The Pensions Regulator

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UK Impact Assessment

Commissioned by DWP: 8 March 2012

8 October 2012

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1 Introduction

On 8 March 2012, the Minister of State for Pensions asked the Pensions Regulator (TPR) to conduct a quantitative impact assessment ("IA") on the potential effect of the European Commission's review of the IORP Directive.

This report is addressed to the Minister of State for Pensions, and contains TPR's findings of its work on the IA.

As part of the European Commission's review, TPR will be undertaking a more detailed Quantitative Impact Study (QIS) later this year. This will involve carrying out more detailed calculations than those used for this report, and may result in differences to the numbers shown in this report.

The calculations in this report are based on the draft technical specifications for the QIS that were published by EIOPA in June 2012 suitably adjusted to ensure we provided more realistic assessment. They do not take account of changes that EIOPA have subsequently included in a revised draft that was submitted to the European Commission for consideration on 2 October 2012. The final technical specifications for the QIS will be established – after possible amendments - by the Commission.

The final specifications for the QIS, or indeed any legislative proposal could result in material differences (eg £100 billion or more) to the numbers shown in this report.

We understand that the IA will be used by DWP and HMT officials in assessing the likely effects on economic growth, employment and the stability of financial markets. It is therefore important that any user of this report is aware of the limitations and material uncertainties in the figures it contains.

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2 Scope

This report covers the items requested by the Minister in the letter of 8 March 2012, namely:

- the likely impact on the gross capital requirements for UK firms in aggregate;
- the extent to which sponsor covenant might offset additional requirements;
- the range (by number and size) of firms that would be unable to meet the additional funding caused by the new solvency requirements;
- the range (by number and size) of firms where affordability could only be achieved by extending recovery plan periods;
- the impact on speed of DB closures;
- the impact on schemes' investment strategy

Given the uncertainties over the form of any final Commission proposals even after the publication of revised EIOPA specifications on 2 October 2012, TPR has been asked to look at possible scenarios – particularly on confidence levels, methods of valuing the sponsor covenant, treatment of pension protection mechanisms, and length of recovery periods.

3 Executive Summary

The EIOPA QIS, on which this impact assessment is based, covers only the calculation of assets, liabilities and potential capital requirements under EIOPA's proposals for a Holistic Balance Sheet. The QIS will not consider the wider implications of this approach to determining funding obligations, including recovery plans and possible supervisory actions.

Our estimates and comments should be regarded as high-level. Due to the scale and complexity of the task, several of our numbers have been rounded to the nearest £100 billion. In addition, all estimates are highly dependent on explicit and implicit assumptions without which it would not have been possible to obtain results at this stage. Therefore the impact may not be the same if the Commission adopts a different approach. In addition, the estimates may change when we carry out more detailed calculations on UK schemes for the QIS later this year.

Key points:

MANY POLICY UNCERTAINTIES REMAIN

- There are a number of alternative variables in the EIOPA approach, notably the method of calculating technical provisions and the role of sponsor support. The QIS does not suggest options for what period schemes must achieve the funding target, nor what that target should be, so a specific assessment of the impact of the Commission applying the EIOPA advice is not achievable.

ESTIMATED IMPACT ON THE FUNDING REQUIREMNT

- Nevertheless, if we assume that technical provisions are calculated under what we believe to be the most likely scenario then we believe the new rules would lead to an additional shortfall (relative to current UK funding measures as at end 2011) of **around £150 billion**. This assumes that technical provisions are calculated using EIOPA's "Level A proposals" (which are close to insurance buy-out liabilities), and then reduced to allow for sponsor support. However if there is no allowance for employer support, the funding shortfall could increase to **£500 billion or more.** On the basis of current discussions, we do not believe this outcome will arise (ie we would expect funding shortfalls to take into account employer support).

- The table below shows the range of possible scenarios impacting on scheme funding requirements, depending on the options chosen by the European Commission in its proposals for a Directive. No options have been proposed so these should be regarded as indications only. Actual options will be political decisions, as is the level for the Solvency Capital Requirement.

	Possible maximum level outcome	**Possible middle level outcome**	**Possible minimum level outcome**
Technical Provisions	Level A TPs	Level A TPs	Level B TPs
Sponsor Support	Included as asset on Holistic Balance Sheet	Included as asset on Holistic Balance Sheet	Not required for minimum funding purposes
Solvency Capital Requirement ("SCR")	Full SCR (offset by sponsor support)	Not required for funding purposes	Not required for funding purposes
ESTIMATED INCREASE IN FUNDING SHORTFALLS (INCLUDING ALLOWANCE FOR SCR)	**£400 billion** *(ie increase in technical provisions of £500 bn, less estimated sponsor support of £350bn, plus a net SCR of £250bn. The net SCR also allows for sponsor support)*	**£150 billion** *(ie increase in technical provisions of £500bn, less estimated sponsor support of £350bn)*	**Nil** *(as in line with current estimated funding deficits, and no allowance for SCR)*

- The sponsor support calculation is very sensitive to the actual method of assessment, underlying parameters and assumptions. These have been heavily criticised during the recent EIOPA consultation and, in the specifications published on 2 October 2012, EIOPA committed to do further work on sponsor support. It is possible that this amount could change materially following the actual QIS depending on the final form of the specifications and our detailed QIS calculations.

- Our estimates, even when rounded, are very sensitive to even small changes in the assumptions, and could easily change (upwards or downwards) by **£50 billion or more** if changes are made to some of the key calculations.

- Currently, UK pension schemes are receiving deficit contributions of around **£15-20 billion pa.** Clearly, any proposal such as that under discussion which acts to increase total pension scheme shortfalls by £150 billion or more would have a significant impact on deficit contributions required going forward (unless they can be spread over a very long period).

POSSIBLE ADDITIONAL FUNDING REQUIREMENT (SCR)

- Schemes may or may not also need to have access to additional capital to cover a Solvency Capital Requirement ("SCR"). The amount of capital for the SCR will depend on the confidence level chosen by the Commission and, based on the 99.5% confidence level being used for insurers, could reach **£500 billion** (excluding allowance for sponsor support). However sponsor support items may allow this to be reduced to around **£250 billion.**

- Use of lower confidence limits would reduce this amount. For example, use of a 95% confidence level (which we understand is being considered by the Commission) would reduce the SCR (before sponsor support) to around **£300 billion**, and the net SCR (after sponsor support) to around **£150 billion**.

- It is not yet clear how the SCR will be incorporated in future recovery plan contributions.

IMPACT WILL BE MUCH SMALLER IF PAST SERVICE BENEFITS ARE EXCLUDED

- Our calculations assume that any new proposals will be applied to past service pension liabilities. It is not yet clear whether this will be the case, or whether past service liabilities will be treated differently. European Commissioner Michel Barnier said in a speech earlier this year that "a solution needs to be found to deal with the past, but applying something rigorous could be financially unsustainable".

SMALL SCHEMES MIGHT BE EXEMPTED

- Our calculations do not make any allowance for the possibility to exempt small schemes from such requirements. This could affect third or more of UK schemes but would not materially impact the overall numbers for the UK as a whole.

LIABILITY MEASURE SUBJECT TO FURTHER CHANGE

- As mentioned above, UK funding deficits (ignoring sponsor support) would have increased by an **estimated £500 billion** if calculated using EIOPA's "Level A" proposals as at end 2011.

    - EIOPA is currently considering a small reduction, of 0.25% pa, to the Level A discount rate. This would result in the above deficit increasing by an additional **£100 billion**
    - Other options being considered by EIOPA could result in the above deficit reducing by around c **£150 billion.**

- EIOPA have proposed an alternative liability measure ("Level B") which, we estimate, would have resulted in broadly **no change** to current funding deficits, based on assumptions reflecting the estimated return on scheme assets (based on current allocations and with no allowance for future de-risking of assets) and allowing for an 8% risk margin.

DISTRIBUTION OF IMPACTS

- We expect that **around half of UK schemes** would have a net shortfall (other than due to credit risk), which represents the schemes included in the above £150 billion net shortfall figure. Schemes of all size would be affected, although around two-thirds of this shortfall is in respect of schemes with more than £500m each in assets. The number of schemes affected could reduce significantly if any new legislative proposal only applies to schemes of a certain size (eg there is an exemption for small schemes) or if it does not apply to past service liabilities.

- The services, manufacturing and financial service industries are expected to have schemes that are most impacted by these changes. These three industries would account for about two-thirds of the total expected shortfall of £150bn.

SCHEME CLOSURES

- Currently 16% of schemes are open to new members, and 58% are closed to new members but open to future accrual. We would expect more schemes to close to future accrual if any proposals from the Commission result in higher recovery plan requirements. However, most commentators believe that schemes will continue to close even in the absence of any legislative changes, and it may be difficult to identify how many closures could be caused specifically as a result of any such changes. The impact of the proposals on scheme closures will depend on the length of any transitional period for a new Directive (which may have to be 20 years or more for any proposals to be affordable). If the Commission proposes new funding rules for IORPs towards the maximum level, on the basis of current trends, it is possible that over the next 20 years, less than 5% of schemes will remain open to new members, and less than 25% will remain open to future accrual.

INVESTMENT STRATEGIES

- We would also expect schemes to continue to reduce equity allocations, and increase allocations to bonds as well as use of derivatives for hedging and de-risking purposes. Currently around 40% of UK pension plan assets are invested in equities. Over the next 20 years or so, it is possible that equity allocations could reduce to 15%-25% of total assets or fall even further. The rate of any change will depend on the length of any transitional period, as well as wider economic factors.

4 Stakeholder views on EIOPA's proposals for a QIS methodology

Our work has been carried out largely using the methods and assumptions in EIOPA's draft technical specifications for a Quantitative Impact Study "(QIS") to be carried out by EU member states between October and December 2012. This draft was published in June 2012 for a six week public consultation. Over 110 organisations responded to the consultation, with over 1,300 pages of comments. A large majority, around 75%, came from UK or German stakeholders.

Almost all respondents disagreed with the general set up of the QIS and there were significant amounts of criticisms on the process and the detailed specifications. Subsequently, EIOPA has formally agreed to undertake further work on how to measure and assess sponsor support.

For any modelling work, the quality of the technical specifications will have a direct impact on the quality of the output. If a model is inappropriate for use, then it is likely to give inappropriate output (even if calculated accurately). For the purpose of this report, we have been able to calculate numbers based on the draft specification. However, this does not mean the numbers are fully appropriate for decision making. It only means we have been able to calculate numbers based on the proposed model.

The findings in our report should therefore be read in the light of the above comments. Our preliminary findings, and therefore the impact on UK firms, could change if the European Commission makes its proposals for a Directive on a different basis or if the technical specifications for the QIS are altered. There is a significant possibility of this happening, as we understand that changes which may make a material different to the results are being considered in more detail by EIOPA (including the method of calculating determining discount rates, and treatment of sponsor support).

Some of the main shortcomings identified in the consultation process are as follows:

- The QIS will not consider the impact on recovery plans, tiering of assets, and supervisory/regulatory responses.
- A significant number of options are being considered for the selection of the discount rate. It is not clear how some of the options have been derived. Some of these are still under consideration for Solvency II for insurers. Small changes to the discount rate will have a material impact on UK pension scheme liabilities (for example, a small reduction of 0.25% pa would increase liabilities by £100 billion).
- EIOPA proposed a fixed price inflation assumption of 2% pa. This has been heavily criticised in the UK and elsewhere. As a result, the specifications published on 2 October 2012 allow for market-based inflation assumptions (and we have allowed for this in our calculations).

- It is not clear whether allowance should be made for future salary increases when calculating technical provisions.
- The simplification for calculating the risk margin for calculating technical provisions appears to be arbitrary, and it is not clear how it has been derived.
- The methodology for calculating sponsor support has been heavily criticised. In particular, it is not clear where all the parameters have come from, or whether it will give sensible answers for certain types of organisation. For example, the actual wording in the draft specifications does not adequately deal with charities, non-profit institutions, quasi public-sector entities, multi-employer schemes, and sponsors that have support from other group entities (eg cross-guarantees or informal funding commitments from a parent company whether based in the UK or overseas).
- The proposed technical specifications for the sponsor support could have some unintended consequences. For example, the Institute & Faculty of Actuaries has indicated that paying a deficit contribution to a pension scheme could actually worsen the Holistic Balance Sheet (as the increase in scheme assets would be offset by an increase to the Solvency Capital Requirement as well as a reduction in future Sponsor Support - in some cases the latter two items could be more than the increase in scheme asset).
- The sponsor support calculations require significant use of credit ratings. Use of credit ratings for regulatory purposes has been criticised in other areas (eg G20 views).
- The calculations for the solvency capital requirement are very detailed in places, but also miss out some major risks (eg inflation risk).

5 Methodology

Our work has been carried out largely using the methods and assumptions in EIOPA's draft technical specifications for a Quantitative Impact Study ("QIS") to be carried out by EU member states between October and December 2012.

Given the complexity of some of the EIOPA's calculations and methods, and given the fact that they are still subject to change by the European Commission, we have made a number of simplifying assumptions where we believe it has been appropriate and proportionate to do so.

Our calculations for these preliminary findings are high level calculations and, in many cases, numbers are rounded to the nearest £100 billion. This rounding should be considered in the context of pension liabilities, which under some of the measures shown in Section 6, reach almost £2 trillion.

Our calculations are based on market conditions as at 30 December 2011 (the date that will be used for the QIS). We have used the dataset that was used for the Pensions Universe Risk Profile (Purple Book 2011), published by the PPF and TPR, which is based on data for 6,432 defined benefit schemes (representing 96% of PPF-eligible schemes). We have rolled forward the asset and liability figures forward to 30 December 2011 in a manner consistent with the projections carried out for the PPF 7800 Index period at this date.

It is possible that smaller pension schemes could be excluded from any new pensions directive. This could have a significant impact on the number of schemes impacted by any new legislation. Of the schemes in our dataset:

- Almost 2,300 (35% of all schemes) have less than 100 members, so could be exempt if IORPs with less than 100 members are exempt from the new directive. These 2,300 schemes had total assets of £11 billion (just over 1% of total assets), with an average scheme size of £5 million.
- A further 2,900 (45% of all schemes) have between 100 and 999 members, with total assets of £85 billion (9% of total assets), with an average scheme size of £30 million.
- Only c 1,250 schemes have more than 1,000 members, and these represent 90% of all UK scheme assets. Average scheme size for these is c £700 million.

We have not made any adjustments to allow for other schemes outside this dataset, or for schemes that have wound up, entered into the PPF or transferred pension assets and liabilities to third parties (eg insurers, the government) since 31 March 2011. Given the rounding we have used for our numbers, these are not expected to have a material impact on the results.

The QIS will only measure the assets and liabilities of pension schemes as at end 2011, and are based on discount rates at this date. Materially different results could be obtained if carried out at different dates or at a date in the future (and could become worse if markets deteriorate further or long-term interest rates reduce further).

Quality Assurance

This report has been compiled by TPR in accordance with its internal modelling standards relating to part-actuarial and part non-actuarial work. These include appropriate checking and internal peer review. Compliance with the Financial Reporting Council's technical actuarial standards is neither asserted nor required by the Financial Reporting Council. These standards, along with others, do however inform the design of TPR Quality Assurance process.

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6 Impact on valuation balance sheets (excluding impact of sponsor support and solvency capital requirement)

We have been asked to look at the impact on gross capital requirements.

It is important to note that, at this stage, neither EIOPA nor the European Commission have presented any proposals for determining future funding contributions. The forthcoming QIS is confined to the numerical calculations for the holistic balance sheet, and will not consider the wider implications of this approach to determine funding obligations. In particular the QIS will not look at the adoption of the holistic balance sheet in practice, recovery plans, tiering of assets and own funds, or regulatory and supervisory actions. EIOPA intends to include specific sections in its final report to start the discussion on these items, and to inform the policy making process, but without drawing any definite conclusions.

In order to assess the potential impact on capital requirements, we have first looked at the impact on pension scheme valuation balance sheets (using the proposed EIOPA methodology) excluding the impact of sponsor support and solvency capital requirements.

The impact of sponsor support is considered in Sections 7-9, and we look at some possibilities on the potential impact of solvency capital requirements (SCRs) in Sections 10 and 11.

In Section 12, we look at the potential impact on recovery plans.

Our calculations for these preliminary findings are high level calculations and, in this section, most numbers are rounded to the nearest £100 billion.

6.1 Current funding deficits

The starting point for our calculations is the estimated deficit for UK pension schemes under current UK funding rules. We estimate that it was around **£300 billion** as at 30 December 2011 (ie liabilities of £1.3 trillion less assets of £1.0 trillion).

The liability figures are very sensitive to the discount rate used. The above figure is based on an average discount rate of c 4% pa (ie just over 1% pa above the yield on long-dated government bonds, which is based on average discount rates seen in TPR's published scheme funding data based on recovery plans with effective valuation dates falling between September 2007 to September 2010).

This figure assumes that pension schemes would have retained the same margin over gilt yields (compared to that used in their last formal valuation) had they carried out a valuation at this date.

6.2 Funding deficit on EIOPA's proposed method

EIOPA has proposed that technical provisions should be calculated using a risk-free discount rate (known as Level A) and should incorporate a risk margin. This method is consistent with that proposed for insurers under Solvency II, and also broadly in line with that used by Dutch pension funds (who, after the UK, have the largest level of assets in IORPs in the EU). For these calculations, we have used an average Level A discount rate for UK plans of 3% pa.

- The Level A figures give a figure close to current estimated buy-out levels (although, of course, this is a notional estimate of buy-out as there is not enough capacity in the insurance market to buy-out all UK pension liabilities).
- The Level A figures will overall be higher than current scheme funding methods in the UK.

EIOPA has also proposed an alternative method based on a discount rate calculated using best estimate asset returns (known as Level B). This is similar to the approach adopted by many schemes for current funding in the UK, but without the margin for prudence. The EIOPA proposals are a simplified approach to calculating the expected return on return-seeking assets. For these calculations, we have used a Level B discount rate of c 5%pa and, in accordance with the current specification, have not allowed for any future de-risking.

The table below summarises the funding position on these two methods, with comparator figures against other measures seen in the UK (ie PPF 7800 Index, current UK funding rules, and estimated insurance buy-out costs). *(Note: As at 30 December 2011, the estimated funding deficit under current UK funding rules was broadly the same as the estimated deficit in the PPF 7800 Index. This is because, at this date, the differences in assumptions under both methods are broadly offset by the differences in benefits valued under both methods.)*

Estimated assets and liabilities as at 30 December 2011 (rounded to nearest £100 billion)

The numbers below are before, so exclude, the impact of introducing a Solvency Capital Requirement (see Section 10).

	EIOPA Proposed methods		**Current UK funding measures**		
£ billion (rounded to nearest £100bn)	**Level A**	**Level B**	**PPF 7800 Index**	**Estimated Current UK scheme funding deficit**	**Estimated cost of buy-out**
Liabilities	**1,800**	**1,300**	**1,300**	**1,300**	**1,800**
Assets	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)
Shortfall	**800**	**300**	**300**	**300**	**800**
Estimated current UK scheme funding deficit	300	300	300	300	300
Impact relative to current UK funding	**500**	**-**	**-**	**-**	**500**

Note- The liabilities under Level A and Level B incorporate a risk margin of 8% and allow for market-implied price inflation (as set out in the specifications published by EIOPA on 2 October 2012). Note it is not clear from the draft specifications whether a risk margin should be included under Level B or, if it is to be included, it should be identical to the risk margin used for Level A (ie 8% of the Level A liabilities). We have also allowed for future salary increases to the extent these are allowed for in current UK funding valuations (though we note that EIOPA may require future salary increases to be excluded).

The above table shows that:

- UK funding deficits would be expected to increase by c **£500 billion** if calculated using the proposed **Level A discount rate** approach (including an 8% risk margin). The liabilities under Level A would also be close to the expected cost of buying-out liabilities with insurers. Essentially this means adopting Level A for funding purposes would, at the end of 2011, be broadly equivalent to requiring schemes to fund to full buy-out levels.
- UK funding deficits would be **broadly unchanged** if calculated using the proposed **Level B discount rate** (with an 8% risk margin included).
- A key consideration for the government, and the Commission, is whether the primary discount rate for determining future cash funding should be based on Level A or Level B or something else.

EIOPA have also proposed some alternative options for calculating the liabilities under Level A.

Options that could lead to a significant reduction to the liabilities calculated under Level A include:

- Increasing the discount rate to reflect the long-term nature of pension liabilities, and a so-called "counter cyclical premium" that has been requested by the Commission. EIOPA has asked for this to be illustrated by increasing the discount rate by 0.5%pa – however, we note that the size of the adjustment may change as a result of further work being done by EIOPA for insurers under Solvency II.
- Removing the risk margin (assumed to equal 8% of the liabilities).
- Both of the above would act to **reduce** the Level A liabilities by **c £150 billion,** meaning UK funding deficits would then be **c £350 billion** higher than under current methods.

Options that could lead to a significant increase to the liabilities calculate under Level A include:

- Reducing the discount rate by 0.25%pa (eg to allow for higher assumed credit risk on swaps).

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This change would act to **increase** the Level A liabilities by a further **c £100 billion,** meaning UK funding deficits would then be **c £600 billion** higher than under current methods.

7 The extent to which sponsor support could offset the additional capital requirements

Important note: EIOPA's proposals for calculating sponsor support have been heavily criticised by UK and other European stakeholders, and many identified shortcomings in the approach when responding to the EIOPA consultation. Many stakeholders suggested that the treatment of sponsor support should be looked at in a second QIS. Therefore, it is quite possible that the final form of the calculation could change from the current draft proposals, and changes to calculation methods and parameters could lead to a materially different impact. EIOPA will now undertake to do further work. Our calculations for this report are all based on the original proposals from EIOPA.

We estimate that sponsor support could allow the estimated deficit under Level A above to reduce from £800 billion (if calculated using the current proposal for Level A) to around £150 billion using the methodology as set out in the draft QIS specifications. This figure should not be compared directly to the estimated deficit of £300 billion under current UK funding measures. The calculation of this net £150 billion deficit assumes that schemes will be able to meet the current estimated deficit of £300 billion. **Therefore the net deficit of £150 billion represents the potential additional capital requirement under EIOPA's proposals**. This figure is very sensitive to the underlying calculation methods and parameters, and could change significantly if a different approach is adopted by EIOPA or the Commission.

7.1 Approach set out draft specifications for QIS

Under its holistic balance sheet proposals, EIOPA has stated that IORPs should recognise the value of sponsor support as an asset on the holistic balance sheet.

For the purpose of the QIS, EIOPA has said that the value of sponsor support is the value of the contributions that would be required to be paid by the plan sponsor in order to ensure assets meet the full value of the Level A technical provisions (ie our estimated figure of £1,800 billion). To do this, pension funds will first be required to calculate the maximum amount of sponsor support that could be available from the sponsor. We have valued this, in a manner consistent with the draft specifications, as the sum of the following items:

- Current recovery plan contributions (for the purpose of our IA calculations, we have, for simplicity, set these to equal the estimated UK funding deficit as at 31 December 2011),
- 50% of shareholder funds for the employers sponsoring the scheme (with an adjustment to allow for employers sponsoring multiple schemes) (where shareholder funds are negative, we have assumed a zero value)

- A multiple of future earnings *(based on the lower of (a) 50% expected future net profits and (b) 25% of expected future EBTDA, for a period equal to the average duration of the pensions scheme's liabilities) NB The earnings figures are to be projected from the average of the most recent 3 years' data for the scheme sponsor, with inflation for past and future inflation*. Where this figure is negative, we have assumed a zero value.

In cases where the maximum sponsor support figure exceeds the deficit under Level A, the sponsor support figure for the calculation is then reduced so that it equals the Level A deficit.

Our figure for sponsor support is based on estimated figures of:

- A maximum sponsor support figure (based on participating employers only) of around £2 trillion. (*This figure could change if allowance is made for sponsor support from other companies in the sponsor's group, especially if there is a separate parent company.)*
- A sponsor support figure for the Holistic Balance Sheet purposes of (ie the amount to fund Level A technical provisions) of around £650 billion.

Both figures are very approximate figures. They are very sensitive to the underlying parameters specified by EIOPA for the calculations, and our results could change materially if some of these are changed.

EIOPA have also warned that, for some sponsors, the number calculated using the proposed standard formula may materially mis-state the actual value of sponsor support available, and scheme specific calculations should be carried out instead.

The estimated figures for sponsor support could change significantly if different methods or assumptions are used for the calculation of the liabilities or sponsor support items. For example, if liabilities increased by £100 billion (ie to £1,900 billion), we would expect the net shortfall to increase by £50 billion. This is because, if deficits increase as a result of assumption changes, the sponsor support will also increase but not to the extent needed to offset the whole increase in deficit.

7.2 Allowing for credit risk and parent company support

There are a number of items that we have not taken into account in these calculations which could act to change the calculated sponsor support:

- We have not allowed for credit risk. This is for various reasons (see below). Therefore, the current estimates for sponsor support are likely to be overstated due to this factor alone.

- However, in the opposite direction, we have not allowed for any parent company guarantees, or, for multinationals, support that may be available from other entities in the group. These items may result in the current estimates for sponsor support being underestimated.

The draft EIOPA specifications rely heavily on credit ratings, and the calculated value of sponsor support will be extremely sensitive to actual credit ratings. We note that during the consultation, several stakeholders have said the use of or reliance on credit ratings for the QIS is not consistent with other work being done within the Commission.

EIOPA have said that, if credit ratings are not available for individual sponsors, they should be given the same default probabilities as companies with a B or CCC credit rating (ie an assumed default probability of 4.175% pa), unless there is evidence to suggest a different rating should be used. This will require an individual analysis of all plan sponsors which we have not been able to carry out for this IA.

However, we note that the issue of gathering data on credit ratings is regarded as problematic. For most scheme sponsors (eg subsidiaries, non-listed companies, non-profit organisation), credit ratings do not exist so an alternative measure may need to be found. We will look to do more work in this area for the actual QIS.

In doing so we will look to use measures similar to those used by the Pension Protection Fund in its levy calculations and long-term modelling. The PPF take into account of market-implied credit ratings (based on information from equity, bond and credit default swap markets) for sponsors that do not have formal credit ratings, and D&B failure scores for sponsors that do not have publicly quoted equities or bonds or not rated at all by ratings agencies.

At 31 March 2011, around 35% of the PPF's insolvency probabilities for its 500 largest scheme exposures are derived by failure scores. At this date:

- the average insolvency probability using D&B failure scores, unweighted by liabilities, was 1.2% (which is the same as that proposed by EIOPA for BB-rated companies);
- the average insolvency probability weighted by liability was 0.4% (just above the figure of 0.24% proposed by EIOPA for BBB-rated companies).

We will be considering the extent to which we can take account of D&B failure scores when determining long-term probabilities of defaults for the QIS calculation. In particularly, using EIOPA's standard assumption of 4.175% for all unrated employers, could potentially overstate the possible default risk in annual plan sponsors based on the above average short-term insolvency probabilities. However, as the QIS requires a long-term view to be taken of default risk, it may not be appropriate to use the short-term probabilities (as published by D&B) for actual QIS calculations.

8 Analysis of schemes with a shortfall after allowing for sponsor support

Of the 6,432 schemes in our dataset, our calculations for Level A technical provisions currently suggest that:

- Around half of all UK schemes are **not expected to** have a shortfall after allowing for sponsor support (and before taking into account credit risk – see Section 7.1 and the note below).
- The other half of UK schemes **are expected to** have a shortfall after allowing for sponsor support based on the calculations used in Section 7 (ie in which the aggregate shortfall is currently estimated to be £150 billion).

NB the above figures are based on sponsor support that is required for the Holistic Balance Sheet calculations, rather than the maximum value of sponsor support. The above figures do not take into account credit risk – once credit risk is allowed for, the number of schemes with a shortfall will increase. For many (especially those judged to have credit ratings of A or above, so, under the draft QIS specifications, are assumed to have annual default probabilities of 0.05% or below), the size of the shortfall is unlikely to be material in the context of the overall UK numbers.

Employers that sponsor the half of all UK schemes that are likely to have a shortfall after allowing for sponsor support are, by definition, unlikely to be able to afford to increase contributions to these plans (as if they could the sponsor support item could then be increased).

The EIOPA proposals do not consider the implications of having a shortfall. The QIS will not look at how shortfalls can or should be met. EIOPA has stated that they will include information in their final report to inform the policy making process in this area. Therefore the comments below, that relate to affordability, should be regarded as speculative, as we simply do not know how the Commission plans to deal with shortfalls.

For example, affordability may perhaps only be achieved by extending recovery plan periods, by reducing benefits for future service, removing salary links for past service, or trying to obtain support from other entities (eg parent or other group companies). The actual impact on the UK will depend on what the Commission proposes as policy options in this area.

To provide some indication of the potential impact, we have analysed the schemes that contribute to the net shortfall of £150 billion. (In the figures below, the size of the scheme represents the s179 funding position, ie PPF liabilities, as at 31 March 2011 as used for the Purple Book 2011).

Our analysis suggests that:

- schemes of all size will have a shortfall (for example c 900 schemes with scheme size of less than £5m will be expected to have a shortfall; as well as c 150 schemes with scheme size above £500m);
- the majority of the shortfall (around two-thirds, or £100 billion) is in respect of the c 150 schemes that have a scheme size above £500m; and
- 80% of the schemes with a shortfall have less than 1,000 members (and 35% have less than 100 members).

The above analysis assumes that all schemes would be subject to the any new requirements. If smaller schemes are exempt, or a different but more affordable approach is taken by the Commission for past service benefits, the number of schemes affected and the total net shortfall will be lower.

Some of the schemes that are currently expected to have shortfalls are charities, non-profit institutions, quasi public-sector entities, multi-employer schemes, and sponsors that may have support from other group entities (eg cross-guarantees or informal funding commitments from a parent company whether based in the UK or overseas). As mentioned previously in this report, the calculation of sponsor support may not be appropriate for these schemes.

We have also analysed the industries of firms sponsoring schemes that have a shortfall. This shows that schemes with sponsors in the services, manufacturing and finance industries are expected to be most impacted by these changes (which, in part, is due to the large number of schemes in these sectors). These three industries alone contribute two-thirds, c £100 billion, of the current estimated net shortfall. This analysis and amounts may change if EIOPA changes the way that companies in different industries should be valued when calculating the sponsor support item, or if scheme/sponsor specific calculations are used.

9 Impact of allowing for the Pension Protection Fund as a security mechanism

Based on the current EIOPA proposals, we expect that the asset in respect of the Pension Protection Fund will be relatively small for UK schemes as a whole, and certainly much lower than the asset for the Sponsor Support item. This is partly because, upon default, the EIOPA draft specification assumes that up to 50% of the Level A plan deficit can be recovered from shareholder funds. (EIOPA have stated that the actual recovery rate can be assumed to be 50%, but pension schemes may use other lower figures if appropriate).

If a 50% recovery rate is assumed, the amount expected to be recovered will, in most cases, exceed the deficit on the PPF basis, and lead to a zero value for the Pension Protection Fund asset.

Given this (and the uncertainty about how this item will be calculated or used for recovery plans, and the number of other approximations in our calculations) we have not yet taken the Pension Protection Fund into account for our figures. As part of our actual QIS work, we propose looking at the impact of using different recovery rates even though this has not been requested by EIOPA.

10 Solvency Capital Requirement

EIOPA will also require schemes to calculate a Solvency Capital Requirement ("SCR") to cover the risk of adverse events in the future. EIOPA will be requiring schemes to calculate using 99.5%, 97.5% and 95% confidence levels. The SCR will then represent the expected change in deficit based on events that are expected to occur once in every 200, 40 and 20 years respectively.

EIOPA has said that the decision on the actual confidence level will be a political one. We note that a 99.5% confidence level is used for Solvency II, whereas Dutch pension funds currently have a 97.5% confidence level for determining capital requirements.

The table below shows the expected SCR, under a number of different confidence levels for the schemes in our dataset. The SCR figures below are before any adjustment for sponsor support. To produce these numbers we have carried out calculations in line with EIOPA's draft technical specification for the 99.5% confidence level calculations. We have then used standard statistical techniques to estimate the SCR for lower confidence levels.

- For the QIS itself, EIOPA will prescribe some parameters to calculate the 97.5% and 95% confidence limits.
- These have not yet been published, so could lead to different figures than shown below.
- EIOPA will not be calculating figures for lower confidence limits, but we include these here in order to show the impact of even lower limits.

Confidence level	Number of years in which events expected to occur	Estimated SCR (£ bn)	Estimated SCR + Level A deficit (£bn)
99.5%	200	500	1,300
97.5%	40	400	1,200
95%	20	300	1,100
90%	10	250	1,050
80%	5	160	960
75%	4	130	930
67%	3	90	990

The table shows that the SCR could potentially be in the range **£300 billion to £500 billion** (based on the confidence levels being looked at by EIOPA). However, if the Commission are open to considering lower confidence levels, the SCR could reduce considerably.

EIOPA will also allow the SCR to be reduced in cases where there is a strong sponsor or an ability to reduce discretionary benefits. This could have a significant impact on the calculated SCR.

- For the 99.5% SCR confidence level, we estimate this could result in a **net** SCR of **around £250 billion**.
- For the 95% SCR confidence level, we estimate this could result in a **net** SCR of **around £150 billion**.

These figures are in addition to the deficit figures shown in Section 5.

However, it is not yet clear how the EIOPA or Commission will take into account the SCR for funding purposes, and this is not being looked at as part of the QIS.

11 Minimum Capital Requirement

EIOPA is also looking at the introduction of a Minimum Capital Requirement ("MCR"). In the draft technical specifications, this is calculated using a formula with a floor of 25% of the SCR and a cap of 45% of the SCR.

Based on the proposed methodology, this could result in an MCR of **£60 billion** (based on the above figures for the 99.5% SCR confidence level with allowance for sponsor support).

It is not yet clear how this would be allowed for in funding or regulatory intervention. In effect, the MCR is a small version of the SCR and, for insurers, is used to require more immediate corrective action.

12 Possible impact on annual contributions

The Commission has not yet given any indication on how quickly deficits would need to be met, and the extent to which sponsor support could be used to reduce the annual contributions required.

However we note that EIOPA suggested the following options in its advice to the Commission in February 2012:

- Option 1: Retain flexibility on recovery plans of current IORP Directive.
- Option 2: Solvency II principles with extended length of recovery periods.
- Option 3: Short-term Solvency II-type recovery plans combined with long-term flexible recovery plans.

None of the above, or indeed any recovery plan options, are being looked at for the QIS. Therefore it is not possible to determine what the potential impact could be on future funding requirements, since no proposals have been put forward by the Commission.

However, a key aspect of any funding requirement will be the length of period for possible recovery plans. To show what these could look like, we have calculated level annual deficit contributions to UK plans for different deficit measures and recovery plan lengths, assuming that no allowance was made for the value of sponsor support and the deficit was based on the different levels of liability. *(NB As the QIS does not cover the calculation of recovery plan contributions, and how they could be calculated, we have had to make a number of assumptions which may not be borne out in practice. For calculating annualised deficit contributions, we have assumed future investment returns on these contributions will be in line with the Level A risk-free discount rate - no allowance is contained for future expected investment outperformance).*

12.1 Current deficit contributions

The table overleaf shows expected future annual deficit contributions if no changes are made to the funding requirements. These are based on an estimated deficit of £300 billion as at end 2011. We show the expected annual deficit contributions over a variety of periods. These are illustrative numbers only so that they can be compared to the options presented in Section 12.2.

It should not be taken to mean that UK pension schemes will be expected to have recovery plans of these lengths for valuation dates on or after 30 December 2011. Recovery plans will still need to be determined under current UK regulations, taking into account TPR's own guidance in this area. Some pension schemes include allowances for additional expected investment returns when setting recovery plans under the current requirements – such allowances are not included in the numbers in the table below

		Expected annual deficit contributions for different recovery plan lengths (£bn pa) (Rounded to nearest £10bn)			
Deficit measure	**Estimated deficit (£bn)**	**5 years**	**10 years**	**20 years**	**30 years**
Current funding measures	300	60	30	20	10

12.2 **Possible impact of EIOPA proposals on future deficit contributions**

We assume that, under any new legislative proposal, companies will be required to continue paying deficit contributions that are, in present value terms, in line with existing recovery plan requirements. For example, if Level B is adopted as a minimum funding requirement then, as mentioned in Section 6.2, as 31 December 2011 this would have resulted in a funding deficit that is broadly in line with current funding deficits (ie a deficit of £300 billion)

The table below shows the possible additional deficit contributions (in addition to the figures shown in Section 12.1) if plan sponsors need to pay additional contributions to cover the net shortfall under EIOPA's Level A proposals.
Note: No proposals have been produced for recovery plans , so these numbers should be regarded as illustrative only. We show options both with and without allowance for Solvency Capital Requirements ("SCR"). All deficit contributions are rounded to nearest £10bn.

				Additional expected annual deficit contributions (£bn pa) (Rounded to nearest £10bn)			
Deficit measure (including allowance for sponsor support)	***Estimated shortfall (after allowing for sponsor support)***	***Allowance for SCR (99.5% confidence level, net of sponsor support)***	***Estimated shortfall including allowance for SCR (£bn)***	**5 years**	**10 years**	**20 years**	**30 years**
Level A, but no SCR	*150*	-	*150*	40	20	10	10
Level A with SCR	*150*	*250*	*400*	90	50	30	20

The above table shows that, based on Level A measures with allowance for sponsor support:

- Additional annual deficit contributions could be anywhere between **£10bn and £90bn pa** depending on the method used to calculate the deficit, the recovery plan length and how allowance is made for the SCR. In most cases this could lead to a significant increase in deficit contributions from current levels.
- This is in addition to deficit contributions required to fund existing deficits (estimated to be £300 billion as at 30 December 2011) or if Level B is introduced as a minimum funding requirement (also estimated to be £300 billion as at 30 December 2011).

We estimate that deficit contributions to UK schemes are currently of the order of **£15-20 billion pa.**

If no allowance for sponsor support is made, then the deficit contributions would be materially higher than those shown above.

The deficit contributions required would also be different if actual technical specifications are different from those set out in the draft. For example:

- Changes to the methods of calculating the discount rate and sponsor support could result in material differences. .
- Being able to include allowances for additional investment returns in the recovery plan
- Use of different confidence limits for the SCR
- The approach to allowing for the Minimum Capital Requirement ("MCR")

Alternative methods of calculating deficit contributions (eg allowing for inflation-linked payments, one-off payments, additional investment returns in the recovery plan) would, if allowed by the Commission, result in different annual contributions to those shown above. In particular, if allowance can be made for additional expected investment returns (in excess of the risk-free discount rate), deficit contributions would be lower than those shown above.

13 Impact on the speed of scheme closures

Any estimate of the possible impact of scheme closures needs to recognise that there is a current strong trend towards scheme closures to new members and closing to future accrual. The future changes in that trend are uncertain, and will depend on imminent changes such as auto-enrolment, the possible cessation of contracting-out, demographic and investment pressures, and changes to company accounting standards.

The impact of any European legislative changes would add to these pressures but may be very difficult, if not impossible, to distinguish what future closures may be specifically as a result of any legislative change. The actual impact would also be affected, by the unknown as yet, severity and timing of any changes. The following comments need to be read in that light.

We would expect the number of scheme closures to increase if the Commission's proposals result in an increase in funding requirements.

The Purple Book 2011 showed that 74% of schemes are open to future accrual (compared to 81% in 2007).

However a significant number of schemes have closed to new hires since 2007 and only 16% were open to new hires in 2011 (compared to 31% in 2007).

Approximately half of the schemes that are open to new members or to future accrual have a net shortfall on the proposed Level A funding measure (after allowing for sponsor support). We would therefore expect that many of these schemes will have no option other than to close their schemes (both to new members and to future accrual) in order to be able to afford to meet this shortfall and avoid building up further pension risks. In addition, the cost of future accrual will be higher under Level A funding measures, meaning companies need to pay higher contributions for future service benefits. This is also likely to mean more companies will close schemes, or reduce future service benefits, in order for these to be kept at an affordable level.

The speed of closures would very much depend on the timing of any new legislation, and the length of any transitional period. Over time, this could lead to less than 5% of schemes being open to new members, and less than 25% of all schemes being open to future accrual.

However, given this trend, many companies that could afford to keep schemes open may also decide that there is no longer a competitive need to provide defined benefit arrangements. Therefore these companies may also close their schemes and could lead to less than 5% of schemes remaining open, and less than 25% remaining open to future accrual.

Many of the few schemes remaining open could be the larger schemes, particularly those that have strong sponsor support. Whilst 16% of schemes are now open to members, 31% of scheme members are in open schemes. This indicates that smaller schemes are already more likely to be closed to new members or future accrual compared to large schemes, and this trend may continue.

13.1 Survey data on scheme closures

In order to help our thinking in this area and the likely development of scheme closures, we have looked at published survey data from other industry data (TPR does not hold detailed data on what changes employers are considering making to schemes).

The National Association of Pension Funds ("NAPF") publishes an annual pensions survey. 1,500 schemes participated in their Annual Survey for 2011. This revealed that a third of schemes were planning changes to schemes for existing members **in the next five years**, and a similar proportion were planning changes for new employees. Plans include reductions to scheme benefits as well as closing schemes in favour of defined contribution schemes.

The Association of Consulting Actuaries ("ACA") also publishes a biennial Pension trends survey. 468 employers participated in the 2011 Survey, of which 61% employ less than 250 staff. This revealed that 30% of employers are either presently reviewing their pension arrangements or will do so in the year ahead. This is a similar proportion to that seen in the NAPF survey.

These surveys indicate that around a third of companies are considering changes in the short-term, so it would be reasonable to assume, as we have done, that even more would consider changes in the long-term, and that many of these will close to new members and/or to future accrual.

13.2 Other factors leading to scheme closures

The ACA indicated that this high level of scheme changes is likely to be the result of a number of factors, including "the stream of regulatory measures impacting on existing arrangements in recent years, the approach of auto-enrolment, or because of financial reasons in a generally very difficult economic climate for many businesses, with uncertainty mounting".

Given this it is important to note that many of the scheme closures could still occur even if a new directive is not implemented, and it may be difficult to isolate the number of scheme closures expected by this change alone.

14 Impact on schemes' investment strategies

Any estimate of the possible impact on scheme investments strategies needs to recognise that there is a current strong trend towards de-risking of pension assets. The future changes in that trend are uncertain, and will depend on any imminent changes like relative prices of bonds and equities, availability of alternative asset classes, demographic and investment pressures, and changes to company accounting standards.

The impact of any European legislative changes would add to these pressures but may be very difficult, if not impossible, to distinguish what investment changes may be specifically as a result of any legislative change. The actual impact would also be affected, by the unknown as yet, severity and timing of any changes. The following comments need to be read in that light.

The impact on investment strategy will also depend heavily on the final form of the Commission's proposals as well as the length of any transitional period.

Insurers, who have had many years to become used to Solvency II, are now turning their attention to investment strategies and asset allocation.

It is unlikely that, at this stage, many pension schemes will have considered how their investment strategies may change if the Commission makes changes to the IORP directive.

In this section of our report, we look at some of the trends currently seen in UK pension schemes, we comment on whether they may continue, and we consider some of the strategies being considered by insurers which could in turn end up also being considered by pension funds.

It may be worth considering how long-term annuity providers may change their investment strategies as a result of Solvency II. This is not something we have looked at this for this report, but could be a useful area to investigate further.

We note that the Commission has recently announced that it will shortly be producing a green paper on long-term investment, and we provide comments on this at the end of this section.

14.1 Summary

Overall we would expect UK pension funds to reduce investment risk by reducing equity holdings and increasing amounts invested in bonds (especially long-dated gilts and corporate bonds). We also expect increased use of derivatives for interest rate and inflation hedging. The impact on allocations to property, infrastructure, hedge funds and private equity is difficult to predict at this stage.

14.2 Recent trends in investment strategies

Between 2006 and 2011, there have been significant changes in the average asset allocation for UK pension schemes, with schemes reducing investment risk as well as diversifying their return seeking assets:

- equity holdings have reduced significantly, with the share of equities in total scheme assets falling from 61% in 2006 to 41% in 2011.
- holdings in gilts and bonds have increased from 28% to 40% over the same period.

There has also been increased diversification of equity and bond holdings from 2006 to 2011:

- The proportion of equities invested in the UK has fallen from 48% to 38%.
- The proportion of bonds in corporate fixed interest securities has increased from 32% to 44%.
- Holdings in alternative assets (including property, hedge funds and infrastructure) have increased from 7% to 13%.

The fall in equity holdings, as well as lower proportion invested in UK shares, is significant. This means the overall allocation of all pension scheme assets to UK equities has halved from 30% to 15% (ie around £150 billion) over the last 5 years.

In addition, pension schemes have reduced risk in other ways:

- Many pension schemes are using derivatives to provide protection against interest rate and inflation movements. Industry sources suggest that around £200-£250 billion of liabilities had been hedged using derivatives by March 2011.
- There has also been significant interest in risk transfer arrangements covering buy-outs, buy-ins and longevity hedges. However, the volume of deals to date in this area has been relatively small, with transaction volumes of just over £31 billion (c 3% of total pension scheme assets) between 2006 and 2011.

14.3 Impact of potential European changes on de-risking

Overall, we would expect the de-risking trends seen in the last few years to continue; especially if a Level A type discount rate becomes the primary funding measure. There are some exceptions:

- Schemes that have very strong sponsors who may be able to afford to take higher levels of investment risk (as the sponsor may be able and willing to make good shortfalls arising from investment losses).
- If a discount rate based on best estimate asset returns (eg Level B) is chosen for the primary funding measure, then the level of de-risking may not be as high. Under this measure, higher risk investment strategies with higher expected investment returns would lead to a higher discount

rate, and therefore a lower value for the liabilities and a lower deficit (or even a surplus).

- Schemes that have large deficits under new proposals may decide that the only way they can expect to reduce the deficit is to take more investment risk and hope that the deficit can be met by higher investment returns. This may particularly be the case for those with weak sponsors, if it is unlikely that the deficit can be met by contributions alone. Clearly, such an approach may not be acceptable to TPR.

Currently, around 40% of UK pension plan assets are invested in equities (with now only around 15% of assets, c £150 billion, in UK equities). Over time, we would expect this to reduce further, particular given existing de-risking strategies that have been adopted by many pension schemes. For example, the recent ACA survey stated that 40% of employers are looking to buy-out or buy-in their defined benefit liabilities over the next 10 years. Consequently many pension plans have adopted "flight plans" which will allow them to reduce investment risk over time as the funding level reaches buy-out level.

It is difficult to predict how much will move out of equities solely as result of any changes to the IORP Directive and also over what time period. However, we think it is not unreasonable to assume that, over the next 20 to 30 years, the proportion invested in equities could fall further from the current level of 40% to maybe around 15-25%. However it is not easy to identify how much this would change as a result of any new European proposals. The actual impact would also be affected, by the unknown as yet, severity and timing of any changes.

Some of these funds could end up being transferred to corporate bond allocations. This may mean that pension funds will continue to have exposure to listed entities, but with more of this exposure coming from corporate bond holdings rather than shareholdings.

Any shift out of equities and into, say, bonds will depend on future movements in interest rates. Currently government bonds have very high values relative to historic standards, and pension schemes will need to consider whether it is appropriate to move out of equities (or other return-seeking assets) into bonds based on current prices.

14.4 **Strategies being adopted by insurers**

The Economist Intelligence Unit, on behalf of BlackRock, recently surveyed 223 insurers with operations in Europe. Although insurers have typically much lower equity holdings than pension funds, Solvency II will force insurers to review where they are taking investment risks, and whether the potential returns from particular asset classes are sufficient to outweigh the risks and the capital charges required under Solvency II.

Key findings were:

- Most insurers expect to move away from equities and towards corporate bonds.
- 32% of insurers will increase allocations to hedge funds and private equity (with just 9% and 6% respectively stating they will decrease allocations). Despite higher capital charges for these assets under Solvency II, these insurers think that the higher charges will be outweighed by higher potential returns.
- Allocations to derivatives will increase to better match assets and liabilities. Although 18% of insurers currently use derivatives, 37% of insurers said that Solvency II would make them more likely to use them in the future.

A recent study prepared for J.P. Morgan Asset Management by Institutional Investment Advisors Limited ("Solvency II – A briefing for the Chief Investment Officer") also highlighted the following expected changes in investment strategies for insurers:

- Greater use of swaps given the use of swap yields in calculating the discount rate.
- Less use of short duration gilts, and increased use of long duration gilts.
- Less use of sovereign bonds in non-domestic currencies.
- Lower allocations to property as result of higher capital charges.
- Lower allocations to equity as a result of higher capital charges, with EEA/OECD listed equities being preferred over other (eg emerging market) equities.
- Lower allocations to hedge funds, private equity and infrastructure due to high capital charges.

The findings from both studies are similar. Both confirm that a shift away from equities is expected, with greater use of bonds (especially long-dated gilts and corporate bonds) and derivatives. Interestingly, different conclusions are reached on the impact on allocations to infrastructure, hedge funds and private equity. The impact on property investment is not entirely clear either.

It may be worth considering how long-term annuity providers may change their investment strategies as a result of Solvency II. This is not something we have looked at this for this report, but could be a useful area to investigate further.

14.5 Non-UK investors

Since Solvency II and the IORP Directive also affects insurers and pension funds outside the UK, there may also be a knock-on impact on the UK economy in respect of investment decisions made by non-UK insurers and pension funds.

Many of these investors will have holdings in UK equities and UK bonds, and changes to the rules may result in them reducing these holdings in order to reduce currency risks or higher capital charges on equities.

Conversely some non-UK insurers and pension funds may decide to increase their holdings in UK equities and UK bonds in order to diversify their investments further.

The impact of changes by non-UK pension funds is outside the scope of this IA, but this may be something to factor into wider impact work being carried out by HMT/DWP and the Commission.

14.6 European Commission green paper on long-term investment

Commissioner Michel Barnier said in June that the work on Solvency II would have a profound impact on the ability of insurers and, if similar measures are introduced in the IORP Directive, pension funds to invest for the long-term.

He announced that the Commission will shortly be launching a green paper on long-term investment, and we would be happy to work with you and your officials in providing input, or a response, to the Green Paper.

Appendix 1 - Background

In April 2011, the European Commission asked EIOPA to provide advice on the review of the IORP Directive. EIOPA provided its response in February 2012. The publication of this advice followed two public consultations.

In its advice, EIOPA put forward the concept of a holistic balance sheet as a possible means to achieve the Commission's objective of a harmonised prudential regime for IORPs with a uniform for other purposes.

In its Call for Advice, the Commission stated that it's proposals to review the IORP Directive would be accompanied by an impact assessment. EIOPA was also requested to provide a quantitative impact study (QIS) of its advice with a view to informing the impact assessment. However, due to the limited time that EIOPA had to produce its advice in a large number of complex areas, EIOPA was unable to carry out a QIS in time to inform the advice to the Commission.

The Commission has now asked EIOPA to carry out a QIS. The QIS will be confined to the numerical calculations for the holistic balance sheet, and will not consider the wider implications of this approach to determining funding obligations.

In June 2012, EIOPA produced draft technical specifications for the QIS. These have been developed by using the latest technical specifications in Solvency II. In some areas, they have been elaborated upon and modified to take account of differences between IORPs and insurance undertakings, eg security mechanisms, discretionary benefits, 'last resort' reductions of benefits, sponsor support and pension protection schemes.

The technical specifications were put forward for public consultation for a 6 week period in June/July 2012. EIOPA has now reviewed the consultation responses and sent a revised version of the technical specifications to the Commission for its consideration on 2 October 2012. The actual QIS exercise is expected to start at the beginning of October and to last until mid-December. EIOPA then expects to produce a report on the outcomes of the QIS exercise in early 2013.

The Commission has stated that it expects to publish its proposals for a revised IORP Directive by the summer of 2013.

Member states can participate in the QIS on a voluntary basis. National supervisory authorities have considerable freedom in setting up the process for performing the QIS. For the UK, TPR will carry out the QIS calculations using data it holds on actual UK pension schemes. This will reduce the burden on UK pension schemes from having to carry out their own calculations for the QIS. However, individual pension schemes will not be prevented from carrying out their own calculations, and TPR will work with these schemes in order to ensure a consistent approach.

Appendix 2 – Differences between draft and latest QIS methodology

The draft QIS technical specifications were published in June 2012 for public consultation. Following this consultation, EIOPA sent a revised version of its technical specifications to the European Commission for review and consideration on 2 October 2012. It is possible that the European Commission will make further changes to the specifications.

The table below outlines the key differences between the assumptions included in the draft specifications published in June and the assumptions included in the revised specifications published in October.

	Draft QIS technical Specifications	**Revised QIS technical specifications**
Level A risk-free discount rate	10bp adjustment for credit risk	35bp adjustment for credit risk
Counter Cyclical Premium adjustment	50bp adjustment (when applied)	100bp adjustment (when applied)
Inflation assumptions	2% pa	Market related
Salary increase assumptions	3% pa	IORP related
Level B discount rate	Based on expected asset returns	No change
Risk margin	8% of Level A Technical Provisions	No change
Maximum sponsor support	Linked to profits	Linked to cash flows
SCR	Based on 99.5% confidence levels.	Still 99.5%. Inflation and Counter Cyclical Premium modules added. Changes to equity and counterparty risk module