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A warm welcome to the latest edition of **e-News from GAD**.



The new UK Government has made a number of policy announcements on pensions in the last few months, including the change in the inflation measure used to increase pension benefits, the bringing forward of the increase in the State Pension Age and the change in the regime for pensions tax relief for high earners. Lord Hutton has also published his interim report on public service pensions. Further developments are expected in the coming months.

There is also much activity in the build up to the implementation of Solvency II. The long term care commission, chaired by Andrew Dilnot, is also likely to lead to reform.

These changes present a range of opportunities and challenges for our clients. This edition highlights some of the potential implications and how we are working with our clients in response to these changes.

We very much value your feedback on eNews, either to your usual GAD contact or to our central email address [enquires@gad.gov.uk](mailto:enquires@gad.gov.uk). As always, previous issues of e-News are available on our website [www.gad.gov.uk](http://www.gad.gov.uk).

Finally as we approach the festive season, I would like to take this opportunity to send you our very best wishes for the season.

A handwritten signature in black ink that reads "Trevor Llanwarne".

TREVOR LLANWARNE GOVERNMENT ACTUARY

## NEWS FROM GAD

### Client Survey

We are delighted that our recent client survey shows continued improvement in our client service with 78% of respondents agreeing that we make it a priority. We are committed to ensuring this improvement continues in 2011. [Detailed results](#) of the survey are available on our website.

### Contracting-Out Review

GAD has recently consulted on the proposed assumptions for deriving rebates for 2012 to 2017 for those contracted out of the UK State Second Pension. We are currently reviewing comments received. The [consultation document](#) is available on our website.

## EMERGING ISSUES

### Independent Public Service Pensions Commission

The Independent Public Service Pensions Commission, chaired by Lord Hutton, published its Interim Report on 7 October. The report concluded that long-term structural reform is needed to public service pensions. In the short term it recommended some changes such as increased member contributions. The Commission's final report is expected by Budget 2011.

### NAO review of public service pension schemes

The National Audit Office is due to publish its second report on Public Service Pension Schemes in December. The first report on the cost of public service pensions was published in March this year. The second report is expected to examine the impact of changes to public service schemes made in 2006-07 and whether these changes are achieving their primary objectives of cost reduction and sustainability.

### PPF levy

The UK Pension Protection Fund (PPF) has consulted on its proposals for its 2011/12 levy on eligible pension schemes. The total levy estimate of £600 million is less than that for 2010/11 (£720 million) reflecting, in part, the expected change in indexation of PPF benefits from the Retail Prices Index (RPI) to the Consumer Prices Index (CPI). The impact on each eligible pension scheme will depend on its particular circumstances. The PPF is also consulting on more fundamental changes to the levy system from 2012/13.

### Secondments

Trainee actuary Andrew Jinks has returned to GAD after a successful secondment at the Asset Protection Agency. At the APA's request, a further secondment has been arranged, with trainee actuary Mark Ridgman continuing Andrew's work. Additional short-term support is also being provided by trainee actuary, Ian Sharpe.

### Brian Hey Award for Dermot Grenham

Dermot Grenham, a senior actuary in our Insurance team, co-authored the paper on Crop Micro-insurance presented at the UK Actuarial Profession's annual General Insurance conference (GIRO) in Newport in October. The authors were awarded the Brian Hey award for the best paper submitted to the conference. The paper described the main features of crop micro-insurance, the parties involved and included a number of case studies.

### Comprehensive Spending Review

The UK Government's Comprehensive Spending Review on 20 October confirmed the basic State Pension will be up-rated by a 'triple guarantee' of earnings, prices or 2.5 per cent, whichever is highest, from 2011. The Government also announced that the date at which the State Pension Age will be increased will be brought forward, with the State Pension Age increasing to 66 by April 2020. Further proposals on future increases are expected.

The Comprehensive Spending Review also announced public consultations on the SCAPE discount rate and Fair Deal policy, which will have implications for public service pension schemes.

### Accounting for insurance contracts

The International Accounting Standards Board (IASB) published an exposure draft of a new standard on accounting for insurance contracts at the end of July. This will involve substantial changes for all EU listed insurers and other insurers who report under International Financial Reporting Standards (IFRS). The implementation date for the new standard has not yet been decided, but is not expected to be before 2013. The exposure draft presents potential issues for insurers as, in a number of important areas, the IASB proposals diverge from international regulatory principles, including Solvency II.

### Pensions tax relief for high earners

The UK Government has confirmed the new regime for pensions tax relief. We have produced a [technical bulletin](#) setting out the key issues for scheme managers, employers and individuals.

***We are working with our clients to identify and resolve the issues arising from these developments. Queries on any of the emerging issues can be discussed with your usual GAD contact or our Technical Director, Eddy Battersby.***

The UK Chancellor, George Osborne, announced in the June Budget that the inflation measure used to increase public service pension benefits will change from the Retail Prices Index (RPI) to the Consumer Prices Index (CPI) from April 2011.

The Department for Work and Pensions (DWP) announced on 8 July that a similar change is to be made for private sector pensions, whereby, going forward, statutory minimum increases will be linked to the CPI rather than the RPI. This is big news for pension schemes.

### RPI, CPI, what's the difference?

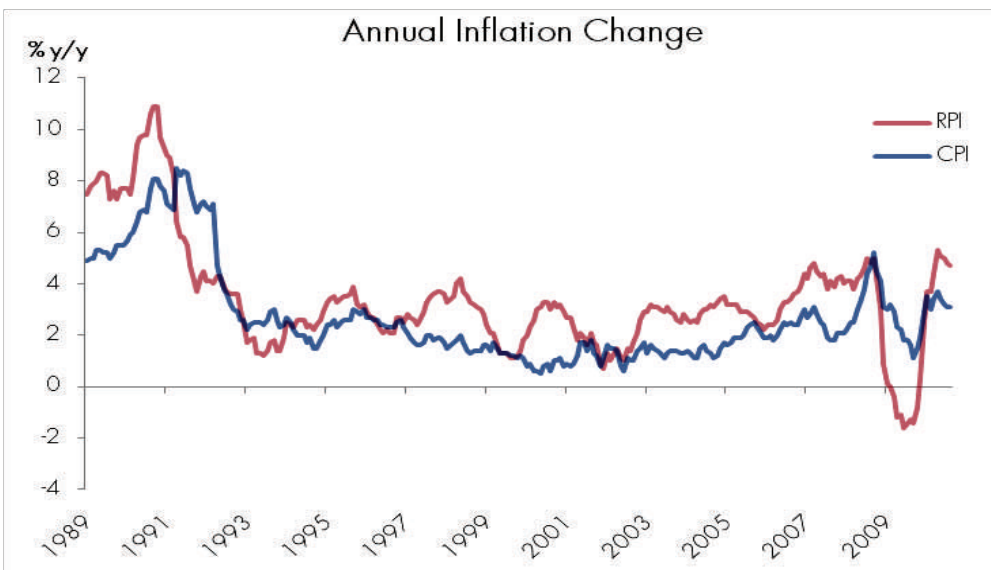
There are a number of different price indices, all of which give slightly different measures of how prices change over time. The RPI and the CPI are just two of these indices.

Price indices are calculated by comparing the prices of a 'basket of goods' over time. The RPI and the CPI are calculated based on different collections of goods. In particular, the RPI includes mortgage interest payments while the CPI does not. More significantly, there are also differences in the calculation methods used to determine the RPI and the CPI. Notably, the CPI uses the 'geometric mean' to combine prices within each detailed category, which allows for the substitution of cheaper goods for more expensive goods when relative prices change. The RPI uses the 'arithmetic mean', which does not allow for substitution.

Excluding mortgage interest payments from the CPI means changes in interest rates have a greater impact on RPI inflation. In addition, the Bank of England's inflation target is defined in terms of the CPI, rather than the RPI. This means CPI inflation is relatively stable compared to RPI inflation.

### Which is higher, CPI inflation or RPI inflation?

As the graph below shows, CPI inflation has sometimes been higher than RPI inflation and sometimes it has been lower. Since 1988, the RPI has, on average, increased by 0.73% a year more than the CPI. Roughly, two thirds of the difference relates to the difference in calculation methods used and one third of the difference relates to the different collections of goods.



Julia Leunig

Teachers' Pensions

*'CPI inflation is relatively stable compared to RPI inflation.'*

Differences between the indices are expected to persist over the long-term, but the size of the difference may change in response to changes in the underlying methodology. Earlier this year, the ONS changed the methodology used to collect clothing and footwear prices for both indices. In addition, it is possible that the CPI will start to include housing costs, although this is not expected to be in the same form as for the RPI. The first of these changes may increase the difference between the RPI and CPI, while the second would reduce the difference, but the likely size of any difference remains unclear.

### What benefits are affected?

The change in the inflation measure used to increase public service pension benefits will apply to future increases to pensions currently in payment, new pensions coming into payment and increases to deferred pension rights. Increases that have been awarded in line with the RPI in the past will not be affected.

For private sector pensions, the effect on benefits will depend on individual schemes' rules on how pension increases are awarded. For example, some schemes' rules specify the use of a particular index. However, schemes will become subject to the statutory minimum, linked to the CPI.

### What are the implications?

The change in pension increases will affect the amount of pension paid to public service pension scheme members and potentially private sector pension scheme members.

Schemes will want to consider the financial assumptions underlying their actuarial advice, for example actuarial factors used in calculations, to reflect the change in likely future pension increases. The change is likely to have the most significant effect where benefits are being capitalised, e.g. individual transfer payments, bulk transfer payments and pension sharing on divorce. Schemes may consider it appropriate to delay or caveat any calculations until assumptions and factors have been reviewed.

The change in pension increases will also affect the valuation of schemes' liabilities, both for funding and accounting purposes. In turn, this will impact on schemes' funding positions. Funded schemes may also wish to consider whether any changes to their investment strategy are appropriate. For example, some schemes invest in index-linked bonds as a means of reducing risk by matching the inflation-linked nature of the pension benefits they provide. However, the inflation measure used for index-linked bonds is the RPI, rather than the CPI.

Schemes should review their member communications, such as scheme booklets, to ensure the policy for increasing benefits is clearly stated. Schemes should also consider if there are any administrative implications, eg where different pension increases are applied for different accrual periods.

Schemes should seek legal advice to assess their own specific circumstances.

### Next steps

We have been liaising with clients on the implications of the change in the price inflation measure used to increase pension scheme benefits, including factors for individual transfers and terms for bulk transfers. We will continue to work with clients on addressing the issues arising and we will keep them informed of developments. Further details about the differences between RPI and CPI and the impact on pension scheme hedges are available in our June and July [Investment News](#) bulletins.

*'Schemes will want to consider the financial assumptions underlying their actuarial advice.'*

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2012 is already lining up to be an extremely interesting year. In addition to the London Olympics and the next US presidential election, it will be the year when insurers and insurance supervisors across the EU, and beyond, will be putting the final touches to their preparations for Solvency II.

## Background to Solvency II

Solvency II is the new EU Directive on the regulation of insurance business. It aims to implement a regulatory system that, among many other things:

- > ensures consistency across all member states;
- > sets a minimum level of capital that better reflects the risks that companies face; and
- > provides an incentive to insurers to properly identify and manage those risks.

Solvency II is likely to be the most significant change to insurance regulation in the UK since the Life Assurance Companies Act of 1870.

Since the Solvency II Directive was agreed in 2009, the EU has been working on the Implementing Measures which put flesh on the bones of the principles of the Directive.

Solvency II covers all aspects of insurance regulation. The aspects that are most exercising supervisors and insurers in the run up to the Directive's implementation are:

- > the calculation of technical provisions;
- > the new solvency capital requirements;
- > the use of internal models;
- > enhanced rules on governance and risk management; and
- > new reporting requirements.

## Technical provisions

Technical provisions – the value of an insurer's policy liabilities – are currently calculated using prudent assumptions, although the detailed rules vary across the EU. Solvency II requires technical provisions to be based on a 'market-consistent' valuation which consists of a best estimate plus an explicit risk margin. Insurers will also be required to calculate their technical provisions by discounting future expected cashflows – which could be a new approach for many general insurers.

## Solvency capital requirements

Under Solvency II, the amount of capital that an insurer is required to hold is set at the level that should enable the insurer to withstand a 1 in 200 year shock to the value of its assets and liabilities. The new solvency capital requirements are built up in a modular fashion, with separate allowances for individual risks such as underwriting, market and credit risk while allowing for the benefits of diversification between risks. There is also a specific capital requirement for operational risk – the risk of loss arising from inadequate or failed internal processes, from personnel and systems, or from external events.

Solvency capital requirements can be calculated using either a standard formula, based on specified parameters, or an insurer's own internal model of the risks it faces.



Nick Foster

Overseas Insurance

*'Solvency II covers all aspects of insurance regulation.'*

## Internal models

Internal models must be approved by supervisors. The Directive allows supervisors 6 months to decide whether to approve an insurer's model once an application has been submitted. But supervisors have been advised to introduce a pre-application process, which could last some 18 months, during which models and associated documentation can be rigorously tested. This is to ensure models have a reasonable chance of being assessed within 6 months. Combining an 18 month pre-application process and a 6 month formal application process means one quickly arrives right on the doorstep of when Solvency II goes live at the end of 2012.

## Governance & risk management

As part of the new governance requirements, insurers and reinsurers will be required to produce their Own Risk and Solvency Assessment (ORSA). This will detail all the processes and procedures they use to identify, assess, monitor, manage and report on the risks they face, and to ensure that they meet their solvency requirements at all times.

## Reporting requirements

The Directive includes new rules for both public disclosure and reporting to supervisors. The main public document, the Solvency and Financial Condition Report, will focus on governance, risk management, capital requirements and the valuation of assets and liabilities. Details of the more extensive supervisory report are still being worked on. It is expected that insurers will have to produce quarterly reports under Solvency II from the first quarter of 2013 and annual reports from the year ending 31 December 2013.

For both supervisors and insurers, the ability to analyse and understand the results of the new calculations and reporting requirements will be just as challenging as the actual production of the information required.

## Next steps

Supervisors and insurers are under severe pressure to develop clear and detailed plans for achieving Solvency II compliance. Supervisors and insurers are in the process of assessing how their technical provisions and solvency capital requirements will change under the new proposals, in order to test the potential financial impact of Solvency II. This is one of a number of assessments and is known as Quantitative Impact Study 5 (QIS5). All insurers are being strongly encouraged to participate in QIS5, as a way of preparing for Solvency II and identifying the issues and challenges involved.

## Implications for others

EU insurance supervisors and insurers are not the only ones affected by Solvency II. Insurance supervisors in a number of non-EU territories are keeping a close eye on Solvency II developments, and will have to decide if they wish to aim for equivalence to the EU rules, known as Third Country Equivalence. This means that insurers based in their territories, typically captives and reinsurers, can be treated within the EU in the same way as EU based companies. Tax authorities within the EU will also have to consider if any changes are required to their rules for insurance business taxation.

In the build up to the implementation of Solvency II, GAD is working with its clients to help them develop their approach to dealing with the impact of the new rules. Clear plans and timetables are essential for ensuring the Solvency II deadlines are met.

*'Supervisors and insurers are under severe pressure to develop clear and detailed plans for achieving Solvency II compliance.'*

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The Pension Protection Fund (PPF) recently published its Long-Term Funding Strategy setting out its plans to target self-sufficiency by 2030. GAD played a key role in reviewing the PPF's risk modelling and providing assurance that the thought processes and work underpinning the funding strategy are sound.

### What is the Pension Protection Fund?

The PPF was set up in 2005 to pay compensation to members of UK defined benefit pension schemes in the event of their employer becoming insolvent when the pension scheme is underfunded. The PPF has grown rapidly since then and now has assets in excess of £4 billion. 46,000 members have been transferred into it.

Eligible members receive compensation based on, but generally less than, their scheme pension. In broad terms, the starting compensation for members over their scheme's normal retirement age is equal to 100% of their pension. Those under their normal retirement age receive compensation equal to 90% of their pension, subject to a cap of around £30,000 pa.

Compensation paid to members is funded from the assets of the pension schemes transferred into the PPF together with an annual levy paid by eligible pension schemes and accumulated investment returns.

### Need for a funding strategy

The PPF recognises that there will come a point when it is unable to rely on levy payments from pension schemes. Therefore it wants to be financially self-sufficient by then. The PPF has carried out analysis to determine a suitable timeframe for achieving this objective, which suggests that this would be about 20 years from now.

By this point, the aim is to have no exposure to interest rate, inflation or market risks and to have a margin to protect against residual risks such as longevity and unexpected claims. This is similar to the way in which defined benefit schemes may aim to fund to a level that would permit a buy-out of their liabilities by an insurance company.

### Risks

In many ways the PPF faces similar risks to defined benefit pension schemes. However, pension schemes do not have the unpredictable risk of additional liabilities from new claims resulting from insolvency events. Furthermore, they do not supplement their assets via a levy but instead receive contributions from the sponsoring employer.

The PPF has identified four primary financial risks to meeting the funding objective:

- > Underfunding risk - the risk that eligible pension schemes have insufficient assets to cover PPF levels of compensation
- > Insolvency risk - the risk that sponsors of eligible pension schemes become insolvent and members' liabilities are transferred to the PPF
- > Investment risk - the risk that the PPF's own investments fail to reach their target investment returns
- > Longevity risk - the risk that PPF members live longer than expected.



Natasha Varma

Investment & Risk

*'A stochastic model ... allows an assessment of the likelihood of various outcomes.'*

## Long-Term Risk Model

The PPF has developed a Long-Term Risk Model to help quantify and assess the potential impact of the risks it faces. The modelling of risks is vital to ensure informed decision making. The PPF uses this model to help make key decisions on the total levy to be charged to eligible pension schemes and the choice of an appropriate investment strategy.

The Long-Term Risk Model is a stochastic model. This means it considers a large number of scenarios reflecting potential variation in future asset returns, insolvency events and longevity experience. These scenarios are used to project the PPF's assets and liabilities over time, providing information on a wide range of potential outcomes. The PPF's model considers 500,000 different scenarios.

A stochastic model is preferable as it allows an assessment of the likelihood of various outcomes - for example, the probability of successfully meeting the funding objective. This compares to a deterministic model, where only a single, often 'best-estimate', assumption is used. The PPF also tested the sensitivity of the model results to a wide range of modelling assumptions such as lower asset returns and higher sponsor insolvencies.

The Long-Term Risk Model's projections suggest there is a high probability of achieving the funding objective of self-sufficiency by 2030.

The Long-Term Risk Model helps the Board of the PPF to understand the risks faced and the potential impact of these risks, including how these might develop over time. The Board receives regular statistical updates from the model, including the probability of achieving the funding objective and a measure of downside risk. Such quantifiable measures assist in monitoring the progression of the fund through time and allow prompt action to be taken when required.

In the event of significant deviation in progress towards the funding objective, the Board may opt to review the funding objective or the investment strategy, or consider an increase or decrease to the PPF levy in the medium term.

Clear measurement and quantification of risks is also helpful for communication with external stakeholders. The PPF can share its plans and show how it intends to ensure it has the financial resources needed to pay existing levels of compensation to current and future members of the PPF.

## GAD's Role

In developing a stochastic model, there is no guarantee that the future will conform to the dynamics seen in the past. The real world is far more complex than it is possible to model. Therefore a degree of judgement is required about the assumptions used and any simplifications made. It is just as crucial to understand the significance of these simplifications and the reasonableness of the output from the model.

Our expertise in actuarial modelling enables us to provide a valued external opinion on aspects such as these. The PPF appointed GAD to provide an external opinion on modelling assumptions and the methodology used in the Long-Term Risk Model. Equally importantly, GAD's review has provided the PPF with valued external assurance that the thought processes and work underpinning the PPF's Long-Term Funding Strategy are sound.

*'GAD's review has provided the PPF with valued external assurance.'*

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