

## Annex A: Performance of the proposed models in predicting existing QR allocations

Following the publication of the consultation document, Reform of Higher Education Research Assessment and Funding, Peter Diggle and Amanda Chetwynd (Lancaster University) have examined the relationship between actual 2003/03 QR and five proposed metrics-based models, A to E, at the level of current (2001) RAE Units of Assessment. The data are taken from the HEFCE website, ([www.hefce.ac.uk/research](http://www.hefce.ac.uk/research)). These data give actual and modelled 2002/03 QR for all individual returns which were graded 3b or above in RAE2001. From this source, they divided the actual and modelled QR for each return by the corresponding volume measure (staff FTE), on the grounds that that the RAE seeks to measure research quality rather than quantity, and that it is presumably the assessment of quality which the metrics-based models are intended to emulate. The resulting data-set consisted of six measures of QR per unit volume (actual and models A to E) for 707 individual UoA returns in STEM subjects (Science, Technology, Engineering, Mathematics and Medicine, which equate to the RAE2001 UoAs 1-11, 14-32) covering 98 Institutions.

For each UoA, they plotted each of the five modelled allocations against actual QR allocations. The results, for four UoAs (2, Community based Clinical Sciences; 19, Physics; 23, Applied Mathematics; 30, Mechanical, Aeronautical and Manufacturing Engineering) which cover the range of STEM subjects are shown in the attached scatterplots. The equivalent figures for all STEM UoAs are available from [http://www.maths.lancs.ac.uk/~diggle/RAE\\_metrics/](http://www.maths.lancs.ac.uk/~diggle/RAE_metrics/).

The diagonal line on each plot is the line of equality. The plots show the poor performance of all five models as predictors of actual QR allocations at UoA level and underline the fact that many of the discrepancies between modelled and actual allocations are very large indeed.

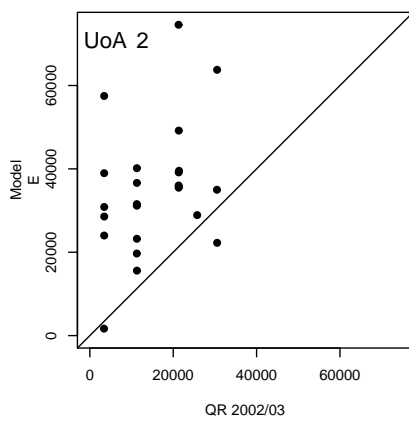
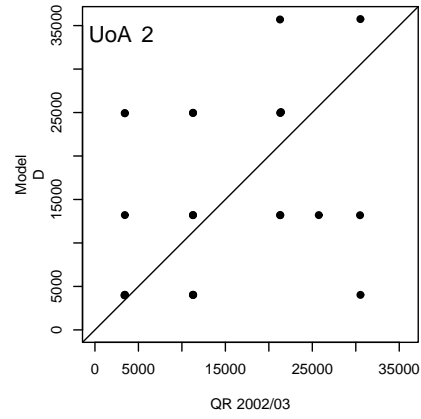
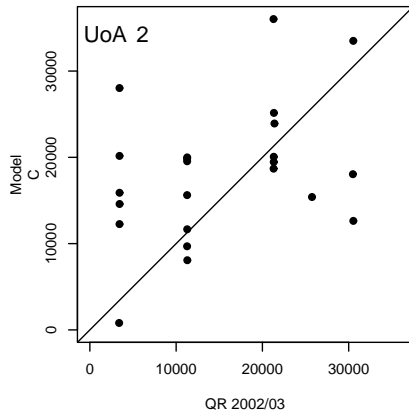
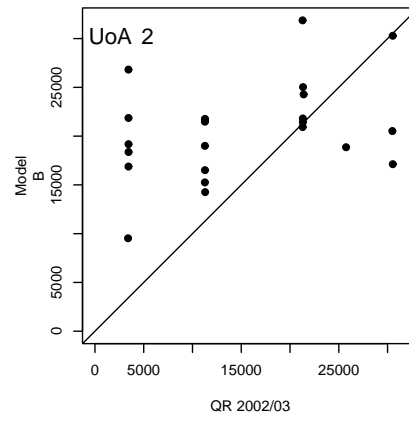
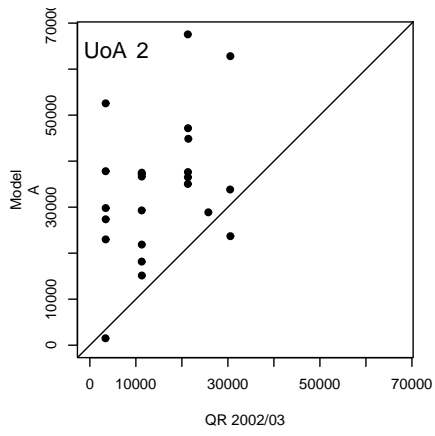


Figure 1: UoA 2: Community based Clinical Sciences

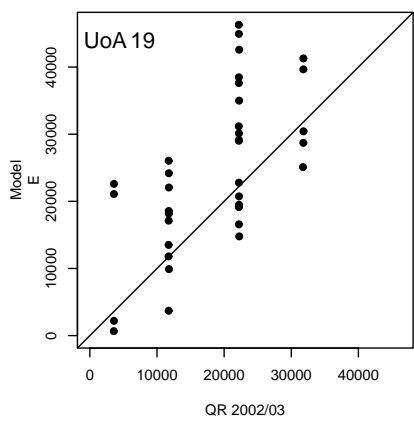
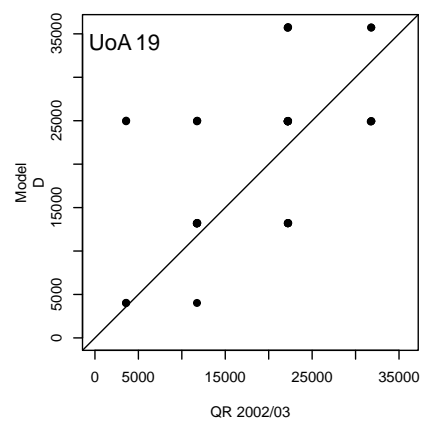
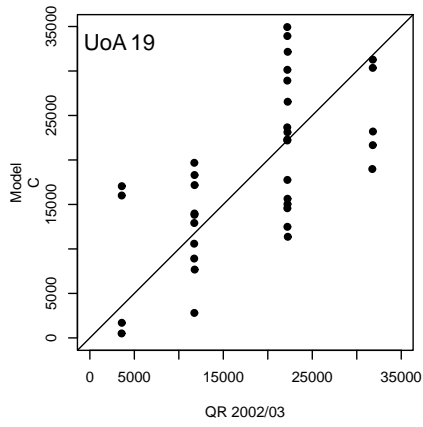
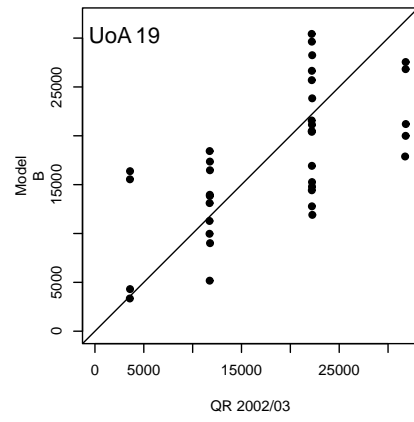
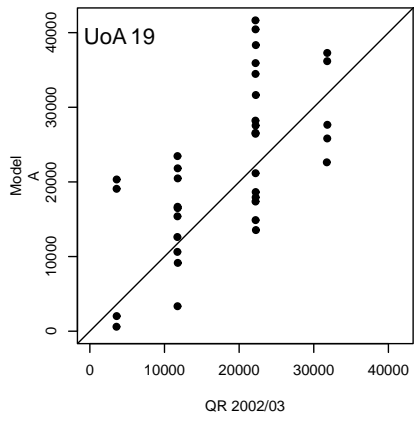


Figure 2: UoA 19: Physics

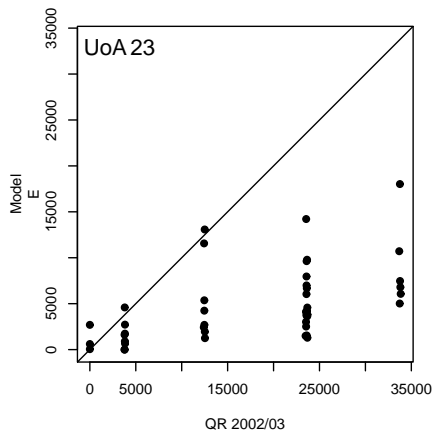
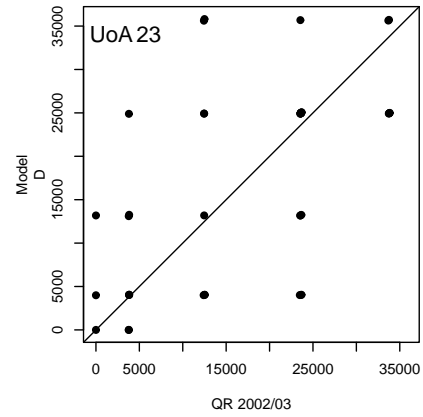
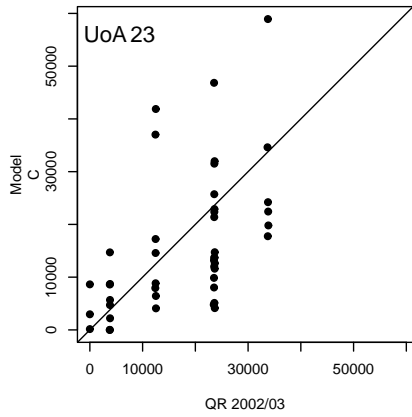
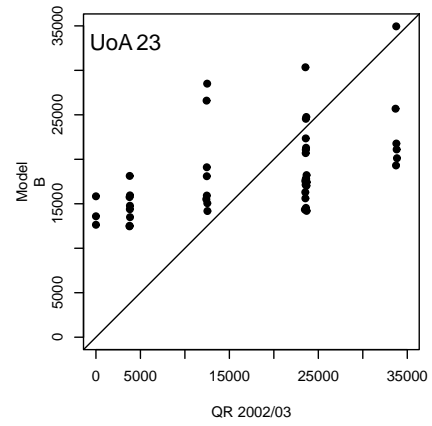
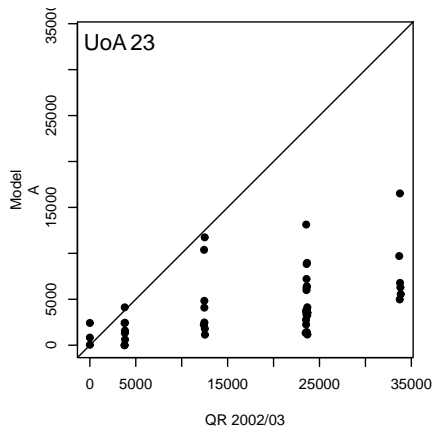


Figure 3: UoA 23, Applied Mathematics

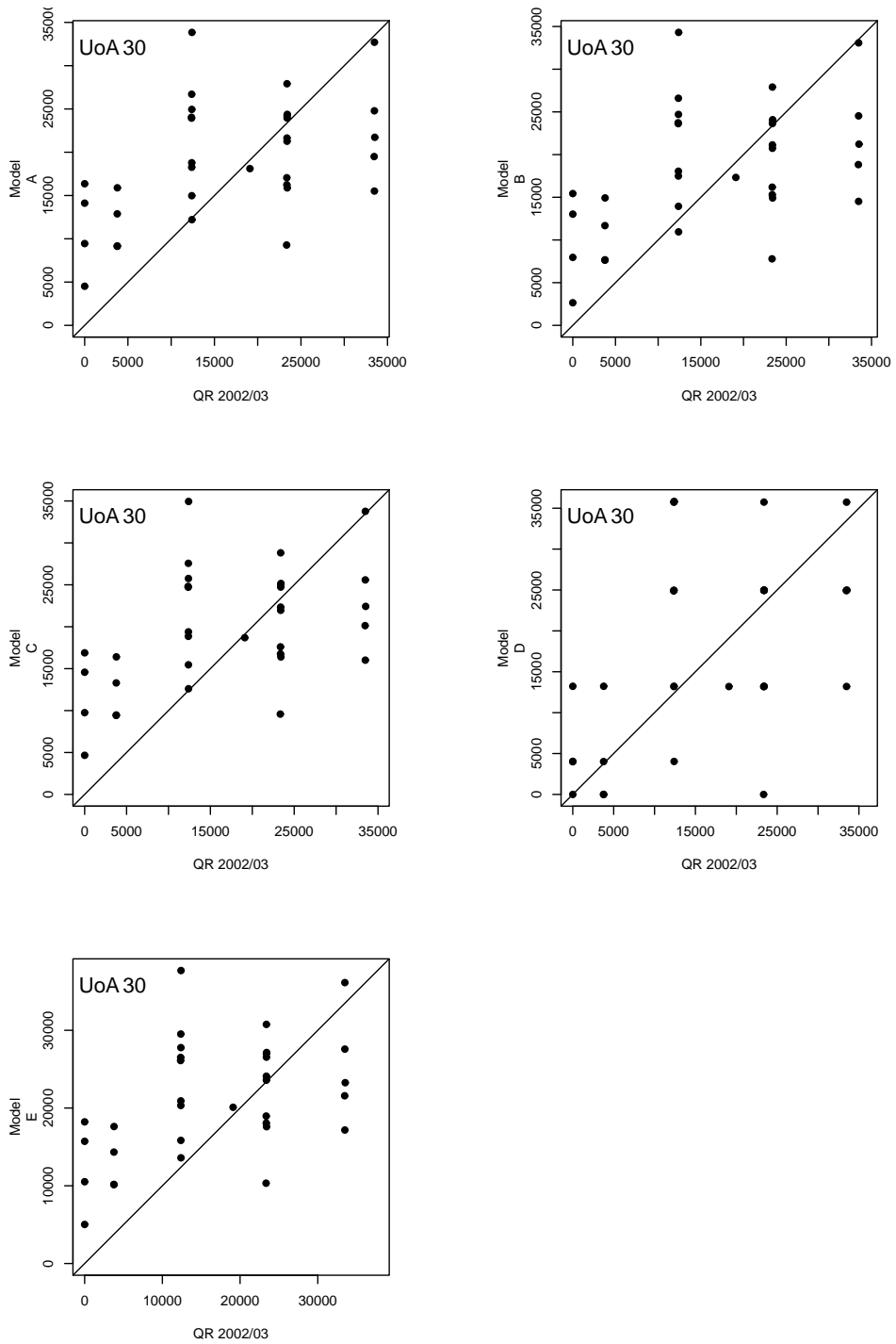


Figure 4: UoA 30: Mechanical, Aeronautical and Manufacturing Engineering