Anticipated acquisition by Towers Watson Limited of the EMB Group

ME/4758/10

The OFT's decision on reference under section 33(2)(a) given on 28 January 2011. Full text of decision published 18 February 2011

Please note that the square brackets indicate figures or text which have been deleted or replaced in ranges at the request of the parties or third parties for reasons of commercial confidentiality.

PARTIES

1. **Towers Watson Limited** (Towers Watson) is a wholly-owned subsidiary of Towers Watson & Co, a global professional services company providing solutions with respect to employee benefit programmes and risk and capital management, which trades on the New York Stock Exchange and the NASDAQ Stock Market. Towers Watson carries on business in the UK and offers a number of products and services, including pricing and financial modelling software and actuarial consultancy services.

2. **The EMB Group** consists of a number of limited liability partnerships that provide actuarial consultancy services dedicated to the non-life insurance sector. Its business activities in the UK are carried out by EMB Consultancy LLP and EMB Software Management LLP and include the provision of actuarial consultancy, business consultancy and software.

TRANSACTION

3. On 9 November 2010, Towers Watson entered into a sale and purchase agreement with EMB to acquire various assets of the EMB Group as well as 100 per cent of the share capital of EMB Management Holdings Limited and EMB Software Limited (together, EMB).

4. The parties notified the proposed transaction to the Office of Fair Trading (OFT) on 10 November 2010. No other merger filings have been made in any other jurisdiction.

JURISDICTION

5. The OFT considers that the assets and entities being acquired constitute an 'enterprise' as defined by section 129 of the Act. As a result of the proposed acquisition, the OFT believes that two enterprises will cease to be distinct within the meaning of section 26 of the Act.

6. The UK turnover of EMB in the last financial year was £29.51 million and so the threshold under section 23(1)(b) of the Act is not met. However, the OFT believes that the share of supply test is met given that the parties overlap, and have at least 25 per cent share of supply to non-life insurance businesses in the UK which will be increased by the merger in:

   i) actuarial consultancy services

   ii) actuarial financial modelling software, and

   iii) actuarial pricing software.

MARKET DEFINITION

Product scope

7. The parties overlap in the supply of actuarial consultancy services and the supply of actuarial software to the non-life insurance sector.

Actuarial Consultancy Services

8. In Case No. COMP/M.5597 *Towers Perrin/Watson Wyatt*, the European Commission (the Commission) found that distinct markets existed for:

   i) financial valuation capital adequacy consulting for insurance companies, including financial modelling and valuation advice for the insurance industry, and

ii) general insurance consulting for the non-life sector, comprising implementation of new financial modelling systems, statutory valuations, profit reporting, review of economic capital requirements, risk management consulting, asset and liability modelling, benchmarking and competitors' analysis, stochastic financial modelling, product development and pricing, including research and analysis of regulatory compliance and selling practices and appointed actuary work.

9. In the present case, the parties submitted that although they provide financial modelling and valuation advice, the combination of types of consultancy they provide is best characterised as general insurance consulting to non-life businesses. In any case, the parties provided market shares specifically on the basis of actuarial consultancy services to non-life insurers.

10. During the course of its third party enquiries, the OFT spoke to customers about a wide range of individual services offered by the parties' actuarial consultancy teams including: independent reserve reviews/statement of actuarial opinion; individual capital assessment (ICA)/capital modelling; pricing/rate reviews; claims modelling; process reviews; staff secondments; Solvency II preparations; independent expert services; M&A advice; economic scenario generators; project management support; and business consulting.

11. Third parties consistently provided feedback to the OFT that the parties' activities overlap significantly in relation to three specific actuarial consultancy services:

i) reserve reviews

ii) independent capital assessment/capital modelling, and

iii) pricing/rate reviews.

12. The parties did not agree that it would be meaningful to segment the actuarial consultancy market along these lines. They stated that there is considerable overlap between these areas of actuarial consultancy and that the professional qualification of the Institute of Actuaries covers all areas of expertise so that a qualified actuary should be able to undertake work in all

disciplines. They were also of the view that when consultants are invited to tender for work, broadly the same firms would bid, along with a small number of niche operators for certain disciplines. For these supply-side reasons, the parties submitted that the relevant market should be one overall market for actuarial consultancy services to non-life insurers.

13. In this regard, some third parties stated that many senior members of consultancy firms have particular expertise in specific areas of actuarial consultancy, and that not all of the consultancy firms are as prominent in all areas. For example, the Big Four accountancy firms, Deloitte, KPMG, Ernst & Young (E&Y), and PricewaterhouseCoopers (PwC) were generally perceived to be strong in reserve reviews, reasonably prevalent in capital consulting, but not so strong in pricing/rate reviews. Some customers noted that when tendering, certain consultancy firms would be taken more seriously than others depending on the particular area. The evidence from the parties' competitors on the nature of competition in each segment also suggested differences between them.

14. Moreover, the OFT notes that customers appear to pick and choose firms for different types of actuarial consultancy services, with tenders often being awarded by reference to a specific area, rather than for overall actuarial consultancy expertise. Consistent with this, competitors are not all prominent in each area, with the Big Four accountancy firms dominating consultancy services for Solvency II, for example, whereas the likes of EMB and Towers Watson being more prominent providers of pricing/rate reviews and capital modelling.

15. The OFT considers that the boundaries of the relevant product market are generally determined by reference to demand-side substitution alone.[1] Self-evidently, a reserve review is not a demand-side substitute for, say, a pricing review. However, there are circumstances where the OFT may aggregate several narrow relevant product markets into one broader one on the basis of considerations about the response of suppliers to changes in price.[2] Notwithstanding that—as discussed above—there may be some overlap on the supply-side between firms who can offer reserve reviews,

[1] Merger Assessment Guidelines, paragraph 5.2.17.
[2] Merger Assessment Guidelines, paragraph 5.2.17.

independent capital assessment/capital modelling and pricing/rate reviews, those circumstances are not met in this case.[3]

16. The OFT therefore considers it appropriate to look at the actuarial consultancy market on a narrower basis, that is, broken down by specific subject-area as set out above.

Actuarial Software

17. In *Towers Perrin/Watson Wyatt*, the Commission found that a separate market existed for the supply of actuarial software for non-life insurance companies.

18. The parties submitted that the actuarial software market should be further divided into three categories, namely:

    i) reserving software

    ii) financial modelling software, and

    iii) pricing software.

19. On the demand-side, they stated this is necessary because software in each segment is used for different purposes and that such software is purchased separately rather than as a bundle. On the supply-side, they also noted that few providers offer software in all three segments.

20. The OFT's market investigation broadly confirmed the parties' views that the actuarial software market should be subdivided in this way, on the basis of an absence of both demand- and supply-side substitution. However, while the OFT's market investigation suggested that a single reserving software market is appropriate, further segmentation of the financial modelling software and pricing software markets is necessary. This is discussed below.

Financial modelling software

[3] Merger Assessment Guidelines, paragraphs 5.2.18 and 5.2.19.

21. With respect to financial modelling software, EMB's main product is Igloo. Third parties perceive this to be a high-end, complex product, which is very costly. EMB also sells ICE, a simpler 'plug-and-play' version of Igloo, which was created to provide a more user-friendly and cost-saving alternative to it. Towers Watson's Simulum software is perceived by most third parties to compete with ICE, on the basis that it is simpler and cheaper than Igloo. The parties agreed with this. Most third parties did not think that Simulum and Igloo competed with each other.

22. On the basis of the evidence available to it, the OFT has not been able to conclude that 'high end' and 'low end' financial modelling software are separate relevant product markets. For instance, a small number of customers did consider Igloo and Simulum to be substitutes. The OFT nonetheless has regard to the distinction between them in its assessment of the competitive effects of the merger in the supply of financial modelling software.

Pricing software

23. One of the parties' competitors distinguished between: (i) risk pricing software (otherwise known as multivariate statistical modelling software); and (ii) price optimisation software.[4] On the demand-side, the OFT was told by the competitor that virtually all UK insurers have some form of risk pricing software, whereas price optimisation software is a more recent product, that (it was estimated) only about 20 per cent of the relevant insurance market has subscribed to. In addition, the parties' customers and competitors informed the OFT that the two types of software inherently do different things, and as such, could not be regarded as substitutes.

24. On the supply-side, the OFT observes that the competitive dynamics are different between these segments, with more significant players competing in price optimisation software than in risk pricing software.

25. The OFT therefore considers it appropriate, particularly on demand-side considerations, to delineate the supply of actuarial pricing software into

[4] Risk pricing software, such as EMB's Emblem package, are generalised linear modelling tools which allow the fitting of predictive models to large datasets. Pricing optimisation software, such as EMB's Rate Assessor and Optimiser packages, allows modelling of alternate scenarios in order to identify and validate pricing decisions (being 'optimized premiums' rather than mathematical algorithms).

markets for risk pricing software and price optimisation software for the purposes of its competitive assessment.

A combined actuarial consultancy and software market

26. The OFT also considered whether it would be appropriate to define a single software/consultancy market for any particular actuarial specialism (in particular pricing, capital modelling or reserving). This can be appropriate in some specific instances where customers only purchase a product/service (such as consultancy) as a direct result of a previous purchase (such as software).[5]

27. In this case, the OFT has specifically considered: (i) the extent to which customers have to (or are strongly incentivised to) purchase actuarial software and related actuarial consultancy services together (or subsequently from the same supplier); and (ii) the extent to which bundles of actuarial software and related consultancy principally compete against other similar bundles. If these two conditions hold, it may be appropriate for the OFT to define a single market for software and related consultancy.

28. Several customers considered that there are advantages, including cost, of purchasing actuarial software from the same provider as for related consultancy services, in particular for pricing software and consultancy. In their view, consultancy arms of actuarial software suppliers are able to advise on related activities such as embedding software into the client's business and developing modelling techniques. Indeed, one customer commented that the provision of software and consultancy 'go hand in hand'. There is also some evidence in the parties' internal documents that software is viewed as an 'enabler' for related consultancy services.

29. Set against this, the parties provided a wide range of evidence indicating separate pricing software and consultancy markets. In particular: documents indicating that the parties rarely sell pricing software and consultancy together; that only [ ] non-life customers of Towers Watson purchased consultancy support specifically linked to its Pretium software; in the data supplied by the parties on (the small number of) competitive tenders in 2010 for joint consultancy and software, none included rate reviews with pricing software; and over [ ] of EMB's non-life pricing

[5] Merger Assessment Guidelines, paragraph 5.2.20 ('*Secondary products*').

software customers did not purchase any form of pricing consultancy from it in 2010.

30. The parties also gave numerous examples of customers being provided with pricing consultancy services by one provider when the pricing software was supplied by another. In this regard, the OFT spoke to two of the Big Four who stated that they had (or had previously) offered pricing consultancy services despite not having their own software, although one told the OFT that users of EMB's Emblem and Towers Watson's Pretium would be more likely to go to EMB or Towers Watson for consultancy.

31. On balance, therefore, the OFT does not consider it appropriate to define a single market for software and consultancy.

Conclusion on product scope

32. On the basis of the above, the OFT considers there to be separate relevant product markets for reserve reviews, independent capital assessment/capital modelling and pricing/rate reviews. The OFT also considers there to be separate relevant product markets for reserving software, financial modelling software (albeit with pronounced 'high end' and 'low end' segments), risk pricing software and price optimisation software.

Geographic scope

Actuarial consultancy services

33. In *Towers Perrin/Watson Wyatt*, the Commission defined the market for some actuarial consulting as being at least EEA-wide since the Solvency II Directive—which is driving demand for consultancy on financial valuation and modelling, and capital adequacy—applies within the EEA.[6] However, the Commission viewed the market for general insurance consulting services to non-life businesses as national in scope.

34. The parties submitted that the relevant geographic scope is UK-wide for each of the three actuarial consultancy segments since the UK is the most sophisticated insurance market in Europe, and as such, a strong familiarity

[6] Solvency II is a new supervisory framework on solvency requirements for European insurers which will be implemented in 2012.

with local market issues and accountancy requirements is essential. In addition, the parties stated that the main competitors differ greatly from country to country; that understanding local conditions, legislation and local language are also important; and that few consultancy firms are in fact organised on a pan-EEA basis to have complete coverage of the EEA market.

35. The parties' competitors also confirmed that even where actuarial consultancy practices are coordinated on a European basis, the London insurance market is much more sophisticated than on the Continent and therefore the investment by suppliers into providing actuarial consultancy services is far greater in the UK than elsewhere.

36. Given the unique nature of the London market, the differences in competitive conditions outside the UK, and the necessity of having local expertise, the OFT considers that the relevant geographic market is national for the supply of actuarial consultancy services to non-life insurers in each of the three specialist segments.

Actuarial software

37. In the life sector, the Commission found in *Towers Perrin/Watson Wyatt* that the relevant geographic scope for actuarial software is EEA-wide because of consistent pricing policies across the EEA and the homogenous business environment created through the harmonisation of insurance business achieved through EU Directives.

38. The parties argued that the actuarial software market should be defined as national in scope since, to achieve any market penetration beyond the subsidiaries of multinational companies and very large domestics, it is necessary to have some on-the-ground support and local language skills. In addition, the software must be adapted to meet local regulatory requirements.

39. Third party views were mixed on this issue. Several customers stated that they generally preferred software suppliers to have a UK presence, though it is not necessary to be UK-based. A few customers emphasised the need for local market knowledge, particularly with respect to the UK retail insurance market. That said, on the supply-side, one of the parties'

competitors said that the core actuarial software required is the same across the EEA and that many competitors are pan-European.

40. Given the preferences of UK customers to have local software support, as well as the particularly sophisticated nature of the UK insurance market in comparison to insurance markets on the Continent, the OFT considers it appropriate to assess the proposed transaction on a national basis.

Conclusion on geographic scope

41. On the basis of the above, the OFT considers the geographic markets for reserve reviews, independent capital assessment/capital modelling and pricing/rate reviews to be national in scope. The OFT also considers the geographic markets for reserving software, financial modelling software (in both the 'high end' and 'low end' segments), risk pricing software and price optimisation software to be national in scope.

Conclusion on market definition

42. With respect to actuarial consultancy services, the OFT considers there to be separate relevant product markets for reserve reviews, independent capital assessment/capital modelling and pricing/rate reviews. For actuarial software, the OFT also considers there to be separate relevant product markets for reserving software, financial modelling software (with pronounced 'high end' and 'low end' segments), risk pricing software and price optimisation software.

43. The OFT considers the geographic market for actuarial consultancy services, that being reserve reviews, independent capital assessment/capital modelling and pricing/rate reviews, to be national in scope. For reserving software, financial modelling software (in both the 'high end' and 'low end' segments), risk pricing software and price optimisation software, the OFT also considers the geographic scope to be national.

COMPETITIVE ASSESSMENT–HORIZONTAL UNILATERAL EFFECTS

Recent market developments

44. The European Solvency II Directive is a relatively recent piece of legislation requiring insurers to comply with new capital requirements and risk management standards. The new regime is due to 'go live' on 1 November 2012. As a result, non-life actuaries are in significant demand by insurers wanting to conform to these new regulatory requirements.

Reserve reviews

45. The OFT was unable to obtain reliable estimates of market shares in reserve reviews. However, the parties were able to provide estimates of shares of supply for all actuarial consultancy services in the UK and these are given below. In the supply of overall actuarial consultancy services, the parties estimate that they have a share of supply of [20-30] per cent (with an increment of [10-20] per cent). Third party comments generally suggest that the overall market shares are broadly reflective of competitive conditions for reserving consultancy.

Table 1: Shares of supply for actuarial consultancy services in the UK (2010)

Competitor	Share of supply (per cent)
Towers Watson	[10-20]
EMB	[10-20]
Combined	**[20-30]**
Deloitte	[10-20]
Ernst & Young	[10-20]
KPMG	[0-10]
PwC	[20-30]
Oliver Wyman	[0-10]
Lane Clark & Peacock	[0-10]
Grant Thornton	[0-10]
Mazars	[0-10]
Milliman	[0-10]
Total	100

Source: parties' estimates

46. The parties' combined market share is not at a level that would usually give the OFT cause for concern over unilateral effects unless the parties were closer competitors than their respective shares implied. In this regard, the OFT was informed that although obtaining independent reserve reviews are

not a legal requirement (although, in Lloyds of London, it is necessary to get a 'Statement of Opinion' from an internal or external actuary), in practice, it is commonplace for an insurer to seek an independent review of its reserves to complement its own internal assessment. This is to help ensure that sufficient reserves are held by the insurer to cover future claims on written business.

47. Most customers thought that sufficient choice existed for reserve reviews. The parties submitted that they are not the most significant players in reserve reviews, and that the Big Four accountancy firms have clear market-leading individuals to draw on their wider expertise in the insurance industry. Notably, the parties asserted [ ].

48. That said, some customers drew a general distinction between the actuarial consultancy services provided by the Big Four accountancy firms and those of Towers Watson and EMB on the basis of the parties 'greater depth of understanding' and 'more innovative approach'.

49. A large number of customers also said that the Big Four may be conflicted out of tendering for work in this area, in instances where they are a customer's auditor. The Big Four did not share these concerns, however.

50. One customer complained that only PwC, E&Y, Towers Watson and EMB have the capability to tender for large reserve review contracts (that is, over £250,000). This view was shared by one competitor and supported by bidding data submitted by the parties. However, another customer who procures relatively large reserving tenders raised no concerns and was able to name several potential alternative providers.

51. Turning to competitors' views, [ ] told the OFT that it considered its main competitors for reserve reviews to be [ ]. It did not mention Towers Watson. [ ] also told the OFT that the Big Four are the main competitors to EMB in reserving consultancy. Towers Watson's internal documents show that, at least with respect to London Market customers, it targets a wide range of other competitors' customers, with a greater emphasis on targeting customers of [ ] than customers of EMB.

52. On the basis of the above, therefore, the OFT does not consider that the merger is likely to give rise to a realistic prospect of a substantial lessening

of competition in the supply of reserve review consultancy services to non-life insurers in the UK.

Capital modelling/independent capital assessment

53. Since 2004, the Financial Services Authority (FSA) has required insurers to assess the level of regulatory free capital that they must hold against major sources of risk, including not only future claims but also losses from any part of the business. Insurers should have sufficient capital to cover a one in 200 year event. As a consequence, many insurers apply stochastic capital modelling techniques to assess their internal capital requirements.

54. In contrast to reserve reviews, Towers Watson's internal documents indicate that, at least with respect to the London insurance market, it targets EMB's clients to a greater extent than the OFT would expect on the basis of the shares of supply in Table 1.

55. The parties submitted that they are not in fact close competitors in this market. They stated that Towers Watson would not typically target EMB's clients for capital modelling work as they would be likely users of Igloo, whereas Towers Watson's focus is on the smaller insurers who may use Simulum. The parties submitted bidding data for 2010 which shows that a substantial proportion of EMB's capital-related consultancy appears to relate to its software package. The parties asserted that EMB's capital modelling support has historically been targeted towards the larger companies where ReMetrica[7]-related consultancy would be its greatest competitor. They stated that all of the Big Four accountancy firms have ReMetrica licences and are working heavily on their capital modelling capabilities. Further, the parties submitted that since much of the capital modelling work is now Solvency II focused, rather than independent capital assessment focused, the Big Four have a major advantage over the likes of Towers Watson and EMB since they have much wider Solvency II capabilities (such as tax, accounting, auditing and risk management skills).

56. In this respect, one customer told the OFT that they had used the Big Four a lot more recently due to Solvency II requirements. Set against this, one customer considered that Towers Watson and EMB were 'towards the

[7] ReMetrica is Aon Benfield's capital modelling software (see further, paragraphs 71 to 77 below).

front of the pack' in terms of reputable providers, a view corroborated by a Towers Watson internal document pointing to the 'weaknesses' of the Big Four.

57. Yet the parties' competitors did not regard Towers Watson as a leading provider in the market. [ ]. Whereas [ ] considers EMB to have a skilled actuarial team, it does not come across Towers Watson as often and does not consider Towers Watson to be at the forefront. [ ] told the OFT that it regularly supplies capital modelling services and tends to win such work independently from its audit services. [ ] said its main competitor in this market is Deloitte, and that it competes with EMB to an extent (though they are differentiated, EMB being particularly strong in 'personal lines' on the basis of its reputation in software) and to a lesser extent with Towers Watson.

58. On the basis of the above, the OFT does not consider that the merger is likely to give rise to a realistic prospect of a substantial lessening of competition in the supply of actuarial consultancy services in capital modelling/independent capital assessment to non-life insurers in the UK.

Pricing/rate reviews

59. The parties considered themselves to be competitors in this market but submitted that they face strong competition from a number of other players. In particular, they stated that the most recent pricing consultancy tenders in the UK non-life insurance sector have related to price optimisation, where EMB's main competitors are asserted to be Earnix and ODG (see further paragraphs 94 to 99 below). Further, the parties submitted that: management consultancy firms such as McKinsey compete with them for broader pricing consultancy work; actuarial consultants such as Matblas and UMACS compete with them for specialist pricing consultancy work; E&Y and Deloitte are very active in this area and KPMG has recently recruited the Group Pricing Actuary at RSA to bolster its capabilities in this market; and actuarial pricing consultancy (particularly for multivariate statistical analyses of past claims experience) is increasingly being taken in-house, of which 14 examples were provided by the parties, including [ ]. This view was confirmed by [ ] who said that it encouraged its clients to take these services in-house.

60. Most customers contacted by the OFT viewed EMB as the market leader in pricing/rate reviews, with Towers Watson being the most credible alternative. Some customers did not regard the Big Four as competitors to the parties but [ ]. [ ] told the OFT that—although it is more difficult to compete for business where customers already use the parties' Emblem and Pretium pricing software—this has not precluded it from providing pricing consultancy to clients using SAS, a general statistical software. This is consistent with the discussion in paragraphs 26 to 31 above. Further, the OFT considers that KPMG is likely to become a more prominent competitor given its recent recruitment of a senior pricing consultant. Submissions from third parties and the parties also indicate that the mobility of individual pricing specialists between firms acts to lower barriers for actuarial consultancies seeking to expand their activities in this area. For example, [ ] told the OFT that a pricing specialist left them for a competitor 18 months ago.

61. On the basis of the above, the OFT does not consider that the merger gives rise to a realistic prospect of a substantial lessening of competition in the supply of actuarial pricing/rate reviews to non-life insurers in the UK.

II. Actuarial software

62. For the majority of actuarial software packages discussed below, the OFT understands that customers generally pay a one-off initial fee, and subsequent annual renewal fees which may be set or indexed at the original point of purchase. The renewal fee gives customers access to software upgrades, customer support and training.

63. In the actuarial software markets discussed below, the Big Four accountancy firms are generally not active—with the exception of Deloitte and E&Y in reserving software—since they do not build software. The OFT considers that software markets are more niche, generally served by fewer players than actuarial consultancy services in the UK.

Reserving software

64. The parties provided market share estimates for the supply of actuarial reserving software to non-life insurers. In this market, EMB is the clear market leader with [60-70] per cent share of supply in the UK.

Table 2: Market shares for actuarial reserving software in the UK (2010)

Competitor	Number of customers	Share (per cent)
Towers Watson ([ ])	[ ]	[0-10]
EMB (ResQ)	[ ]	[60-70]
Combined	[ ]	**[60-70]**
Deloitte (Cros)	[ ]	[10-20]
Insureware (ICRFS-plus)	[ ]	[10-20]
Ernst & Young (WinRes)	[ ]	[10-20]
Milliman (Reserve Pro and Affinity)	[ ]	[0-10]
Ultimate Risk Solutions (Res-Solver)	[ ]	[0-10]
TOTAL	[ ]	100

Source: parties' estimates

65. The market share increment attributable to the merger is small ([zero-10] per cent). Further, Towers Watson informed the OFT that it does not sell actuarial reserving software and does not have a product that it is able to offer non-life insurance businesses. It stated that the small share of supply it achieved in 2010 is derived from an old agreement between Watson Wyatt (now part of Towers Watson & Co.) and [ ]. Following the 2009 merger between Towers Perrin and Watson Wyatt, this agreement came to an end with the result that Towers Watson is no longer a competitor in this market.[8]

66. Consistent with this, a number of third parties informed the OFT that although a few suppliers may offer actuarial reserving software, there is no credible alternative to EMB's ResQ product and that Towers Watson is not active in this area.

67. However, one customer informed the OFT that Towers Watson has its own in-house version of reserving software, and as such, could be a credible entrant to the market. It also stated that an employee of Towers Watson had been keen to develop this in-house software to be sold externally. In this regard, Towers Watson's internal documents suggest that development of a reserving tool may be a possibility going forward. One document [ ], refers to it needing to 'develop reserving software', while the [ ] states that Towers Watson 'deliver on software' as a strategic priority for 2011.

[8] Towers Watson informed the OFT that [ ] and does not receive any income for its reserving software.

68. Set against this, Towers Watson denied it had any intention of launching a competing product to EMB's reserving software. It told the OFT that the internal documents were only the result of a brainstorming exercise and that the minutes of Towers Watson Software Steering Committee made no mention of developing reserving software in the future. It confirmed that it does have an in-house version of reserving software, called Tripod, but that [ ]. Further, Towers Watson stated that although it has, on a very limited basis, given away Tripod to clients for no fee, it gives no commitment to maintain or provide ongoing support, and has never offered this software to clients located in the UK. The OFT further notes that the UK reserving software market has been in existence for 24 years and in that time, Towers Watson and its legacy firms have never sought to develop or sell their own products.

69. On balance, the OFT cannot conclude that, absent the merger, Towers Watson would be **likely** to enter the reserving software market;[9] still less that Towers Watson would be very, or uniquely, well placed to do so.[10] On this basis, the OFT does not consider that the merger gives rise to a realistic prospect of a substantial lessening of competition in the reserving software market.

Financial modelling software

70. In response to FSA requirements that insurers assess the level of capital they must hold against major sources of risk, many customers develop financial models and use capital modelling software to do so.

71. The parties provided share of supply data for all actuarial financial modelling software. On this basis, the parties would have a combined share of supply of [40-50] per cent but with an increment of only [zero-10] per cent. Ordinarily, this would not be sufficient to give the OFT cause for concern over unilateral effects unless the parties were closer competitors than their market shares suggest.

[9] In accordance with the Merger Assessment Guidelines, paragraph 5.4.15.
[10] ME/3535/08 Air France Finance S.A.S/City Jet Limited of VLM N.V., paragraph 111.

Table 3 – Share of supply for actuarial financial modelling software in the UK (2010)

Competitor	Estimated revenue	Share (per cent)
Towers Watson (Simulum & Risk Aggregator)	£[ ]	[0-10]
EMB (Igloo and ICE)	£[ ]	[30-40]
Combined		**[40-50]**
Aon Benfield (ReMetrica)	-	[30-40]
Ultimate Risk Solution (Risk Explorer)	-	[10-20]
DFA Capital Management Inc (Advise)	-	[0-10]
Guy Carpenter (MetaRisk)	-	[0-10]
SunGard Data Systems Inc (Prophet)	-	[0-10]
Total	£[ ]	100

Source: parties' estimates

72. To investigate this, the OFT examined separately the 'high end' and 'low end' segmentation of the market that was suggested by its market investigation (see paragraphs 21 to 22). In the 'high end' of the market, Towers Watson has no product offering and the OFT's market investigation showed that EMB's Igloo software is the main financial modelling software for non-life insurers with Aon Benfield's ReMetrica as its main competitor. Since the majority of customers who responded to the OFT's investigation stated that they would not consider switching from Igloo to Simulum (or vice versa), the OFT believes that there will be no significant merger effect in this segment.

73. In the 'low end' of the market, Towers Watson's Simulum competes with EMB's ICE, although the parties' sales are small: in 2010, EMB's sales amounted to £[ ] and Towers Watson's amounted to £[ ]. Nevertheless, most of the parties' customers of ICE or Simulum who responded to the OFT's market investigation believed that Towers Watson and EMB are close competitors in the lower-end of the financial modelling software market, and that choice is limited. Third parties told the OFT that switching is not commonplace, particularly in light of Solvency II requirements, and that self-supply would be unlikely in the event of a small but significant and non-transitory increase in price (SSNIP) because of cost and time constraints.

74. Set against this, the parties submitted that there are a number of other players in this segment, such as Guy Carpenter's Metarisk software, and Ultimate Risk Solutions' Risk Explorer Express which was launched in

October 2010. They also showed the OFT a press release from Aon Benfield launching its S2Metrica software in 2009, which is marketed as 'an easy-to-use and cost effective tool' and which is also Solvency II compliant, making it a direct competitor to the parties in the 'low end' segment. Although the parties were unable to provide examples of customers choosing any of the competitors' software, one customer told the OFT that it had considered Metarisk before purchasing Simulum.

75. Similarly, the parties considered barriers to entry to be low—not least because 'low end' financial modelling software is a recent and growing area—and that the threat of potential entry comes from existing software providers and from large IT providers such as IBM, Oracle, SAS and Teradata. They cited EMB's recent success with ICE as an example. Consistent with this, one competitor active in another actuarial software market informed the OFT that entry into this market would be possible but difficult, not because of software development but because of reputation. In this respect, the OFT notes that Aon Benfield already has a strong reputation in the actuarial software market, so that S2Metrica is likely to exert a strong constraint going forward on the merged entity in the lower-end of the financial modelling market.

76. The parties estimated that only approximately 115 out of 400 authorised companies are entering the Internal Model Approval Process and that many of those choosing not to go through this process are small companies for whom the overheads associated with building and maintaining an internal model would be too great.

77. On this basis, the OFT does not consider that the merger gives rise to a realistic prospect of a substantial lessening of competition in the financial modelling software market, even considering the distinction between 'high end' and 'low end' software.

Pricing software

78. Pricing software packages are designed to help an insurer establish the optimum pricing strategy for its insurance products.

79. EMB's core product is 'Emblem'. This is a generalised linear modelling tool which allows the fitting of predictive models to large datasets relatively easily. There are a range of complementary programmes to Emblem,

including Classifier, Rate Assessor and Optimiser. Emblem and Classifier are EMB's products offered for standard multivariate statistical modelling, whereas its Optimiser and Classifier products are relevant in the price optimisation segment.

80. While EMB sells specific modules for the relevant risk pricing and price optimisation markets, Towers Watson's Pretium software is sold as an all-in-one package.

A. Risk pricing software

81. The parties overlap in the supply of generalised linear modelling, or 'risk pricing' software in the UK. Estimated market shares for all business and for new business (often a better measure when switching costs are high) are given in Table 4.

Table 4: Market shares for risk pricing software in the UK (2010)

	New Business		**Total Revenue**	
	Revenue (£ 000)	**Share (per cent)**	**Revenue (£ 000)**	**Share (per cent)**
EMB (Emblem, Classifier)	[ ]	[70-80]	[ ]	[80-90]
Towers Watson (Pretium)	[ ]	[20-30]	[ ]	[10-20]
Combined	[ ]	**100**	[ ]	**100**

Source: parties' estimates

82. Towers Watson's Pretium sales (which include sales for price optimisation), represent [ ] non-life customers in the UK. EMB told the OFT that its sales represent only a small share of the risk pricing market and that approximately [80-90] per cent of these sales were for renewal fees as opposed to new software sales.

83. The OFT's market investigation showed that Pretium and Emblem are effectively the only players operating in this market in the UK. This is corroborated by the parties' internal documents where Towers Watson only considered Emblem as its competitor to its Pretium pricing software, without reference to any other provider. However, the parties submitted that SAS, a generic software tool not specific to non-life insurers, performs the same calculations as Emblem or Pretium (and where Pretium itself is based on SAS), and should therefore be included in the market.

84. [ ] considered that all insurers use SAS to do statistics but that it is not a software package designed specifically for non-life insurance pricing. However, it was of the view that SAS would be a potential alternative to the parties' products. One customer told the OFT that in the event of a five per cent increase in price, it may consider using SAS. However, most respondents believed that SAS is not tailored to risk pricing requirements, is slower, and using it would effectively mean developing one's own programme which would be much more expensive and time-consuming than using either Emblem or Pretium.

85. [ ]

86. Customers informed the OFT that there are no alternative providers to switch to outside of the merging parties, but that the costs involved in switching in terms of, for example, retraining users and designing new data to deal with the new software would be too high to actually switch in the event of a five per cent price increase. [ ] told the OFT that the market in the UK for risk pricing software is about 90 per cent saturated, with virtually everyone already having taken up Emblem or Pretium. Most third parties told the OFT that the merging parties are really the only two providers of risk pricing software and voiced their concern that the merger will eliminate the only remaining alternative in the market. They complained that not only may this lead to price increases with respect to renewal fees and upgrades, but that the merger threatened the development of, and investment into, such software. That said, the parties provided the OFT with copies of their standard Pretium/EMB licence contracts which contain maintenance and upgrade obligations for a number of years.

87. [ ] was not aware of anyone else operating in the UK in any meaningful way in risk pricing software. One customer stated that there are no other software packages besides Pretium and Emblem that have the same level of functionality. Indeed, the parties were only able to provide examples of switching occurring between their own products. However, the parties were of the view that the greater immediate threat in the UK from customers switching away from EMB software is the customer's recent change of requirements, that being the need for price optimisation, most recently in real time, which Towers Watson does not provide, but EMB is currently trialling.

88. The OFT considers that the proposed transaction will create a merger to monopoly in this market. Although SAS may be used by a number of insurers for price modelling, the OFT has heard consistent views from third parties that it is not a substitute for either Pretium or Emblem. This is because the parties' products are tailored specifically for risk pricing whereas SAS is a basic statistical programme which must be built upon to achieve the same result.

89. [ ]

90. The OFT has heard no evidence that any other software (or actuarial consultancy) provider is likely to enter this market in the near future. In terms of self-supply, the OFT unanimously heard from customers that bringing such software development in-house (by using SAS, R, SPSS or another generic statistical package) would not be an option in the event of a five per cent increase in price.

91. The OFT recognises that the risk pricing market is mature and that switching costs are high, but this makes the OFT more concerned to protect what competition remains for new business, not less concerned.[11] In this regard, the OFT considers that the parties currently exert a competitive constraint on each other, to the extent that the threat of one party's customers switching to the other is sufficient to ensure that its software is developed, maintained, and supported. Although the parties have maintenance and upgrade obligations as standard clauses in their pricing software contracts, the OFT does not consider that this would be sufficient to ensure that the same level of quality and service is maintained as the pre-merger situation where the threat of switching is real.

92. In addition, the OFT considers that Towers Watson's relatively small share of all business in comparison to EMB's may not accurately reflect its current competitive strength. Several customers told the OFT that they considered Pretium when purchasing Emblem. In addition, Towers Watson told the OFT that although it only has [ ] non-life customers for Pretium in the UK, it has [ ] customers in Continental Europe, representing £[ ] of sales in the 2010 financial year. Indeed, one customer informed the OFT that Pretium is stronger on the Continent than in the UK. The OFT

[11] See Merger Assessment Guidelines paragraph 5.4.5.

therefore believes that Towers Watson's relatively small market share in the UK is likely to understate Pretium's reputation.

93. On balance, on the basis of the above, the OFT considers that the proposed transaction creates a realistic prospect of a substantial lessening of competition in the market for risk pricing software on the basis of unilateral effects, meaning that the merged firm may have the incentive and ability to raise prices, or to reduce quality, development, investment or service.

B. Price optimisation software

94. EMB is considered to be the market leader in price optimisation in the UK, with its Optimiser and Rate Assessor products. Towers Watson's all-in-one Pretium software has price optimisation capability, but the parties submit that it is not strong in this segment. Earnix and ODG also offer price optimisation packages. Estimated market shares are given in Table 5. The parties' combined share (between [35-45] per cent) is not at a level that would normally give the OFT cause for concern over unilateral effects (given the small increment of between [zero-10] per cent) unless the parties were closer competitors than their market shares imply.

Table 5: Market share for price optimisation software in the UK (2010)

	New Business		**Total Revenue**	
	Revenue (£'000)	**Share of supply (per cent)**	**Revenue (£'000)**	**Share of supply (per cent)**
EMB (Optimiser/ Rate Assessor)	[ ]	N/A	[ ]	[25-35]
Towers Watson (Pretium)	[ ]	N/A	[ ]*	[0-10]
Earnix (Optimiser)	[ ]	N/A	[ ]**	[20-30]
ODG (Lambda)	[ ]	N/A	[ ]	[20-30]
TOTAL	[ ]	N/A	[ ]	100

Source: parties' estimates

*includes overall revenues of Pretium which the parties state has 'limited price optimisation capabilities'

**Earnix's figures

95. In this respect, EMB told the OFT that it considers Earnix and ODG to be its main competitors in price optimisation. According to EMB, it has not knowingly lost a competitive opportunity to sell pricing software to a UK personal lines non-life insurer to Towers Watson. It considered that Towers Watson does not have much relevant UK experience and that the price

optimisation capabilities of Pretium are limited. Further, the parties gave examples of tenders won by Earnix from [ ], and tenders won by ODG from [ ] for price optimisation software in the UK.

96. [ ]

97. [ ]. That said, [ ] believed that the market is growing at around 10-20 per cent per year. It was of the view that the entry barrier is not the development of the software itself, but having sufficient reputation and brand recognition with insurers. Given that price optimisation is only a small segment of actuarial software sales, [ ] believed that a new entrant would only enter as part of a larger strategy, either by enhancing its consulting services, or expanding its product line.

98. [ ]. A few customers were aware of offerings from Earnix and ODG. One customer told the OFT that if the price of EMB's software rose by five per cent, it would consider switching to ODG. However, other third parties were not aware of ODG or Earnix.

99. On the basis of the above, the OFT does not believe that the merger gives rise to a realistic prospect of a substantial lessening of competition in the market for price optimisation software.

Conclusion on unilateral effects

100. Overall, and on the basis of the evidence received, the OFT considers that the proposed transaction does not give rise to a realistic prospect of a substantial lessening of competition in the UK markets for consultancy services for reserve reviews, for independent capital assessment/capital modelling and for pricing/rate reviews, nor in the UK markets for reserving software, financial modelling software and price optimisation software.

101. With respect to the UK actuarial risk pricing software market, the OFT considers that the merger will combine the only two main players in this market. As a result, and absent countervailing factors, the OFT finds that there is a realistic prospect that the merger will give rise to a substantial lessening of competition on the basis of unilateral effects.

BARRIERS TO ENTRY AND EXPANSION

102. Barriers to entry and expansion have been set out above, where relevant.

103. The parties submitted that barriers to entry and expansion are low. They emphasised the growing strength and current expansion plans of the Big Four accountancy firms, the rise in the number of actuarial contractors and the trend towards increased in-house supply. In their view, the key components necessary to develop a market presence and an ability to compete are a small number of highly skilled people to provide support on consultancy assignments. The parties asserted that experts are highly mobile and are often incentivised to leave and head up new practices in other firms when new positions are opened up. They informed the OFT that Towers Watson lost [ ] non-life staff in the UK during 2010 since they left for employment elsewhere. They therefore stated that the market for actuaries is extremely fluid.

104. With respect to both actuarial consultancy services and actuarial software, the OFT considers that new entry is difficult for firms not already active in these areas, due to the significance of reputation, brand strength, access to qualified staff, and specialist knowledge of actuarial software. This is consistent with the Commission's view in *Towers Perrin/Watson Wyatt*, where it found that 'barriers to expansion for non-life insurance consulting are essentially the same as for life insurance...namely the need for access to qualified staff and related issues around knowhow and reputation'.[12]

105. With respect to expansion, the OFT believes that barriers are lower. In actuarial consultancy services, the OFT considers that firms are able to expand, and indeed, there seems to be evidence of at least some of the Big Four currently planning to do so. However, in relation to actuarial software, the OFT believes that, although expansion either of existing capacity, or into other types of software is theoretically possible, there is little evidence of firms actually intending to do so. In particular, [ ]. On the basis of the available facts, the OFT therefore does not have sufficient evidence of any likely, timely and sufficient entry or expansion from other suppliers to avert its concerns of a substantial lessening of competition in the supply of actuarial risk pricing software to insurers in the UK.

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[12] Case COMP/M.5597, at paragraph 70.

THIRD PARTY VIEWS

106. Third party comments have been discussed above where relevant.

107. In general, customers and competitors were less concerned about the actuarial consultancy markets than the actuarial software markets. However, some customers voiced their concern about the reduction of choice in pricing/rate review consultancy since EMB and Towers Watson are notable providers. These concerns are discussed above.

108. With respect to reserving software, one customer told the OFT that Towers Watson represented the most credible potential competitor to enter the market, particularly given that it already has its own in-house version which could be developed. However, as discussed above, the evidence before the OFT does not meet the high threshold for such a 'potential competition' theory of harm.

109. Several customers of 'low end' financial modelling software complained to the OFT that the merger will reduce competition, where there are already only a few players in the market. These concerns are addressed above.

110. A few customers raised concerns that either Simulum or ICE would be discontinued, therefore causing major problems especially in light of Solvency II requirements. The parties told the OFT that the standard licence agreements for ICE and Simulum contain contractual terms for EMB and Towers Watson requiring them to maintain and upgrade the software for several years. Though mindful of these submissions, the OFT has not relied on them in considering customers' concerns. Rather, the OFT has considered whether the merger may give the parties the incentive to discontinue either Simulum or ICE, and has concluded it would not, for the following reasons. First, software in general earns high profit margins over incremental cost as much of the cost of software is fixed or sunk development cost. This is especially true for renewal fees for software licences. Discontinuing the software loses this profit stream. Second, although some of this lost profit could be retained if the merged firm could force customers to switch from the discontinued software to the retained software, switching costs are high (see paragraph 73) and significant diversion between ICE and Simulum going forward may be no more likely than significant diversion from either of them to Metarisk, Risk Explorer

Express or S2Metrica, given recent developments in the market (see paragraphs 74 to 76 above).

111. With respect to risk pricing software, the OFT received many complaints from customers who viewed the merger as creating a near monopoly in the risk pricing software market. They were concerned that the elimination of any remaining choice in the market may lead to higher prices, but more significantly, the likely deterioration of investment into the development of risk pricing software. These concerns are discussed above.

ASSESSMENT

112. The parties overlap in the supply of actuarial consultancy services and the supply of actuarial software to non-life insurers.

113. With respect to actuarial consultancy services, the OFT considers there to be separate relevant product markets for reserve reviews, independent capital assessment/capital modelling and pricing/rate reviews. For actuarial software, the OFT also considers there to be separate relevant product markets for reserving software, financial modelling software (with pronounced 'high end' and 'low end' segments), risk pricing software and price optimisation software. The OFT considers the geographic market for actuarial consultancy services and for actuarial software to be national.

114. EMB is perceived to be a strong player in all three of the actuarial consultancy segments. The main competitors across these segments are the Big Four. Towers Watson is not perceived by third parties to be as prominent in actuarial consulting, with the exception of pricing/rate reviews, where customers viewed the parties to be close competitors. Given that first, customers did not, on balance, raise significant concerns about the competitive effects of the merger; second, other significant players continue to exert a competitive constraint; and third, that barriers to expansion are low (and indeed there is evidence of current expansion in actuarial consultancy services), the OFT does not consider that the merger will give rise to competition concerns in any of the actuarial consultancy markets.

115. In the actuarial software markets, Towers Watson and EMB are considered to be close competitors, with the exception of reserving software, where Towers Watson is no longer active. In financial modelling software at the

high-end, Towers Watson has no product offering to compete with EMB's Igloo software. However, in the low-end of the market, Towers Watson's Simulum software closely competes with EMB's ICE software. Although a number of concerns were raised by customers in this low-end of the market such that the merger would reduce competition or that one of the two products may be discontinued by the merged entity, the OFT does not consider that the merger will give rise to a substantial lessening of competition in this area. This is because there continues to be credible alternatives in the market (such as Aon Benfield's S2Metrica, Ultimate Risk Explorer's Risk Explorer Express and Guy Carpenter's Metarisk), and third parties consider that this market is growing.

116. With respect to price optimisation software, the OFT does not consider that the proposed transaction raises any competition concerns since Towers Watson is not a strong player in this market, and other competitors (namely ODG and Earnix) will continue to constrain the merged entity going forward. However, in relation to risk pricing software, the OFT considers that the parties are the only two players on the market. It does not believe that generic statistical packages, such as SAS, are substitutable such that they provide the same level of functionality for customers as the parties' products. The OFT therefore believes that the merger creates a merger to monopoly in this market. The OFT notes that switching is not commonplace, the market is mature, and that barriers to entry are high not least as a result of the importance of reputation and brand awareness. The OFT also does not consider that expansion from any credible software provider, [ ], is likely. On this basis, and taking into account the high level of customer complaints in this area, the OFT considers that the proposed merger creates a realistic prospect of a substantial lessening of competition in the risk pricing software market to insurers in the UK.

EXCEPTIONS TO THE DUTY TO REFER

117. The OFT's duty to refer under section 33(1) of the Act is subject to the application of certain discretionary exceptions, including the markets of insufficient importance or 'de minimis' exception under section 33(2)(a).

118. The OFT has found a realistic prospect of a substantial lessening of competition in relation to the supply of risk pricing software to non-life insurers in the UK. The OFT believes that the annual cumulative size of the

affected market in the UK is less than £10 million. The OFT has therefore considered whether it should apply the 'de minimis' exception to the duty to refer.

Availability of undertakings in lieu

119. As set out in the OFT's Exceptions Guidance,[13] the OFT's general policy is not to apply the 'de minimis' exception where it is 'in principle' open to the parties to offer a clear-cut undertaking in lieu of reference. This is because the recurring benefits of avoiding consumer harm by means of undertakings in lieu in a given case, and all future like cases, outweighs the one-off costs of a reference.

120. The OFT's judgment as to whether undertakings in lieu are 'in principle' available for the purposes of considering whether the 'de minimis' exception can be applied, does not depend on an actual offer of undertakings in lieu being made by the parties, and in any event, the existence of any such offer is unknown to the decision maker at the time of his or her decision as to whether undertakings are in principle available.

121. Cases that the OFT considers are in principle suitable for resolution by undertakings in lieu are typically those where the part of the transaction that raises concerns can be divested to an independent third party purchaser.[14] In the present case, the minimum structural remedy that the OFT considers would clearly be effective would be the divestment by Towers Watson of its Pretium software.

122. Pretium is an international brand and the staff dedicated to supporting the software, provide services on a global level. As discussed in paragraph 92 above, the OFT considers that Pretium is stronger outside the UK given its greater sales and customer base in the EEA. The OFT therefore believes that to require Towers Watson to divest its global Pretium brand would be wholly disproportionate to the substantial lessening of competition identified in the UK market.[15]

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[13] Exceptions to the duty to refer and undertakings in lieu of reference guidance, OFT1122, paragraph 2.21.
[14] Exceptions Guidance, paragraph 2.24.
[15] Exceptions Guidance, paragraph 2.26.

123. In the alternative, the OFT considered whether Towers Watson's Pretium software could be licensed in the UK and its customer-base assigned/novated to a third party supplier of actuarial consultancy services/software in the non-life sector. However, the OFT doubted whether such a licence would be clearly and effectively separable from the remainder of Towers Watson, and whether it would be a viable and attractive package to a potential third party purchaser. Such concerns might ultimately be surmountable, but the OFT will take a conservative approach in assessing whether undertakings in lieu are in principle available.[16] To the extent that there is any doubt as to whether undertakings in lieu would meet the 'clear-cut' standard, as is the case here, it will not be included in the 'in principle' assessment.[17]

124. On the basis of the above, the OFT therefore considers that there is no clear-cut and proportionate divestiture package in principle available. The OFT has therefore proceeded to examine whether to exercise its 'de minimis' exception in this case.

Application of the markets of insufficient importance exception to this case

125. Where the annual value in the UK of the market(s) concerned is, in aggregate, less than £3 million (and where the OFT considers there are no clear-cut undertakings in lieu in principle available), a reference to the Competition Commission (CC) will generally not be justified. In only exceptional circumstances will the OFT refer the merger where the markets concerned are less than £3 million. This may be where the direct impact of the merger in terms of customer harm is particularly significant and/or where the merger is highly replicable in the relevant sector.[18]

126. In the present case, the size of the risk pricing software market to non-life insurers in the UK is less than £1.4 million. In this case, the OFT does not consider that the customer harm is so significant to justify a reference to the CC. Neither does it consider that the merger is likely to be highly replicable across the insurance sector any more generally.

127. Given the small size of the affected market, the OFT considers that the total impact of the merger in terms of customer harm is not likely to be

[16] See also ME/3841/08 Completed Acquisition by Capital Group plc of IBS OPENSystems plc.
[17] Exceptions Guidance, paragraph 2.27.
[18] Exceptions Guidance, paragraph 2.15.

significant in this case, and the costs associated with a CC inquiry would be disproportionate in comparison. For the reasons given above, the OFT therefore considers it appropriate to exercise its '*de minimis*' discretion in this case.

DECISION

128. This proposed transaction will **not** be referred to the Competition Commission pursuant to section 33(2)(a) of the Act.

ENDNOTE

129. With respect to paragraph 81, Table 4, the OFT clarifies that the market share estimates of new business for Towers Watson and EMB are OFT estimates based on revenue figures received from the parties.