 55%. However, LGPS funds are maturing rapidly, a new scheme is starting in 2014 and contracting out will be abolished from 2016. These factors are expected to lead to increases in scheme deficits in the 2013 round of valuations amid a backdrop of increasing liabilities and rising longevity. It is therefore entirely possible that local authority funds could begin to invest in a manner more akin to their private sector counterparts in the coming years.[5]

[4] Excludes Local Government Pension Scheme (LGPS)

[5] "Local Government Pension Scheme 2013: investing in a changing world" NAPF, May 2013

Figure 3: Private Sector DB Scheme status 2008-2012



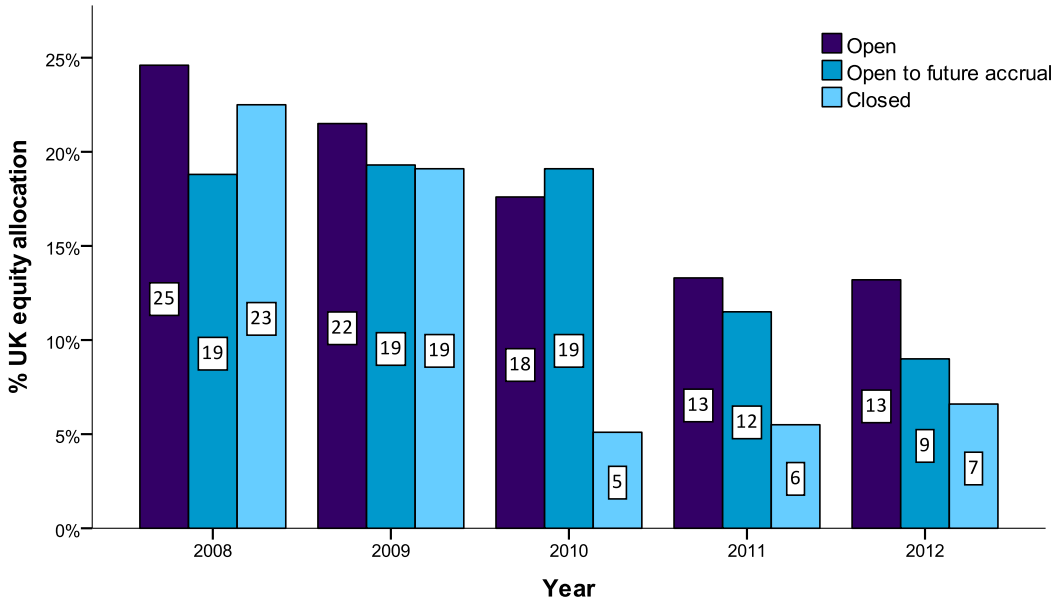
So, drilling down further into asset allocation and status of private sector schemes, why is it that schemes have seen such rapid reductions in their allocations to equities? It could be that they are generally looking to de-risk because of volatility from valuations and associated pressures on their funding levels. However, if we analyse how average asset allocations have been diverging for open and closed schemes since 2008, a much clearer picture emerges.

As Figure 3 shows, the number of closed schemes in 2008 and 2009 is very small so the figures for these years should be treated with some caution. However, data for these years have been included in Figure 4 below because they show a very large drop in UK equity allocation for closed schemes after 2009 (falling from 19% to 5% in a year). This may indicate that the first tranche of schemes to close had not initially given full consideration to the changes in investment strategy that would be required by the changing maturity of their scheme and may have also been triggered to rapidly shift out of UK equities as a result of instability in the financial markets in 2008 and 2009.

"We have increased the allocation to liability matching assets as the scheme profile matured to reduce the volatility of the deficit." DB pension scheme closed to new entrants

"We have allocated more to fixed income type assets and will continue to do so as our closed scheme matures and the number of active members reduces." DB scheme closed to new entrants

Figure 4: UK equity allocation by DB scheme status 2008 - 2012



Schemes have reduced their allocation to UK equities across the board, reflecting changes in the underlying benchmark indices. The average DB scheme in the Annual Survey 2012 held 9.9% in UK equities, compared to 9.0% in the MSCI World All Cap Index[6]. Since the 1970s, institutional investors, including pension funds, have increasingly looked to diversify their portfolios internationally and multinational organisations have progressively listed their shares on overseas exchanges in the search for new capital and more exposure. However, what is especially interesting about the Survey results is that the reduction in UK equity allocation has been far more marked among closed DB schemes than among schemes that have remained open to new members. In 2008 fully open schemes had an average allocation to UK equities of 25%. By 2012 that had reduced to 13%. The allocation to UK equities also fell in fully closed schemes, from 23% in 2008 to 7% in 2012. So the rapid increase in the number of closed schemes, combined with their lower UK equity allocation, is exacerbating the more general diversification away from UK equities. If schemes continue to close at a similar pace to that exhibited in 2012 then, based on a static analysis, we estimate a further £31bn could move out of UK equities by 2020.

Bearing in mind that the abolition of contracting-out in April 2016 as part of the state pension reforms will prompt employers to review their DB schemes, there is a risk that, if not carefully managed, we will see a further acceleration in scheme closures which could further reinforce these trends.

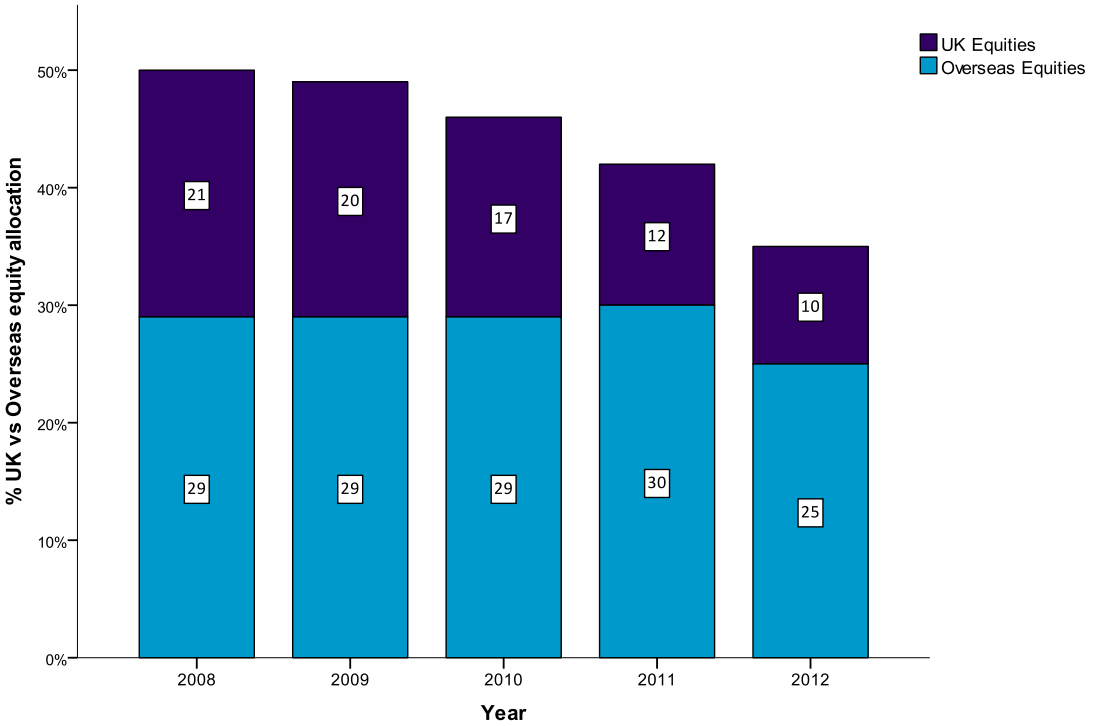
Data from the ONS are supportive of this trend. This year, the ONS reported that only 5% of the FTSE 100 index is now owned by pension schemes (including local authority public and private sector),[7] down from 13% in 2008. Although there were some signs of a return of risk appetite in 2012 they were not enough to outweigh the impact of smaller equity allocations from the increasing number of closed schemes.

The importance of overseas equity holdings in the overall equity portfolio is also altering over time. We have seen that in 2008 the average equity allocation of a DB scheme (excluding LGPS) was 50%. By 2012 it had fallen to 35%. During that period the UK equity holding fell from 21% to 10% and the overseas equity holding

6 MSCI World All Cap Index factsheet March 29 2013
[7] ONS data now include pooled pension funds managed by insurance companies

fell from 29% to 25%. We can see from Figure 5 that schemes have moved out of UK equities much faster than they have overseas equities.

Figure 5: The importance of UK equity allocations as a proportion of total DB equity allocation



When we consider where closed schemes' assets are increasingly invested we find that they have, not surprisingly, opted to move into lower risk assets. Closed schemes have significantly higher allocations to both index-linked gilts and corporate bonds. In fact, on average they are now investing 13% more than fully open schemes in index-linked gilts (21% compared to 8%) and pension schemes overall held around 40% of the index-linked gilt market at the end of 2011[8]. UK DB pension schemes are dependent on holding index-linked gilts to hedge their long-term liabilities. It was therefore welcome that the Bank of England did not purchase index-linked gilts as part of its Quantitative Easing programme. As schemes mature they are likely to need even more index-linked gilts to hedge their risk, further fuelling already strong demand.

So, asset allocations are moving towards index-linked gilts and corporate bonds once schemes close to either new members or to both new members and future accrual. Closed schemes now hold 21% of their assets in index-linked gilts compared to 8% for open schemes and 19% in corporate bonds compared to an average of 9% in open schemes. Again, based on a purely static analysis and current observed rates of closures, by 2020 this could generate demand for an extra £70bn in index-linked gilts[9] from DB schemes.

These differences in asset allocations are relevant when considering that the majority of schemes currently discount their future liabilities for the purpose of triennial scheme valuations on the basis of a conventional gilts plus approach and that they perceive the Pensions Regulator (TPR) to have a strong preference for this relatively risk-free approach for all schemes.

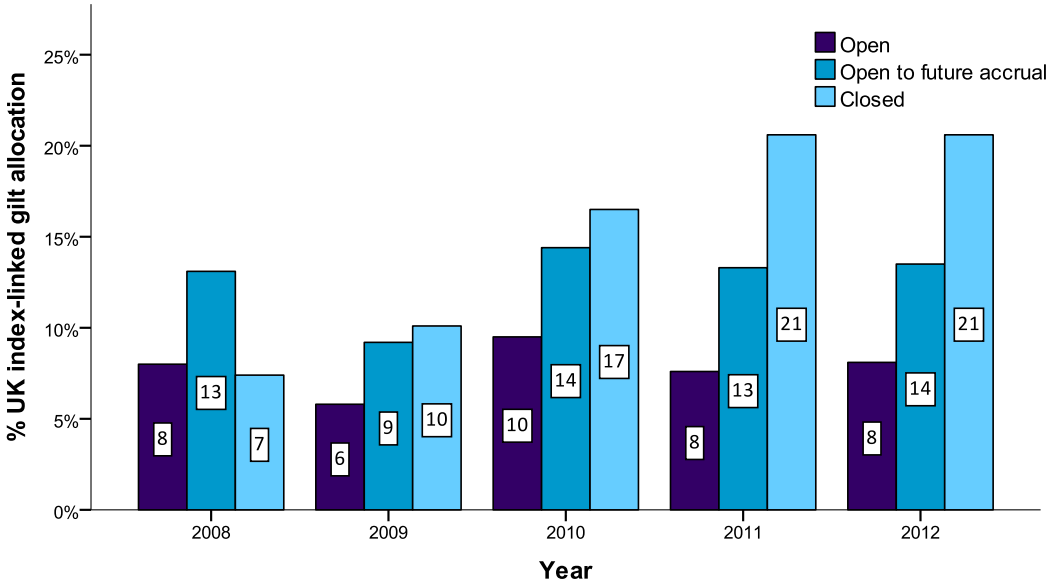
[8] ONS MQ5 tables and DMO tables 'Historical data on the gilt portfolio'. Based on Self-administered pension funds (primarily private funded DB schemes, including the LGPS)

[9] This interim figure assumes that scheme closures will be equally distributed among schemes of different sizes and therefore there will be no distorting impact on the overall weighted equity allocation. In practice this may not occur, for instance larger schemes may stay open longer.

As we have seen, schemes have very different asset allocations depending on their scheme specific characteristics. Applying a discount rate that is strongly pegged to currently low gilt yields is likely to be less appropriate for those schemes with a more diverse asset allocation who are more heavily invested in return seeking assets.

TPR's annual funding statement published in May 2013[10] put more emphasis on the flexibilities open to pension schemes grappling with the very low gilt yields resulting from the weak economy and quantitative easing. This, together with new statutory objective for TPR to "minimise any adverse impact on the sustainable growth of an employer" should help schemes to agree a discount rate most appropriate to their scheme specific requirements.

Figure 6: Allocation to UK Index-linked gilts by DB scheme status

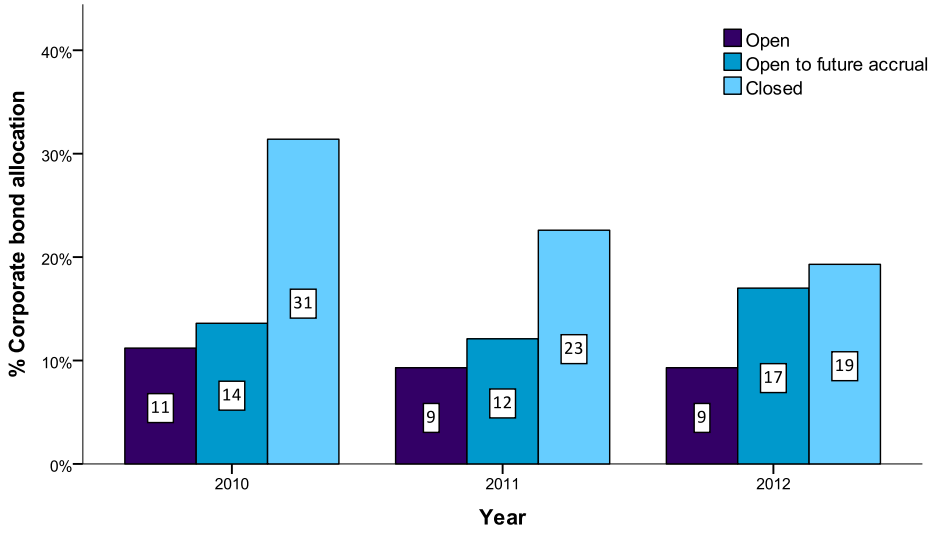


Fully closed schemes also hold much larger allocations to corporate bonds than open schemes (19% versus 9%), although at the same time have seen their allocations to corporate bonds fall rapidly from 31% in 2010 to 19% in 2012. This is consistent with the concept that closed schemes have continued to move into inflation matching assets at a faster pace than open schemes.

But de-risking comes with associated costs with gilt yields at historically low levels. The average weighted index-linked gilt allocation of schemes that reported being fully funded increased from 14% in 2010 to 24% in 2012. Schemes with funding levels below 80% held 13% in 2012 compared to 12% in 2010. So, although we have seen a general move towards portfolio de-risking, using index-linked gilts for this purpose is not a luxury open to all schemes and where prices of index-linked gilts have increased some schemes will have benefited from a first mover advantage. This is contributing to the increasing interest in assets that offer similar inflation proofing attributes at a more attractive cost.

[10] Defined Benefit Annual Funding Statement, TPR, May 2013

Figure 7: Allocation to corporate bonds by DB scheme status[11]

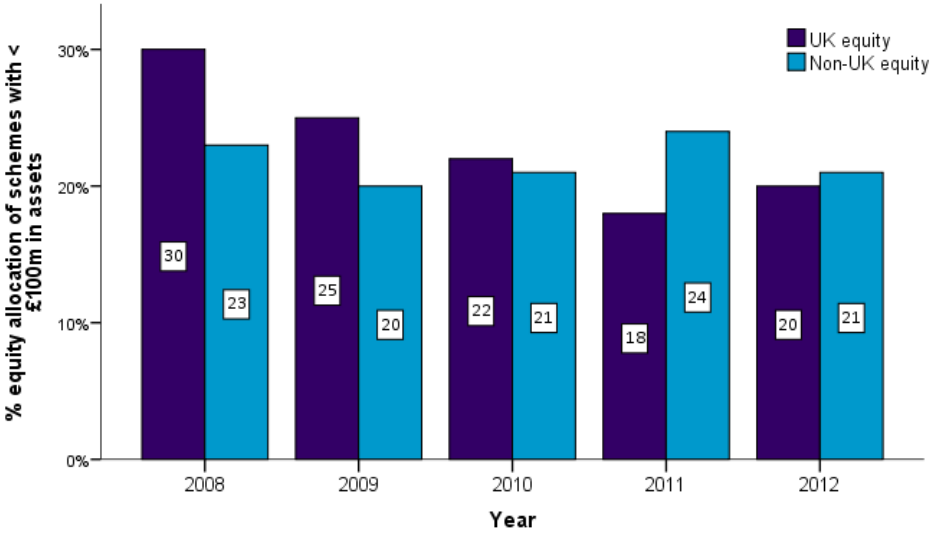


Without legislative or regulatory change it seems likely that the trend in DB scheme closures to new members or future accrual is likely to continue. The demand for other assets which allow schemes to hedge their liabilities, or provide them with an attractive risk/return profile compared to the very low real returns on index-linked gilts, is therefore likely to continue to grow.

Differences in allocation according to scheme size

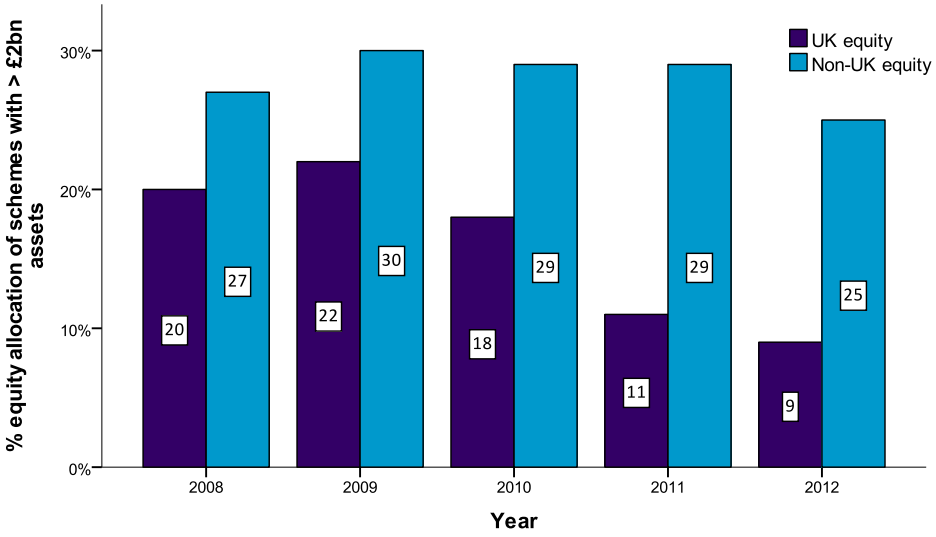
There are notable differences in the approach taken to equity allocations between the smallest and largest schemes. Figures 8a and 8b show that equity allocations have decreased across the board but that the smaller schemes have been much slower to shift away from UK equities. They are therefore more reliant on the domestic financial markets and the health of UK domiciled companies to deliver returns. UK equities still represent half of the total equity allocation of the smallest schemes whereas the largest schemes have only around a quarter of their equity allocation in the UK.

Figure 8a: Equity allocation for DB schemes with less than £100m in assets



[11] 2008 and 2009 have been omitted from this chart as the absolute number of closed schemes invested in corporate bonds was too small for analytical purposes (16)

Figure 8b: Equity allocation for DB schemes with over £2bn in assets



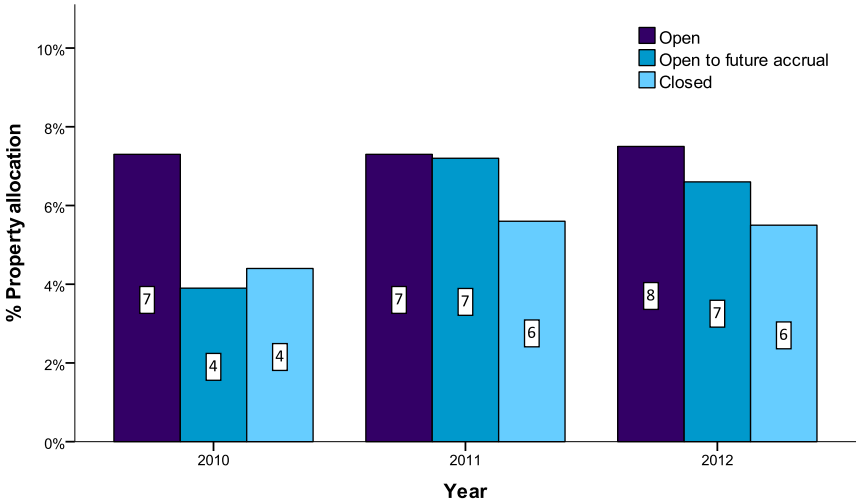
A similar phenomenon is observed when the data are examined by size of employer. Schemes whose sponsoring employer has fewer than 1000 employees hold around half of their overall equity holding in UK equities (21% out of a total of 43%). Schemes with the largest sponsoring employers, those with over 10,000 employees, hold only 10% in UK equities or around a quarter of their total of 36% equity allocation

Asset allocation differences among smaller asset classes

With returns on the more traditional assets disappointing in recent years and with index-linked gilt yields still at record lows, schemes are increasingly looking at assets that can offer similar attributes but with a better prospect of a strong return. 68% of DB schemes (excluding LGPS) responding to the 2012 Survey told us they were invested in property, 32% were invested in hedge funds and 23% were invested in private equity or venture capital. The proportion of schemes investing in less conventional assets such as insurance policies, commodities, short term investments and active currency had also increased in recent years.

"We have diversified away from equities as and when we identify, and are comfortable with, asset classes and managers that we believe can deliver the returns we seek whilst reducing V@R." DB pension scheme closed to new entrants and future accrual

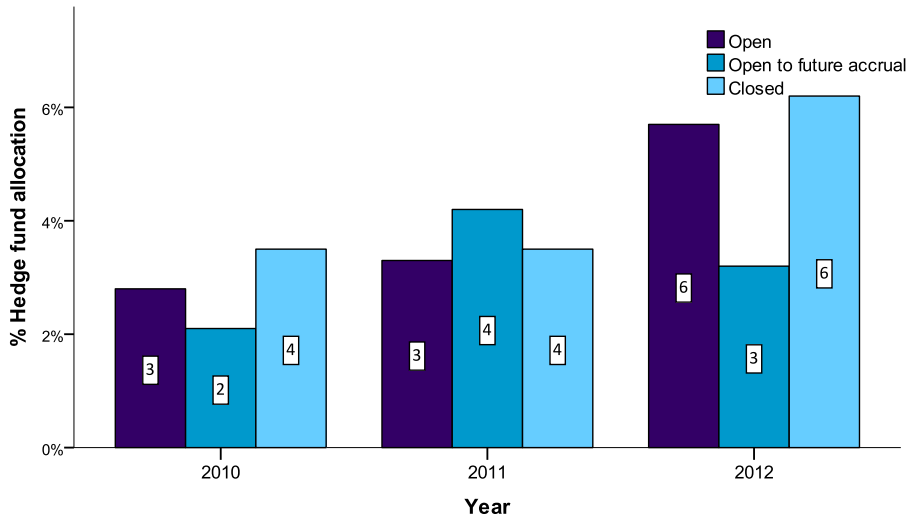
Figure 9: Allocation to property by DB scheme status[12],



The allocation to property in open DB schemes has increased slightly in the last 3 years. The overall weighted allocation[13] to property has risen from 5% in 2010 to 7% in 2012. Open DB schemes have a higher than average allocation to property than closed schemes. This may reflect the longer term nature of liabilities in open schemes compared to their closed counterparts.

The allocation to hedge funds has increased among closed schemes but the most notable increase has been from open schemes. 57%[14] of global assets managed by hedge funds are now managed on behalf of institutional investors including pension schemes and insurance companies rather than the high net worth individuals that were originally hedge fund customers. [15] The attraction of hedge funds to pension schemes of all types may be because there is no 'one size fits all' approach. Hedge funds may be used by schemes for return enhancement, diversification or downside risk protection.

Figure 10: Allocation to hedge funds by schemes status

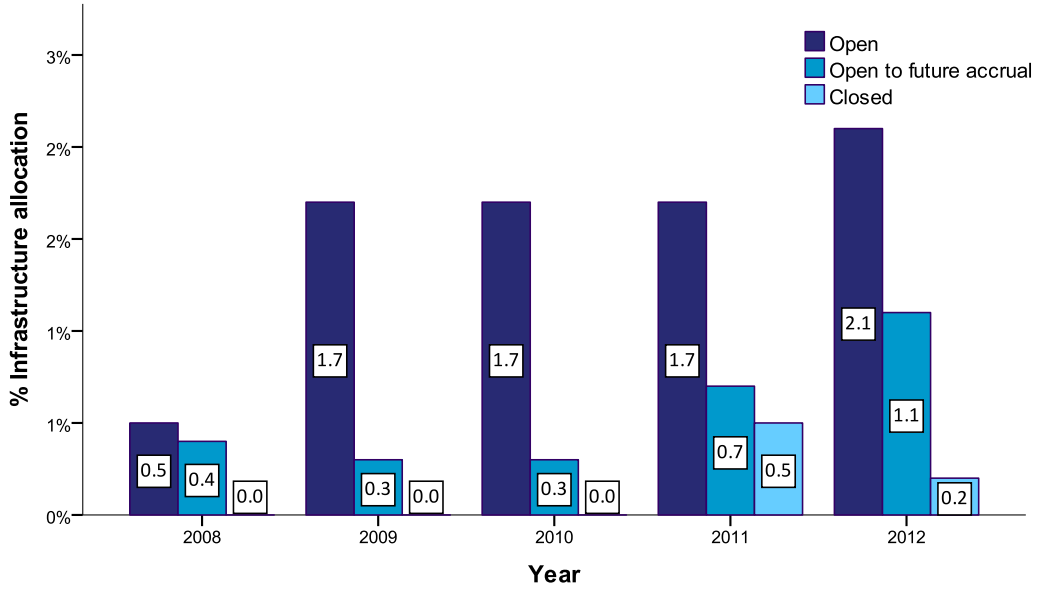


[12] Figures in this section exclude 2008 and 2009 due to the small number of schemes invested in these asset classes in those years
[13] Sum of allocation multiplied by scheme size expressed as a % of total assets
[14] KPMG survey 2012
[15] Note that the overall allocation to hedge funds reported in the Annual Survey fell slightly between 2011 and 2012 as the largest group of schemes, (those closed to new members) allocated less than reported in previous years.

"Hedge funds offer us diversification, lower volatility and equity-like returns." DB pension scheme closed to new entrants

"We appreciate the lower volatility provided by hedge funds compared to our equity allocation." DB pension scheme closed to new entrants.

Figure 11: Allocation to infrastructure by scheme status[16]



Infrastructure is also proving attractive to schemes open to either new members or still open at least to future accrual. The long term nature of the liabilities of these schemes makes infrastructure an attractive investment but accessibility has proved a problem in the past, particularly for smaller schemes. The pensions' industry is currently developing the Pensions Infrastructure Platform, (PIP Limited). A number of the UK's largest pension funds have already agreed to become founding investors. They include the BAE Systems Pension Funds, BT Pension Scheme, Pension Protection Fund, The Railways Pension Scheme, Strathclyde Pension Fund, and West Midlands Pension Fund. This platform could help to open up infrastructure to a wider range of pension schemes in the coming years.

"We have made an investment in infrastructure. The problem for a small funds such as ours is to find an appropriate vehicle in which to invest." DB pension scheme open to new members.

"Infrastructure provides us with an income stream that we can use alongside contributions to meet our cashflows." DB pension scheme closed to new entrants but open to future accrual.

[16] Figures are reported to 1 decimal place for clarity as the absolute levels of allocation to infrastructure are low.

What might the future have in store for pension schemes and their investments?

This deeper analysis of the Annual Survey results has highlighted the very rapid shifts we have seen in DB schemes' asset allocations in recent years and how they have varied by different groups of schemes.

The significant movements away from traditional growth assets like equities, and particularly UK equities, combined with the increasing pressures on closed and mature schemes to look to fully hedge against movements in liabilities, is changing the role of DB pension schemes as institutional investors and the ways in which they interact with the wider economy.

Challenges on the near horizon, including the uncertain outlook for economic growth and inflation and the threat of further QE, and the abolition of contracting out for DB schemes which could cause some employers to review and close their DB schemes, will all have an impact going forward. Meanwhile the suspension of the European Commission's plans to impose Solvency II style funding requirements on occupational pension schemes is welcome respite but may not be permanently put to bed.

Against that backdrop, we have identified 3 key areas where we will need to place ever greater focus to understand the new pressures and challenges facing DB schemes, the interaction of DB schemes with the wider economic and regulatory environment, and the changing drivers and influence across the DB and DC landscapes. Those key areas are:

1) **The evolution of funding regulations and accounting standards and the impact on DB investment strategies**

- How strong is the interaction between accounting standards and funding valuations, discount rate assumptions and schemes' investment strategies and desire to hedge liability movements?
- To what extent is the regulatory landscape in the UK pushing schemes away from more traditional growth assets and other higher risk/return strategies and how does this vary across different groups?

2) **Navigating the DB 'run-off' and the demand for different asset classes**

- Will the demand for gilts from DB schemes rise ever higher as more schemes look to de-risk?
- What would the impact of rising demand have on prices and yields and how does this interact with the DMO's gilt issuance policy and the Bank of England's monetary policy?
- Do schemes have sufficient access to other assets that allow them to hedge and de-risk and how constrained will they be going forward as more schemes mature?
- How does this interact with the growth in the DC market and likely investment strategies and asset allocation under auto-enrolment?

Looking further ahead, the Government has made it clear that it wants to ensure that UK equity markets continue to operate to the benefit of both companies and investors. It therefore asked Professor Kay last year to review the effect of UK equity markets on the competitiveness of UK business. The final report[17] found that "Increased fragmentation, driven by the diminishing share of large UK insurance companies and pension funds and by the globalisation of financial markets has led to increased foreign shareholding. This fragmentation has reduced the incentives for engagement and the level of control enjoyed by each shareholder."

[17] The Kay review of UK equity markets and long-term decision making. July 2012

With UK DB holdings in UK equities falling from 21% in 2008 to 10% in 2012, over 40% of UK quoted shares are now owned by investors from outside the UK[18]. This could have significant consequences for the level of engagement companies can expect from their shareholders and the consequent stewardship of UK companies. DC scheme respondents to the 2012 Survey told us that they held large equity allocations in their default fund during the growth phase falling to near zero by retirement age. The allocation of DC schemes will become increasingly influential as auto-enrolment is phased in. We will therefore need to ensure that the importance of good corporate governance and effective stewardship is understood by the DC market in order that scheme beneficiaries are adequately protected and equity markets give sufficient encouragement to boards to focus on the long term development of their business. The prospect of better managed companies mitigating investment risk and consequently providing better investment returns could play a key role in motivating both schemes and investment managers to insist on high standards of stewardship and governance.[19]

3) The role of pension funds as institutional investors and the stewardship of the economy

- What impact will DB schemes' falling asset allocation to UK equities have on the mechanisms of corporate control and accountability through the UK equity markets and the long-term competitive performance of UK businesses?
- How prominent a role might larger DC schemes play in future as institutional investors and equity owners in the UK market?

These are all areas where policymakers and regulators will need to be increasingly live to the investment implications of their actions. Further DB scheme closures and regulatory pressures will only serve to exacerbate these trends.

We need your views. Over the next year we will be running a series of industry working groups, along with member seminars, surveys and discussion forums to build greater insight into what these trends and developments mean and the challenges and opportunities on the horizon. We will also be building a more detailed understanding of individual asset classes for the benefit of trustees and others through our new Investment Insight series.

[18] ONS, ownership of UK quoted shares 2010
[19] Responsible Investment Guide 2013, NAPF

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