

# Solvency II for Pensions: an overview

January 2012

## Introduction

The recently published - and cryptically titled - “Call for Advice on the review of Directive 2003/41/EC: second consultation” has served to heat up the debate over the future for European prudential regulatory reform. In particular, this 517-page document raises the possibility of the inclusion of Solvency II-style rules in the supervision of pension schemes. In this paper we look at how the Solvency II framework may be adapted by EIOPA (European Insurance and Occupational Pensions Authority) for European pension schemes. Further, we consider the impact that these changes may have on the UK pensions landscape.

Our focus in this paper is primarily on defined benefit (“DB”) schemes, due to their inherent complexity. It is worth noting, though, that the requirements would apply equally to defined contribution (“DC”) schemes, including a requirement to hold additional capital to protect against operational risk.

## Solvency II

Solvency II is a framework designed for the regulation of insurance companies. It divides the supervisory process into three “pillars,” that is analogous with the framework used under the Basel II and Basel III regimes for Banks, as shown in Exhibit 1.

### Exhibit 1: The three pillars of Solvency II

Pillar I	Pillar II	Pillar III
Quantitative Requirements	Governance Requirements	Disclosure Requirements

The focus of this paper is on the implications of Pillar I, although we briefly discuss the requirements for Pillars II and III.

## Quantitative requirements: Applying Pillar I to pension schemes

There are three key Pillar I concepts in the call for advice:

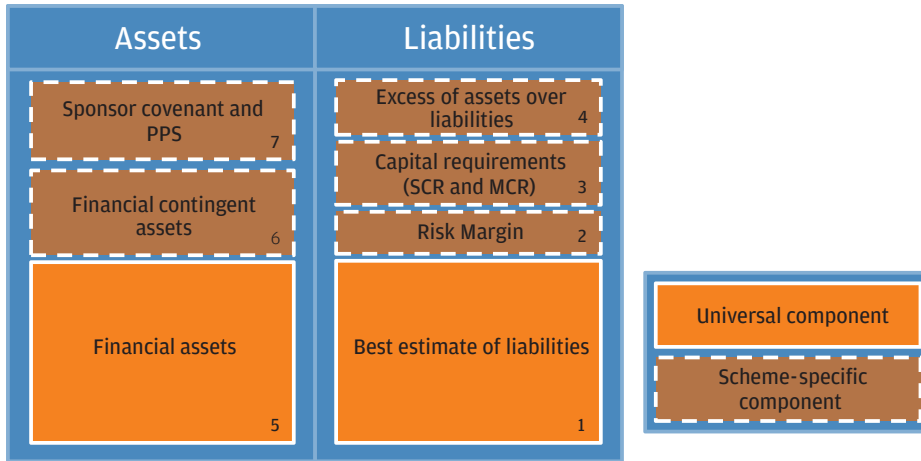
- Holistic balance sheet (“HBS”)
- Valuation of assets and liabilities
- Calculation of Solvency Capital Requirement (“SCR”) and Minimum Capital Requirement (“MCR”)

### Holistic Balance Sheet

The HBS represents a generalised concept for comparing pension assets and liabilities. The various components of the HBS are summarised in Exhibit 2, with the component number referred to at the bottom right corner of the box. The call for advice does not commit to the final shape of the holistic balance sheet and we have presented it in its most comprehensive form, which we believe would be largely necessary to fully implement the options of the directive discussed.

# Solvency II for Pensions: an overview

**Exhibit 2: The Holistic Balance Sheet**



## Liabilities

The liability-side of the holistic balance sheet reflects two broad quantities: the expected value of outgoings from the scheme; and the amount of additional capital required to cover unexpected changes in these outgoings. The best estimate of liabilities relates mainly to the benefits due from a scheme, but also includes any related expenses. The Risk Margin is the difference between liabilities measured using “realistic” actuarial assumptions and these same liabilities measured using “prudent” actuarial assumptions (these would result in a high level of liabilities). Given that the capital requirements also provide a risk sensitive measure of liabilities, we are unsure of the utility of the risk margin measure; indeed EIOPA present the option for no including the Risk Margin on the HBS.

Capital requirements under the Solvency II framework come in two forms: Solvency Capital Requirement (SCR) and Minimum Capital Requirement (MCR). The Solvency II SCR is calculated using a Value at Risk (VaR) methodology. In essence, it requires that sufficient capital be held such that the probability of insolvency in 12 months is less than 0.5%. This is also equivalent to saying that an insurer should hold enough capital for insolvency to be regarded as a 1-in-200 year event, although different confidence levels are considered. Calculation of the SCR would either be by a standard formula, as yet unspecified, or by an internal model validated by the pensions scheme’s supervisor. Under the Solvency II framework, the MCR provides a second (lower) capital requirement level for triggering supervisory action, based on a simple and auditable calculation.

The call for advice notes that falling below the MCR may not have the same implications as under Solvency II, where regulators are able to take action to restrict the operation of an entity. Instead, the MCR may be used as a further signal to increase the level of regulatory scrutiny.

## Assets

The definition of assets extends beyond just investments, but investments - or financial assets as they are described here - give a good starting point. These Financial assets are predominantly physical assets held by the scheme; there is little discussion of the valuation of these assets, but we believe these would be marked to market.

Financial contingent assets represent those which can be called upon by the scheme in the case of the conditions of a pre-defined situation being met. This, for example, could be property, a designated corporate income stream or assets held in escrow, any of which could be pledged in the instance of an underfunding situation.

Component 7 represents all contingent assets that do not fall under the definition of financial contingent assets. These are expected to principally include valuations of sponsor covenant (the sponsor’s commitment to support the scheme) and pension protection schemes, such as the PPF.

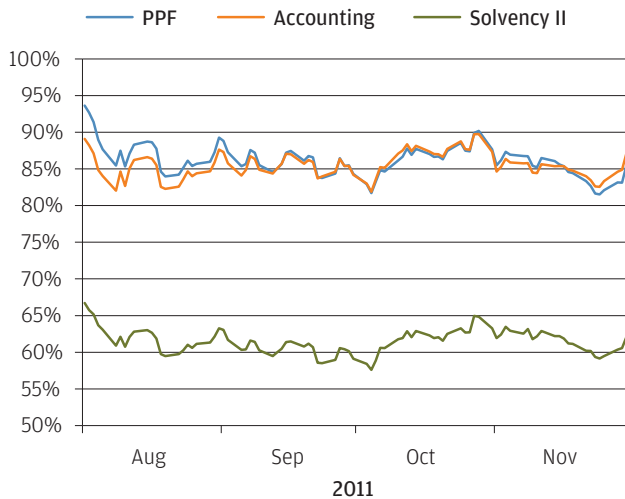
## Potential quantitative impact of the directive on an example UK pension scheme

Exhibit 3 demonstrates the funding level calculated for a typical pension scheme<sup>1</sup> when measured on the Accounting, PPF and Solvency II basis; as such it is the equivalent of component 5 (financial assets) as a proportion of component 1 (best estimate of liabilities) within the HBS framework.

<sup>1</sup>For full details of the scheme and our assumptions, please see our extended version of this paper entitled “Solvency II for Pensions”

# Solvency II for Pensions: an overview

**Exhibit 3: Funded status of representative UK pension scheme under PPF, Accounting and Solvency II liabilities**



Source: Thomson Reuters Datastream; JPMorgan Asset Management Analysis

The markedly lower funding level relative to PPF and Accounting measures is driven out of two factors: the discount rate used in Solvency II is currently far lower than the accounting rate (and therefore increases liabilities) and the level of liabilities is higher than PPF liabilities (which are subject to several caps and liability-reducing assumptions).

To calculate the SCR, we assume that the Solvency II basis were to apply to pension arrangements. Exhibit 4 demonstrates the elements of the final calculation.

**Exhibit 4: Breakdown of the SCR calculation for representative UK pension scheme**



Source : Thomson Reuters Datastream; JPMorgan Asset Management Analysis

The two key drivers of the final SCR are interest risk and equity risk, at 16% and 25% respectively. To a degree these risks are interrelated - an investment in equity as opposed to matching fixed income products exposes the plan to interest rate risk. The effect of the mismatch is further compounded by a mismatch in the duration of the fixed income assets held in the scheme and the liabilities<sup>2</sup>.

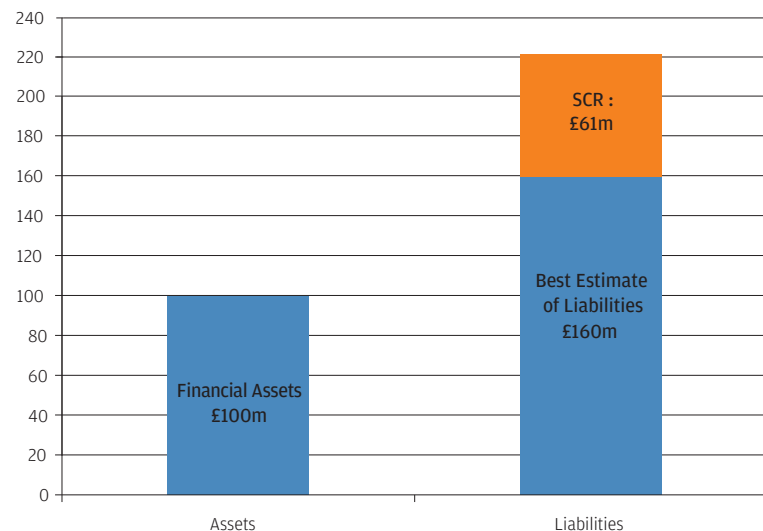
The implications of this figure depend greatly on how the SCR will be interpreted in a pensions context. The crux is whether financial contingent assets and sponsor covenant/PPF can be used to match against the SCR, as is suggested but not confirmed in the call for advice. These components could greatly reduce any additional contributions necessary to meet the capital requirement.

However, with a large difference between the value of financial assets and the SCR for our representative scheme, as detailed in Exhibit 5, the contribution of the non-financial assets would need to be considerable.

<sup>2</sup>For further information on our methodology, please see our extended version of this paper entitled "Solvency II for Pensions".

## Solvency II for Pensions: an overview

**Exhibit 5: Funding shortfall for representative UK pension scheme**



Source: Thomson Reuters Datastream; PPF; JLT Pension Capital Strategies/J.P. Morgan Cazenove; JPMorgan Asset Management Analysis

We use an estimate of the total assets and liabilities of UK defined benefit pension schemes<sup>3</sup> to assess the impact on a systemic level. Assuming that liabilities are discounted using the Solvency II rate of Interest Rate Swaps minus 10 basis points, we determine the Best Estimate of Liabilities as £1.6 trillion, as at the end of November 2011. Using the asset returns of the average PPF portfolio, financial assets would stand at £1.0 trillion. As such, assuming that Financial Assets would be required to meet the Best Estimate of Liabilities, with any higher liabilities met by contingent assets or sponsor covenant/PPF, there is a shortfall of £600 billion which would have to be met by schemes or their sponsors.

### Governance and disclosure: the roles of Pillars II and III

Proposed changes have impacts on both the functional form of pension schemes and the level and nature of information they must prepare for their supervisors. The changes include:

- Formalised internal control systems including risk management, compliance and internal audit frameworks
- Enhanced supervisory powers and associated expectations
- Formalisation and harmonisation of the information provided to members

Of note is that these governance and disclosure measures are intended to be applied equally over DB and DC scheme.

One important point to note is that for Insurers and Banks, the disclosure requirements of a three-pillar regulatory framework provide a market incentive to act in a prudent and appropriate manner, through reduced cost of capital from both bond and equity holders. The same is not true for pension schemes. As such these requirements appear less appropriate in this context.

### Conclusion

The quantitative requirements that result from applying a Solvency II framework to pension schemes lead to a demonstrably worse solvency measure than is found under the PPF or accounting-based valuations. Further, and depending on the ability for non-financial assets to meet the requirements, large contributions on behalf of sponsors would be necessary to bring UK pension schemes in line with the requirements.

Governance and disclosure requirements would entail additional work, and associated expense, for both supervisors and schemes.

There is also the fundamental question of whether this style of framework is appropriate for pension schemes. In particular, the applicability of disclosure in the context of a three-pillar frame work is clear for banks and insurers, but not for pension schemes.

Whatever happens, the full impact of any changes must be carefully considered before any new regulations are set in stone.

<sup>3</sup>For further information on our methodology, please see our extended version of this paper entitled "Solvency II for Pensions".

## Solvency II for Pensions: an overview

### Contributors



**Paul Sweeting,**  
*European Head, Strategy Group*



**Alex Christie,**  
*Strategist*



**Edward Gladwyn,**  
*Strategist*

#### **For Institutional Investor Use Only - Not for Retail Use or Distribution**

Please be aware that this material is produced for educational purposes only and should not be taken as or construed as legal or regulatory advice. The opinions and views expressed here are those held by J.P. Morgan Asset Management (JPMAM) as at December 2011, which are subject to change without notice. Any research in this document has been obtained and may have been acted upon by JPMAM for its own purpose. The results of such research are being made available as additional information only and do not constitute investment advice. They do not reflect the views of JPMorgan Chase Group. JPMorgan Asset Management Marketing Limited accepts no legal responsibility or liability for any matter or opinion expressed in this material and makes no representation or warranty regarding the accuracy or completeness of the information herein.

The recipient must make an independent assessment of any legal, credit, tax, regulatory and accounting issues and determine with its own professional advisors its suitability or appropriateness. This material is specific to the recipient and must not be distributed to any other person or replicated in any form without the prior written consent of JPMAM.

The value of investments and the income from them can fall as well as rise and investors may not get back the full amount invested. Issued by JPMorgan Asset Management Marketing Limited which is authorised and regulated in the UK by the Financial Services Authority. Registered in England No: 288553. Registered Office: 125 London Wall, London EC2Y 5AJ.