

Expert Review by Professor Bruce Lyons

**Major Weaknesses and Mistakes in the Economic Evidence
Used to Justify the Proposed Break-Up of the HCA Private
Hospital Network in central London**

(Competition Commission's private healthcare market investigation)

13 February 2014

Credentials

I am Professor of Economics and Deputy Director of the Centre for Competition Policy (CCP) at the University of East Anglia. My academic research over many years has been related to the economics of market structure and the economics of competition policy. I have a particular interest in the practicalities of identifying and predicting economic effects and implementing remedies in mergers. Books published with various co-authors since 2006 include “Merger Control in the UK” (Oxford University Press), “Mergers and Merger Remedies in the EU: Assessing the Consequences for Competition” (Edward Elgar) and “Cases in European Competition Policy: the Economic Analysis” (Cambridge University Press).

I am one of only two members of the Economic Advisory Group for Competition Policy to the European Commission who have been re-appointed by the Commissioner on the recommendation of all four Chief Competition Economists. I am a member of the Scientific Board of the Austrian Institute of Economic Research (WIFO) and was formerly Editor of Journal of Industrial Economics. I am a former Reporting Panel Member of the UK Competition Commission (2002-11) and was a founder member of the CC’s Remedies Standing Committee. I am a member of the Economics Reference Group (ERG) of Monitor (NHS regulator).

I have advised parties and various national authorities on a number of cases and recently co-authored an independent assessment of a new theory of harm that was quoted extensively by the European Commission in a merger decision. I am currently an academic advisor on competition economics to KPMG’s Economics & Disputes team.

I have reviewed the CC’s Provisional Findings (PF), Provisional Decision on Remedies (PDR), HCA submissions and various other submissions on the CC’s website. I have met HCA executives and I was free to ask them about all aspects of their business.

Bruce Lyons

Introduction and Summary of Conclusions

1. My aim in this short paper is to highlight some major weaknesses and mistakes in the CC's economic evidence in relation to private hospitals located in central London. I do not attempt to be comprehensive. I highlight in particular the:
 - A. Geographic market definition used by the CC
 - B. Interaction of price and quality competition in hospital markets
 - C. Incentives for private medical insurers (PMIs)
 - D. Evidence on barriers to entry
 - E. Evidence on prices
 - F. 'Chilling of competition' effect of break-up divestitures (as distinct from partial merger divestitures)
 - G. Scale and selection of break-up divestitures proposed for HCA

2. I conclude that:
 - The CC has used a crude and arbitrary definition of the geographic market for central London. This is quite different from that used in all other private hospital markets it identifies in this market investigation. It is also quite different from that used in its other market inquiries where local markets are important. It is a geographic area based on the location of providers and not on the location of consumers. Such a measure is appropriate for the purpose of a quick market share filter for first stage merger investigations. It is not fit for the purpose of finding an AEC, let alone for breaking up a successful firm.
 - The CC's analysis focuses exclusively on price. Consumers of healthcare are particularly interested in quality. The CC simply assumes that its proposals will leave quality either untouched or enhanced. Had the CC reviewed the literature on competition and quality in healthcare, it would have realised that this assumption is false – markets in which price is negotiable have very different dynamics to those with fixed prices. There is ample evidence from both the NHS and private hospitals abroad that highlights this issue. The CC should have collected systematic data on quality in order to test its assumption. Had it done so, the evidence submitted by HCA indicates that it would have been very likely to find that HCA performs extremely well on both quality and innovation.
 - The CC relies extensively on the opinions of major PMIs (Bupa and AXA PPP). Despite the CC's current market investigation into motor insurance, in which it finds an AEC due to insurers preferring cost cutting over quality of repairs, it makes no allowance for the bias induced by relying on PMIs as representatives of insured patients. There is also ample evidence that the PMIs have bargaining power which they wield in the form of offering directional healthcare policies excluding HCA and in choosing which hospitals to list or not list.

- The CC appropriately addresses some of its identified barriers to entry in its proposed non-divestiture remedies but under-estimates the importance of growth in London. It identifies economies of scale as the greatest barrier. However, it fails to distinguish growth prospects in London from the rest of the country, except where growth would support its proposal to break-up HCA. Prospective growth naturally erodes this source of entry barrier. This is also reflected in known plans for entry and expansion in central London. PMIs also have the power to facilitate entry by ensuring recognition and agreeing price schedules ahead of entry.
- The CC's evidence on insured 'prices' (episode charges) can be likened to a comparison of shopping baskets in which there are different items and even a different number of items. They are biased when patients differ in the complexity of their treatment needs. They are highly variable and not comparable. They do not reveal any useful evidence on relative HCA prices. The CC could simply have compared itemised price schedules negotiated by PMIs but it does not explain why it chose not to.
- The CC also draws on a price-concentration analysis using data on self-pay domestic patients. The geographic markets used in this analysis are exactly those rejected by the CC as irrelevant for central London because of a presumption that HCA's low market share would not reflect HCA's assumed market power. Nevertheless, this is the only evidence the CC has to estimate any benefit of a break-up. The CC thus uses a share of supply to claim HCA has a high market share, but estimates the harm by using a method that would give HCA a low market share. It then proceeds to design a break-up remedy based on the higher share of supply (which is based on an economically irrelevant market definition; see the first bullet above).
- The CC fails to distinguish between a merger and a market investigation when it comes to remedies. On the contrary, a divestiture in a merger means that a partial merger is allowed, thus it still concentrates the industry. Unless a strongly dominant market position has been unfairly obtained or bestowed on a privatised monopoly, a divestiture that breaks up a successful firm runs counter to consumer preferences determining the market structure. It undermines the incentives for firms to successfully meet the needs and aspirations of their consumers. It also undermines the incentives for rivals to enter with new capacity. This chilling effect goes much wider than the specific market under investigation as firms in other markets will change behaviour as they approach a 40% share of supply.
- There is absolutely no economic basis for the CC to choose the amount of divestiture according to a 40% rule. This misinterprets merger guidelines, Article 102 TFEU and legal precedent. It would be crude and fanciful even with a sensible market definition. Given the arbitrary share of supply that is used to calibrate the divestitures, and the paucity of price evidence, it risks fundamentally undermining confidence in the implementation of competition policy in the UK.

A. Geographic market definition used by the CC

3. Geographic market definition for hospitals located outside ‘central London’ is based on catchment areas. More precisely, a catchment area for each hospital is defined by the minimum road distance that locates 80% of patients. This is standard practice though sometimes travel times are preferred to mileage. The CC argues that this is unlikely to make a substantial difference for hospital market definition. The CC also notes that this methodology may under-estimate market area: *“The catchment area around a hospital reflects the area from which the hospital draws the majority of its patients and does not necessarily fully reflect patients’ willingness to travel in response to a small change in the price or quality of the services provided by the hospital they have attended. This may result in geographic markets defined on the basis of catchment areas possibly being too narrow in some instances.”* PF 5.64
4. The CC notes that within their catchment areas, *“hospitals that are near one another may be expected to exert a stronger competitive constraint than hospitals located further away.”* PF 5.65. This provides a justification for the CC later using a geographically weighted measure of market shares (LOCI) instead of a geographically unweighted measure. The CC also argues that: *“having a large catchment area does not necessarily imply that the hospital is constrained by all hospitals located within its catchment area. Similarly, a small catchment area does not necessarily imply that the hospital is not constrained by hospitals located outside its catchment area.”* PF 5.66. The first sentence in this extract refers to the fact that some *“products”* or specialities are not offered by all hospitals.¹ This methodology is now standard practice. However, the same cannot be said about the quite different methodology applied to central London.
5. The CC simply states (in a footnote to PFs 5.59 and in the first paragraph of Appendix 6.10) that: *“For the purposes of our analysis, we refer to ‘central London’ as the area inside the north and south circular roads, and ‘Greater London’ as the area outside central London but within the London Government Office Region”*. No reasoning is given for this as being a coherent relevant economic market/ geographic area. The N&S Circular roads circle inner London at a roughly 6-10 mile distance from Aldwych. No evidence is given that this is the catchment area for any hospital, let alone any HCA hospital. In fact, HCA estimates that [X] of its inpatients and daypatients have a central London postcode.
6. The CC does list some distinctive characteristics of the hospitals located in this geographic area: *“we observe that market conditions in central London, both on the demand side and on the supply side, differ markedly from those prevailing elsewhere in the UK or are more evident in central London than elsewhere. In particular, central London is characterised by a high PMI penetration rate, in part arising from the large presence of corporate PMI customers; a significant number of patients travelling from Greater London and outer London into central London; a significant number of private*

¹ In relation to the product market, the CC argues that *“within each specialty, supply-side substitution appears to be greater for more routine treatments than for more complex treatments, in our competitive assessment we considered constraints within these markets arising in the provision of more complex treatments (also referred to as ‘high acuity’ or ‘tertiary’ care)”* PF 5.54.

hospitals and PPUs, with a widespread offer of complex treatments or specialties; strong reputation of some private hospitals and PPUs which are perceived by patients as offering a higher quality of care than private hospitals and PPUs elsewhere in the UK; and private hospitals and PPUs in general drawing patients from very wide geographic areas.” PF 5.59

7. In other words:
 - There is greater proportion of insured population so per capita demand for private healthcare services is higher
 - Part of this demand is due to a large presence of the headquarters of leading firms, who presumably want to offer the highest quality of healthcare to attract the best staff
 - Most patients cross the north or south circular to use hospitals located in central London
 - Generally, private hospitals and PPUs draw patients from “*very wide geographic areas*”.
8. Overall, there is much greater demand for private hospital services in central London than there is for a 6 or 10 mile isochrone elsewhere in the UK.²
9. The CC proceeds to deduce: “*These characteristics suggest that the area covering the set of private hospitals and PPUs located in central London should be regarded as a distinct geographic market.*” PF 5.59. I find this deeply flawed. For the rest of the country, each geographic market is defined by where patients come from – a more geographically dispersed customer base is associated with a wider geographic market. In central London, the CC assumes precisely the opposite – a dense and dispersed customer base means that a narrower geographic market must be defined. In fact, the CC’s own estimates suggest an 80% isochrone for HCA’s central London hospitals of [REDACTED].³ This would give a standardly defined geographic market of Greater London.
10. Of course, market definition is only a first stage in the competitive analysis, including of whether there are asymmetric competitive constraints, but the arbitrary curtailment of the set of competitor hospitals closes the mind of the CC to important sources of competitive constraint (including for international patients).
11. The CC uses variants on two standard structural indicators of competition for everywhere except central London. It: “*identified a hospital as being of potential concern if either of the following conditions are met: (a) LOCI (patient share) and/or LOCI (revenue share) is below 0.6; or (b) fascia count (set of 16 specialties) and/or fascia count (oncology) is equal to or below 1.*”

² An isochrones strictly refers to locations with the same travel time, but I use it here to refer to distance instead of time. A recent medical example where the CC used true isochrones was for laser eye surgery merger in Optimax/Ultralase. The CC used 45 minutes, which is equivalent to around 15 miles.

³ [REDACTED]

12. First, consider the number of competitors HCA faces under the CC's central London market definition. The CC says that there are 26 private hospitals, including ten PPUs. Removing HCA's eight facilities, this leaves 18 private hospitals competing with HCA. Narrowing this analysis to only those private hospitals that the CC considers offer Oncology, this leaves 15 hospitals, eight of which are PPUs. Removing HCA's three facilities, this leaves 12 private hospitals which the CC considers compete with HCA, seven of which are PPUs. [PF Appendix 6.6]
13. If we use the CC's standard market definition for private hospitals, the CC acknowledges there are 44 private hospitals, including 18 PPUs, present in Greater London. Removing HCA's nine facilities, this leaves 35 competing hospitals for HCA. [PF Appendix 6.6].
14. For comparison, outside of London, private hospital operators typically face a much lower number of competitors. Using the CC's specification of 16 specialties, only 38 out of 174 private hospitals face three or more competing fascias. Using the Oncology subset, only 12 out of 113 private hospitals face three or more competing fascias. [PF Appendix 6.5 Tables 2 & 3⁴] Whichever comparison is made, HCA competes with a very large number of fascias.
15. Next consider LOCI. This is best understood as a measure equal to one minus the geographically weighted market share. There is a controversial interpretation of LOCI in terms of a particular demand system, but both the authors of the LOCI working paper and the CC now prefer to interpret LOCI as a purely descriptive measure (PF Appendices 6.4 and 6.5). I agree with that interpretation and so use the 'weighted market share' terminology, equivalent to $[1 - \text{LOCI}]$, in this paper.⁵ Based on network LOCI (calculated on patient volumes), outside London, only 36 out of 144 private hospitals have a weighted average market share less than 40%.⁶ In contrast, HCA's hospitals in central London only have weighted average market shares ranging between [%].⁷
16. The CC places considerable reliance on LOCI everywhere in the UK except central London, arguing as follows: *"We consider the LOCI measure to have several benefits in the context of this investigation, in particular if compared with the fascia count measure. As described in more detail in Appendix 6.4, where we also address the comments received from the parties, the LOCI measure takes into account the geographic differentiation between hospitals, accurately reflects where the patient demand originates from, and does not rely on a fixed catchment area or other*

⁴ Numbers in these tables have been adjusted to exclude London. The same applies to the following LOCI.

⁵ The measure is sensitive to the choice of geographical submarkets, and these are essentially arbitrary and if they are defined too narrowly, they can create a very high weighted market share (e.g. if every household chooses the same hospital, that hospital will have a 100% market share at that address). Nevertheless, market share by broad enough post codes provides a useful measure as long as the absolute value of the measure is cautiously interpreted. The weighting generally places a greater weight on market shares in postcodes nearer the hospital.

⁶ Market shares of hospitals in the same group are aggregated to provide a 'network' share. Figures taken from PF Table 5, Appendix 6.4.

⁷ [%]

geographic market definition. Therefore it is our view that the LOCI measure, as compared to fascia count, is likely to provide a more accurate reflection of local competitive constraints facing a hospital.” PF 6.98. It is clear from Table 7 in PF Appendix 6.5 that everywhere except central London a weighted average market share of greater than 40% is the key filter to identify hospitals for further investigation as being of potential concern.

17. It is puzzling, therefore, that the CC does not use LOCI for central London to get a sense of competitive constraints provided by less local hospitals. The CC could have done this. No justification is given for not doing so. The only hint is in PF 6.10 #44 where it says: *“Bupa argued that measures such as network LOCI would underestimate HCA’s market power [REDACTED by CC].”*⁸
18. The only reference to competition from hospitals outside central London is PF 6.140 referring to the fact that central London patients rarely travel to Greater London for treatment. There is no reflection on why they do not do so. For example, this pattern of travel is consistent with central London providing good value for high quality patient care so there is no need to travel outwards, perhaps unlike those who travel in to central London, particularly for high acuity treatments.
19. Instead of the LOCI measure used elsewhere in the UK, the CC uses simple shares of supply in central London, much as the OFT would use in the very limited time it has to decide on a merger referral with a very low required standard of proof. A share of supply is the crudest form of structural indicator and is appropriate only when there is no information to calculate an economically meaningful measure of market share. Nevertheless, it is used by the CC to say that *“HCA has a share of supply in central London above 45 per cent by admissions (inpatient and inpatient plus day-patient) and above 55 per cent by revenue (inpatient and total).”* PF 6.125⁹ The CC also notes that HCA has higher shares of supply in certain specialities, particularly high acuity and tertiary. PF 6.127. More specifically, the CC states: *“As our disaggregated shares of supply shows, HCA has an even stronger position when considering the most common specialties and the more complex specialties and treatments.”* PF 6.135. These two segments of specialties are revealing. ‘Common specialties’ should be expected to be amongst the easiest for efficient competitors to expand or enter. Evidence suggests that a strategy of focussing on high acuity and complex care were pioneered by HCA in the UK private healthcare market. It is perfectly natural for an original risk-taking pioneer to achieve a strong market position – indeed, this provides the essential incentive for innovation.
20. The CC places far too much reliance on crude shares of supply: *“On the basis of our shares of supply analysis described above, we consider central London to be a highly concentrated market. Our analysis of hospital operators’ shares of capacity also supports this. The shares of supply indicate that patients (and PMIs that represent their policyholders) do not see non-HCA hospitals, including private hospitals and PPUs, as good substitutes for HCA hospitals.”* PF 6.134. If patient preferences, possibly

⁸ I note that Bupa is a horizontal rival to HCA through Bupa Cromwell, as well as having a 41% market share in PMI. As I discuss below, it is wise to be cautious about evidence provided by rivals and PMIs.

⁹ The HCA submission picks up on errors in the CC’s calculations and these turn out to be over-estimates.

following the preferences of consultants who want the best support for patient treatment, favour HCA hospitals because HCA has invested heavily, promoted highly successful working practices and risked the development of new facilities such as ITUs, then it would be perverse to penalise quality and success founded in patient preferences. I have seen no evidence that patients are being fooled or misled into overestimating HCA quality.

21. The CC also seems to imply that HCA's high reputation is anticompetitive: *"There are other factors that may limit substitutability between HCA hospitals and its rivals, for example brand, reputation and patient perceptions."* PF 6.136. These three are not independent 'other factors'. A high quality product is appreciated by patients who pass on their experience by word of mouth to friends, relatives and GPs. This creates a positive reputation. The economics of brands shows that a brand is an important means of 'putting your neck on the line' for products where quality is experienced but not directly observed pre-treatment. In such markets, the preservation of the reputation of the brand becomes an imperative because a bad experience in one part of the network is highly expensive for the whole network due to reputational loss. The CC does not provide any evidence to suggest that the reputation of HCA amongst patients as a high quality hospital operator is unjustified.
22. Hospitals are not of pre-determined quality with a fixed number of 'slots' for high quality hospitals.¹⁰ The CC has given no reason why a moderate quality hospital cannot be upgraded to challenge HCA on quality. The CC provides no model or evidence on how London hospitals compete. There is simply a concern about market share.

B. Competition and quality (and innovation) in private hospital markets

23. For patients, the most important issue in healthcare markets is how effective they are at improving health outcomes. This is true for private healthcare as much as for the NHS. Apart from convenience, patients value the reassurance of being treated as well as possible and particularly the outcome of their treatment. Price is also important, but this must be considered in relation to the amount that consumers are willing to pay for improved quality. Effective markets protect and enhance quality – they should not be appraised with an exclusive focus on price. Quality may be measured in various ways, including mortality, infection and re-admittance rates, inspection reports, patient feedback and waiting times. What do we know about effective healthcare markets from the existing research?
24. In the context of a fixed price per treatment, which has been the case for elective treatments in NHS hospitals since the 2006-08 reforms,¹¹ competition is naturally channelled into quality improvements. The economic theory supports this clear prediction and academic research has provided econometric support – competition

¹⁰ In PDR #2.110, the CC notes the possibility that buyers may take LB and PG downmarket.

¹¹ The fixed price is known as Payment by Results (PbR) and the choice of hospital is available through the appointments booking website called Choose and Book.

can save lives.¹² The CC relies on this research in its recent decision to prohibit the proposed merger between the Royal Bournemouth & Christchurch Hospital NHS FT and Poole Hospital NHS FT (hereafter, Bournemouth / Poole) on the grounds of an expected decline in quality were the merger to proceed.

25. However, in the context of a market in which both price and quality are variable and price is negotiated with a buyer group, as in the NHS during an earlier period (1991-97), economic theory provides no clear predictions on the effect of competition on quality. Price competition alongside imperfectly observed quality can result in lower quality of provision. For example, if patients have little choice but to attend the hospital chosen by a healthcare buyer which requires the lowest procurement price subject to a minimum quality standard, there is an incentive for hospitals to cut cost and unobservable aspects of quality (e.g. clinical staff training). More positively, lower quality need not be the outcome – we must turn to empirical evidence if we are to understand the balance of competitive forces in a particular institutional setting. The seminal paper on this period for the NHS finds that mortality rates did in fact increase in more competitive local markets.¹³ Professor Carol Propper puts this research in a wider context: *“Research for the UK showed that when competition was introduced in the early 1990s in an NHS regime that allowed hospitals to negotiate prices as well as quality, there was a fall in clinical quality in more competitive areas. This is confirmed by research in the US healthcare market: where prices are set as part of the bargaining process between hospitals and buyers of healthcare, competition tends to be associated with poorer quality.”*¹⁴ The fact that competition does not always have a positive effect on quality should not be taken to imply that we should abandon competition. Nor should it be interpreted to mean that high quality is an indicator of low competition. The proper implication is that the empirical investigation of quality must be a central feature of a market investigation in private healthcare.
26. The CC must be aware of this widely cited research on competition and quality in healthcare, but there is no reference to any such research in the 1,484 pages of PF, PDR and appendices. This is despite the fact that the recent Bournemouth/Poole merger decision has two appendices (D and H) which review quality indicators, quality driving patient choices and quality incentives for hospitals (in a fixed price context). It is all the more surprising that there are no such appendices for the CC’s Private Healthcare market investigation because there is a much longer inquiry period than is available for a merger. In the CC’s PF and PDR, the effects of competition on quality are left to a few unfounded speculative assertions.¹⁵
27. In Bournemouth /Poole, the CC provides specific evidence of patient choice on the basis of quality. Evidence is also provided from the CC’s consumer survey for private

¹² Gaynor, Moreno-Serra and Propper (2010) ‘Death by Market Power: Reform, Competition and Patient Outcomes in the English National Health Service’, CMPO University of Bristol Working Paper 10/242. In 2011, this and related research sparked debates in the British Medical Journal and The Lancet.

¹³ Propper, Burgess and Gossage (2008) ‘Competition and quality: evidence from the NHS internal market 1991-9’ *The Economic Journal*, 118, 138-170. Note that (easily observable) waiting lists were shorter, which is consistent with a distortion of effort as well as cost and investment cutting.

¹⁴ Propper, ‘Healthcare competition saves lives’, *Research in Public Policy*, Winter 2010, p.20.

¹⁵ E.g. in PDR #2.110 and 2.156.

healthcare. People choose private healthcare for convenience and quality. Quality is particularly important for high acuity and complex illness: *“In our patient survey, the average travel time to a hospital being attended was just over 30 minutes. However, around half of all patients said that they would travel further if the GP recommended that they did so or if it was the only way they could see the consultant recommended. The proportion of those who felt their condition was severe or affected their life who would be willing to travel further was higher.”* [PF, footnote 34]

28. The CC’s patient survey also shows how London based patients are particularly willing to search to find the best private healthcare: 63% looked up relevant information online; 41% visited private consultant websites; and 36% looked up private hospital websites. They are likely to have received recommendations from their GPs and friends/family with experience of private healthcare in London. Nevertheless, there remains imperfect observability of quality by consumers of healthcare. The CC’s proposals to provide consumers with better and more comparable information on quality in private hospitals are therefore highly commendable and I agree with the CC that they are likely to *“enable patients, other clinicians and private medical insurers to make more meaningful choices between providers and stimulate competition between private hospital operators”* [PDR summary, para 7(d)].
29. I next turn to the possibility that quality is fixed, or more precisely that there is a fixed number of high quality hospital sites and other hospitals and PPU’s cannot achieve the same level.¹⁶ Although the CC does not make this claim, it may be the only way to make sense of remedy which breaks up HCA. An outstanding example of how quality is not predetermined is, in fact, London Bridge hospital (LB): *“In 2001, the London Bridge was considered an unattractive and oddly located hospital (being south of the river Thames). However, following significant cumulative investment by HCA, it has been transformed into one of the UK’s best private hospitals and is able to compete on an international level with leading hospitals in the US, Germany, Singapore and Thailand.”*¹⁷ The CC has not rebutted HCA’s claim that its investment took this hospital from mediocre to elite. It was HCA vision and competitive strategy to determine the level of investment and range of specialities at LB. Another hospital group, without the reputation for quality to be defended, might have chosen a very different future for LB.¹⁸
30. [X] I understand that consultants are not tied in to HCA hospitals through contracts. The only requirements are for consultants to hold practising privileges at any hospital at which they practise. Competition for consultants is an important dynamic of the private healthcare market
31. In summary, the dynamics of quality and competition are not as simple as for price alone and it is important for consumers to be able to choose on the basis of quality as well as price. There is not a fixed number of hospital sites that can achieve high quality. Quality is largely determined by the investment of the hospital network. This

¹⁶ This seems to be the view of AXA PPP who say that only HCA hospitals and TLC are ‘elite’; Paragraph 2.12, AXA PPP’s Response to the CC’s Provisional Findings.

¹⁷ HCA Response to the Issues Statement #3.7.

¹⁸ The CC cannot expect this investment in quality to be unaffected by a forced break-up of HCA.

investment can attract the best consultants and makes these hospitals attractive to discerning patients.¹⁹

32. Similar incentive issues arise in relation to competition and innovation. Economic theory suggests that there is no simple monotonic relationship between measures of competition and innovation. There is, of course, abundant evidence that successful innovators reap a significant part of their reward in growing market share. This growth is a key incentive for innovation. It is more difficult to isolate the feedback effect of competition on innovation, but the most widely cited econometric paper finds an inverted-U shaped relationship.²⁰ At risk of over-simplifying, both highly fragmented and monopoly markets give poor incentives to innovate, but firms with substantial market shares to defend and attack have strong incentives. Although that specific paper is not directly relevant to private healthcare or London, it remains important evidence against any presumption that a break-up of HCA would improve innovation incentives. In fact, the opposite appears more likely.
33. Just as for the various dimensions of quality, the CC should have collected specific evidence on the innovation records of different hospital groups and carefully related this to the competition they face. Without this, it is only possible to appraise the evidence provided by HCA. This is consistent with past innovative success raising market share and with a continuing high level of innovation. This raises a serious concern that a forced break-up would harm incentives for future innovation.
34. A key feature of HCA's expansion in London has been the introduction of new high acuity specialities and frontier technologies into the private healthcare market. HCA was the first private hospital group in the UK to risk venturing into high acuity and complex treatments including ITUs. Effectively, it has created this end of the market. These innovations in the private sector are, no doubt, expensive for PMIs. They result in insurance claims by the most seriously ill patients who would previously have had to be treated on the NHS. In the following section, I develop this theme. The incentives for PMIs are not fully aligned with those of their policyholders.

C. Incentives for Private Medical Insurers (PMIs)

35. The CC adopts the presumption that PMIs act as unbiased advocates of the customers they insure. For example: "...patients (and PMIs that represent their policyholders)..." PF 6.134. Although insurers are intermediaries, the CC assumes that they have an incentive to procure the best price for their customers and that price competition between insurers ensures pass-through. The CC does not consider the crucial difference between PMIs and patients in their preference for quality. Once again, this is particularly surprising given another CC market investigation that is taking place in parallel to private healthcare.

¹⁹ This mechanism is well understood in the economics of industrial organisation and applies to a wide range of markets where quality is important. See, for example, the books by John Sutton (1991, 1997).

²⁰ Philippe Aghion, Nick Bloom, Richard Blundell, Rachel Griffith and Peter Howitt (2005) 'Competition and Innovation: an Inverted-U Relationship' *Quarterly Journal of Economics*, 120.2, 701-28. Innovation is measured by patent intensity and the dataset runs across a wide range of industries so there is no.

36. In its current market investigation of Private Motor Insurance,²¹ the CC provisionally finds that although there is strong rivalry in the sale of basic motor insurance, there are still three adverse effects on competition. The second has a significant read-across to private medical insurance:

"5... (b) (i) lack of effective monitoring by insurers and CMCs of the quality of car repairs; and (ii) significant limitations in consumers' own ability to assess the quality of repairs, with the result that cars are too often not repaired to the standard to which consumers are entitled" [Private Motor Insurance PFs Summary #5; 17 December 2013]²²

37. This is a very important finding by the CC because it acknowledges that even apparently competitive insurance companies cannot be expected to make the right judgement call on behalf of their clients when it comes to quality differences. At the very least, the CC should have been aware of this as an issue and been cautious in interpreting the opinions of leading PMIs.
38. Some of the issues in motor insurance relate to there often being two insurers involved, one for the 'at fault' driver and one for the 'no fault' party. However, this is not the only source of moral hazard motor insurance problems. The motor insurance PF report explains the theories of harm more precisely, including:

"7.5... (b) Insurers and other claims managers procuring repair, replacement cars and write-offs do not themselves have the necessary incentive to ensure that claimants get the quality of service to which they are entitled, for instance because reputational effects are weak."

39. Two points from this excerpt are worth highlighting. First, an insurer does not have the same trade-off between quality and price as the insured party. Of course, the insurer wants to offer a lower price for insurance to gain market share, and the insured driver wants to pay a low premium. However, when it comes to repairs, the insurer wants to keep costs low (even if that compromises unobserved elements of quality) while the insured driver wants a high quality repair. In general, insured drivers would prefer a slightly higher premium in return for having access to a high quality repair facility. The difference is likely to be far higher in healthcare.
40. Second, note the CC's recognition that the reputation of providers of car repairs might play a crucial role in helping consumers who cannot easily judge quality. It is the weakness of reputational effects for repair shops that causes the adverse effect on competition in motor insurance. This weakness may be the result of infrequent use of repair shops by individuals and lack of brand development. This contrasts with healthcare in which HCA appears to have a justified reputation for quality which should help address the insurance bias found by the CC in the case of private motor insurance.

²¹ To avoid confusion, I use PMIs refer to medical insurers and I do not abbreviate motor insurers.

²² Motor insurers often use claims management companies (CMCs) as the point of contact for claimants. The read-across requires the substitutions of 'healthcare' for 'car repairs' and 'patients' for 'cars'.

41. Returning to private healthcare, it is surprising that the CC fails to recognise that PMIs may have different incentives to insured patients. There is no appropriate caution when the CC refers to *“patients (and PMIs that represent their policyholders)”*. The CC also seems to question the reputational mechanism by using reserved terminology like *“perceived”* in *“...central London is characterised by [a number of factors including] strong reputation of some private hospitals and PPU’s which are perceived by patients as offering a higher quality of care than private hospitals and PPU’s elsewhere in the UK”* [PF #5.59].
42. In markets where quality is only partially observable, reputation is a well understood mechanism in the economics literature.²³ By developing a brand with a reputation for high quality, every hospital in the HCA network must achieve the same high levels of quality or else it compromises the whole network. This makes it highly expensive to make a mistake and so ensures that investment and quality are at least at the level appropriate to reputation. A bluff is not sustainable. HCA has maintained throughout the inquiry that it has a well-founded reputation for quality (and innovation) and provided evidence of its own high standards and superior patient outcomes. Only the CC can collect equivalent indicators for rival hospitals.²⁴ By collecting comparative data, the CC could have tested the validity of HCA’s reputation for excellence. Meanwhile, on the basis of HCA’s ability to attract international patients, its willingness to publish relevant quality indicators, and the lack of voluntary production of similar evidence by other hospitals, I consider that it is highly likely that HCA’s healthcare is of exceptionally high quality.²⁵
43. The CC did review quality indicators for the Bournemouth /Poole merger, as mentioned above. It also collected quality indicators for private motor insurance, including: a consumer survey of perceptions of quality; evidence from insurers; evidence from repairers (hospitals); specially commissioned audit report on quality (the results of which the CC found decisive). Yet for private healthcare the CC only adopted a very casual and anecdotal approach.²⁶ This is no basis on which to break-up a world class hospital network.
44. Elsewhere in the PDR, the CC is on firmer ground in that it recognises the importance of quality indicators for patients and GPs (who often act as patient advisers). Corrective informational remedies are an important part of the CC’s recommendations. The new indicators will reinforce a positive and credible reputation mechanism, including for smaller hospitals, which will facilitate informed patient choice and the entry or expansion of smaller high quality hospitals.

²³ E.g. Shapiro, ‘Consumer Information, Product Quality, and Seller Reputation’, *The Bell Journal of Economics*, Vol. 13, No. 1 (Spring, 1982), pp. 20-35.

²⁴ Of course, such information on rivals is not publicly available. A high quality hospital network has an incentive to publish credible quality indicators but lower quality rivals, who would look poor in comparison, do not have an incentive to publish.

²⁵ The HCA response to PDR, Annex 2, (#1.31-1.34) includes a number of quotes from third party evidence provided to the CC and which support HCA’s reputation for quality.

²⁶ See HCA’s response to PDR (Section 5 and Annex 2).

45. Before leaving PMIs, there is an important way in which they can exert their bargaining power against HCA while at the same time limiting the quality distortion caused by their own incentive to minimise claims costs. This is to offer alternative ‘limited hospital list’ insurance products. In relation to hospitals located in central London, for example, consumers can be offered the choice between insurance products with and without HCA hospitals. If consumers are found to be willing to pay for quality, then that is the revealed preference of insured patients.
46. The CC discusses the ability of PMIs to offer insurance products that exclude certain hospitals: *“One important form of restrictive network involves exclusion of many central London hospitals (often HCA hospitals) which tend to be more expensive to use. Such policies include AXA PPP’s Pathways product (for corporate customers) and the Aviva ‘Key’ network list. Whilst our review of employee PMI schemes highlighted that policies which enable corporate clients to contain costs, including those referred to above, appear to be growing in attractiveness among corporate customers, many corporates do require policies to allow access to a wide range of London hospitals.”* [PF 6.172 and PF Appendix 2 for more detail]. Thus, the PMIs can and do sell low cost insurance products that exclude HCA hospitals.²⁷
47. This is very important for understanding bargaining power between PMIs and HCA. Consumers have an explicit price-quality choice to make and they can choose according to their own valuation. The fact that some customers prefer the higher priced higher quality product to the low cost alternative is exactly what should be expected in a well-functioning market. The CC offers no explanation as to why free choice by consumers should be interpreted otherwise. It is not for a PMI (or regulator) to substitute its own preferences with regard to this choice. Inasmuch as a consumer wants a Mercedes, it is not for others to say no because a Ford would be of adequate quality. Yet this is what the CC is proposes when it says that *“patients’ needs would be adequately met”* following its proposed divestitures.
48. Finally, the combination of better quality indicators (following the CC’s informational remedies) and PMIs’ restricted networks will further reduce distortion of the price-quality trade-off between PMIs and insured patients at the same time as further raising PMI bargaining power. Better information on quality will encourage a more informed choice by consumers between unlimited policies and products which offer lower prices for a restricted list of hospitals.

²⁷ It seems that some PMIs have encountered some problems in setting up corporate pathways products, but these seem short-lived. Paragraph 135 of Appendix 6.11 of the PFs suggests AXA PPP has developed a model that is gaining success nationally, but that (unsurprisingly) London corporates want to pay for high quality. Bupa seems to have made a significant mistake in being unwilling to share information with hospital groups and this apparently undermined the bidding process it was trying to conduct (Paragraph 140, Appendix 6.11 of the PFs). On the other hand, “An internal document reviewing the outcome of the tender exercise noted that PruHealth’s view was that it had been very successful in securing ‘excellent pricing submissions from the main five hospital groups’.” (Paragraph 147, Appendix 6.11 of the PFs) Aviva seems to have had problems with its existing contract, but this would presumably be regularly (annually?) renegotiated, so I presume it is no longer a concern. Overall, it is unconvincing that PMIs cannot, and do not, use different products to strengthen their bargaining power.

D. Evidence on barriers to entry and remedies designed to address them

49. The CC's findings on barriers to entry can be summarised as follows (emphasis added):
- a) *"We provisionally concluded that **in combination economies of scale and high capital costs in a static market** constituted the greatest barrier to entry."* PF 6.79
 - b) *"We found that **finding a site and obtaining planning permission** for a new general hospital, certainly in central London but also in some other parts of the UK, could raise the costs and the risks of entry or expansion, thus giving incumbent hospitals a cost advantage and, therefore, constituting a barrier to entry."* PF 6.81
 - c) *"We found that the need to **persuade consultants to commit** to a new hospital, often much before it became operational, constituted a barrier to entry."* PF 6.83
 - d) *"We did not find that PMI recognition, in itself, was in general a barrier to entry. However, we have found that **some large hospital groups may have the ability to induce a PMI to refuse recognition of a new entrant locally**, even one offering lower prices or higher quality services."* PF 6.84
50. The main evidence on barriers to entry was collected through three case studies. *"These case studies were chosen to highlight the factors that could impede or facilitate entry and to allow us to assess their relative importance."* PF 6.15. Further evidence was submitted in the form of examples of dealings with planning authorities, opinions on availability of sites and experience with consultants. Much of the further evidence seems to have come from rival hospital groups.
51. Before turning to the evidence, note that great caution is required when interpreting the evidence and opinions offered by horizontal rivals, in my opinion even more so than for PMIs. In the context of a merger, for example, rivals who are likely to benefit through a price rise have an incentive to support the merger. Those who fear the creation of a more efficient rival will object. Such is the theoretical and intuitive strength of this argument, that it has been developed to appraise merger regulation decisions by examining the announcement effects of a merger on rival stock prices.²⁸ The complement of this argument in relation to a market investigation is that rivals who are likely to benefit from the break-up by weakening an efficient competitor have an incentive to lobby a regulator to impose divestitures. Others not already in the market have a further incentive to lobby for a break-up because they can expect to benefit from being able to purchase premium assets in a fire sale, as well as expecting to operate in a less competitive market than were the most efficient incumbent to

²⁸ Eckbo (1983) and Stillman (1983) first proposed the idea that the change in stock market value of rival firms at the time of a horizontal merger announcement can be used to identify expected competitive effects. If rival stock prices rise, this suggests the merger will be anti-competitive, and if rival valuations fall it is consistent with an efficient merger enhancing competition. See also Duso et al (2007) and Aktas et al (2007) for recent European applications. These studies can be criticised for various statistical reasons (e.g. the merger may affect only a small part of the parent company's business or announcements may be leaked, so the consequences can be hard to identify) but the underlying idea is widely accepted.

remain intact.²⁹ Thus, the CC must be particularly cautious in interpreting any apparently ‘helpful’ evidence from rivals and potential rivals.³⁰

52. Returning to the CC’s barriers to entry and expansion case studies, they suggest a pervasive and important role of PMI recognition. In two of the three studies, PMI refusal to recognise a new hospital created major problems for new entrants (AXA PPP and Aviva for Circle’s new hospital in Bath; AXA PPP for The Edinburgh Clinic). In the third, TLC secured AXA PPP recognition for its major expansion in London and TLC is now part of its low cost Corporate Pathways product which excludes HCA. The CC notes more broadly that PMIs use the volume provided by corporate clients, selective recognition of hospital facilities, and ‘tendering for recognition’ as bargaining chips with hospital groups [PF 6.67-72].
53. Because AXA PPP seems to have used non-recognition of Circle in Bath to negotiate better terms with BMI across the country, the CC did not interpret PMI recognition as a barrier to entry in Bath. However, it is then completely unbalanced to proceed to ‘blame’ the hospital groups for going along with this (as it does in the fourth barrier d) above, quoted from PF 6.84). The nature of bilateral negotiations is that both parties must gain something or there would be no agreement. Unless one side can be shown to be completely without bargaining power (e.g. unable to reject unreasonable offers without substantially compromising their business), it is not balanced to exonerate one side and blame the other for reaching a deal.³¹ In fact, HCA appears to have more to lose from failing to reach agreement with Bupa (or AXA PPP) than vice versa. The evidence on limited list products and de-listing tactics by PMIs suggests that PMIs have substantial bargaining power. The CC’s fourth barrier d) does not stand up to economic scrutiny
54. What about barrier b)? Finding a site and obtaining planning consent was not a problem for Circle in Bath. Circle also found a site and obtained planning permission for a new hospital next to the Edinburgh Royal Infirmary, and on a smaller scale The Edinburgh Clinic was able to acquire and convert an existing building. In London, TLC took some time to acquire a site adjacent to its existing buildings in Harley Street for its new Cancer Centre – it is possibly not surprising that it took a while given such a specific locational requirement. The same can be said of HCA in its ambitions for a site adjacent to LB. The CC also refers to submissions by other rival hospital groups saying they have experienced difficulties in finding an appropriate location. However, there is no evidence that site availability is a substantial barrier to entry except possibly in the very narrow sense of finding an adjacent site to an existing hospital.
55. Planning permission depends on the attitude of the local planning authority. The CC refers to evidence from Circle which had experience in Southampton and elsewhere,

²⁹ The argument would need refining if the incumbent was engaging in exclusionary behaviour (e.g. some types of exclusive agreements), but if that is the case it is appropriate to prohibit that behaviour and, if due to a dominant position, to fine the firm under Article 102 TFEU or Ch.2CA98.

³⁰ This is the context in which the opinions of rivals in PDR #2.15-2.38 should be viewed.

³¹ Deals will be rejected by a PMI if they are not in their own best interests. For example, the CC says HCA *unsuccessfully* attempted to persuade AXA PPP “not to include additional radiotherapy facilities in its network in London”. See PF 6.27.

that *“in the absence of government guidance to local authorities it had been necessary to persuade both officers and planning committee members that many of the views of local hospital trusts (and incumbent private hospital providers) should be seen as partial. It said that such objections should be regarded in the same way that one would view an objection by one supermarket operator that there was no need for a rival to establish itself in the area.”* PF 6.55. The attitude of the local NHS hospitals appears to be influential. The remedy for this is obvious – the CC should recommend that the government develops appropriate planning guidance. This would tackle the problem at source, yet it does not appear to have been considered in the PDR.

56. On barrier c), TLC said it had difficulty retaining key oncologists when a cooperation agreement with the London Oncology Clinic expired and the latter was acquired by HCA. Nevertheless, it offered *“some consultants large financial incentives to retain their practice at the London Clinic.”* PF 6.26. Circle found that its partner/consultant business model provided an effective way to secure the support of consultants as well as for winning financial backing. [PF 6.19]
57. Finance is not identified by the CC as a separate barrier, but I note that TLC was able to fund a £90m investment in its new Cancer Centre. Circle’s entry into Edinburgh fell foul of the financial crisis in 2009 when it could not get funding. This was in the middle of a credit crunch of historical proportions. There are now signs of the economy beginning to return to economic and financial health. It must be expected that funding for profitable projects will be available from the near future.
58. Overall, the CC highlights the issues that are important for successful entry, including finance, site identification, planning permission, consultant contracts and PMI recognition. The evidence also highlights how they can be overcome and points to what specific measures may be helpful to ease future entry. The CC could also have been more creative in considering a greater range of remedies relating to planning permission, finding suitable sites and facilitating pre-entry agreements with consultants.³²
59. The CC emphasises that were entry to be unsuccessful, many of the costs would be sunk and so not recoverable. In itself, this is not a barrier to entry. It is only important in a small market (relative to the efficient scale of a new hospital or one which is stagnant or declining and where the entrant cannot secure demand by contracting with a PMI before entry. With private hospitals, the existence of concentrated and powerful PMI buyers means that it is open to a credible entrant to secure demand before entry. Even if this was not possible, sunk costs are much less relevant in a large or growing market. The larger the market, the smaller the proportion of that market is needed to achieve economies of scale. In a growing market, demand can be found more easily. Thus, market growth limits any barrier due to economies of scale.
60. The CC concludes: *“We found that there were significant capital costs of building and equipping a full service hospital, and that there were large economies of scale relative*

³² HCA has provided the CC with a list of numerous potential hospitals sites in central London, including old NHS hospitals that are highly suitable for development. See footnote 68 of Annex 2 of its response on the CC’s Provisional Decision on Remedies.

to the size of local markets. We also found that demand for private health services had been fairly static over the last five years and that no significant growth was expected for the foreseeable future. We provisionally concluded that in combination economies of scale and high capital costs in a static market constituted the greatest barrier to entry.” PF 6.79. The CC seems to have made no attempt to distinguish growth in London from elsewhere, despite identifying different demand characteristics for London. The same homogeneous statement of ‘demand stagnation’ is made by the Chairman in his press release of 16th January 2014 announcing the proposed break-up of HCA. It seems to me that this judgement was firmly in the mind of the CC group when reaching its provisional decisions.

61. However, elsewhere in the CC’s PDR it acknowledges, quite to the contrary, that London is likely to grow. For example, the CC says in relation to the loss of scale in HCA following a break-up: *“we thought that the growth in the size of the London market would support the provision of specialist services even within an HCA group that held a smaller share of the market”* [PDR 2.119]. Based on the evidence I have seen, I believe this is nearer to the truth than the London stagnation story. Given London’s population growth, ageing demographic, higher PMI penetration rates and economic recovery, it seems highly likely that demand for private healthcare will grow significantly over the coming years.³³ The CC cannot justify conflicting views that there is stagnation when deciding there are entry barriers, but growth when deciding there are no consequences of loss of scale following a break-up.

E. Evidence on prices

62. Price is the core focus of the CC in its finding of an AEC in central London, as it is in supporting its case to break-up HCA. It is therefore deeply worrying that the supposed evidence is so flawed as to be unfit for purpose. This may not be immediately obvious because the *“price”* comparisons the CC uses are unnecessarily convoluted, so I illustrate some of the issues by simple analogy.
63. Suppose the CC was interested in comparing prices across supermarkets. It might start by collecting a representative sample of well-defined items (e.g. 500g Tilda basmati rice) across supermarkets in the same market. These prices could be compared for individual products or they might be aggregated into a standard basket to find an overall price difference. Standard statistical tests could then be applied to confirm that any differences are not due to random chance.³⁴ This would be a standard price comparison methodology.
64. Next consider an alternative method for supermarket price comparisons. Start by collecting the till receipts of customers who had gone to Waitrose to buy the

³³ More detailed evidence on growth can be found in HCA’s response to PF (11th November 2013) section 4. The recent and planned growth of PPU’s also supports the expectation of demand growth by those closest to the market.

³⁴ Of course, this comparison would not tell the whole story – although Waitrose may have higher prices than other supermarkets for the same standard basket, the overall quality of the shopping experience may be different and some customers are willing to pay for this.

ingredients for a chicken curry. Next, do the same for Tesco customers who shopped for a chicken curry and then compare the 'price' of buying chicken curry ingredients to ascertain if Waitrose prices are excessively high. Do the same for other recipes or tasks (e.g. clothes washing) so that [X] of Waitrose's revenue is covered. Divide the till receipts of Waitrose customers for chicken curry ingredients by the till receipts for Tesco customers buying chicken curry ingredients and use the resulting number to determine the excessive price of Waitrose. You may think this is a rather odd and inaccurate method for comparing prices:

- The number of ingredients is likely to differ because different people have different recipes
 - The quality of individual ingredients may differ
 - The selection of products covers a tiny proportion of Waitrose's overall product range
 - The comparison is with only one other supermarket
 - No statistical tests are conducted to take account of the variation in the till receipt data.
65. Yet this is exactly what the CC does in its London 'insured price analysis' in private healthcare! In its comparison of episode charges, patients with different individual complexities of treatment are being compared. Patient outcomes are ignored. The treatments are not representative of HCA's activities and covered [X] of HCA's total insured revenues for Bupa and AXA PPP³⁵ and far less for most other insurers. HCA is compared with only one other hospital, the tax advantaged TLC. No statistical tests have been conducted. This approach is not only wildly and unnecessarily inaccurate, but is likely to be fundamentally biased against HCA because its reputation for quality and the treatment of high acuity and complex cases is particularly likely to be attractive for patients needing more intricate treatment. More technical detail of the precise problems with the CC's insured price analysis can be found elsewhere in HCA's submission.³⁶
66. What are the findings from this analysis of episode charges ('insured price analysis')? I have not been given access to the data room results, but it appears from the non-confidential version of the report written by HCA's advisers that there is enormous variability in the data and there are few statistically significant 'price' differences when comparing HCA and TLC. Moreover, when comparing HCA and King Edward VII, even the direction of 'price' differences disappears. There are no controls for quality, case complexity or health outcomes.
67. I am puzzled as to why the CC has pursued this very indirect and inaccurate method of collecting episode charges. In particular, it must have access, or have been able to obtain access, to all PMI price schedules negotiated with all the hospitals they use (i.e. equivalent to shelf prices in supermarkets). Why is there no analysis of these prices

³⁵ This is the correct proportion for 2011, the year covered by the CC's analysis.

³⁶ See HCA's response to PFs, Appendix 4.

reported? There would still be issues in making these schedules properly comparable (including rebates), but this is exactly the sort of careful evidence collection that the timescale of a market investigation permits.

68. In order to estimate the impact of break-up divestitures on prices the CC used two approaches. The first was to assume episode charges at divested hospitals would fall to TLC's level. For the reasons just given, no credibility can be attached to this method.
69. This means the CC must rely on its second method which is based on quite different evidence. It applies its price-concentration analysis (PCA) which relates self-pay prices to LOCI (i.e. weighted average market share). It then uses the estimated coefficient on weighted average market share to estimate the effect of possible divestitures on prices. A reduction of market share of 20% is estimated by the CC to reduce self-pay prices by 3% using its preferred model specification.³⁷
70. How relevant is this to appraising the effect of breaking up HCA? As already discussed, the CC has rejected LOCI as irrelevant to central London. In the absence of any other evidence, however, the CC relies on its PCA estimated on markets across the rest of the UK.
71. I am aware that this may be a bit technical and confusing, so it is worth summarising the alternative shares of supply that can be attributed to HCA pre-divestiture.³⁸
- If we define the geographic market by the location of 80% of its patients, as the CC does in almost every other case of local markets including all private hospitals located outside central London, HCA's share of capacity is [X]³⁹
 - If we use the network LOCI measure (calculated on patient volumes), HCA's weighted average market share based on London Bridge is [X]⁴⁰
 - If we consider the crude share of capacity (private beds) located in central London (which is relevant for the ability of PMIs to switch between hospitals), HCA estimates that its share of capacity including PPUs is [X]
 - If we consider the crude share of revenues of hospitals located in central London (which attributes higher market share to hospitals that are more successful at utilising their available bed capacity), the CC calculates HCA's share of revenue is [X].
72. To say the least, it is then boldly inconsistent for the CC to say that:
- LOCI is inappropriate when defining a market, so HCA is presented as having a share of revenue of [X] in central London, but

³⁷ In order to provide some context for the size of effect, the hypothetical monopolist test often used to define a relevant economic market would typically assume that such a price effect is not significant.

³⁸ Shares are taken from HCA's submission in response to PDR. These include PPUs.

³⁹ HCA has estimated this figure based on hospitals and PPUs within the catchment areas for all its hospitals (excluding HCA's NHS Venture Christie Clinic).

⁴⁰ Network LOCI is sensitive to the hospital base. Based on PG, HCA's weighted market share is [X].

- LOCI is appropriate when deciding the effects of an HCA break-up on prices in central London to show that divestiture might have customer benefits, and then again
 - LOCI is inappropriate when determining the scale of HCA break-up leading to the sale of two hospitals being necessary to take HCA below the assumed threshold of a 40% revenue share of supply.
73. I will not repeat all the arguments about the weaknesses of the PCA itself (e.g. the treatments considered only cover [redacted] of HCA self-pay inpatient revenues; the analysis excludes HCA competitors including TLC and Bupa Cromwell; according to HCA's advisers the results appear to depend entirely on the inclusion of Nuffield hospitals; and the estimates do not appear statistically robust).⁴¹ Nor will I labour the obvious point that the estimates could only apply, at most, to the [redacted] proportion of revenues [redacted] that are generated by HCA's UK self-pay in-patients (i.e. excluding overseas patients, day-case patients, out-patients and insured patients). However, it is important to emphasise that negotiations with PMIs over price schedules have an entirely different dynamic to the prices private hospitals independently choose to offer self-pay patients without bargaining power.
74. As this market investigation approaches its final decision, it is left with no plausible evidence on prices or the price effects of proposed break-up divestitures for HCA.

F. Chilling of competition with break-up divestitures

75. In the introduction to my edited book on 'Cases in European Competition Policy: the Economic Analysis'⁴², I try to set out the economic context of remedies in competition law: *"While it is crucial that a remedy should be effective in eliminating the competitive harm, success should not be penalised and wise policy follows a principle of minimum necessary intervention. It is the essence of competition that firms should seek to produce more efficiently, to entice customers to buy from them and to experiment with novel strategies. An important way in which the law brings some balance between the general incentive to compete and the specific strategy under scrutiny is to take account of how the market power has been achieved."*
76. This economic understanding of the range of competition law can be illustrated by thinking about how the different elements of legislation address the issue of high prices associated with high market shares. A classic cartel covering 50% of the market can have no redeeming features (e.g. efficiencies) and is in place only to make life easy for firms and to exploit consumers. The relevant competition law (Article 101 TFEU and Ch.1 CA98) therefore prohibits such behaviour and even makes it a criminal offence. A merger that creates a 50% market share must come under routine scrutiny because it is not the result of customer choice. Nevertheless, mergers may provide a quick way to achieve synergies which ultimately do benefit customers, so there is no prohibition based on market share.⁴³

⁴¹ See HCA's response to PFs, Appendix 2.

⁴² Published 2009 by Cambridge University Press; pp13-14.

⁴³ The relevant legislation which sets out this position is the ECMR and EA02.

77. Alternatively, a 50% market share might be achieved over time by providing a product consumers want, controlling costs and being an effective competitor. Such success is to be applauded unless it is achieved unfairly. In particular, we must be alert to exclusionary practices (e.g. some types of exclusive contracting or predatory targeted discounts) and this is the role of Article 102 TFEU or ch.2 CA98. We still need to be alert to potential abuses of this market position, but investigation can await a serious complaint about specific behaviour. The application of Article 102 TFEU or its UK equivalent CA98 ch.2 has been almost exclusively applied to identifiable business practices that exclude efficient competitors. This is due to the strength of the argument that firms which have achieved market power by virtue of serving consumers well should be allowed to reap the benefits of their enterprise. There do remain a small number of such cases and a minority of competition economists (including myself) do not rule out the application of competition law to tackle high prices (known as ‘exploitative abuse’).⁴⁴
78. UK competition legislation has an unusual but useful additional element to address markets that do not seem to be working despite the above standard elements of the law. It sits closest to the abuse of dominance because the market has evolved over time in response to consumer choice, but a market inquiry does not require an individual firm to be dominant or to be engaging in anticompetitive behaviour. This is particularly helpful when there is either a behavioural reason for a market not to be working as well as it could (e.g. consumers lacking information at the time of decision making), or because there is a small number of oligopolists who do not seem to be competing against each other. In a very limited number of cases, a market inquiry may also be helpful when there has been an error in a privatisation strategy so that a position of market power protected by absolute entry barriers has been achieved by government decree, and not by consumer choice.
79. In order to focus on the economic arguments, I suppose for the remainder of this section that the CC is right that HCA charges high prices. To be clear, I believe this to be entirely unproven for the reasons given in the previous section.
80. Actions taken by a competition authority against firms to remedy high prices can have serious side effects if they are seen to penalise success. First, they undermine the investment incentives for firms with high market shares. Second, they undermine the investment incentives for new entrants. Third, they create legal uncertainty over what is and is not a permissible unilateral pricing policy; which may result in, for example, inflexible pricing. Importantly, actions taken in one market will have consequences that chill competition in all markets in which another successful firm achieves a large market share – not just in the market under consideration.
81. The chilling effect might apply to a range of remedies that do not directly address the removal of entry barriers, but breaking up a firm *“is a rare and dramatic remedy, and enormous caution is necessary because the efficiency consequences are so hard to predict. Quite generally, it would be far better to facilitate expansion by a small rival or entry by a new firm, preferably one with a track record in a neighbouring market so*

⁴⁴ See Lyons ‘The paradox of the exclusion of exploitative abuse’ in ‘The Pros and Cons of High Prices’ (2007) published by the Swedish Competition Authority.

it has the appropriate experience, financial resources and skills to succeed. This requires a deep analysis of the source of current entry barriers.”⁴⁵

82. As discussed in a previous section, the CC has done much but could have done more to develop remedies suitable for each entry barrier. Instead, it has provisionally decided to break up HCA. Divestiture as a remedy in a merger is so different to divestment as a remedy in a market inquiry that it justifies the distinctively separate terminology. First consider divestiture in a merger case. A market that has developed pre-merger mostly reflects corporate success (or failure) in serving customers. A merger in such a context is a distinct step that may anticipate further benefits to customers but may be a step towards monopolisation. This is why mergers are rightly and tightly regulated. A merger may be blocked, thus returning to the previous market-determined structure, or it may be allowed partially. Divestiture in the context of merger regulation still allows a part of the merger to go ahead. When we refer to divestiture in the context of a merger, the regulator is deliberately allowing a partial merger/concentration. In a partial merger divestiture, the regulator is not breaking up a firm that has operated successfully in the market. Even a full prohibition is neutral with respect to the market’s determined structure.
83. Divestiture in the context of a market inquiry is qualitatively different. A break-up divestiture is the untested structural design of a market by the regulator.⁴⁶ It is a conscious industrial policy to impose a new market structure. It is not full central planning because firms remain free to set prices. However, it does very substantially override a core element of what makes markets work well for consumers, which is consumer choice. The history of such interventions is not promising.⁴⁷
84. There is one significant success story of a divestiture remedy arising from a ‘market investigation’ – BAA. The inverted commas are because that this was a highly unusual case in being an investigation of a single firm, not a market. There was a

⁴⁵ Lyons op cit, p.78. Eminent competition economist Massimo Motta, currently Chief Competition Economist at the European Commission and one of the world’s leading experts on dominant firms, also advocates a (tightly limited) role for tackling high prices set by a dominant firm. His central remedy is a close examination of the sources of entry barriers and addressing the problem at source. His analysis, co-authored with de Streeck in ‘Excessive pricing in competition law: never say never’ in the same ‘Pros and Cons’ volume, considers appropriate remedies in detail. As a last resort, they are willing to concede price regulation. Break-up is not even discussed as a remedy in their paper. Furthermore, they write: “A dominant firm which has, say, 50-60% of the market is a firm which does have competitors and therefore operates in a market where entry is possible (since it has occurred). In our view, [possible guidelines for exploitative abuse] should explicitly exclude the use of Article [102] EC to firms which have, say, less than 80% of the market.” [p.42]

⁴⁶ Untested in the sense that the CC can see the performance of a partial merger divestiture because it is typically a reversion to the current market structure for a part of the merger; but for a break-up divestiture the CC is speculating on how the market will perform in a new structure. Put another way, the risky decision is ‘no divestment’ in a merger but all the risk is on divestiture in a break-up decision.

⁴⁷ Break-up divestiture is closer to industrial policy than to competition policy and such planning has a long history of failure. It did not save the British motor industry but heralded many years of decline before the industry’s current resurgence through entry under foreign ownership. The fact that the industry planning was for consolidation at the time does not make break-up any less industry planning. In both cases, politicians or regulators appear to be listening to siren voices of rivals complaining of a hard time in the face of high quality foreign competition or a successful market leader. Successful competition policy must be based on more reliable economic evidence.

fundamentally a monopoly of airports in London and barriers to entry were uniquely prohibitive. BAA was the result of a botched privatisation. BAA's airports were not coordinated to benefit consumers. Quality and the consumer experience were demonstrably poor. Many prices were regulated. In every respect, this set of features is completely different to HCA and private healthcare.

85. Note also that divestitures can be problematic even for mergers. Research on merger remedies provides insight into some of the risks.⁴⁸ The pitfalls are not just transitional problems that can be addressed by requiring a monitoring trustee and identifying potential purchasers. Failed merger remedies in the past have been due to problems of carve-out and scope. The European merger regulation does not allow mergers to be completed until after being cleared so these problems can be minimised in a partial merger context. In the UK, interim undertakings are routinely agreed for recently completed mergers to prevent integration. However, a break-up divestiture is necessarily a carve-out from a long-integrated business. This will inevitably be problematic for the reasons provided by HCA in its submissions.

G. Scale and selection of break-up divestitures

86. Finally, I consider the CC's determination of the scale of divestiture. The CC uses a 40% market share of supply in central London as the foundational justification of the scale of its proposed break-up of HCA. This is a share that may appear to have a casual resonance in the implementation of competition law but it is a fundamental misunderstanding to think that it can ever be used for this purpose. Where does the 40% come from?
87. The joint OFT/CC merger Guidelines state: *"In relation to market shares, previous OFT decisions in mergers in markets where products are undifferentiated suggest that combined market shares of less than 40 per cent will not often give the OFT cause for concern over unilateral effects."* [#5.3.5] Note two things. First, this is identifying a quasi-safe haven market share – it does not create an automatic expectation of harm. Second, this relates the very low standard of proof, which is that there should be a 'realistic prospect' that the merger may be harmful. It is a far lower standard of proof than for the CC, so the 40% is intended to be conservative – a 40% market share is enough to warrant closer investigation. The European Commission, supported by the Court, starts with 50% as a threshold for presumed dominance in a merger. My own econometric research with Luke Garrod on EC mergers shows that there is a less than 50% chance of either a reference to Phase II or remedies in Phase I if market share is less than 45%. Even acknowledging reservations about dominance in market niches⁴⁹, 40% is much closer to a Phase I merger clearance threshold than it is for use as a break-up divestiture requirement. Article 102 TFEU refers only to market share

⁴⁸ The two classic studies have been on the USA by the FTC (1999) and on the EU by DG Comp (2005). Since 2007, the CC has also conducted its own research programme on merger remedies. For an academic study of merger remedies in Europe, see the book by S Davies and B Lyons (2007) 'Mergers and merger remedies in the EU: assessing the consequences for competition'.

⁴⁹ The CC mentions that product differentiation could justify an even lower market share (PDR, Appendix 2.1, #89-90. However, this idea is not developed.

relevant to exclusionary abuse. Once again, dominance is presumed unlikely if the firm has less than 40% of the relevant market. The consideration of high prices is too rare to be able to provide any guidance, but the threshold would surely be very much higher. Even in the current market investigation of private hospitals, in all geographic areas except central London, 40% is used only as a first filter to identify hospitals for closer scrutiny.⁵⁰

88. Nevertheless, this is the criterion used by the CC to determine the scale of the break-up. In PDR #90, the CC makes two additional points. First, *“we have taken account of the significant extent of differentiation in the central London market”*. This is not explained. In the context of PDR #89, this may refer to the range of specialities at each hospital, but the CC has conducted no analysis at this product level. For example, there is no evidence on any barriers to developing new specialities. The CC has simply called on ‘product differentiation’ to claim that 40% is somehow a modest target for divestiture. This has no basis in the absence of a coherent model of competition, which the CC does not provide.
89. Second, the CC says: *“We have also taken account of the views of major PMIs that divestitures that would achieve this market share reduction would effectively be the minimum necessary to provide appropriate rivals to compete with the retained portfolio of HCA hospitals.”* I have already highlighted the dangers of unquestioning acceptance of the opinions of Bupa and AXA PPP (and indeed any other interested party).
90. Returning to the CC’s logic in selecting divestitures, [REDACTED]⁵¹ More importantly, if the CC was consistent in its determination of market definition, [REDACTED]⁵³ This approach to remedies is entirely without economic foundation. It ignores the facts that:
- The CC’s estimate of HCA’s market share is based on a market definition that has no grounding in competition economics
 - 40% is more often used as a clearance threshold in mergers
 - Partial merger divestitures are very different to break-up divestitures
 - Professor Motta suggests 80% as a suitable market share threshold for even non-divestiture intervention in markets where high prices are found to exist⁵⁴

⁵⁰ See PF Appendix 6.5 Table 7.

⁵¹ [REDACTED]

⁵³ HCA, its advisers and I do not have access to the CC’s data in order to estimate its share of supply based on the catchment areas the CC defined. However, I note that in the CC’s working paper on Private healthcare in central London: horizontal competitive constraints, in Table 6 the CC sets out that HCA’s share of total admissions in Greater London is 30-40%. [REDACTED] The CC has redacted the revenue shares and I understand that these have not been provided to HCA.

⁵⁴ See earlier footnote.

- There is a serious danger of chilling competition if a 40% market share for successful firms were to enter business minds, even as a seed of doubt – firms will have an incentive to milk their market position by raising prices and reducing investment as soon as they get near the 40% threshold. It is also a perfect coordination device for tacit or explicit collusion because it undermines the incentive to compete for market share.
91. The 40% rule for divestiture is a very dangerous rule of thumb even when used in relation to a sound market definition. Applied to crude shares of supply and given the paucity of evidence of high prices in the first place, **it risks fundamentally undermining confidence in the implementation of UK competition policy.**