Working Party on Private Pensions

REGULATORY AND OTHER STRUCTURAL FACTORS AFFECTING THE DEVELOPMENT OF ANNUITY MARKETS AND PRODUCT DESIGN

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REGULATORY AND OTHER STRUCTURAL FACTORS AFFECTING THE DEVELOPMENT OF ANNUITY MARKETS AND PRODUCT DESIGN

Introduction

1. The OECD project on Annuity Products (DAF/AS/PEN/WD(2012)6) aims to better understand the nature of the products offered in different countries and the types of protection they provide. The first part of the project examined the different types of annuity products in different countries and tried to build a classification of annuity products based on their features and guarantees involved.

2. This discussion note continues with the project outline and examines the potential influence of several structural factors on the development of annuity markets and on the availability and design of annuity products. The special joint OECD IPPC and WPPP roundtable on annuity risk management and regulation scheduled for the day after the WPPP is expected to provide us with more specifics about risk management practices of insurers.

3. This discussion note raises several issues relating to the regulation and other structural factors affecting the development of annuity markets and product design. It discusses first the impact on annuity markets and the design of annuity products of the design and rules of the overall pension system. Annuities are not always a clear option for pay-out in pension savings plans, and rules around withdrawals may not take the need of (partial) annuitisation into account.

4. Secondly, the discussion notes looks at the role of taxation. Tax incentives for the payout of pension savings as annuities rather than lump sums do influence individuals’ decision to annuitise but does not appear to be the deciding factor. Annuities purchased with funds which have not been tax-sheltered tend to benefit from a deferral of capital gains tax, with a portion of the income being paid out treated as a taxable gain. The calculation of this proportion varies across countries, though here again taxation does not appear to be the determining factor in an individual’s decision of how to take the income.

5. Thirdly, this discussion note moves onto issues related to insurance regulation. On the effect of insurance regulation on the development of annuity markets and product design, this note distinguishes between issues related to market conduct and issues related to prudential regulation. The rules governing the distribution of annuities and the regulation around product structure and pricing are the two issues identified as market conduct. They are closely linked to consumer protection.

6. With respect to market conduct, issues around the distribution of annuities and regulation on product structure may affect the development of these markets and product design. Fiduciary risk for plan sponsors seems to be one barrier to the promotion of annuities. Some jurisdictions require that financial intermediaries consider the appropriateness of the product for individual clients, and several jurisdictions are pushing for more information and guidance on annuity products be available to consumers. Annuities seem to have better success for distribution channels where commissions are paid, however the level of the commissions could be an area of concern for offering good-value annuity products to the consumer. Regulations around allowable product structures or assumptions certainly impact the types of products available, though there is no clear evidence that the types of products allowed significantly influence the market for annuities.
7. Finally, the discussion note focuses on how prudential regulation affects the development of annuity markets and product design. It discusses three issues: regulation on investment, reserving requirements and solvency requirements.

8. With the movement towards risk-based regulation, explicit investment restrictions are becoming less common and many jurisdictions have recognized the advantage in the use of derivatives for the management of risk for annuity products, particularly with respect to interest rate risk. There is some speculation however that the proposed European regulation around over-the-counter derivative transactions may impact insurers’ ability to maintain a long-term investment strategy given the liquid collateral requirements.

9. Reserve requirements have tended to follow product innovations rather than influence them, and are becoming increasingly principles-based in response to more complex products. This should increase the link between the reserve calculation and the internal view of liability values, potentially reducing the risk of regulatory arbitrage.

10. Solvency requirements are becoming more risk-based, and there are some concerns that with the move toward market-consistent valuation insurers may have more difficulty in offering long-term guarantees such as those offered by annuity products. This is a point under discussion particularly with respect to the pending Solvency II requirements.

11. The discussions here and those at the special joint OECD IPPC and WPPP roundtable on annuity risk management and regulation will be used to prepare a document for June 2015 addressing all the issues related to risk management by annuity providers and the role of the regulatory framework on the development and design of annuity products. The next document to the IPPC and WPPP will focus therefore on three issues, on the impact that risk management by annuity providers can have, on the prudential regulation issues identified in this note, and on issues linked to consumer protection.

12. Delegates are invited to provide additional information and examples from their own jurisdictions to complete the initial findings presented here. Issues for discussion are raised in each relevant section.

Design and rules of the pension system

13. The way in which the pension system itself is designed can significantly influence the market for annuity products. In several countries annuities play a direct role in retirement savings, with annuitisation either being mandated or representing an explicit option for the payout of pension savings. Rules dictating the allowable drawdown of assets, or programmed withdrawals, may also influence the types of annuity products available to individuals.

14. While the mandatory purchase of an annuity is not common, it is effective for the development of an annuity market. For example, the United Kingdom currently has claim to the largest annuity market relative to the size of its economy, which is largely a result of the effective requirement to use assets accumulated within a defined contribution plan to purchase an annuity. This requirement was rescinded in 2014, and is expected to significantly reduce the demand for individual annuities. Initial estimates by the government predict a reduction of annuitisation rates by at least a third.\(^1\)

15. The extent to which the purchase of an annuity is an explicit option in mandatory savings plans may also play a role. For example Chile’s pension system, which mandates savings in individual defined

\(^1\) UK Parliament briefing papers, 2014
contribution plans, boasts an annuitisation rate of around two-thirds.² Full lump-sum payments are not allowed at retirement, except when they will be below a certain minimum income level, and individuals have the option of taking a programmed withdrawal, purchasing a life annuity, or purchasing a deferred annuity and taking programmed withdrawals temporarily until the annuity payments begin. Nevertheless there is some speculation that the increased coverage and level of the first pillar pension benefits from the 2008 reform will reduce future demand for annuities as more individuals will have access to this minimum pension (Mitchell & Ruiz, 2009).

16. Rules with respect to the drawdown of pension assets may also play an important role in the type of annuity products available. Until recently, annuities purchased at retirement with payments deferred to an older age did not count towards the minimum withdrawal requirement for personal defined contribution plans in the United States which is the minimum percentage individuals are required to withdraw from their account upon reaching age 70.5. However from 2014, Qualified Longevity Annuity Contracts are allowed to count towards the minimum distribution requirement if the payments begin by age 85 and the annuity premium does not exceed the minimum of 25% of the account balance or $125,000. This allowance is expected to increase the demand for these types of deferred annuity contracts. As another example, in the United Kingdom the allowable income from the drawdown of pension assets was subject to maximum and minimum levels defined by HMRC regulations. This restricted the annuity providers’ ability to offer guarantees on the level of withdrawal benefit, since if the value of the fund fell below a certain threshold the guaranteed income could exceed the maximum allowed.³

17. The pension system in Switzerland presents a design which encourages annuitisation only within the mandatory occupational schemes, as the conversion factor to be used to convert accumulated funds into an annuity for the mandatory portion of these pensions is imposed by legislation. These rates are generous compared to rates which are offered for the voluntary individual annuity market, which contributes to the very low demand for these annuities.

18. Issues for discussion:

- Annuities should be considered in the design of pension systems. Annuities should be available as an option for the payout phase of pension plans (particularly defined contribution plans), and restrictions around minimum and maximum withdrawals should make allowances for any form of annuitisation of accumulated assets.

Taxation of annuities

19. The taxation of annuities is generally on the payments and depends primarily on the source of income used to purchase the annuity, and it is not linked to the type of annuity product. Annuities can be purchased within a tax-sheltered pension plan, in which case the resulting income is subject to taxation as any withdrawals from the plan would be. Alternatively, annuities can be purchased with funds which have already been subject to taxation. In this case at least part of the resulting annuity payments should be treated as a return of the premium paid to purchase the annuity and thereby tax-exempt (since this money was already taxed), and the remaining portion treated as an implicit return on investment and subject to taxation.

20. The way in which an annuity is taxed is generally not dependent on the type of annuity product so long as the assets backing the annuity are fully transferred to the annuity provider. Annuity-type

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² The fraction of people retiring that choose and annuity
products where the individual maintains control of his assets may however be subject to different tax treatment as such products would normally be treated as investment products with respect to taxation.

21. If annuities have been purchased within a tax-sheltered pension savings plan, annuity payments are taxed as income for most countries. The rate at which these annuities are purchased in these tax-deferred pension plans seems to be highly influenced by the relative taxation of the annuity income compared to the taxation of the lump sum, where allowed. Denmark provides an example where lump sums were previously taxed at a relatively advantageous flat rate for high income earners compared to annuities and programmed withdrawals; this relative advantage has since been removed and lump-sums are now declining in popularity (Rocha et al, 2011). Lump sums also seem to be more favourably taxed in Japan and are indeed more popular than annuities. If the lump sum is taken, Japan allows a service-related retirement income deduction to be taken and the lump-sum is taxed separately from all other income, whereas annuity payments benefit from an annuity deduction but the payments are aggregated with other income and taxed accordingly (Urata, 2009). Belgium is another example where lump sums may be taxed more favourably than annuities in certain instances, with the tax rate on lump sums depending on the timing of the contribution (16.5% before 1993, 10% thereafter), whereas the tax rate on annuities depends on the source of the income (10% on workers contributions, 16.5% on employer contributions) (Antolin et al, 2008). Lump sums payouts are much more popular than annuities in Belgium. Nevertheless taxing annuity payments more favourably than lump sums does not necessarily lead to a preference for annuities, as is shown in the Australian case where lump sums remain the more popular options despite having a lower threshold for favourable taxation (Antolin et al, 2008).

22. There are several approaches to tax annuity payments for annuities purchased with funds which have already been taxed. In these cases part of the annuity payment can be viewed as a return of the premium paid to purchase the annuity and thereby should not be taxable, and the other part as interest income, or additional income above the premium paid. The definition of each part varies widely across countries, and the proportion each represents of each annuity payment can vary over time.

23. Belgium does not distinguish between these two parts of the annuity payment, and the annuity payments are not taxed at all.4

24. The United States and Canada present two contrasting approaches for defining the two parts based on an explicit recognition of the premium paid or interest earned. In the United States, the portion of the annuity payment which is considered as a return of the premium paid and excluded from taxation as income remains constant until the full premium paid for the annuity has been returned. At this point the entire annuity income is then considered to be interest income and is fully taxed as ordinary income. In Canada annuities are classified as either prescribed or non-prescribed, with interest earned defined for each year. If the annuity is owned by the person receiving payments and the payments are level, the annuity can be classified as a prescribed annuity for tax purposes, and total expected interest to be earned is spread evenly across all payments and taxed accordingly. This means the individual will continue to be able to exclude a portion of the annuity payment from taxation even when the full premium which was paid to purchase the annuity has been returned. If the annuity does not qualify as prescribed, tax on the actual accrued interest payments are owed each year (Milevsky & Shao, 2010).

25. In other jurisdictions, the proportion of the annuity payment which is taxable is dependent on time or age. In the United Kingdom, the proportion of the annuity payment which is treated as a return of premium and thereby tax-free depends on the age and sex of the annuitant(s), and increases with age. In Spain, income from term annuities is taxed depending on the duration of the payments. For an annuity with a duration under 5 years, 15% of the income is taxed, whereas for an annuity over 15 years 42% is taxed.

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4http://www.belgium.be/fr/impots/impot_sur_les_revenus/particuliers_et_independants/revenus_imposables/pensions/
Taxation for life annuities depend on the age at which payments begin. 45% of the annuity is taxed if payments begin before the age of 40, whereas 20% is taxed if payments begin from age 70 or later.\(^5\)

26. Annuity-type products where the individual retains control over the underlying assets are not generally viewed as annuity products for tax purposes. This is the case in the United States for guaranteed lifetime withdrawal benefits, where the insurer guarantees a minimum level of income for life even if the underlying assets have been depleted via programmed withdrawals. These withdrawals are fully taxed as income until all interest and earnings from the contract have been withdrawn, after which the income is no longer taxable and is treated as a return of the premium (IRI, 2011). Nevertheless despite the taxation for the entire gain upfront, guaranteed withdrawal benefits have remained the most popular option for payouts from variable annuities in the United States (Geneva Association, 2013).

27. Issues for discussion:

- The fiscal treatment of lump-sums should not be more beneficial than the treatment for an annuity so as not to encourage individuals to take a lump-sum payment instead of annuity income.

Insurance regulation: market conduct

28. This section discusses the effect of rules governing the distribution on annuities and regulations around product design and pricing on the development of annuity markets and product design.

Rules governing the distribution of annuities

29. Rules governing the distribution of annuities may influence the market for annuity products. Fiduciary requirements for the financial intermediary, information disclosure and allowable commissions all relate to how annuities are marketed to consumers.

30. Employer concern regarding the potential legal liability arising from their fiduciary obligations has been identified as a reason for the lack of annuity options within employer sponsored plans in the United States (IRI, 2013). Investment options available within employer sponsored plans can be perceived as being suggestions, therefore if an individual purchases an annuity offered within such a plan which the employee later decides is not appropriate for him, the employer could potentially face legal action. There is no obligation for employer sponsored individual retirement savings plans, 401(k)s, to offer an annuity option. In 2009 only 1% of plans offered a deferred annuity option, and only 15% offered an option to convert accumulated savings into an annuity at retirement. Nevertheless, funds accumulated within employer sponsored plans can be transferred to an individual plan (IRA), which in most cases do offer the option to purchase an annuity. However, the average rate of annuitisation is still relatively low, at 6.1% from 1994-2008 for all DC plans (Brien & Panis, 2011).

31. Similarly in Canada the majority of plan sponsors avoid giving financial advice with respect to annuities in order to minimize their fiduciary risk. As a response, pension regulators have proposed guidelines to provide standardized information about annuities (Warshawsky, 2013).

32. The United Kingdom is also pushing for consumers to have more guidance and information about annuities. As an incentive for employers to provide pension advice to their employees, a tax deduction of 150 GBP for each employee was introduced in 2004 (Harrison et al, 2006). A Guidance Guarantee is expected to be implemented in 2015 in order to make sure customers are sufficiently informed in their

\(^5\) http://www.thinkspain.com/hottopics/moneymatters/annuities.asp
decision to purchase an annuity with their pension savings. As a result of numerous incidences of mis-selling, pension providers will be required to inform customers of how to access this guidance.

33. Mis-selling in the United Kingdom also occurred due to a lack of regulation of brokers, and has undoubtedly contributed to the bad reputation of annuity products. Previously, no suitability checks were required to ensure that the type of annuity purchased was appropriate for the customer given, for example, their health status. This will change with the new pension reform. In the United States, on the other hand, financial advisors are required to ensure the suitability of the recommendation by obtaining information regarding the individual’s financial, tax and investment objectives (Praeger, 2007).

34. In Chile, commissions to distributors for an annuity sale are capped at 2%, and electronic auction of annuities (SCOMP) has been implemented. Both of these measures have led to better value annuities for the customer. Price quotes may be requested from SCOMP directly by the individual, or alternatively through a financial intermediary for a commission. If the request is made through the pensioner’s AFP, however, no commission is paid. The take-up rate is significantly higher for requests made via brokers, where commissions are allowed. Annuities remain popular relative to programmed withdrawals, which may also be due to the relatively high charges charged by the AFP for the latter (Mitchell & Ruiz, 2009).

35. Where there is more flexibility around product design, the typical distribution channel used may also have an influence on the types of annuity products on offer. For example, in the United States and United Kingdom the main financial intermediaries used for the purchase of insurance are brokers, whether they are independent or affiliated with a specific company. As a result annuity products available in these jurisdictions tend to offer numerous options so the product can be customized to suit the individual consumer’s needs. This could help explain the growth of variable annuities in the United States and with-profits and life-care annuities in the United Kingdom. Europeans, on the other hand, often purchase their insurance from bank channels and tend to be more focused on price, resulting in simpler product designs being offered (Bahna-Nolan et al, 2013).

36. Issues for discussion:

- Fiduciary risk for plan sponsors needs to be clearly defined so as not to unnecessarily restrict the availability of annuity products as a payout option for pension plans. This could be addressed through the dissemination of standardised guidance and information on annuities to consumers.

- Brokers should be required to make suitability checks as to whether the annuity product sold is appropriate for the individual in order to ensure the best interests of customers and reduce instances of mis-selling which harm the reputation of annuity products.

- Broker commissions should be regulated to avoid large upfront fees which reduce the value of the annuity for the consumer.

Regulation around product structure and pricing

37. Several countries impose restrictions regarding what types of annuity products can be offered or pricing assumptions which are allowed to be used.

38. Pricing by gender was disallowed in the European Union in 2012. This equalisation of pricing resulted in a spike in annuity sales to men in the United Kingdom just prior to the implementation of the
new regulation, following which several months passed before demand returned to normal levels. France in particular imposes minimum mortality assumptions for the purpose of pricing annuities.

39. Prior to the new pension reforms in the United Kingdom, the income from annuities purchased with pension savings was not allowed to decrease in absolute value, nor were certain periods of guaranteed income allowed to extend beyond 10 years. No lump sum was allowed to be taken out of the product. A money-back guarantee was allowed to be paid to heirs upon death, however. New regulation stipulates that annuities purchased with pension savings no longer have restrictions on the guarantee period and that 30,000 GBP may be taken as a lump sum if needed, for example, to cover health care costs. Some speculate the increased flexibility in the design of the payment pattern could help counter the fall in demand for individual annuities following the removal of the annuitisation requirement.

40. In Chile, all annuities bought from assets accumulated within the mandatory individual defined contribution plans must be linked to inflation. Inflation linked annuities are not widely available in other jurisdictions, so it seems their availability in Chile is largely a result of this requirement.

41. Few restrictions on annuity products are imposed in Canada however, the guaranteed payment period for an annuity cannot extend beyond age 90 (Milevsky & Shao, 2010).

Insurance prudential regulation

42. Three factors are considered that affect the development of annuity markets and product design: regulations on investment, reserve requirements and solvency requirements.

Regulation on investment

43. Restrictions on investment and hedging, particularly with respect to the use of derivatives, could impede the offer of guarantees with annuity contracts. Hedging investment guarantees, such as minimum guaranteed returns, with derivatives such as interest rate swaps is a common risk management technique for insurers. Most jurisdictions with established annuity markets do allow for the use of derivatives for risk management purposes, though many (such as the United States, Canada and Chile) require that the insurance company have a clearly laid out strategy for their use. Derivatives which are not used for the purpose of hedging may not be recognised as a capital resource for the insurer, as in the United Kingdom.

44. Concerns have been raised in light of the over-the-counter derivatives reform in Europe, which will require insurers to hold liquid collateral to cover margin requirements for these derivatives. This could potentially detract from the long-term investment strategy of insurers and limit their ability to manage the duration gap of their assets and long-term liabilities.

45. The availability of other matching assets which could be used to back annuity liabilities could also influence the development of the annuity market. Governments in some jurisdictions such as Canada and Mexico have issued ultra-long term bonds which could improve the duration matching of assets and liabilities.

10. [DAF/AS/WD(2014)8](#)
annuity liabilities for insurers. The lack of inflation linked bonds in many jurisdictions may help explain why inflation-linked annuities are not widely available.

46. Explicit quantitative restrictions on asset classes are becoming less common with the movement towards risk-based capital requirements, as these regimes inherently penalize more risky or aggressive investment strategies. The prudent person principle which requires sense-checks on investment strategies is also becoming the norm.\textsuperscript{11}

47. Issues for discussion:

• The regulatory framework should allow for the investment in derivatives for risk management purposes, and the collateral requirements for this should keep the insurer’s long-term investment strategy in mind.

• The issuance of ultra-long term bonds could be helpful for duration matching of long-dated annuity liabilities, and the issuance of inflation-linked bonds could facilitate the availability of annuities indexed to inflation.

**Reserving requirements**

48. Reserve requirements generally rely on the valuation of annuity liabilities using assumptions which include a certain level of margin and are historically based on rather prescriptive formulas. The formulaic approach is now beginning to change with the movement towards principles-based requirements in an effort to better represent increasingly complex products and guarantees. As such, reserve requirements have typically responded to the evolution in product design rather than the other way around.

49. As an example of the traditional formulaic approach, reserve requirements in the United States under statutory accounting for fixed annuities are based on the Commissioners Annuity Reserve Valuation Method (CARVM). Reserves for deferred annuities reflect the greatest present value of guaranteed benefits, do not account for mortality probabilities during deferral, and assume all options are exercised by the policyholder in their best interest (Sharp, 1999). The valuation rate and mortality table are defined by regulation and vary depending on product type and date of issue (Model Regulation Service, 2012).

50. With the increased complexity presented by variable annuities, reserve requirement for these products have evolved to a more principles-based approach which relies on valuation using stochastic market scenarios, with reserves set at the conditional tail expectation at the 70% level of confidence (CTE 70), which is the average of the worst 30% of the scenarios.\textsuperscript{12} While hedging can be accounted for, it can only be reflected if the insurer has a Clearly Defined Hedging Strategy in place, and cannot assume more than 70% hedge effectiveness (Covington, 2012).

51. The Financial Services Agency responded in Japan to the complexity of variable annuity products by requiring a valuation of all guarantees based on risk-neutral scenarios assuming no lapse and full utilization of guarantees. These increased reserved requirements led Japanese insurers to rethink the product design (Zhang, 2006).

\textsuperscript{11} DAF/AS/WD(2014)8

\textsuperscript{12} The Conditional Tail Expectation (CTE) at a given confidence level is defined as the average of all outcomes beyond the confidence level. Therefore the CTE 70 would be the average of all outcomes beyond the 70th percentile, or the average of the worst 30% of scenarios. The CTE is alternatively known as the Tail-VaR or the Conditional Value at Risk (CVaR).
52. Canada is slightly more flexible in its approach, and annuity reserves follow the Policy Premium Method (PPM) and are based on the present value of expected future cash flows valued using best estimate assumptions with an appropriate margin. Expected future cash flows account for both the probability of death and the probability of surrender, where applicable. Margins are set following guidance offered by the Canadian Institute of Actuaries (CIA), with the level of conservatism depending on considerations such as the type of product and investment policy (e.g. dividend payments and duration matching). Cash flows must be discounted under several economic scenarios, and the reserve set appropriately to capture most of the range of results. Reinsurance can be reflected (Society of Actuaries, 1997).

53. Similar to the requirements in the United States for variable annuities, the CIA has published guidance for the valuation of segregated funds, which should be calculated based on stochastic modelling to calculate the guaranteed minimum benefits owed net of the account value. The confidence level should be set between 60% and 80% CTE. Hedging may be reflected (CIA, 2010).

54. In the United Kingdom, reserve requirements have had to evolve for the with-profits business to better reflect the value of any embedded options and guarantees must be reflected in the reserves. Reserves for with-profits business must be the maximum of 1) the mathematical reserve based on prudent assumptions and gross premiums and 2) a realistic calculation based on best estimate assumptions which explicitly takes into account expected discretionary bonus payments. Reinsurance may be accounted for so long as there is an effective transfer of risk.

55. The prescription of reserve formulas which do not always align with the actuarial liability value could leave room for regulatory arbitrage and perverse incentives for the management of insurance companies. For example, at the onset of the financial crisis in 2008 and 2009, insurance companies in the United States were offering deeply discounted prices for annuities because the reserve formula implied a requirement below the actuarial value of the annuity and the additional sales boosted the balance sheet (Koijen & Yogo, 2013).

56. Issues for discussion:
   
   - Reserve requirements should reflect the actuarial value of annuities to avoid regulatory arbitrage.
   
   - Clearly defined hedging strategies should be required to ensure the appropriate use of derivatives for risk-management.

Solvency requirements

57. Solvency requirements are additional capital requirements on top of reserves which insurers are required to have available in order to be able to sustain adverse shocks to the business. Reserve calculations usually already include significant margins on the assumptions used for their calculation for the purpose of covering adverse deviations. These margins usually also count towards the solvency capital requirements. Therefore, the calculation of the solvency requirement can be viewed as the capital requirement including the margins embedded in the reserves.

58. As with reserves, solvency requirements for insurers have historically been prescribed and formulaic but are moving towards more flexible and principles-based approaches as increasingly complex products are introduced to the market.

59. The United States and Canada were among the first countries to impose risk-based solvency requirements, with both regimes defining factors to be applied to balance sheet items to calculate the required capital. As a response to the development of guarantees on annuity products which are highly
sensitive to interest rate movements, the required capital for interest rate risk in the United States is now based on stochastic scenarios and calculated at the 90% CTE. Canada has retained a rather complex formula for these types of products, though the use of internal models with stochastic modelling is allowed, with the recommended security level of 95% CTE to be consistent with the security level on which the standard factors are based. Hedging is allowed to be taken into account, though the maximum hedging effectiveness which can be assumed is 95% and 50% for the United States and Canada, respectively.

60. The United Kingdom requires additional stress and scenario testing to ensure the insurer’s ability to meet its liabilities under a wide range of situations relevant to its particular risk profile in addition to the minimum capital requirement calculated using risk-based factors.

61. The Solvency I regime in Europe uses a formulaic approach to calculate capital requirements based on reserves and capital at risk. The pending Solvency II regime aims to align the requirements across Europe and make them more sensitive to the risk exposure of insurers. The new requirements will be based on market consistent valuation (mark-to-market for assets and mark-to-model for liabilities) at a security level of 99.5% Value at Risk (VaR). The use of internal models to better reflect the individual risk profiles of insurers is encouraged.

62. There are some concerns that a market-consistent approach will restrict the ability of insurance companies to offer long-term guarantees by increasing pro-cyclicality and the ability to recognize expected returns above the risk-free rate. Various counter-cyclical mechanisms are being considered to address this issue, such as a matching adjustment which would reflect an illiquidity premium in the discount rate for liabilities. The final specifications for Solvency II, however, are yet to be finalised.

63. While much of the world is moving towards more fully-principles based and market consistent approaches with internal models, the United States intends to keep its current framework. Regulators are reluctant to allow the use of full internal models due to higher costs and reduced comparability and transparency (SMI Task Force, 2013). Another potential motivation for this is the legal standards in the United States. An approach which remains objective and formulaic could be less subject to legal challenge (Bahna-Nolan et al, 2013).

64. Issues for discussion:

- Counter-cyclical mechanisms, such as adjustments to the liability discount rate, should be considered as one solution to allow insurers to continue to offer long-term guarantees under market-consistent (mark-to-market) solvency requirements which may promote pro-cyclicality.

- The use of internal models should require careful regulatory review and approval to ensure that appropriate assumptions are used and that all relevant risks are captured.
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