Financial risk in GP commissioning: the loss ratio

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The government in England appears to be heading toward a free market style system of healthcare provision. A significant part of the inspiration seems to come from the USA; however, just how successful are American insurance companies in balancing the difference between income from premiums and the expenses due to claims? Is there some magic free market road to financial stability?

Figure 1: Loss ratio for US health insurers
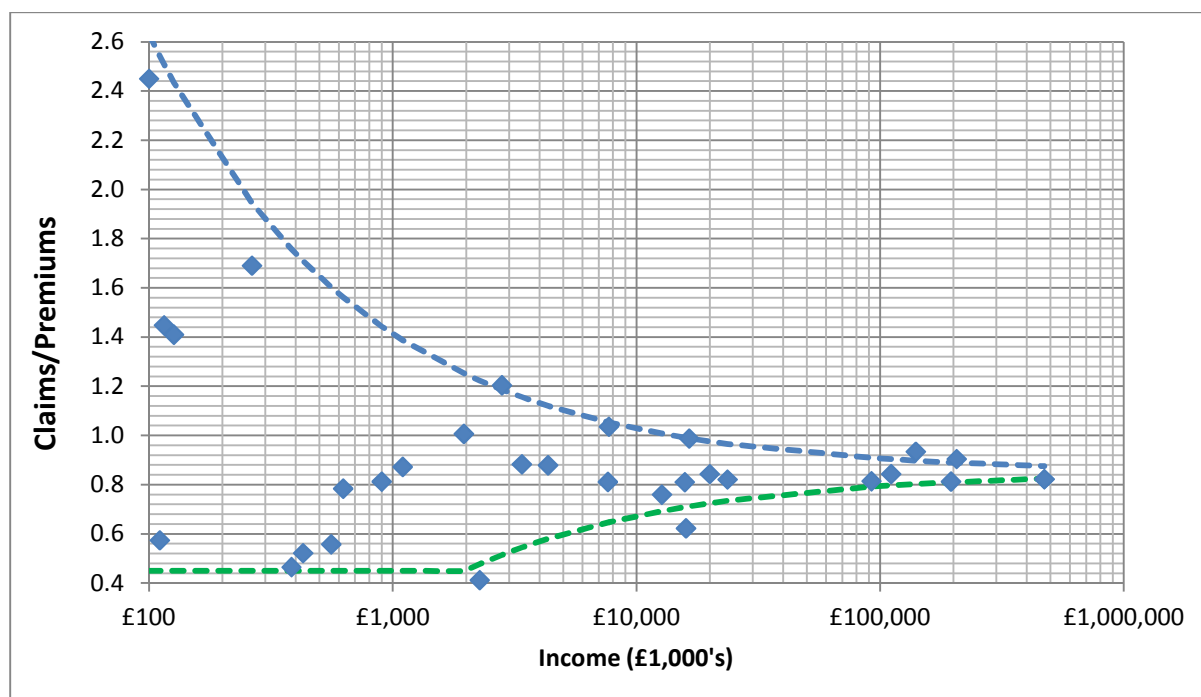
Footnote: Data is from health insurance companies/mutuals operating in the state of Minnesota in 2010 (http://www.state.mn.us/mn/externalDocs/Commerce/Current_Loss_Ratio_Report_052104013421_LossRatioReport.pdf) and has been converted to purchasing equivalent in pounds, i.e. dollars to pounds at current exchange rate which is then halved to account for like-for-like costs which are roughly double UK equivalent.

Figure 1 gives some rather disturbing insights using the loss ratio (ratio of expenses due to claims against income due to premiums) for health care insurers in the state of Minnesota in 2010. A loss ratio of 2.5 implies that claims have cost the insurer 2.5-times more than the income received from premiums; hence they have made a substantial loss. The loss ratio for break-even in Minnesota appears to be around 0.85, i.e. administration and management costs are around 15% of premiums. For a wider discussion of administration costs in the US health care system see Woolhandler et al (2003).

Data for a single year and a single state have been used to exclude the additional contribution from year-to-year volatility in costs and differential volatility between different locations (Jones 2012a-f). In the US each insurer risk-scores the individual to set the premium and such risk-scoring is the equivalent to that contained within the capitation formula in England. Since this is data from the USA, by definition, costs are for those in employment and able to afford insurance and exclude the over 65's since they are covered by Medicare. Hence this will exclude end-of-life costs for the 80% of deaths which occur in the Medicare age group. The under 65's account for around 60% of total healthcare costs and should be characterised by lower volatility in costs due to a higher proportion of elective as opposed to more volatile non-elective interventions.

As can be seen the maximum and minimum lines are equally spaced around the break-even line for organisations above £3 million UK equivalent, however, below £3 million there is strong asymmetry. Asymmetry implies that maximum costs are higher than minimum costs, i.e. high cost years are not balanced out by low cost years. This arises from the impact of 'high cost' individuals. The lower limit is set by a general level of health maintenance involving patient events such as pregnancy and childbirth (cost per birth is close to the higher cost per head for the over 85's), GP check-up, diagnostics, vaccinations, acute interventions for general wear and tear, etc.

Therefore to achieve a ± 5%, ± 3% or ± 2% tolerance for costs associated with (a generally more affluent group of under 65's the organisational size needs to be around £126 million, £351 million or £787 million respectively. It would appear that the prospect of two GP practices working together as a CCG (as suggested in the Health & Social Care Bill) was never a viable option. Organisations larger than most of the former PCTs are actually required to achieve financial stability.

The management of financial risk occurs in two parts, namely, risk sharing for the very high volatile cost groups and overall cost reduction to bring costs to a level below income, i.e. a risk ratio below 0.85 for US health insurers. As an example, take the newly formed Arden cluster (Warwickshire + Coventry) with a population of around 914,000 served by 139 GP practices and a total budget of £1.3 billion or around £800 million expenditure on the under 65's. This gives them a tolerance of around ± 2% for this part of the budget. Hence in order

to maintain an ongoing surplus they would have to reduce the long-term average costs by 1% to 2% below their income. Smaller organisations have to make larger cost savings to ensure a surplus as per Figure 1. The issues become vastly more complex when you attempt to give the 139 Arden GP practices their own budget of roughly £6 million each (for the under 65's) with an approximate tolerance of ± 25% - at which point the ability to demonstrate if a particular cost saving initiative has made any impact is clouded in cost volatility issues and in-fighting over the management of practice budgets (is an overspend due to chance or 'inefficiency'?) becomes a total distraction.

In the US health insurance organisations are free to cover their risk via re-insurance although this comes at a cost which must be absorbed into the overall cost of fund management. Lower cost alternatives which are applicable to CCG's have been discussed (Jones 2008a,b, 2012e).

Figure 1 has been deliberately selected as a best possible case scenario and in reality, the loss ratio varies considerably from year to year (Born and Santerre 2005) as does the equivalent in England (Jones 2012a-e) and the savings required to *guarantee* an ongoing surplus become even greater. Such savings are not impossible but require a period of financial stability to prevent distraction from the core mission. It may well be the case that the NHS Commissioning Board may have to offer far greater support with respect to the pragmatic issues of financial stability in the early years of this transition than may have been thought necessary or desirable. How this is worked out in practice remains to be seen.

In conclusion, there is no magic free market advantage to be learnt from the USA on this occasion, other than the age old truth, that *only* size confers financial stability. The flip side of this also remains true – it is very difficult to manage budgets in small locations. In this respect innovation and change has to be delivered in a spirit of co-operation, mutuality and maintaining sight of the whole. We can all think of examples where dissecting the health service into small autonomous parts may reduce the cost of the parts but increase the cost of the whole.

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