

Response to the Competition  
Commission's Profitability  
Analysis Working Paper

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*This report contains 34 pages*

*Appendices contain 48 pages*



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## 1 Introduction

- 1.1.1 The Competition Commission (CC) notes in its Draft Guidelines<sup>1</sup> that, *“profitability can be a useful indicator of the competitive conditions in a market. An efficient firm in a competitive market would generally be able to earn no more than a ‘normal’ rate of profit—the minimum level of profits required to keep the factors of production in their current use in the long run, i.e. its rate of return on invested capital for a particular business activity would be equal to its cost of capital for that activity.”*
- 1.1.2 The CC published its profitability working paper on 1 March 2013, setting out its approach to, and the results of, the analysis of the profitability of the provision of private healthcare services by the seven largest private hospital operators in the UK. As one of those providers, HCA has reviewed the CC’s methodology, analysis and results and sets out its response in this paper. In addition to providing its comments on, and adjustments to, the CC’s analysis, HCA presents its own profitability analysis, covering both the Return on Capital Employed (ROCE) and Weighted Average Cost of Capital (WACC). HCA sets out its results and conclusions in this response.
- 1.1.3 This paper is structured as follows:
- Review of the CC’s analysis of HCA’s profitability
  - HCA’s analysis of its profitability
  - Adjustments made to the CC’s analysis of HCA’s profitability
  - Review of the CC’s approach to calculating the WACC and HCA’s own analysis

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<sup>1</sup> [http://www.competition-commission.org.uk/assets/competitioncommission/docs/2012/consultations/market\\_guidelines\\_main\\_text.pdf](http://www.competition-commission.org.uk/assets/competitioncommission/docs/2012/consultations/market_guidelines_main_text.pdf)

- Conclusions and interpretation, including other considerations to be taken into account in the context of economic profitability

## 2 Executive summary

2.1.1 The HCA Group is one of the largest private healthcare providers worldwide, serving 14 million patients a year across the US and UK. Its investment in the UK dates back to the 1990s. HCA<sup>2</sup> operates a successful and innovative business focusing on high acuity, tertiary care. It has invested heavily to develop the clinical teams and infrastructure required to support these services and has a strategy of continuous investment and innovation to provide patients with the highest quality of care. HCA strongly contends that it earns no more than a normal rate of profit. The analysis set out in this paper supports this view.

2.1.2 In reaching this conclusion, HCA has:

- Reviewed the CC's analysis of the market's profitability and HCA's profitability;
- Conducted its own modelling of its profitability; and
- Applied adjustments and sensitivities to the CC's model of HCA's profitability to reflect more reasonable assumptions.

2.1.3 HCA's analysis suggests that its profits are in line with the estimated cost of capital for UK healthcare providers. HCA notes that the CC, however, has come to the conclusion that "*the Relevant Firms are, on average, making returns in excess of the cost of capital*"<sup>3</sup>. [X]. HCA firmly disagrees with these conclusions.

2.1.4 HCA has identified fundamental problems with the CC's adopted approach, which in its view means that the CC's analysis cannot be relied upon as a robust or relevant indicator of HCA's profit levels. The most important of these are:

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<sup>2</sup> Throughout this paper, "HCA" refers to the 25 UK medical facilities operating under HCA International limited and the 3 UK medical facilities operating under St. Martins Healthcare

<sup>3</sup> Competition Commission, *Profitability analysis*, March 2012 ("Working Paper"), paragraph 4

- HCA disagrees with the valuations of HCA's property portfolio that the CC has used in its modelling. HCA has already set out its concerns to the CC, which it appears the CC has not taken into account. The value of HCA's properties in alternative use (residential use in the case of London) should be reflected in the valuations. Redevelopment to residential use is the most likely alternative use for HCA's properties, but this is only partially reflected in the CC's valuation approach. HCA therefore considers that the CC is using a significantly understated value for HCA's capital employed. HCA has commissioned its own independent valuation exercise to estimate the current market value of HCA properties. HCA's property portfolio is valued at [X], compared to the CC's significant underestimate of [X];
- The CC's analysis of HCA's profitability includes the returns from HCA's overseas patients. [X] and the CC's analysis of profitability should reflect this; and
- The CC's benchmark WACC calculation is based on a number of flawed assumptions and choice of comparator providers used to derive its estimates. As a result, the CC's WACC estimate considerably underestimates the cost of capital of a UK healthcare provider.

2.1.5 HCA has constructed a model for its ROCE which takes into account the new valuations HCA has commissioned for its property portfolio and segmentation for UK and overseas patients.

2.1.6 HCA estimates its ROCE for the five year period of 2007 to 2011 to be [X] for the overall UK operations (i.e. before applying segmentation). HCA also conducted analysis to estimate the relative profitability of UK and overseas customer groups. On this basis, HCA estimates its five year ROCE for UK patients to be [X] and for overseas patients to be [X].

2.1.7 However, due to inherent measurement difficulties, HCA has not included in its own ROCE estimates the value of its intangible assets. The ROCE estimates will

therefore overstate profits and this should be considered when interpreting the results. This same limitation applies to the CC's own estimates, which reflect only a very small proportion of the CC's intangible assets value.

- 2.1.8 HCA has also identified fundamental problems with the CC's WACC analysis and therefore has conducted its own analysis of WACC due to the problems it has found with the CC's analysis. The main difference between HCA's estimate of WACC and the CC's arises from the inevitable and inherent problems of finding suitable comparators for the relevant markets, which undermines any attempt to arrive at a robust point estimate of WACC. However, HCA is also concerned that the CC has made several assumptions and choices in its modelling of WACC for which better options are available.
- 2.1.9 HCA's analysis, adopting more appropriate assumptions for each of the components of the WACC calculations and a more suitable selection of comparator countries from which the estimates are drawn, estimates a base case pre-tax WACC estimate for a generic UK hospital operator of 12.5%. However, for a number of key reasons, HCA considers this to be a conservative estimate and that its true effective cost of capital lies between 12.5% and 15.2%; the range between its conservative base-case and its high-case estimates.
- 2.1.10 In general, HCA notes that there are inherent difficulties in estimating both ROCE and WACC and the estimates calculated are largely dependent on various modelling assumptions made. Whilst HCA has derived its estimates using the approach and assumptions it considers to be most relevant, at an overarching level, it is HCA's view that the combination of all the areas of uncertainty mean that any estimate of its profitability may have a significant margin of error and this should be taken into account when interpreting the results.

### **3 HCA's views on the CC's profitability analysis**

- 3.1.1 The CC has conducted analysis of the profitability of the private healthcare market. In this section of the report, HCA sets out its opinion on the CC's profitability analysis, specifically the approach the CC has taken to calculating a five year ROCE estimate.
- 3.1.2 The CC considers that, "*the Relevant Firms*<sup>4</sup> are, on average, making returns in excess of the cost of capital"<sup>5</sup>. It found the weighted average ROCE of the hospital operators to be 18% for the five year period between January 2007 and June 2012, compared to a WACC of 9%. For HCA specifically, it estimated that the ROCE was on average [3<] over the five year period.
- 3.1.3 HCA has identified a number of different areas in which it strongly contends that the CC's analysis of the ROCE is flawed and therefore the results unreliable. These include the approaches adopted to valuing HCA's property portfolio and working capital..
- 3.1.4 HCA also has concerns about the CC's treatment of fully depreciated assets, in particular refurbishments, valuing intangible assets and the relevant timeframe for the analysis. HCA's views on each of these areas are set out below.

### **3.2 The CC's approach to valuing HCA's properties**

- 3.2.1 The CC has recognised that freehold and long leasehold property should be included in the capital base. It has also recognised that book values for these assets will not represent economic value. It has therefore used estimated values for HCA's properties in its modelling.

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<sup>4</sup> The largest seven private hospital operators in the UK

<sup>5</sup> Working Paper, paragraph 4

- 3.2.2 The CC commissioned DTZ to “*provide desktop opinions of land prices*”<sup>6</sup> on a number of hospital sites throughout the UK. For non-London hospitals, DTZ has estimated the cost of current land occupied and the CC has included the un-depreciated reinstatement cost of the building in its ROCE calculations. Its approach for central London hospitals, however, was to “*estimate the cost of acquiring a replacement building rather than a plot of land, with the price per square foot estimated on the basis of recent transactions, both commercial and residential.*”<sup>7</sup> DTZ estimated the valuations of HCA’s properties<sup>8</sup> using the gross internal area of the properties as given by the Valuation Office Agency in 2010<sup>9</sup>. DTZ’s valuation exercise resulted in a total value of HCA’s property portfolio of [£].
- 3.2.3 The CC also considered valuations carried out by Altus Edwin Hill (“AEH”) for HCA in 2012. These valuations used a depreciated replacement cost (DRC) methodology. The CC used the AEH valuations to calculate an “*un-depreciated replacement cost of the buildings plus the land values.*”<sup>10</sup> The un-depreciated replacement cost as valued by AEH was [£]. In addition to this, AEH valued staff accommodation and office space using an open market approach. These valuations sum to [£].
- 3.2.4 For the purposes of its profitability analysis the CC used the mid-point of AEH un-depreciated replacement costs and DTZ valuations, and added the staff accommodation and office space to this value. The CC said that the difference between these two figures is “*likely to be due to the discrepancies in the plot size*

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<sup>6</sup> Appendix 12 to the Working Paper, *Provision of Land Consultancy Services*, DTZ, January 2013, paragraphs 1.1

<sup>7</sup> Working Paper, paragraph 40

<sup>8</sup> Princess Grace Hospital, Wellington Hospital, Harley Street Clinic, HCA Laboratories, Lister Hospital, London Bridge Hospital and Portland Hospital

<sup>9</sup> Submitted to the CC as part of HCA Response to the CC’s follow-up questions on profitability methodology, December 2012

<sup>10</sup> Working Paper, paragraph 43

*used to estimate the value of one of [redacted]'s buildings". The resulting valuation used by the CC in its analysis of HCA's properties is [redacted].*

- 3.2.5 HCA considers that AEH valuations are fundamentally not suited for these purposes because of the valuation approach adopted and that they therefore should be disregarded. HCA provided the AEH valuations to the CC at their specific request and at the same time provided an explanatory note dated 1 February 2013 explaining why they are inappropriate for the purposes of the CC's profitability analysis. As HCA has previously stated to the CC, the AEH approach was to assume a low-end value of the properties excluding any alternative use. By excluding the potentially higher value for alternative use, particularly residential use, the resultant values significantly underestimate the potential market value and the amount of capital HCA has employed at its sites. HCA does not consider AEH's valuation approach to be appropriate and strongly maintains that the CC should not use them in its profitability analysis.
- 3.2.6 Furthermore, HCA does not consider the DTZ valuations to be appropriate for the profitability analysis. Again, HCA has presented these views to the CC already, in its response to the DTZ valuations dated 8 February 2013, but they have been disregarded in the analysis. HCA strongly disagrees with the assumption that the [redacted] valuation made by DTZ serves as the market value of its properties.
- 3.2.7 HCA recognises that chartered surveyors using similar methodologies may provide estimates of the value of land and buildings that are different. However, the difference in the estimates would be expected to be small. Having commissioned its own new independent valuations of its property portfolio, HCA has found [redacted] between the resultant estimates and those used by the CC. These valuations are included at Appendix 4. HCA has previously expressed concerns to the CC about the DTZ valuations commissioned by the CC, including the basis of the alternative uses considered and due to a lack of transparency over a number of key components of the valuation calculations, including the evidence to support the price per square foot comparators used. Despite the concerns expressed, the

CC has not provided HCA access to DTZ's detailed calculations or list of comparators. The significant discrepancies between the DTZ and KPMG valuations would suggest that DTZ may not have fully or properly considered alternative use comparators. The KPMG valuations included at Appendix 4 fully detail the valuation approach as well as the comparators used.

3.2.8 HCA believes that the value in alternative use is the most appropriate benchmark for valuing HCA's properties for the purposes of profitability analysis. If a hospital operator is unable to make acceptable returns, on capital valued considering alternative use, economic theory would suggest that the optimal course of action would be to close the hospital and sell the site for the highest available price. In London, the property assets in use are scarce, as acknowledged by DTZ in its alternative treatment of central London hospitals. However, it then sought to find a replacement value of HCA's hospitals, rather than a value of alternative use.

3.2.9 Gregory (2001, p6)<sup>11</sup> gives the following example specifically relating to property values:

*"When valuing a company, it is important to realise that there are three values that need to be investigated. ..[the] going concern value should be the present value of the company's future free cash flows... This going concern value can be termed the 'economic value' and in current terminology is often referred to as the 'enterprise value'. This is not necessarily the actual value of the business, as there are two alternative values that arise. First, there is the possibility of breaking up the company in some way rather than have it continue in its present form..... For example, a regional bus company may be able to relocate its head office and garages to the edge of a city leaving the city centre bus depot and head office to be sold off as freehold property. The relevant figure for the purposes of*

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<sup>11</sup> Gregory (2001): *Strategic Valuation of Companies*, Financial Times Management Briefing, 2001 (second edition)

*our valuation is the best of these alternatives, which gives us the maximised net realisable value of the company...*

*...If this net realisable value exceeds the economic value, the best alternative is to break up the company."*

- 3.2.10 The implication for the current case could not be clearer. It is the value of HCA's buildings in their best alternative use that must form the appropriate benchmark value for any profitability test. If HCA cannot make a fair return on this asset value the implication is that the hospitals should simply be closed or relocated and the properties sold off for redevelopment. The results of HCA's own commissioned valuation exercise, involving site inspections of each of the relevant properties, indicates that the alternative use for the sites occupied by HCA is for residential development.
- 3.2.11 As HCA presents below in section 4.2, the KPMG valuation exercise arrived at a total value of freehold and long leasehold HCA's properties of [£]. By adopting a lower, inappropriate valuation in its analysis, the CC has significantly understated the market value of HCA's properties, thereby overstating HCA's estimated ROCE.
- 3.2.12 HCA notes that the choice of the properties included in this revaluation exercise is itself conservative. HCA has adopted the CC's preferred approach of following the existing accounting treatment of the property assets. Those which are capitalised in HCA's own accounting records were included in the revaluation exercise. Those property assets which are not capitalised in HCA's accounting records (and for which the lease payments are treated as rental expense in HCA's P&Ls) were not included. However, many of these leases are in fact relatively long, between 10 and 40 years. Under other accounting standards, these leases might be treated as finance leases, and would therefore be capitalised. The accounting standards which HCA applies – UK GAAP – tend to lead to fewer leases being capitalised than either US GAAP or IFRS standards. If HCA capitalised more of its leases, this would result in a lower ROCE overall.

### 3.3 Critique of other elements of the CC's approach

3.3.1 HCA has considered the CC's approach to other elements of the modelling of the ROCE and has particular comments on the following elements:

- Relevant timeframe for the analysis
- Fully Depreciated Assets
- Working Capital
- Intangible Assets

#### *Relevant Timeframe*

3.3.2 The CC "*recognise[s] that it may be necessary to consider a number of [such] factors, including past innovation, efficiency and the economic cycle, when interpreting the results of our profitability analysis on each of the relevant firms.*"<sup>12</sup> HCA agrees and also recognises the practical difficulties in a comparable market analysis over the period of an investment lifecycle.

3.3.3 However, HCA reiterates that the lifecycle of investment is important. Many of the assets employed in the private healthcare industry have long economic lives, implying a longer investment lifecycle than five years. Approximately [X] of HCA's depreciable asset base has a life longer than five years.<sup>13</sup>

3.3.4 A relevant example of the length of the investment cycle is the case of HCA's purchase of St Martin's Healthcare<sup>14</sup> in 2000. At the time that HCA made this acquisition, there was relatively little investor interest in the London market. However, HCA invested heavily in the businesses, making efficiencies and

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<sup>12</sup> Working Paper, paragraph 25

<sup>13</sup> The [X] was estimated on the basis of gross book value. Land, which has infinite asset life, is excluded from the calculation.

<sup>14</sup> St Martin's Healthcare comprises the London Bridge Hospital, The Lister Hospital and The Devonshire Hospital, which is now an outpatient-only facility.

improvements and introducing cutting-edge technology, which has allowed it to make a reasonable long-term return on its investment.

*Fully Depreciated Assets*

- 3.3.5 The CC included fixtures, fittings and equipment in its analysis at their net book value. It considered approaches to measure these assets by their replacement cost, stating that its approach to using net book value “*seeks to proxy the DRC of these assets using a readily-available value*”<sup>15</sup>. It also considers inaccuracies resulting from this approach such as incorrect patterns in depreciation and a failure to reflect an assets useful economic life.
- 3.3.6 In addition to HCA’s fixtures, fittings and equipment, the CC has also included refurbishments for leasehold buildings in its analysis. HCA agrees that the inclusion of these assets at net book value is a suitable approach, given the availability of data, but considers that freehold refurbishments should also be included. This is because these refurbishments are investments into the running of the hospital, which do not contribute to a market value of HCA’s properties under the DTZ or KPMG valuation methodologies.

*Working Capital*

- 3.3.7 The CC considered the seasonality of working capital by observing monthly changes in working capital over the five year period<sup>16</sup>. It used the average monthly working capital as part of its capital employed calculations. HCA noted in its response to the CC’s follow-up questions on profitability methodology<sup>17</sup> that the difference between employing a year-end working capital value and employing a monthly average is unlikely to be material for HCA. HCA broadly agrees that seasonality is unlikely to have an effect at a group level. HCA therefore broadly accepts the approach the CC has adopted in this respect.

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<sup>15</sup> Working Paper, paragraph 52

<sup>16</sup> Working Paper, paragraphs 54-56

<sup>17</sup> HCA Response to the CC’s follow-up questions on profitability methodology, December 2012

3.3.8 The CC has, however, omitted a working cash balance from its working capital calculation. A working cash balance is necessary for the operations of a business in a labour-intensive industry such as healthcare provision, where monthly salary obligations are a minimum requirement for a business. HCA considers that a cash balance of at least monthly staff costs is necessary for the operation of its hospitals. Indeed, HCA believes that this would be a conservative assumption as there are property costs and interest payments that would also need to be paid from the working cash balance in order to keep the facilities operational.

*Intangible Assets*

3.3.9 The CC indicates that it has considered the merit of recognising valuations of intangible assets in capital employed<sup>18</sup> on the basis of the guidelines which state that “*the CC may consider the inclusion of certain intangible assets where the [following] criteria are met*”<sup>19</sup>. The criteria are:

- It must comprise a cost that has been incurred primarily to obtain earnings in the future;
- This cost must be additional to costs necessarily incurred at the time in running the business; and
- It must be identifiable as creating such an asset separate from any arising from the general running of the business

3.3.10 The CC’s interpretation of these guidelines to a large extent is likely to affect what intangible assets, if any, would qualify for inclusion in the analysis. HCA indicated in its note on intangible assets<sup>20</sup>, submitted to the CC in December 2012, that HCA has significant intangible assets associated with human capital and knowledge; brand, reputation and customer relationships; and IP and software. HCA strongly considers that expenditure on the creation of these assets is an

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<sup>18</sup> Working Paper, paragraphs 59-77

<sup>19</sup> Working Paper, paragraph 59

<sup>20</sup> Annex II to Response to CC additional request of 10 December 2012

investment in the respective areas of the business and is “*separate from any arising from the general running of the business*”<sup>21</sup>. HCA refers the CC to its note on intangibles for HCA’s full rationale and explanation for this.

3.3.11 HCA recognises the inherent difficulties in attempting to value these intangible assets through a cost-based approach. This is due to the difficulty of separately identifying all of the relevant expenditure on intangible assets. Time-based staff costs on undertaking training and engaging in business development, for example, are difficult to identify separately due to lack of recorded information on time spent on different activities.

3.3.12 There is, however, evidence of significant intangible assets that have been separately identified in valuations carried out for the purpose of acquisitions by HCA’s parent company. In October 2011, HCA’s parent company in the U.S. completed the acquisition of the Colorado Health Foundation’s 40% remaining ownership interest in the HCA-HealthONE LLC joint venture for \$1.45 billion. As reported in the HCA Holding Inc. Annual Report in December 2011<sup>22</sup>, a single intangible asset relating to the trade name was identified at a value of \$0.27 billion. The same report also identified goodwill associated with the acquisition of \$2.26 billion, some of which contains unidentifiable assets such as an assembled workforce of health professionals.

3.3.13 HCA notes that there are other valuation methods used to identify the value of intangible assets, such as income-based and market-based approaches. Whilst these are also difficult to carry out, HCA notes that a calculation of profitability without a suitable intangible asset valuation will overstate profits. HCA strongly contends that the CC should take account of this overstatement in its interpretation of its profitability calculations.

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<sup>21</sup> Working Paper, paragraph 76

<sup>22</sup> HCA Holdings Inc, Annual report to security holders(Form 10-K), December 2011, pF-19

## **4 HCA's analysis of its profitability**

### **4.1 HCA's ROCE model**

4.1.1 Given HCA's fundamental concerns with the CC's analysis of ROCE, as described in section 3 above, HCA has conducted its own modelling of its ROCE, using the approach and inputs it considers most appropriate.

4.1.2 HCA has constructed a spreadsheet model using the information and methods described in the paragraphs below to determine a ROCE for the five years of 2007-2011. HCA's analysis of its ROCE is based on its historical accounting records. In particular, HCA has used consolidated profit & loss statements and balance sheets for the individual facilities. These form the basis of the calculation of returns over time.

4.1.3 HCA has made adjustments to both the returns and the capital employed set out in its historical accounting statements. These include revaluation of land and buildings and other specific adjustments described in section 4.4 below. These adjustments have been made following the CC's guidelines, which state that certain adjustments can be made to the accounting ROCE in order to arrive at an "economically meaningful" measure of profitability.

4.1.4 ROCE in each year has been calculated by dividing adjusted net profit by adjusted total capital employed. HCA has conducted the analysis over a five year period.

### **4.2 The value of HCA's properties**

4.2.1 As discussed at section 3.2 above, given HCA's concerns with the available valuations for its property portfolio (namely the AEH and DTZ valuations) it considered that a new revaluation of its properties to current market values must be carried out. Based on KPMG's recent valuations, HCA's properties make up approximately [X] of its overall asset base.

- 4.2.2 HCA commissioned KPMG to carry out market valuations of the properties in February 2013<sup>23</sup>. KPMG's qualified chartered surveyor undertaking the valuations conducted site inspections at each of HCA's hospital sites, covering all of the freehold and long leasehold properties that are treated as assets in HCA's accounting records. The valuations were performed using market comparators (recent transactions for properties similar to the likely use of the property if sold). Where the most likely use of the property is redevelopment for residential use, the valuation approach uses comparators to establish the likely final sale value of the redevelopment. From this are subtracted all the estimated costs of conversion and construction, to arrive at the estimated value which HCA could realise by selling the property.
- 4.2.3 It was the surveyor's opinion that residential use is the relevant alternative use for HCA's properties and that planning permission could be reasonably expected to be forthcoming, given the location and demand for housing in the area.
- 4.2.4 The overall methodology applied for these valuations corresponds with how HCA views its property portfolio and HCA considers it relevant for the purposes of the profitability analysis. HCA regularly reviews the performance of its hospitals, and considers whether sale of the properties could generate a better return. This is in line with businesses applying opportunity cost principles discussed in paragraph 3.2.8 above.

### 4.3 **Segmentation**

- 4.3.1 HCA's strategy of focusing of high acuity, tertiary care and undertaking significant innovation and investment in order to be a leading world-class provider of high quality care means that it competes vigorously for international patients. [X] of HCA's revenue<sup>24</sup> comes from overseas for treatment. HCA is competing in a very different market for these patients to the market for its domestic patients,

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<sup>23</sup> KPMG's valuation report is attached as Appendix 4 to this paper

<sup>24</sup> Average net revenue between 2006 and 2011

which are largely drawn from the Private Medical Insurers policyholder base. Consequently, the economic returns are different.

- 4.3.2 The market for overseas patients stretches beyond the UK private hospital market. HCA competes for overseas patients with leading hospitals around the world, such as major clinics in the US and Germany. International patients have, and do exercise, considerable choice. This is evidenced in Figure 1 below, which shows the volatility in revenue trends for HCA's main overseas customers.

**Figure 1: HCA net revenue streams from key overseas patient groups**

[X]

- 4.3.3 HCA must remain innovative and invest in quality of care in order to attract international patients, due to the worldwide competition it faces. International patients choose HCA based on its strong reputation and clinical excellence and place significant value on this. As a result, [X] for its services to overseas patients based on its product differentiation over its competitors. Whilst prices to UK domestic patients (either self-pay or PMI customers) also reflect the product differentiation, [X]. HCA's provision of services to international patients is essentially an export business, supporting and driving growth in UK plc.
- 4.3.4 [X]. All patients receive the same treatment, benefit from the same level of service, and have access to the same facilities. Whilst HCA occasionally uses translators for international patients, these and similar costs are immaterial in comparison with HCA's overall cost base. HCA has therefore used a volume factor to allocate costs and capital employed between UK and overseas patients.
- 4.3.5 HCA has modelled the ROCE of its overseas and UK patients separately. To do this, HCA has allocated the value of its assets and its costs to UK or overseas customers using weighted volumes as the driver. Overseas patient revenue is clearly identifiable in HCA's patient records. The methodology is described in more detail in Appendix 1.

#### **4.4 Other adjustments made in HCA's modelling compared to the CC's modelling**

4.4.1 In its own modelling of the ROCE, HCA has made a number of modelling assumptions in order to generate economically meaningful results. These are set out in detail in HCA's ROCE methodology paper at Appendix 1 and summarised below:

- A working cash balance assumption based on the monthly staff costs as a minimum required to operate HCA's hospitals in place of cash and bank balances;
- Removal of taxation balances to keep the analysis as a pre-tax analysis, consistent with the CC's approach;
- Removal of acquisition-related intangible assets and goodwill as reported on the balance sheet given that these are not relevant to the economic profitability of HCA;
- Removal of interest and dividends from profit before tax analysis as these result from financing and are not relevant to the economic profitability of HCA; and
- Removal of management fees. These are inter-facility charges, the associated revenues of which are included in net revenue. Because these fees represent costs for some facilities and revenues for others, they net off to zero at the Profit before tax level. Some management fees are also paid to facilities not within scope, and are recorded in the facility-level P&Ls. These fees, on average [£<] a year, have been excluded as a cost in the consolidated analysis.

4.4.2 The modelling adjustments set out above remove an annual average of [£<] of costs from the P&L and [£<] of assets from the balance sheet. With the exception of these, all other items on the P&L and balance sheet are included in the ROCE analysis as they are relevant to the economic profitability of HCA. They relate to

revenue, costs and assets used in the operations of the hospital business. More detail on these items can be found in the ROCE methodology at Appendix 1.

#### **4.5 Results of HCA's ROCE analysis**

HCA estimates the ROCE for the five year period of 2007 to 2011 to be [X] for the overall UK operations. When the business is segmented by domestic and overseas patient groups, HCA estimates the five year ROCE for UK patients to be [X] and for overseas patients to be [X]. However, HCA has not included in its estimates a valuation of its intangible assets. These ROCE estimates will therefore overstate profits and this should be considered when interpreting the results. HCA's full interpretation of these results is set out in section 7 of this response.

## 5 HCA's adjustments to the CC's modelling approach

5.1.1 Whilst HCA maintains that its own approach to modelling the ROCE is the correct one to adopt for the purposes of the profitability analysis, it has also sought to make a number of adjustments to the most critical aspects of the CC's model to reflect the appropriate assumptions.

### 5.2 Applying HCA's property valuations

5.2.1 HCA argues in section 3.2 above that the valuations estimated by DTZ are fundamentally unsuitable for the analysis of its profitability because the approach taken by DTZ does not fully consider alternative use. HCA believes that the KPMG valuations adopt the correct methodology for use in the profitability analysis of its UK operations. Therefore this value for HCA's property portfolio should be used in the ROCE calculations.

5.2.2 HCA has applied this total valuation to the CC's own model by replacing the [X] assumption used by the CC with the KPMG [X] valuation. All other things being equal in the CC's modelling approach, this changes the CC's estimate of HCA's five year ROCE to [X].

### 5.3 Applying customer segmentation to the CC's model

5.3.1 The CC has not segmented analysis between overseas and UK patients. HCA notes that the CC in its methodology paper said that it would "*be extremely difficult to allocate costs and assets between publicly- and privately-funded services*"<sup>25</sup> but did not specifically address the question of segmentation by overseas and UK patients. HCA believes that it is possible to construct a robust segmentation of UK and overseas patients using patient volume data. It considers that only the ROCE for UK customers is the relevant profitability measure for the CC's investigation.

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<sup>25</sup> Methodology Paper, Paragraph 20

- 5.3.2 All other things being equal in the CC's modelling approach, HCA has applied segmentation to the CC's analysis of its ROCE, using the same cost allocation approach as used in its own analysis (described at section 4.3 above). This generated a ROCE for UK patients of approximately [X].
- 5.3.3 When HCA applies both the KPMG valuations and the segmentation approach to the CC's model (approaches that it strongly contends are appropriate for the purposes of the profitability analysis), the CC model produces a ROCE of approximately [X] for UK patients and of [X] for overseas patients. This compares to the ROCE estimated by HCA's own model, which it considers to be most accurate, of [X] for UK patients and [X] for overseas patients.

## 6 The WACC for a UK healthcare provider

- 6.1.1 HCA has reviewed the CC's analysis and results for its estimation of the WACC for a generic UK healthcare provider, as set out in its Profitability working paper. In its Draft Guidelines, the CC explains that it "*will generally look to the capital asset pricing model (CAPM) when considering the cost of capital, since this is a widely understood technique with strong theoretical foundations*"<sup>26</sup>. In this model, the cost of capital is estimated using a Weighted Average Cost of Capital (WACC). Using this approach, the CC estimated a WACC for UK healthcare providers ranging between 7.3% and 10.0%.
- 6.1.2 In reviewing the CC's analysis, HCA has identified a number of fundamental flaws in the assumptions made to generate a WACC of a generic UK healthcare provider. In addition, HCA considers that there are a number of reasons why the WACC for HCA UK would be higher than that for a generic UK healthcare provider.
- 6.1.3 The main reasons for this are set out below:
- [X] HCA UK's increased exposure to overseas customers, particularly Middle Eastern customers. These international customers tend to exhibit greater volatility of demand. This volatility is shown in Figure 1 in section 4.3 of this response which shows net revenue over time from HCA's four main overseas patient groups. The WACC estimated for a generic UK healthcare provider will therefore understate the true WACC for HCA UK.
  - HCA UK has a sizeable and valuable property portfolio. HCA could effectively be viewed as two integrated businesses: a private healthcare services business and a property management business which provides the properties that the

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<sup>26</sup> [http://www.competition-commission.org.uk/assets/competitioncommission/docs/2012/consultations/market\\_guidelines\\_main\\_text.pdf](http://www.competition-commission.org.uk/assets/competitioncommission/docs/2012/consultations/market_guidelines_main_text.pdf)

healthcare business uses. Since HCA's properties are predominantly in London, the extent to which the enterprise value of the business is related to property prices is likely to be higher than for other healthcare businesses that are not located in such prime property hotspots. The betas for property management businesses are typically above those for healthcare businesses<sup>27</sup>. Therefore, in aggregate, due to HCA's heightened exposure to the property market, the combined business model of HCA is likely to be riskier than that of the other UK private healthcare providers.

6.1.4 Therefore, HCA disputes the CC's results and the conclusions drawn based on those results. In this section of the report HCA summarises its key areas of concern and sets out the rationale behind, and results of, its own WACC analysis. A detailed critique and analysis is set out in Appendix 2.

6.1.5 The following components are the key drivers of the WACC calculations:

- risk-free rate;
- equity risk premium (ERP);
- beta;
- gearing;
- corporate debt premium; and
- tax rate.

6.1.6 In its own analysis to estimate the cost of capital for a UK healthcare provider (to act as a benchmark for HCA's WACC), HCA has used estimates of each of these key components. Ideally an HCA UK-specific cost of capital would be calculated. However, as HCA UK is not separately listed, it is necessary to use a benchmark

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<sup>27</sup> For instance, Land Securities (a FTSE 100 property investor with a large Central London property portfolio) has an estimated asset beta of 0.87 (based on an equity beta of 1.16 and an average gearing of 34%) over the 2007 to 2011 period.

based on a generic UK private hospital operator. When interpreting the results, the fact that HCA's cost of capital is likely to be above that of a generic UK healthcare provider should be taken into account.

- 6.1.7 The approach to estimating the risk-free rate and the corporate tax rate are generally not contentious. However, estimating the other components is more problematic and requires a number of assumptions to be made. In some respects HCA's approach differs materially to the CC's. Where this is the case, HCA has explained why it believes its approach to be appropriate and more relevant.
- 6.1.8 HCA has estimated the WACC over the period January 2007 to December 2011, which is consistent with the five-year period of the ROCE analysis for HCA UK. The relevant time period used by the CC in the Profitability working paper is extended to June 2012 (for those parties whose year-end results go up to end-June 2012). However, in order to directly compare the WACC and ROCE for HCA it is only appropriate to consider the period up to end-December 2011 as this is HCA's final financial year-end within the scope of the CC's investigation. By conducting our analysis only up to end-December 2011, HCA has estimated a slightly different risk-free rate than the CC's estimates ([3<] versus the CC's range of 3.5% to 4.5%)<sup>28</sup>.
- 6.1.9 Table 1 below compares HCA's findings with the CC's preliminary estimates. HCA's estimates for the pre-tax WACC are highlighted.

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<sup>28</sup> The securities and the time period being looked at by the CC imply a risk-free rate of 4.1%, from which the CC has imputed a range of 3.5% to 4.5%.

**Table 1: Components of HCA's estimated WACC and comparison with the CC findings**

	HCA's estimates <sup>29</sup> 2007-2011		CC's estimates 2007-2012
	Conservative base case	High case <sup>30</sup>	
<u>Cost of Equity (Ke)</u>			
Real Risk Free Rate	0.9%	0.9%	n/a
Nominal Risk Free Rate (a)	4.2%	4.2%	3.5% - 4.5%
ERP (b)	6.2%	6.2%	3.5% - 5.0%
Equity Beta (c)	1.67	2.33	0.88 - 1.10
Asset beta	0.85	1.19	0.50 - 0.60
Proportion of Equity = E/(D+E) (e)	43.0%	43.0%	50.0%
<b>Cost of equity = a + (b x c)</b>	<b>14.5%</b>	<b>18.6%</b>	<b>6.6% - 10.0%</b>
<u>Cost of Debt (Kd)</u>			
Risk Free Rate (f)	4.2%	4.2%	3.5% - 4.5%
Corporate Debt Premium (g)	2.5%	3.0%	2.0%
Corporate Tax Rate (h)	28.4%	28.4%	28.0%
Proportion of Debt = D/(D+E) (i)	57.0%	57.0%	50.0%
<b>Post-tax Cost of Debt = (f + g) x (1 - h)</b>	<b>4.8%</b>	<b>5.2%</b>	<b>4.0% - 4.7%</b>
<b>Post-tax WACC = (e x Ke) + (i x Kd) (j)</b>	<b>9.0%</b>	<b>10.9%</b>	<b>5.3% - 7.2%</b>
<b>Pre-tax WACC = j / (1-h)</b>	<b>12.5%</b>	<b>15.2%</b>	<b>7.3% - 10.0%</b>
<i>Sources: CC, HCA's own analysis</i>			

6.1.10 HCA notes that its base case pre-tax estimate of the WACC for the five-year period, 12.5%, is above the CC's current range, of 7.3% to 10%. HCA strongly considers that the CC's range is flawed, or at least incomplete, for the following key reasons:

<sup>29</sup> It should be noted that there may be some roundings in the overall WACC calculations because the beta estimates have been rounded to the nearest two decimal places for presentation in this report.

<sup>30</sup> The high case uses a higher estimate of the corporate debt premium and includes an uplift of the beta to account for the size premium generated by the Fama-French three-factor model.

- The CC's range of comparators, which it uses as benchmarks for the asset beta and gearing level, includes a number of illiquid stocks and stocks on emerging market indices. HCA regards these as poor sources of data. Using these comparators, the CC estimates an asset beta range of 0.50 to 0.60. HCA's range of more appropriate comparators, based on six highly liquid US private hospital operators, yields an asset beta of 0.85. The full rationale for HCA's selection of comparators and a critique of the CC's approach is set out in Appendix 2.
- The CC's ERP range of 3.5% to 5.0% covers a range of geometric and arithmetic average returns on the UK equity market, which HCA considers to be the wrong approach. HCA, and other UK regulators, consider an arithmetic average of returns to be more robust than a geometric average<sup>31</sup>. The CC's results for the ERP are also not consistent with the CC's own risk-free rate range. The combination of the ERP and real risk-free rate should equal the expected return on the market portfolio, which Dimson, Marsh and Staunton (DMS) find to be 7.1%, based on 112 years of data. HCA's estimate of the real risk-free rate is 0.9%<sup>32</sup>. Its ERP estimate of 6.2% is based on an arithmetic average of returns on the UK market and is consistent with its real risk-free rate assumption, unlike the CC's estimate.
- The CC's debt premium of 2% is based on the observed cost of bank debt for UK healthcare providers. HCA believes this is likely to understate the true cost of debt during the period since this does not capture the cost of debt issuance for the parent companies of the UK companies in question. As a result, HCA's

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<sup>31</sup> HCA also notes that in a previous regulatory decision, when the CC used a mix of geometric and arithmetic averages to determine the ERP (in its October 2008 recommendation to the CAA in regard to setting price controls for Stansted Airport), the resulting range was so low that it chose to use a point estimate of the WACC that was at the 87<sup>th</sup> percentile of the proposed range. See L27 – L28 of [http://www.competition-commission.org.uk/assets/competitioncommission/docs/pdf/non-inquiry/rep\\_pub/reports/2008/fulltext/539a1.pdf](http://www.competition-commission.org.uk/assets/competitioncommission/docs/pdf/non-inquiry/rep_pub/reports/2008/fulltext/539a1.pdf)

<sup>32</sup> This is based on annual average yields from 10- and 20-year British Government securities (real zero coupon) over the 2007 to 2011 period, sourced from the Bank of England.

estimate of the cost of debt also takes into account the expected cost of debt for the range of US comparators chosen (based on their credit ratings), which HCA estimates to have been around 3% during the period in question. Applying weight to the CC's observations of UK providers, HCA estimates a debt premium range of between 2% and 3% for the five-year period, versus the CC's 2% estimate.

6.1.11 HCA has estimated a base case pre-tax WACC of 12.5%, which it considers to be a conservative estimate for the following reasons:

- HCA draws its beta analysis from a range of US comparators. Given the different market structure in the US and the UK (specifically the presence of a public healthcare service for consumers who do not want to pay for private healthcare in the UK), HCA strongly considers that UK healthcare operators are likely to face higher systematic risk than their US counterparts. HCA has not adjusted its US comparator betas upwards for this effect therefore its estimates understate the WACC for a UK provider.
- A number of practitioners and academics believe that a pure CAPM approach severely limits the descriptive power of this analysis and that an adapted version of the CAPM, such as the Fama-French three-factor model, provides a more accurate assessment of investor preferences. A preliminary assessment of the Fama-French three-factor model, which attempts to explain share price movements through more than a simple assessment of systematic risk, suggests that other factors are significant in explaining the movements in US healthcare provider share prices. Specifically, the SMB factor (the size factor) is significant, which would increase the cost of capital were it to be included in the analysis. This is particularly relevant in the context of this WACC analysis considering that the beta estimates rely on international healthcare provider comparators, largely drawn from the US. Further details are set out in Appendix 4. HCA has only taken the results of the Fama-French three-factor

model in to account in estimating its high case scenario WACC. The base case WACC does not incorporate this approach. Therefore, HCA considers that its base case is a conservative estimate of the WACC.

- 6.1.12 In addition to the estimate for a UK Healthcare provider being a conservative estimate, HCA also considers that there are a number of reasons why the WACC for HCA UK would be higher than that for an average provider. This is explained in paragraph 6.1.3 above.
- 6.1.13 For the reasons outlined above, HCA considers that HCA UK's effective cost of capital lies above its conservative base case for a UK healthcare provider, i.e. within the range of HCA's conservative base case and high case estimates: 12.5% to 15.2%.
- 6.1.14 Finally, the CC should note that the post-tax WACC estimate of [X] (equivalent to a pre-tax estimate of [Y]<sup>33</sup>) that HCA submitted in response to the CC's Financial Questionnaire, was based on HCA's US parent company. As HCA has previously stated to the CC, that WACC estimate is not relevant for the purpose of the profitability analysis in the context of the CC's investigation in to the UK private healthcare market. Not only does it relate to HCA's US parent company rather than the UK business, it was also estimated for a specific point in time (i.e. Q1 2012). Therefore, the estimates associated with some of the key components (most notably the risk-free rate and the ERP) do not reflect the situation of a UK healthcare provider over the relevant time period, and more generally do not apply to the scope of the CC's market investigation.

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<sup>33</sup> Assuming a tax rate of [Z], as submitted in response to the CC's Financial Questionnaire.

## **7 Conclusions and interpretation of the profitability analysis**

7.1.1 HCA strongly contends that the approach the CC has taken to estimating HCA's profitability is flawed in a number of key areas. This is leading the CC to incorrectly consider that HCA is making excess profits. This is not the case.

7.1.2 HCA argues that the CC must consider the following points in relation to the profitability of its hospitals:

- HCA firmly disagrees with the valuations of HCA's property portfolio the CC has used in its modelling. HCA has already set out its concerns to the CC, in relation to both the AEH and DTZ valuations, but these submissions have not been taken in to account and the CC has continued to adopt valuations based on inappropriate methodologies and assumptions. The value of HCA's properties in alternative use (residential use in the case of London) is the relevant benchmark to be used for the purposes of profitability analysis. If a hospital operator is unable to make returns broadly in line with its cost of capital (based on the potential market value which would reflect residential alternate use), the optimal course of action is to close the hospital and redevelop the site. Redevelopment to residential use is the most likely alternative use for HCA's property due to their locations, but this is only partially reflected in the CC's valuation approach. HCA therefore believes that the CC is using a significantly understated value for HCA's capital employed. This view is reinforced by HCA's own independent KPMG valuations which, based on the appropriate approach to estimating the current market value of HCA properties, values HCA's property portfolio at [X].
- The CC's analysis of HCA's profitability includes the returns from HCA's overseas patients. [X] and the CC's analysis of profitability should reflect this; and

- The CC's benchmark WACC calculation is based on a number of flawed assumptions and choice of comparators. As a result, the WACC estimate considerably underestimates the cost of capital of a UK healthcare provider.

7.1.3 Due to the concerns highlighted above, and explained in detail in earlier sections of this response, HCA has undertaken its own ROCE and WACC analysis to address the fundamental flaws in the CC's analysis. As a result, HCA analysis of its profitability over the five-year period shows:

- HCA's ROCE for the five year period of 2007 to 2011 is estimated to be [X] for its overall operations. HCA also conducted analysis to estimate the relative profitability of domestic and overseas customer groups which leads to estimates of the five year ROCE for UK patients of [X] and for overseas patients of [X]. For a number of reasons, these are conservative estimates.
- HCA estimates a base case pre-tax WACC for a generic UK hospital operator to be 12.5%. However, as explained in section 6 of this response, HCA considers this to be a conservative estimate for a number of reasons. These include the greater systemic risk associated with a UK healthcare provider (not captured through the use of US comparators) and for HCA in particular as result of specific characteristics of its business. Therefore, on the balance of probabilities, HCA considers that its true effective cost of capital lies between 12.5% and 15.2%; the range between its conservative base-case and its high-case estimates.

7.1.4 This shows that HCA does not earn excessive profits [X]. In interpreting the results of this analysis and assessing the profitability of HCA, HCA considers that there are a number of additional key factors that should be taken in to account by the CC, namely:

- Lifecycle of investments;
- Intangible assets;

- Investment risk;
- HCA's product differentiation and high quality of service; and
- HCA's reinvestment of profits

*Lifecycle of investments*

7.1.5 As discussed in section 3.3 above, HCA believes that the lifecycle of investment is particularly important in the healthcare sector. This is because many of the assets employed in the private healthcare industry have long economic lives, implying a longer investment lifecycle than five years.

7.1.6 An analysis of HCA's profitability over the entire lifecycle would take into account the initial investments required to become a successful business. This must be taken into consideration when interpreting the profitability results, with a five year analysis likely to be overstating the ROCE.

*Intangible assets*

7.1.7 HCA believes that there are significant intangible assets in the healthcare sector and sets out the evidence for these in paragraph 3.3.12 above. Investments in intangible assets are important to the operations of a successful hospital business and enables HCA to lead on innovation and new processes.

7.1.8 The omission of significant intangible assets from profitability analysis overstates the ROCE. As a result, HCA believes that this should be taken into consideration when interpreting the ROCE results.

*Investment risk*

7.1.9 As noted by the CC in its 2003 Market Investigation Guidelines (CC3), the CC will not consider profitability in isolation, but only in the context of an overall assessment. This may include, for instance, whether a firm is earning profits gained as a result of past innovations. This is particularly relevant for HCA and for the healthcare market more generally. Given the pace of medical advances, innovation is a key feature of the market. HCA has invested significantly in new

technologies and services and the ability to innovate and offer new services and patient pathways is a key differentiator.

7.1.10 HCA considers that the assessment of HCA's profitability should, among other factors, be duly weighted against the high level of risk it has taken. For HCA these include HCA's strategy to move into providing a wide spectrum of treatments with a particular focus on high acuity, tertiary treatments in areas such as cancer, cardiac and neurosurgery, or HCA's decision to expand in London through the acquisition of St Martin's Healthcare Limited (which owned the London Bridge, Lister and the Arrazi hospitals) in 2001 to transform these hospitals through large-scale investment and innovation into leading centres of complex, tertiary care. These examples, among numerous other examples represent relatively risky investment decisions compared to those undertaken by other hospital operators.

7.1.11 HCA is frequently the market leader in terms of innovation, offering new treatments and technologies ahead of its competitors in order to maintain its competitive position by raising quality and improving patient outcomes. Investments in new technologies and treatments can be significant and involve substantial risk. Whilst many of HCA's investments have resulted in successful outcomes, this is not always the case. For any investment, whether ultimately successful or not, there is inherently an associated probability of failure. Analysing the *ex post* cash flows, as the CC is only able to do here, misses out the *ex ante* distribution of expected cash flows. There needs to be recognition that the expected cash flow at the time of investment would have taken into account a probability of failure.

*High quality of service*

7.1.12 Quality of care is of critical importance to HCA. Achieving recognition for providing a high quality service and excellent clinical outcomes enhances HCA's reputation and brand, which is important to all patients, both domestic and

overseas patients. This quality reputation is discussed in some detail in HCA's Response to the CC's Issues Statement<sup>34</sup>. For example:

- HCA achieved 100% compliance with all Care and Quality Commission (CQC) outcomes of care in 2011.
- Independent patient satisfaction surveys show that over 99% of patients rated HCA hospitals highly for overall quality of care.
- The Intensive Care National Audit Research Centre study of survival rates in intensive care units in the UK found HCA hospitals to be in the top 10% of hospital operators.

7.1.13 HCA's returns should also be understood in the context of the high quality of service and excellent clinical outcomes it achieves.

*Reinvestment of profits*

7.1.14 Under standard economic theory, a firm making excess profits would not be expected to reinvest significant amounts of those profits back into its business. Instead, the expectation would be for large amounts of profit to be removed from the business and paid to the owners.

7.1.15 This is not what happens in HCA's case. HCA does not typically transfer large amounts of money to its US parent. Instead, it continually reinvests significant amounts in order to offer new, innovative treatments and technologies in order to maintain its competitive position by raising quality and improving patient outcomes.

7.1.16 Furthermore, HCA notes that in general there are inherent difficulties in estimating both ROCE and WACC. The estimates calculated are largely dependent on various modelling assumptions made. Whilst HCA has derived its estimates using the approach and assumptions it considers to be most relevant, at

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<sup>34</sup> HCA's Response to the Competition Commission's Issues Statement. July 2012, Paragraph 3.23

an overarching level, it is HCA's view that the combination of all the areas of uncertainty mean that any estimate of its profitability may have a significant margin of error and this should be taken into account when interpreting the results.