



## **A Response to the**

Department of Work and Pensions

## **Risk Sharing Consultation**

*Organisms inherently understand that there is risk in life. The idea that we can eliminate these risks would be selected against quickly in the natural world since any organism that tried to do so would not have enough resources left for reproduction, or feeding itself.*

Raphael D. Sagarin  
Duke University





## **A formal response to the DWP Risk Sharing Consultation**

By now it should be obvious to any impartial observer that the extent of regulation of UK defined benefit pension schemes is disproportionate to any market failure which might justify regulation in the first place; UK pension regulation is complex, often ineffectual, occasionally counterproductive and in general very costly. Against that background deregulation would, in general, be a welcome development.

As pension benefits are a (usually minor) part of the labour contract between employer and employee, it is surprising that analysis of the incentives and risks in this labour market context is absent.

The decline of defined benefit pension schemes in the UK is overwhelmingly rooted in its increased cost of provision. The incentives for a corporate sponsor to offer DB rather than DC are now very small relative to the risks which are assumed under DB. It is disappointing then that the paper does not examine the incentives together with risks, a cost benefit analysis. Some discussion also of the type I and type II error consequence in this analysis would be appropriate.

The consultation paper asserts that steps have been taken to restore confidence and security and cites the creation of the PPF as one example. This fails to recognise that in order to be credible a signal must be costly to the sender. The PPF is financed by levies on other pension schemes, so rather than protecting pensioners it actually inflicts the costs of particular failures upon other pensioners and their corporate sponsors. In this regard the fact that it only covers by PPF calculation 83% of promised benefits and 20% of schemes' risk is welcome.

The consultation's analysis of the risks faced by pension schemes and their costs to sponsors is badly flawed in that it fails to recognise that the primary risk for a scheme member is sponsor insolvency. Unless or until that event occurs, pensions must be paid in full. The central thrust of regulation has in fact been on the consequence post insolvency with such features as scheme funding or deficits dominant concerns; this is both inefficient and costly for schemes individually and collectively. Moreover in many situations it is explicitly counter-productive.

The event of insolvency does create a genuine corporate finance problem. Prior to insolvency funding to 100% of the actuarial best estimate of liabilities is sufficient. However post insolvency the orphaned scheme is faced by many uncertainties until its liabilities have run off, and that requires funding to well above that level. It is only equitable that the post abandonment or insolvency debt on the employer should take this reference level; however there are unresolved questions here of equity with respect to other creditors. This problem is well resolved by indemnity assurance, such as that offered by BrightonRock.



There is actually a strong case for the compulsory third party indemnity assurance of all pension schemes in which risk is transferred or shared among members and sponsor. Such arrangements would also permit a massive deregulation of pensions, while maintaining member security.

The consultation on many occasions fails to distinguish between risk and error. Risk diversifies while errors add. Risk sharing, risk pooling and risk transfer may all result in cost savings, but this is not true for errors. This confusion may prove particularly costly if “prudent” valuations are adopted.

Risk sharing would in common usage imply that a scheme member might also participate in gains, but each of the proposals in this consultation results only in lower benefits, participation in losses but not gains.

There are, in principle, two routes by which risk sharing of the form discussed might be achieved. The first may be described as promise high benefits with the explicit possibility that upon a contingency occurring lower may be paid. The risk sharing here has the form of a put option written to the employer by members. The second has the design promise low but upon a contingency occurrence pay higher, this has the form of a call option in the hands of the scheme members. The second is superior to the first in a number of regards, but only the first is considered.

It is frankly unlikely that these proposals will do much to slow or reverse the decline of DB provision. However it is undoubtedly true that DB provision with correctly designed risk sharing can achieve those objectives while remaining affordable.

The notes which follow elaborate on many of these points. The use of italics and paragraphs numbering are references to the consultation paper. For ease of further reference we would recommend having the original consultation paper to hand. The notes also contain explicit responses to many of the questions posed in the consultation paper. If anything in this response is unclear or requires further explanation, please feel free to contact me.

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## Notes and other Commentary:

### Chapter 1: Introduction

1. *Given that we have protected scheme members and are bringing in measures to combat undersaving, should we undertake a far-reaching deregulation of the way risks are shared in pension schemes?*

The combination of actions introduced in recent times has not served to protect members; it has merely created a public relations illusion of doing so. The consultation paper makes much of the concept of restoring confidence and security – Government actions have overwhelmingly not been consistent with this objective. Nor have they been consistent with an objective of maintaining ongoing provision of good quality pensions.

The removal of the “surplus” in the case of the Mineworkers’ Pension Scheme and the British Coal Staff Superannuation Scheme also sends signals which conflict with the ambition of restoring confidence; this is an action which is severely constrained by regulation for the private sector, with the actuarial basis used for the calculation unavailable to it because of the accounting standards and regulation in effect.

If Government had wished to instil confidence, its signals to scheme members in order to be credible would have had to be costly to it. However the signals with respect to the FAS were overwhelmingly that Government would not incur costs. The costs of the tPR and PPF are by design expressly borne by schemes. Perhaps more startling examples of contra-indication are the treatment of advanced corporation tax and the contracted-out rebate.

The effect of new regulation has been to raise markedly the costs of provision of DB pensions; the extent of this cost increase may be gauged by consideration of the near doubling of scheme administration expenses as a proportion of pensions in payment over the last 20 years. The PPF arrangements suffer from many fundamental design flaws, but the principal consideration here is that the costs of sponsor failure fall upon the members of other schemes and their sponsors. Members in aggregate cannot be described as having been protected. The so-called PPF solution is in fact no more than a mechanism to defer the problem.

There are a number of fundamental errors in the consultation paper which distort the subsequent analysis. Increasing the costs of pension provision does not increase pension security per se. The primary risk event for DB pensions is sponsor insolvency and increasing the sponsor cost of pension provision by ex post variations in regulations actually increases the likelihood of sponsor insolvency. This decreases pension security for any set level of scheme funding; funding is the determinant of the consequence of insolvency for a scheme.



Sponsor insolvency is the primary risk for DB pensions because it is the only way that members may receive benefits less than set out in the Trust Deed & Rules of the scheme. This is the risk that is strategic and inherent in DB provision in the UK; all other risks (funding level, asset allocation, longevity and so on) are operational. With the operational risks however they arise, however they are quantified, and however they are managed the membership will still receive full benefits. Put another way, the only risk that matters from a policy perspective is one that actually lies outside the pension scheme. All risks that lie inside the pension scheme, the operational risks, are of secondary importance.

Any action which reduces the uncertainty of the expected value of a pension liability raises its cost to the sponsor and also serves to increase the likelihood of sponsor insolvency. Many of the regulatory implementation actions have been arbitrary and costly in consequence. It is, by way of illustration here, trivial to show that the significance of a scheme deficit varies with the level of the discount rate under which it was derived. In plain English, the term under which scheme specific funding plans make good deficits, should vary with the level of interest rates; when rates are low, the term to make good deficits should be longest.

The consequence of frequent “make-good” or special contributions is a far higher cost to the sponsor than is efficient; these special contributions and excess costs are also costly to the population at large in that they reduce corporate tax receipts. The tax cost of these special contributions, at several billion pounds per year, has been material in recent years to other tax-payers and is socially inequitable. This cost has been far higher than the costs of scheme failures; regulation has failed to pass the primary test justifying its introduction: that the costs should be less than the costs of the market failure they addressed.

The consultation paper is entitled “Risk Sharing”. In ordinary usage this would imply participation in the gains and losses associated with the unavoidable uncertainties, but the proposals discussed offer no participation in any upside to pension members; they are exclusively devices to transfer risk and costs to members. They are fundamentally inconsistent with the concept of enhancing member security.

Risk sharing and risk pooling arrangements are intrinsically beneficial aspects in the design of pension provision; properly constructed they can increase the quality of the pension while maintaining affordability.

To answer the question:

**1      *Should we undertake a far-reaching deregulation of the way risks are shared in pension schemes?***

Yes, but in true Irish tradition this is a very poor place from which to start, particularly as the word risk here has a disconcerting flexibility of meaning.



## Chapter 2: The decline in defined benefit provision

### 2 *Are you aware of any additional evidence of the impact on pension outcomes of lower contributions into DC schemes when all these complicating factors are taken into account?*

The consultation paper correctly notes that employer DC contributions are typically lower than DB contributions. *Ceteris paribus*, the costs of DB provision would have to exceed the costs of DC to outweigh this contribution difference.

While it is evident that regulation raises the cost of DB provision by more than DC, for regulation to increase costs to such an extent would carry perverse implications for the regulation of DB. It would imply that the collectivisation of risk and participation of an external party, the sponsor, in risk sharing has increased risk absolutely.

The paper states: “*It is important to note that in economic terms, one is not better than the other.*” This is untrue. In DC all risk is borne by the employee; it is little more than a tax-incentivised savings scheme. In DB there are complex risk-sharing, risk pooling and risk transfer mechanisms at work, and such mechanisms exist in an economy precisely because they redistribute risk efficiently. All risk within an economy is ultimately borne by individuals, with the central purpose of government being to re-allocate this in distribution.

The paper later carries an illustration, *Figure 3.1: Pension outcomes on retirement in final salary DB and DC plans*, which shows DB as inferior to the mean or median DC outcome. This figure is not credible. A DC contribution fixed as a proportion of salary would result in a career average contribution; *ceteris paribus*, only if final salary was lower than the career average salary could this hold true.

The chapter states that the “*performance of the (DB) scheme has therefore been heavily dependent on the performance of financial markets.*” This is untrue. Pension outcomes are independent of scheme performance. The poor performance of pension fund investments may have raised the estimated cost of provision but that does not mean that this estimate is in any way better than that which prevailed previously or that “*pension providers underestimated the true costs of DB provision, and delayed adjustments to pension scheme benefits.*” These latter statements merely exhibit the same bias from the authors of the consultation.

There is also a fundamental misconception at work here. If a scheme is still growing, that is to say increasing its aggregate liabilities, or receiving more in contributions than it pays in pensions to members, lower asset market prices help rather than harm it. The analogy is that it is a consumer of investments and if we want to consume a hamburger every day for the rest of our lives (God forbid), we want hamburger prices to fall, not rise.



We would contend that it was the effect of changing accounting standards and imminent increased regulation which were the dominant influences on DB scheme closure. We are particularly concerned by the disconnect between accounting standards which are based upon market consistent best estimates and regulatory accounting that requires prudent estimation, where estimates are loaded to reflect risks. The biases from the latter can be significant and actions based upon them unsound. This difference is also important in the context of the confusion between error and risk in the consultation paper.

The chapter outlines “*several other factors which have contributed to the increase in the cost of DB provision*”. Among these is the “*Decrease in inflation during the 1980s-1990s*”

This paragraph (part of 2.6) is badly muddled; it describes the limited price inflation indexation of pensions as risk-sharing when the reality is far from this. Recall that LPI was introduced by PA95 for no good reason, certainly not risk sharing. Its introduction destroyed the practice of discretionary increases in pensions that preceded it.

Risk is best considered as variation from the expectation of a variable<sup>1</sup>. The effect of a cap is then properly considered in terms of its distance from that expectation and its variability beyond. It is technically an exceedance-based conditional expectation. Increasing the variability, the risk of inflation, actually lowers the future value of pensions for a given expected level of inflation. The discussion of real funding costs here fails to consider this, or the far more complex issue of scheme resource sensitivity to inflation. Decreases in inflation have in fact lowered sponsor costs of pension provision. The paragraph seems to believe that the proportion of inflation costs borne by the sponsor rather than the absolute amount is material.

Following on from this, there is a paragraph:

***Increased member protection***

*Changes to pensions legislation, such as the rules on scheme funding, debt on the employer and general rules on the administration have helped to improve members’ benefits and protection.*

Note first that improvements to member benefits, a costly form of direct interference in a voluntary arrangement are explicitly cited here; the administration and funding rules are an indirect but not unimportant source of increased costs. These are in fact the key elements contributing to increased cost of provision of DB pensions.

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<sup>1</sup> The usual measure of risk in financial analysis is the standard deviation, the variation from expectation, a second moment measure. There are some circumstances where the expectation, a first order “moment” is used, such as with credit risk. These measures though possessing common units of measurement should not be confused or commingled as their properties differ significantly and their aggregation is not simple.



### ***Changes in accounting standards***

*These changes have increased the transparency of pension funding costs in company accounts and may have created an impression that the actual cost of funding schemes has increased.*

It is far from obvious that the new accounting standards have increased the transparency of pension accounting or funding costs. Actions based upon these standards and the distortions introduced by them have, though, undoubtedly been costly.

The separation of deficit reduction and other special contributions from current service cost contributions in DB is trivial to achieve. The evidence is that employer and employee DC contributions are materially lower than the equivalent current service DB contributions. One possible explanation of this is that employers expect that as time passes the inadequacy of DC arrangements will become evident and that government action will require them to make further higher contributions.

These issues should not be confused by the actuarial methods used to assign contribution costs to the DB pension entitlements of individual members. These are a matter of administrative accounting convenience for the company and scheme rather than being of economic significance.

The chapter ends with paragraph 2.17:

*There are several other factors which make it difficult to judge the generosity of DB and DC schemes solely on contribution rates:*

- *The age profiles of members will be different – DB members tend to be older and more costly; and*
- *DB schemes are usually contracted out while DC schemes are increasingly contracted in.*

The concept of generosity is strange in the context of pensions; sufficiency is perhaps superior. The increasing retention of contracted-in status is a reflection of the inequity of the contracted-out rebate, another instance of government unwillingness to bear pension costs, which is lower than even the amount recommended for payment by the Government Actuary's Department.

The age profiles are different but they do not have to be so. In fact risk sharing among members arising from disparities in age and income may be a source of considerable cost saving. There is no such sharing in DC arrangements. The current legacy position arises predominantly from regulatory distortions already effected. A younger member of a scheme may have a higher expected future value of savings at retirement arising from the investment income accruing to a contribution over the term to retirement but there are



many compounding factors affecting the present utility of this contribution. A contribution fixed as a proportion of salary is smaller in monetary amount for a younger member than for an older member. The younger member also has a higher expectation of life at retirement and greater uncertainty of the variability of this expectation. A linear entitlement, such as a fixed proportion (say one fiftieth) of final salary, revalued for early leavers from employment serves well to share risk among members and lower scheme costs. The higher contribution to the pension pot at retirement of early age saving in a DC arrangement is offset by uncertainty concerning longevity, pre-retirement investment performance, inflation and the cost of annuitisation or other procedure needed to translate the retirement assets into income.

There are perhaps a few individuals for whom DC is more appropriate in the sense of offering higher pensions than DB. These are in the main younger, job mobile and well-educated, possessing in consequence high residual human capital. With the addition of good fortune in investment outcomes, these will tend to benefit from DC rather than DB membership; however they are also precisely the constituency for which risk sharing is least beneficial. They are also the constituency in which the employer should invest the least.

Returning to the specific question:

***Are you aware of any additional evidence of the impact on pension outcomes of lower contributions into DC schemes when all these complicating factors are taken into account?***

Yes, our own commercial research considered the question: Is DB superior to DC? This was a necessary precursor question for the development of BrightonRock's business model. Had the answer to this question been no, we would have considered opportunities and developments for DC rather than DB. The lower contribution rates associated with DC will result in poorer pension outcomes.

The commonplace insufficiency of DC is evident from the US instance of the West Virginia School Employees Plan, where 78% of members voted for a return to DB from a DC arrangement (401K plan) and from the instance of the United Methodist Church, which involved some 36,000 members.

We also believe that participation in a DC pension saving scheme, where capital values of the retirement fund are disclosed will result in lower precautionary savings and supplementary pension provision by many and perhaps most individuals. This is important in the context of the consultation paper's claim to have introduced effective measures to combat the problem of undersaving.

The differing nature of the DB promise from DC, a promise of future payments rather than merely the current cost will tend to bias management willingness to grant more by way of benefits. There is an incentive here for management to promise more in DB



reducing other current wage concessions, improving apparent current performance at the expense of some future management.

### **Chapter 3: An overview of risk in pension provision**

3 *Is our characterisation of the allocation of risks in DB and DC schemes correct?*

4 *Which parties are best placed to bear each risk?*

The characterisation of risk in this chapter is sufficiently incomplete and idiosyncratic that it is necessary to discuss it at considerable length.

3.1 *Indeed compensating employees through pensions exposes both employers and employees to risks that are additional to the risks they would face if employees were compensated purely in the form of wages.*

In DC there are no additional risks to the sponsor – they make a current payment and wash their hands of the consequence for the employee. It is most important to recognise that a DB pension scheme is merely a device for redistributing risk; the total risk faced in essence remains unchanged. There is actually no risk transformation evident, though risk sharing, risk pooling and risk transfer are present and these are redistributive.

It is arguable that some government actions have in fact transformed and added risks. The most notable of these actions are the treatment of advanced corporation tax and the contracted out rebate, but perhaps less obvious but of greater magnitude are the preservation rules, which add, through revaluation, significantly to aggregate pension costs and variability. It must also be said that it is not at all obvious why a population of early leaver deferred members should be accommodated by a corporate sponsor; there is no mutuality of interest with either the sponsor company or other members after departure.

3.2 *There are two main risks involved in any system of pension provision which need to be borne by the parties involved (the member, sponsor, state and financial institutions):*

This is simplistic to the point of being wrong. The principal risks faced by all of these agents differ; in fact many may exist solely because of a particular risk. An external financial institution may become involved in aspects of pension provision solely because the uncertainty and risk which they can resolve by assumption is so adequately rewarded that they can base a profitable business upon it. These questions of risk, risk distribution and risk bearing capacity depend fundamentally upon their associated incentives.

The principal risk faced by a member in DB schemes is in fact sponsor insolvency. Only after that event does any other conditional risk become a relevant concern. The principal risk faced by a sponsor company is that the cost of provision will exceed the equivalent



wage cost; in turn that of course leads to questions of operating efficiency and ultimate insolvency likelihood.

### ***Investment Risk***

*Funded pension accrual exposes employers and employees to investment risk: the risk that a scheme or an individual's assets will be adversely affected by fluctuations in the market value of the assets in which the pension fund is invested.*

Firstly it must be recognised that the employer faces no such risk in DC arrangements where it rests entirely with the member and that in DB arrangements the member faces no such risk as it rests entirely with the sponsor employer. This is also true more generally than investment risk.

The nature of the risk also differs. In the case of DC, the realisable market value is a direct and relevant consideration at the point in time when annuitisation is executed; everywhere else it is of interest but uncrystallised. In the case of DB schemes the market value of assets is relevant only to the extent that they need to be realised and liquidated; the proportion of scheme assets which need to be realised at any point in time is typically small (5% or less). In fact for schemes which are still growing, no current liquidation at all may be necessary and in such situations the scheme prefers low asset values rather than high (as was noted earlier – the hamburger analogy). This inter-temporal smoothing of investment returns in DB is significant and of material value, though erroneously denied by both accounting standards and many regulations. DB pension schemes in aggregate are still growing incidentally.

*At times there may be a high return on investments, but at other times a low return can lead to underfunding or an inadequate level of retirement income.*

This is far too simplistic; it is necessary first to distinguish between income and total return. If a government bond falls in market price, its income remains unchanged. Reinvestment of that coupon income actually increases the performance of the fund since it takes place at a lower price or higher current yield. Underfunding is only important to a DB scheme to the extent that liquidation of some part of the fund is required. Of course in the case of DC arrangements a low valued fund at annuitisation can lead to inadequate retirement income, but in the period when savings are being effected the member prefers low asset prices and high income yields.

*Interest rates affect the value of liabilities and cash-flow. There is a direct effect from the interest income on scheme assets and an indirect effect through potential additional employer contributions to reduce deficits.*



Other than through the possible presence of some common latent variable, such as inflation, interest rates do not affect the value of liabilities or future cash flows<sup>2</sup>. They are however used to derive the “**present** value” of liabilities and consequently affect those accounting values. It is important to recognise that this accounting convention is in fact no more than a model and that pension liabilities do not oscillate with the vagaries of a discount rate. Interest rates play no part in the determination of the pension payable for DB schemes. In fact it is trivial to show that the discount rate can distort the significance of a scheme deficit or surplus, the lower the rate the longer one has to repair a deficit. The cult of risk management which is concerned only with the immediate, is badly flawed and can be extremely costly. Special deficit make-good contributions, rooted in discount function variation, are a prime example of actions which are inefficient and excessively costly. Any regulatory process, such as this, which introduces path dependency or otherwise limits flexibility, is strictly costly and inefficient. We will see later that the attractions of variations such as conditional indexation are rooted in this flexibility. Interest income has its greatest value when bond prices are low.

Market prices for assets are subject to a similar critique – see “Response to ASB /PAAinE pension accounting consultation” – available from [www.BrightonRockGroup.co.uk](http://www.BrightonRockGroup.co.uk) .

### **Longevity Risk**

Most of the problem of longevity estimation has been one of model error rather than risk; Error in the (first) expectation but nonetheless not longevity risk. The question of longevity risk is much more limited; this is concerned with the distribution of lives around the expectation. This distribution has not been stationary or invariant, but interestingly perhaps, the changes evident have tended to mitigate the error in the location expectation.

As our understanding of this topic (longevity) is a source of commercial competitive advantage for BrightonRock, we do not propose to elaborate here. Suffice it to say that the proposed taxonomy of longevity risk is of little practical value.

### **Inflation Risk**

The LPI cap places the burden of partial expected inflation on the employer but, as noted earlier, variation (or risk) in that lies squarely with the employee member and reduces the purchasing power of their pension.

There is also a significant basis risk present in as much as the consumption basket of pensioners differs markedly from that used to calculate economy-wide indices. Given the

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<sup>2</sup> This abstracts, for simplicity, from one minor interest rate sensitivity the refund of contributions with interest for leavers who hadn't vested



subsequent proposals and the desire to produce equitable outcomes under conditional indexation among classes of member, much further analysis is required.

In particular, the position of preserved deferred members should be reviewed. As was noted earlier this class of member lacks any mutuality of interest with other members or the sponsor enterprise.

### **Discontinuity / Default Risk**

This really should have been separated into tenure and insolvency. Unemployment is a material risk for employee members. Insolvency of their sponsor employer is the principal risk for members of a DB pension scheme, compounded for active employees.

*In such cases there are real risks to the members' pensions, though in practice the existence of the Pension Protection Fund mitigates much of this risk.*

The PPF does not mitigate much of this risk; by its own calculation and public admission it mitigates only approximately 20%. The PPF is a mutual compensation fund; it in fact transfers this risk on a cost plus basis to the members of all other schemes.

The central problem of DB pension scheme finance arises from sponsor insolvency. Prior to insolvency no rational sponsor company should wish to fund its scheme at greater than its best estimate of the liabilities accrued, that is 100% of the accounting value. Only if assets deployed in the pension scheme earn more than assets in the business should the sponsor company consider excess funding – and if this earnings relation holds true it becomes necessary to ask why the sponsor company exists. For companies which fund in excess of the best estimate, the problem is that this increases the likelihood that they become insolvent. However once insolvency has occurred the scheme is an orphan and faces a long future before its liabilities are entirely discharged – it faces uncertainty and risk. It is then necessary to capitalise the pension scheme sufficiently to absorb this risk and this is clearly in excess of 100% of the best estimate accounting liability; if the bulk annuitisation market is any guide, this is a further 30% or so of liabilities. And there is no obvious source of this excess funding. This problem is one of corporate finance and not natural for government.

This problem is well resolved by insurance and the central business activity for BrightonRock which offers the appropriate indemnity assurance. (See [www.BrightonRockGroup.co.uk](http://www.BrightonRockGroup.co.uk))

### **Regulatory Risk**

We have earlier indicated our belief that this has been excessive and counter-productive in terms of the ambition of government.



*Given the complex nature of pensions and the associated informational barriers, a degree of regulation is unavoidable and so the risk of increased cost of provision always exists.*

This is insufficient justification for regulation. The correct questions here are: Where is the market failure? and what is the cost of this failure? Asymmetry of information is common to many problems of contract and does not alone justify regulation.

### **The distribution of risks**

A number of elements of the tabulation of risk are debatable, but that criticism is irrelevant. The chapter continues:

*3.7 Once a final salary is known, the sponsor is obliged to meet that commitment regardless of what happens to the scheme's assets.*

In fact once the employment contract has been executed and scheme entry conditions satisfied, the sponsor commitment exists; there is no need for the final salary to be determined.

*3.8 Employers may be better placed to bear investment risk up to a point because they can pool the risk across all members.*

This paragraph is true but the more important dimension is that of time; time diversification and future contributions alter the quantum of the risk materially. Employee service times are far shorter than employer life times.

*3.9 In the long run and over large fluctuations neither sponsors nor employees will be well placed to bear investment risk, which instead is best allocated to financial institutions.*

This is simply untrue. The individual may not be well positioned and on average clearly isn't well placed to bear the risk. However sponsor firms are well placed. In large part this arises precisely because of the time diversification of investment and future contributions. The employer also has the entire business capital in addition to asset allocation to support such risks. By contrast in assuming such risks the financial institution must charge for the use of their capital in supporting risks transferred to them, which is costly. In addition, as the FSA keep reminding us, there is little or no evidence that financial institutions possess any material skill in financial asset management.

*3.10 We do not find the taxonomy useful and shall confine ourselves to the observation that members outliving their expected longevity represent only a cash call on the fund.*

*3.11 As before, individuals never directly bear this (post-retirement longevity) risk in either type of scheme, but in a DC scheme they may bear it indirectly through changes in annuity prices which reflect changes in mortality projections.*



There is nothing indirect about the exposure of a DC arrangement to future annuity prices; this is the largest single risk faced by most DC arrangements.

3.13 This paragraph which concerns pre-retirement longevity risk is muddled. A flexible retirement age would allow the transfer of the expected life, rather than risk, to the employee; it is an explicit reduction in the pension benefit.

The important element of a DB scheme which passes unmentioned is that the life expectation of younger members is, under most longevity models in use, greater than and more variable than the life expectancy of an older member. There is risk sharing among members in this arrangement when the pension entitlement is linear in benefits, such as one fiftieth of final salary for each year of service.

*Individuals are better placed to bear this form of longevity risk, compared to the two forms, because it occurs before retirement and they have time to adjust their saving and working preferences to accommodate long-term increases in life expectancy.*

This convoluted assertion lacks any evidence to support it. The term risk is as noted earlier inappropriate, error is correct. This prompts the question as to whether an employee member should share in the errors of the sponsor employer, which clearly are within their control and influence. The incentives are not attractive.

### 3.14 *Inflation risk*

Sponsors do indeed have a superior ability than the individual to bear the expectation but the LPI rules limit their exposure to this at the cost of the member. In fact the principal mechanism by which inflation works is through its effects upon the capital structure of the firm. Nominal debt is devalued by inflation, increasing the strength of the real balance sheet.

### 3.16 *Discontinuity / Default Risk*

*There is a risk of default caused by insolvency of the scheme sponsor. In general terms, this risk falls on the individual, but the presence of the Pension Protection Fund means that a large part of the risk is transferred to that fund. A fund such as the PPF is better suited to bear this risk than individual members who cannot purchase such insurance.*

This is disingenuous in extreme. The Pension Protection Fund as noted earlier does not accept a large part of this risk; by its own admission and calculation it compensates approximately 20%. This risk of course is not absorbed by the PPF, it is transferred to the members of other schemes through the levy mechanism. A government sponsored compensation fund is not well positioned to deal with insolvency risk – for more detail on this see: [www.BrightonRockGroup.co.uk](http://www.BrightonRockGroup.co.uk) “The Costs and Benefits of DB pensions Part (2) – Also in The Actuary, August 2008



As the DWP has been encouraging Ministers, journalists and other civil servants to resist the introduction of such private sector insurance, we find the last sentence incredible.

### 3.19 *Regulatory Risk*

*The impact of these regulations has been to improve member protection but sometimes at the cost of making DB provision more expensive for sponsors.*

Some regulations have simply introduced further benefits payable. All regulations to improve member protection have made provision more expensive, unless they have been entirely ineffectual.

3.20 *The question of who is well placed to bear these risks is not clear cut, but there is no reason to think that any one party should bear unequal amounts of these risks.*

There is actually no reason for any risk to be shared equally and many reasons, such as the capacity to bear, to believe that these should be shared in unequal amounts.

Sections 3.21 through 3.26 describe incompletely a DWP modelling exercise. It is not possible from the detail given to reproduce these results. As was noted earlier the results shown are not credible.

### 3 *Is our characterisation of the allocation of risks in DB and DC schemes correct?*

No – See above

### 4 *Which parties are best placed to bear each risk?*

Overwhelmingly it is the corporate sponsor. DB need not be unaffordable to the sponsor or insecure for the member under the correct regulation – the problem lies in the current regulations in effect.

## **Chapter 4: Risk Sharing: International Comparisons**

This chapter describes pension arrangements in a number of different countries. Beyond the observation that the text is confused with respect to which elements of the designs represent risk sharing and which simply lower benefits, we have no comment. We have mentioned earlier some instances of the failure or insufficiency of DC arrangements evident in other countries, which are not commented upon in this international comparison.



## **Chapter 5: Risk sharing within the current regulatory framework**

There is confusion evident as to what is and what isn't risk-sharing. Rather than criticising the description of the status quo, it is more productive to consider the problem somewhat more abstractly.

The provision of pensions of any form by a corporate employer is a voluntary act. It is a form of deferred compensation. A rational employer should provide pension benefits if the cost of that provision is less than or equal to the equivalent immediate wage cost.

It is useful to consider the employer current service contribution as belonging to the employee from the point of entitlement. In this situation the assets in a pension fund belong to the employees collectively. The employer however maintains an obligation to add to the fund if adverse developments occur and special contributions are required.

The employer trade off here is that the gain from their cost of current service contributions relative to a wage payment should be equal to or higher than the risks of future special contributions. It should also be recognised that the risks of future special contributions are based upon the whole of contributions, employee and employer.

The employer may contribute a fixed sum in a DC arrangement and have no further obligation to the pension scheme – it is directly comparable to a current wage cost. Other than the treatment of national insurance there is no incentive for the sponsor employer to create such a scheme. It must, perhaps, be presumed that the existence of so many DC schemes is in fact predicated upon the labour market norms, which bring recruitment and retention pressures onto employers. The analysis of pension structures really does need to be performed in the context of the labour market; the existence of a pension scheme does however have signalling value to the employer in such negotiations.

The employee position is also worth considering. There is no reason for them to consider accepting a pound of pension rather than a pound of wages unless the “value” of the pension pound equals or exceeds that which could be achieved by the employee.

The puzzle then is how a lower current employer cost can be reconciled with a higher future employee value. The tax concession allowing investments to accumulate without payment of taxes permits precisely this. Of course the lower the tax rate for individuals, the lower this differential can be.

The extent of Government involvement is no more than this – and indeed the tax concession is to a large part clawed back by the taxation of pensions in payment and the lower future reliance upon state social security systems. There really is no risk sharing here.

There is no tax advantage for DB over DC; this means that the cost of the risks absorbed by the employer must be met from other forms of risk sharing or management within the



scheme structure, in the absence of any value assigned to the existence of the scheme as a signalling device.

The question of incentives is examined in more in detail in “Costs, Risks and Security of Defined Benefit Pensions (Part 1)”, The Actuary, June 2008, also available from [www.BrightonRockGroup.co.uk](http://www.BrightonRockGroup.co.uk).

The primary risk of course is that the sponsor will fail and be unable to meet its obligations to finance adverse risk development under the pension contract. Note that in ordinary circumstances this financing does not have to be a cash contribution, the scheme has a claim on the sponsor. In fact from the standpoint of the employer such claims are very attractive as very long duration financing in their business; it is not however free financing, the cost is what would have been earned by the asset purchased by the scheme with an equivalent cash contribution. This aspect, of course, historically constituted a major attraction of DB creation for a sponsor but is now restricted by the “own employer” investment legislation.

There are a number of assumptions which are needed to drive the estimation of the future value of a pension promise. These assumptions in turn also determine the current contribution cost.

If these are erroneous, they will raise the cost of pension provision; they are not risk financing. It is important to understand the difference between risk as variation from expectation and risk as it is widely misused in the consultation paper. On average risk which is variation from a correct expectation is zero, however it does need an allowance in pricing for the cost of capital employed as a technical provision. Error in expectation is different in that this requires explicit funding. Risk in portfolio diversifies, error in portfolio accumulates. This is important in the context of the concept of “prudent” valuations later.

As it becomes evident that the scheme assumptions are wrong, there really is no case for “risk-sharing” with beneficiaries. The incentives are all wrong. With aggressive assumptions the historic contribution would have been lower than it should have been and the cost - benefit incentive to the employer higher. Any additional payment now due is not sourced in risk.

Unfortunately the limited freedom now available to sponsors has the consequence that lowering the value of future benefits becomes the attractive choice. Increasing normal retirement age, moving to career average from final salary, reducing accrual rates, or a switch to DC all lower member benefits receivable with no possible gain.

If we consider scheme assets as the property of members, with employer participation limited to the commitment to finance adverse developments, we see that the relative contributions of member and sponsor are in fact immaterial – all that matters is the total contribution and its sufficiency under current best estimates to generate the pension



promised under scheme rules. Moreover it should be obvious that for any given benefit structure the introduction of risk-sharing of any form must result in lower pensions than are presently provided under DB arrangements.

**Consultation questions:**

**6** *In general, do you believe greater flexibility in the way employers and employees can share pension risks would increase (or slow any decline) in the availability of high-quality workplace pension provision?*

Yes. Greater flexibility, reduced path dependency will certainly increase the quality of pensions and most likely also the quantity. Most of the more sensible freedoms however lie in alleviating the restrictions imposed by the Pensions Act 2004 and Pensions Regulator – these are very costly indeed.

**7** *Would this greater flexibility encourage employers who are considering a move out of DB provision to continue to bear some risk rather than moving fully to DC?*

Yes, but adequate incentives have to exist to justify the risk assumption.

**8** *Would employers currently offering DC consider a move to a risk sharing arrangement?*

Yes, provided the appropriate incentive / risk structure was available.

**9** *Do employers consider the existing risk sharing options (for example cash balance schemes, career average) when looking at alterations to DB pension arrangements?*

Altering pension arrangements is a delicate exercise for an employer as it is reflected in recurrent wage negotiations, where it is far from a dominant concern in most circumstances. Most of the risk-sharing arrangements described are in fact just exercises in liability reduction, or, where that is unacceptable, containment of future liability growth. As the employer's risk exposure is a function of the size of liabilities this is sensible. It is obvious that a very wide range of possibilities has been considered.

**10** *Have you considered any options other than those outlined in this chapter?*

Yes. Indemnity assurance. The BrightonRock policy guarantees the full payment of members' pensions in the event of sponsor insolvency. The certainty that this brings to members breaks the current linkage between scheme funding and benefits achievable and in doing so allows the scheme and sponsor to pursue the benefits and funding strategies that are relevant in their circumstances. The absence of arbitrary constraints and mutuality of interest that result under such true risk-assumption reduces the costs of



scheme finance and provision markedly; the quality of provision is enhanced. The policy is in fact a form of corporate finance designed to ensure pension security. For further details, see: “The Benefits of BrightonRock to Trustees” and “The Benefits of BrightonRock to Sponsors” available from [www.BrightonRockGroup.co.uk](http://www.BrightonRockGroup.co.uk).

Obstructing the introduction of this form of insurance will not serve scheme members or their sponsors well.

11 *Have the existing options proved inadequate and if so how?*

Yes. There are no existing options described which do not lower benefits.

## **Chapter 6: Conditional Indexation Schemes**

There are two possible ways of achieving conditional indexation. A scheme may target full defined benefits but deliver less in the event of a contingency occurrence – this is an employer put option on the employee. This is the form discussed in the consultation paper. Alternatively it may promise some lower level of benefits but pay more when scheme funding permits – this is an employee call option. The Dutch system is of the second form.

The second form is superior with respect to the risk and incentive characteristics. Both options increase in value with increasing volatility or riskiness. In the first form the employer gains by employing risky investment strategies but in the second the employee gains. There is employer moral hazard evident.

### **Conditional indexation – career average schemes**

6.3 The choice of career average appears to be based upon the ease with which these can be revalued. The same effect could be achieved by varying the service accrual rate for a contribution year in a final salary arrangement. This would have the advantage that pensioners in payment would have their accruals defined from the point of retirement and would not be faced with the prospect of pensions failing to keep pace through low revaluation. Moreover the risk-sharing would be limited to active members. It could quite easily be extended to deferreds.

6.3 The transition from discretionary target to defined benefit obligation would mean that the liabilities of a scheme would tend over time to the liabilities of a DB scheme. The value of the put option(s) diminishes, encouraging earlier utilisation of risky strategies.

6.5 The funding cost basis proposed would mean that there is no contribution cost saving to the employer. Audit of the assumptions in effect and the definition of “prudent” could be deeply problematic. The non-availability of surpluses to the employer would ensure that no employer would ever make additional contributions.



In the context of the confusion of error and risk, the idea of prudent valuations is deeply problematic. In ordinary insurance use, prudent would mean that a policy has been loaded for some level of risk – that is to say the cost of the capital available to support that level of risk has been priced into the insurance contract. Of course, risk in aggregate diversifies in this context. By contrast if we are dealing with an error in an assumption, then risk does not diversify; in fact errors in a pension context are super-additive and require explicit full financing. If we move to prudent valuation techniques rather than best estimates we introduce biases which are both complex and costly. In the context of error, it is necessary to consider the type I and type II consequences in some considerable detail. It would be necessary also to recognise that the relation among these error types need not be commutative among member and employer; indeed more generally it is disappointing that the consultation paper does not consider the question of asymmetries of risk and risk consequence for employer and member.

It really is necessary to think a little about how much is available to be distributed under risk sharing; this is quite limited. We can achieve a tax free roll-up of investment under DC, which means that any superiority of DB, and incentive for the sponsor to offer this form, can only come from the risk sharing or risk superiority aspects of DB relative to DC. It seems that these rules and the regulations in force and proposed will carry costs which leave even conditionally indexed DB non-competitive.

6.6 Ex post reinstatement of revaluation and indexation is a fine idea, but unfortunately in the interim many members will most likely have died. The requirement for annual valuations is frankly just an actuaries' full employment charter; as most of the deficit effects would arise from the behaviour of stock and bond markets there have to be doubts with respect to capacity and timeliness of delivery of such valuations.

6.7 A limited but unilateral ability to increase the NRA is no more than a device to reduce the aggregate benefit liability – the terms “*actuarial evidence*” and “*prescribed safeguards*” would need clear definition before anyone could be comfortable with this idea. There are other approaches to the question of longevity: One idea is to leave NRA undetermined until a member reaches a certain age, say 45, at which point it is set. The point here is that a 20 year old, for example, does not need to know when he is 20 when his pension will start – it is sufficient that he is in a DB scheme accruing  $1/60^{\text{th}}$  or whatever. The same applies for State Pensions.

6.8 This is rather vague and woolly. The employer debt on wind-up would contain no future revaluation or increases, but for wind up to be achieved annuitisation must be undertaken and the cost of that exceeds the best estimate on any particular basis by a considerable margin. The sentence concerning possible levels of funding under the proposals at wind-up needs much greater justification than is evident. The simple fact is that an orphan scheme needs higher “capitalisation” than one supported by a solvent sponsor. In insolvent wind-up, it currently remains possible that administrators or liquidators will challenge funding in excess of 100% FRS17/IAS19 as being the property of scheme and trustees.



6.9 Is division of the PPF membership a good idea? What justifies the removal of the cap for this class of scheme? We have seen the DWP and Ministers resist other arrangements which would have reduced the number of DB schemes covered by the PPF, even when the alternate cover was superior from a member standpoint. This has continued to be expressed as a “cherry-picking” concern, when the reality is that “cherry-picking” is not a feasible commercial strategy.

6.10 Disclosure of risks being shared – is this practical? Unless a risk has crystallised, there is no evidence that it was a risk.

### ***Objectives and Rationale***

6.11 The central question here, given the rules suggested earlier, is would this prove less costly to an employer than DB and would it enable incentives to exist for any form of risk assumption by employers. This requires detailed analysis.

6.12 The risk-sharing among members would be equal in consequence but it is far from obvious that this arrangement is fair or equitable. Perhaps the ACA is not aware that the risk sharing among members in CARE arrangements is less than under final salary.

6.13 There is an element of this longevity concern which is troubling. The life expectation of a younger member is greater than an older member at the same retirement age, as that time is further into the future and longevity has been trending upwards. Now consider the passage of time, where the younger member is now approaching retirement and there are new young members in the scheme and longevity is still trending upwards – the life expectation of the scheme has increased – is the proposal to have the scheme increase the NRA? And if NRAs are altered how does this affect the revaluation of pensions?

### **Moral Hazard**

6.17 If the funding regulations are applied to the target level liabilities, there can't be any material cost-savings in terms of service contributions – in other words this option depends entirely upon being able to shed some risk i.e. it has to operate solely through special contributions savings. But the special contributions of recent times have predominantly been driven by changes in accounting standards, changes in scheme funding regulation, errors, that is revision of assumption estimates, and not by risk in the correct, technical sense.

6.18 In addition, using more “prudent” assumptions might create a deficit but it would also raise service contributions. (See earlier)

6.19 There are disincentives – see above.



6.21 Overly prudent assumptions result ultimately in over-funding of the scheme through ordinary contributions – this is in Trustees’ interests.

6.22 It will raise the demand for actuarial services.

This section has not addressed the principal practical form of moral hazard. The “fund high” with an employer put option will encourage risky and even reckless investment strategies. This design will place even greater strain on the relations between trustees and sponsors than currently exists.

### ***Complexity for members***

6.23 People should decline to participate for another reason; the cuts in payments will tend to occur in times of economic distress and this is precisely when pension income is most needed.

6.24 The principal difference between the UK and the Netherlands is known as solidarity and it extends to Government. No such trust in Government exists in the UK.

### ***Fairness***

6.26 There is nothing fair or equitable in applying a revaluation equally to all classes of member – if members’ lives in payment were the same as the period in contribution accrual perhaps, but then what of deferreds? There’s also the difference between a saving accrual and a pension income to consider.

6.27 Reinstatement when recovered doesn’t really work – what of the early leaver who departs after a period of withheld revaluation? For many getting paid later is the same as not getting paid at all.

### **Conditional indexation for all defined benefit schemes**

6.33 through 6.50

This section covers a possible structure in which LPI indexation of pensions in payment may be withheld. It suffers from a major defect that all of the risk is borne by retired members.

Scheme contributions and funding are based upon full indexation which means that the structure has no initial cost incentive to the sponsor (as recognised later in the document). Moreover the extent of the “risk sharing” is very limited which implies that cost savings to the sponsor will not be large.

Questions



16 *Would the introduction of conditional indexation schemes add significantly to the risk sharing already available to DB schemes?*

Yes but the design is critical if the cost savings are to be material.

17 *Is sharing investment risk with pension scheme members through indexation and revaluation provisions a suitable response to the costs and risks facing DB scheme sponsors?*

In the evident unwillingness of government to adopt proportionate regulation, it is one of a very few things which can be done to reduce the excess cost of provision.

*Is it acceptable that this risk should be transferred to retirees?*

No.

18 *Are there other approaches to conditional indexation which you consider to be better?*

Yes. It is better to promise low and deliver in excess (see introductory discussion to this chapter). This would involve no more than funding at say 50ths but promising only 100ths with discretionary increases up to a maximum of 50ths. While there may be difficulties with HMRC this should be feasible currently.

22 *If risk sharing is adopted, what sort of protection for members is appropriate?*

The promise low and deliver high could be regulated as currently on the basis of the lower commitment; this is the 100<sup>th</sup> in the earlier suggestion.

23 *Does the fact that the risk sharing available to sponsors depends upon the rate of inflation reduce the potential value of conditional indexation to them?*

Yes.