

STATUTORY AUDIT SERVICES MARKET INVESTIGATION

Profitability - part one

Introduction and overview

1. In reaching a view about the functioning of a market the Competition Commission (CC) often considers the outcomes of the competitive process in that market: including prices and profitability; product quality and range; and levels of innovation. Whilst this paper focuses on profitability (as an indicator of whether prices are too high), the CC considers the evidence on market outcomes in the round, rather than individually. Hence any results from this analysis will be assessed alongside other evidence on competition and outcomes.
2. In assessing profitability for the purposes of a market investigation the CC is concerned to measure economic profits, which can differ in important respects from accounting profits. We are interested in whether profits for firms representing a substantial proportion of the market have exceeded their cost of capital over a sustained period.¹ If so, this can indicate barriers to entry, or other sources of incumbency advantage, which prevent rivals entering the market with competing offers.
3. We may also be interested in the trend in profits as an indicator of changes in the competitive environment. For example, a situation where the profits of firms representing a significant part of the market have increased over a number of years may indicate a worsening of the competitive situation.

¹ [Guidelines for market investigations consultation document \(June 2012\)](#), paragraphs 118–122.

4. In this investigation, we are looking at the FTSE 350 audit market and so wish to consider the relevant revenues, costs and capital base of FTSE 350 audit engagements. In practice there is no stand-alone FTSE 350 audit business, and audits are conducted by integrated professional services firms who undertake audits of a variety of companies as well as providing other types of work.

5. We have received submissions on the most appropriate methods of assessing profitability in this market from:

(a) Oxera acting on behalf of Grant Thornton (GT) and BDO;^{2,3}

(b) PricewaterhouseCoopers (PwC);⁴ and

(c) Deloitte.⁵

We have considered these submissions in developing our approach and have referred to them as appropriate in this paper.

6. In this paper we set out:

(a) the firms' approaches to assessing profitability of their engagements (in paragraphs 9 to 18);

(b) the issues associated with assessing profitability in this market (in paragraphs 19 to 63); and

(c) our review of the following measures of profitability (in paragraphs 64 to 85):

(i) return on capital employed (ROCE); and

(ii) return on sales (ROS) based measures.

² www.competition-commission.org.uk/assets/competitioncommission/docs/2011/statutory-audit-services/oxera_presentation_ideas_on_profitability_assessment.pdf.

³ We note that Oxera presented on eight options—some of which we consider in other papers (analysis by sector, PCA analysis), some of which we cannot undertake due to data limitations (partner IRR, Big X premium over time) and some ROCE-based approaches which we consider in this paper.

⁴ www.competition-commission.org.uk/assets/competitioncommission/docs/2011/statutory-audit-services/pwc_presentation_approaches_to_profitability_analysis.pdf.

⁵ www.competition-commission.org.uk/assets/competitioncommission/docs/2011/statutory-audit-services/deloitte_amended_mfq_summary_.pdf, section 7.

7. In our paper titled 'Profitability – part 2'⁶ we:
 - (a) review profitability on the basis of:
 - (i) profits per partner; and
 - (ii) Assurance versus other business units.
 - (b) We also present our initial views on the assessment of profitability drawing on work from both the Profitability – part 1 and Profitability – part 2 papers.

8. On the basis of this paper, having considered the parties' submissions and the available data, our initial view is that we are unable undertake a reliable or meaningful assessment of economic profitability in this market. Hence we are likely to be unable to conclude as to whether firms representing a substantial part of the FTSE 350 audit market have earned profits that are persistently in excess of their cost of capital. As noted we consider the relative profitability of assurance (including audit) in the Profitability – part 2 paper.

The firms' approaches to assessing profitability of their engagements

9. As noted in our guidelines⁷ we consider the manner in which firms assess profitability for the purpose of monitoring and reporting performance may inform our view as to what is an appropriate measure for the industry in question.⁸

10. Ideally we wished to find a measure of the profitability of FTSE 350 audit engagements taking into account all relevant costs and an appropriate capital base. In assessing the viability of doing this it is important to consider how the firms are organized.

⁶ To be published in due course.

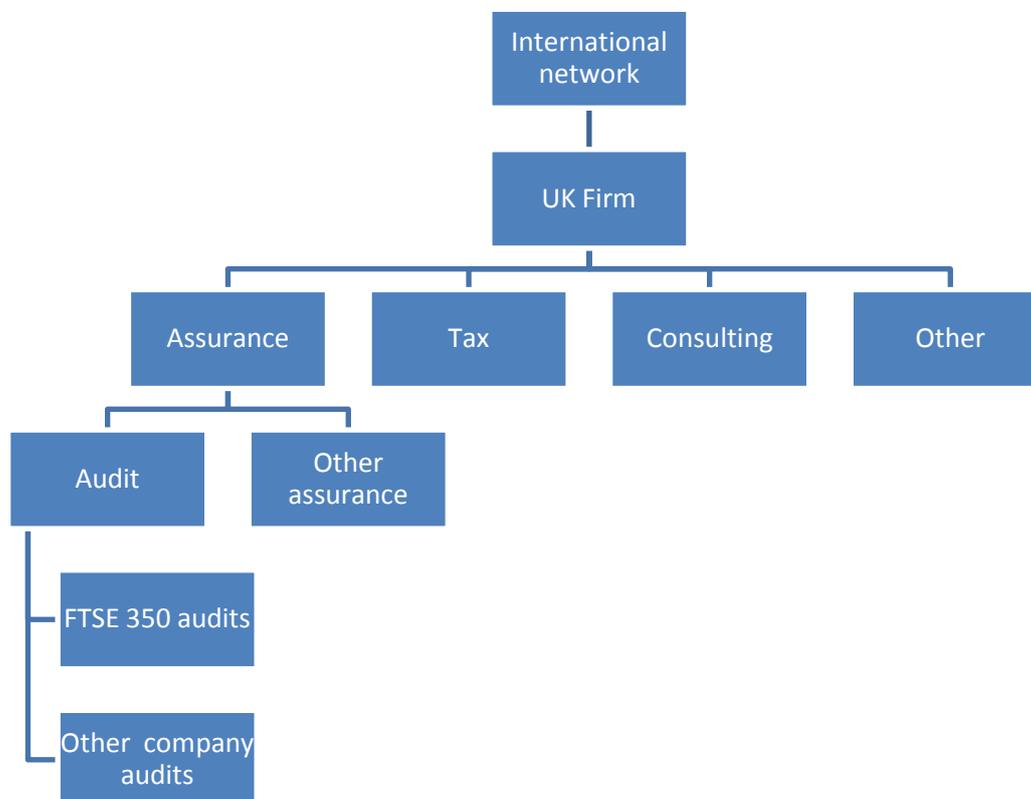
⁷ [Guidelines for market investigations consultation document \(June 2012\)](#).

⁸ [Guidelines for market investigations consultation document \(June 2012\)](#), Annex A, paragraph 8.

11. Figure 1, shows how the profits of an audit engagement fit within the organizational structure of the firms.

FIGURE 1

Example of FTSE 350 audit engagements position in firm's corporate structure



Source: CC.

Note: There will be subdivisions below the non-assurance service lines but these have not been shown in this diagram.

12. The UK firms are each part of international networks, and they report profitability at a UK firm level on the basis of profit per partner.⁹ The UK firms'^{10,11} management accounts are then generally split into service line accounts (or in some cases¹² are split by office location). The service line profitability is generally assessed on the basis of direct margin or in some cases, margin after allocation of costs incurred at a

⁹ Ernst & Young LLP operates as part of two sub-areas of its network's EMEIA structure (the sub-areas being UK&I (UK and Ireland) and FSO (Financial Services Office)). Ernst & Young (EY) as part of its internal reporting does not report profitability at the UK level, but does prepare statutory accounts for Ernst & Young LLP which states total profit and the number of members of the LLP.

¹⁰ By firms we are referring here to: BDO, Deloitte, EY, GT, KPMG and PwC.

¹¹ Deloitte's management accounts include UK crown dependencies, the Swiss member firm and two joint ventures in the Middle East and CIS respectively.

¹² For example, GT and BDO.

firm level (facilities, practice protection insurance, IT, marketing etc). The firms all report an Assurance business unit/service line that encompasses their statutory audit work and several other services not all of which are similar to statutory audit work. The components of the Assurance business unit/service line differ between the firms.

13. The largest six firms produce 'Transparency reports' which are required, inter alia, to report financial information relating to a firm's statutory audit work.¹³ However, reporting profitability for statutory audit and directly related services falls under a voluntary code and not all firms produce this (see paragraph 22).

14. We asked the firms how they measured the profitability of engagements, to assist us in understanding whether assessing the profitability of either audit as a whole or FTSE 350 audits (as a subset) was possible. A key measure of engagement level profitability used by the firms was revenue recovery rate (RRR). This compared actual fees charged with 'scale rate' (or 'charge out') revenue. The scale rate revenue was calculated by taking the scale rate for each grade of staff and multiplying it by the expected or actual number of hours booked by that grade. Because of the method of setting scale rates, RRR did not directly take into account actual costs per hour.¹⁴

15. Scale rates effectively cover direct staff costs with an allocation of overheads and an additional element of profit for partners.¹⁵ The scale rates would notionally be linked to the underlying cost of the firm providing an hour of staff time to an engagement. Whilst scale rates were not a direct representation of costs, firms were able to reflect changes in the underlying cost base in the scale rate. Review of RRR then allowed

¹³ These reports are required by all firms auditing PIE clients.

¹⁴ The parties use a number of terms to describe a theoretical target revenue per hour for each grade. This paper uses the term scale rate regardless of the firm's own descriptor.

¹⁵ The actual scale rate chosen for each grade of staff will be subject to other considerations and will not necessarily include a specific mark-up or margin on top of direct staff costs and any apportioned overheads.

firms to monitor changes in their underlying profitability and firms were able to reflect changes in costs and hence scale rates in target revenues and/or fee discussions.

16. PwC also used a client profitability metric (CPy) that applied standard cost rates to hours worked by staff and partners to give an indication of the underlying average cost of delivery. The CPy margin compares the average cost of delivery to the revenue generated, rather than a scale rate, which is a theoretical target level of revenue to be earned per hour.¹⁶
17. It appeared that no firm calculated a profit per engagement that closely reflected actual costs. This was consistent across both Mid Tier and Big 4 firms and it was not isolated to FTSE 350 company audits which is the focus of our inquiry. We understood this to be because (i) it would be very difficult to attribute the exact cost of the individuals working on an engagement (the bulk of the costs) and (ii) inevitably there would need to be an allocation of costs to the engagements (both staff costs when not working on engagements¹⁷ and non-staff costs). RRR is similar to contribution-based approaches in that it avoids the need for detailed cost allocation. The focus for management in using RRR is in comparing relative performance of engagements (between one another and over time) rather than indicating absolute levels of profitability of engagements.
18. The firms' measures of RRR were not comparable with one another, due to the differences in firms' scale rates.¹⁸ Looking at trends in RRR helps firms manage their

¹⁶ PwC stated that its 'Client Profitability' metric was not suitable for year on year comparison due to annual changes in the methodology used for its calculation.

¹⁷ To calculate a measure of profitability for individual engagements, which when considered in aggregate would reconcile to the firm's accounting profit would require periodic assessments of utilization rates and thus different 'scale rates' over the course of the year would need to be calculated.

¹⁸ Scale rates will differ both because of differing underlying cost bases but also because a scale rate will include an amount of headroom which relates to potential profit.

businesses but cannot be used to assess the absolute level of profitability in this industry. We therefore consider other metrics instead.

Issues in assessing profitability of the FTSE 350 audit market

19. In this section, we consider whether we could obtain appropriate data from the firm's management accounts to assess the profitability of the FTSE 350 audit market (and/or the audit market). We consider that there are a number of issues to consider in assessing profitability in this market, including:
- (a) cost allocation (including staff time not spent on engagements);
 - (b) partner remuneration;
 - (c) capital base; and
 - (d) the appropriate benchmark cost of capital.

Cost allocation

20. As shown in Figure 1, FTSE 350 audit engagements together with other audit engagements (including those of private and smaller listed companies) make up the firms' Audit businesses. Generally Audit sits as a service within a wider Assurance business unit. In turn, the Assurance business unit forms only one part of the accounting firms' overall professional service offering and the accounting firms themselves are part of international networks of firms. As accounting firms are multi-disciplinary there are many shared and common costs. Some of the costs are incurred directly by the audit engagements and Assurance divisions, such as staff, travel, recruitment, software, stationary, entertainment, some marketing costs and some professional fees. Other costs are incurred at a firm level allocated across the firms to divisions including Assurance, typically these include international network costs, firm-wide marketing and branding, some recruitment costs, facilities, insurance, IT costs, property etc.

Assurance/audit

21. The Assurance business unit sits as a separate division within firms. As discussed above, the business unit will incur direct costs as well as receiving an allocation of firm overheads.

22. The largest six firms produce 'Transparency reports' which are required to report financial information relating to a firm's statutory audit work.¹⁹ A voluntary code issued by the CCAB (Consultative Committee of Accountancy Bodies) applicable for reporting periods from April 2009 included guidance on reporting on the profitability of the firm's audit practice. Obtaining reasonably robust cost allocations for 'Audit' practices as a whole is therefore possible for some firms, but not all firms provide this analysis and not to the same level of detail.²⁰

23. For the purpose of our investigation, PwC undertook an analysis of its audit business. It considered a range of fully-allocated cost (FAC) bases using two main drivers of costs. Its preferred approach (its FAC central estimate) gave an average audit profit margin—before any adjustments for partner salary or return on invested capital—of 19 per cent in FY07 to FY11. This compared with an average of 18 per cent based on its Transparency Report.²¹ PwC considered its Transparency Report approach to be reasonable for the purpose for which it was produced, but said that in the context of this investigation it wanted to perform the most accurate possible calculation. It said that its FAC approach therefore used a more detailed analysis resulting in a smaller proportion of costs being allocated to Audit in later years than under the Transparency Report approach and so resulting in a small difference between the five-year average margins.

¹⁹ These reports are required by all firms auditing PIE clients.

²⁰ For example, EY does not include any cost or profit information in the financial information included in its transparency report.

²¹ PwC [Observations on the assessment of audit profitability](#), 7 August 2012, paragraph 4.3.

FTSE 350 engagements

24. Within the Assurance divisions, firms provide audit services to FTSE 350 businesses and other listed and private companies; they also undertake assurance (non-statutory audit) work for clients. As discussed above (see paragraph 14 to 18) firms assess engagement profitability on the basis of RRR.

25. The direct cost data that we have on an engagement basis reflects average staff costs flexed only by the number of hours and not by skill mix within grade (ie for a manager's time on an engagement, the average cost of a manager multiplied by the number of hours worked is used). However, PwC's audit profitability analysis (see ROS measures section below) calculated staff costs by individual and therefore did not differentiate within grade.

26. If attempting to allocate costs from Assurance or Audit to a subset of audit engagements (eg FTSE 350 audits) we would need to consider whether using the average staff cost was appropriate for these engagements. In addition, the staff cost allocated to service lines (ie Assurance) includes the full cost of employing a member of staff and not just the cost of utilization on engagements. If allocating costs to a subset of engagements as some form of stand-alone business unit we would need to consider carefully how to capture the full cost of employing staff.

CC discussion

27. As set out above, costs are allocated from the firms to their Assurance service lines. To assess Audit or engagement level profitability a further allocation of costs from the Assurance businesses to those engagements needs to be made. (In some cases firms have done this for their Audit businesses.) Given the multiple layers of cost allocation required to analyse FTSE 350 audits as a subdivision of accounting firms (and the hypothetical nature of the exercise), the accuracy of any such analysis is

questionable. For the Big 4 firms, FTSE 350 audit fees represented on average 19 per cent of Assurance revenues over the period 2007 to 2011.²² We therefore think that obtaining profitability measures for FTSE 350 audits as a subset of the Assurance businesses is unlikely to be a robust analysis.

28. However, we consider that allocating revenues and costs to the firms' audit/Assurance businesses is possible. To a large extent this cost allocation to the Assurance business is undertaken by the firms in their management accounts (albeit some firms still have a residual unallocated overhead that is considered only at the firm level. In assessing the Assurance division returns, we would need to be aware that Audit margins may differ from those for Assurance as a whole. We note that assessing Audit as a subset of Assurance would be difficult for all firms as they do not all provide cost and profit information in their Transparency Reports.

Partner remuneration

29. Because partners supply labour as an employee would, as well as being an owner of the business, the partner's remuneration compensates the individual for their:
- (a) contribution to engagements, marketing and other non-engagement activities (eg in some cases firm management) based on role and performance (ie they receive a salary-related element); and
 - (b) capital investment in the firm (ie they receive a return on their investment).
30. Some firms include a nominal partner charge in their management accounts when assessing business unit profitability but many do not.²³ Some firms nominally split partners' total remuneration into base, performance and capital return elements (or equivalent) but stress that this is not an accurate allocation.

²² CC analysis based on FTSE 350 audit fee information provided in the OBI (MFQ) and Assurance revenues from the firms' management accounts. (Note for KPMG information available was for 2008 to 2011 only).

²³ KPMG, EY, GT and BDO (BDO in 2007 and 2008 only).

31. We agree that there is a need to assess an appropriate 'salary' element from partners' total remuneration, as submitted by PwC, Deloitte and Oxera.
32. In the following paragraphs we set out some possible benchmarks that could be used as proxy for partner salaries, we consider PwC's submission on the appropriate benchmark partner salaries and discuss the implications of this exercise for average partner salary.
33. We considered a range of benchmarks could be used for this purpose. These included:
- (a) a mark up on average director salary costs (including employers costs) for each firm based on the difference in charge out rates for partners and directors. This gave a range for Partner salary in 2011 of £[x] to £[x]. [x]
 - (b) the salary costs of a non-equity partner (eg Deloitte £[x] in 2011);
 - (c) the partner charge²⁴ used by different firms:
 - (i) GT used £[x] in its management accounts;
 - (ii) KPMG used £[x] in its 2011 management accounts; and
 - (iii) PwC used £[x] in its internal CPy measure.²⁵
 - (d) Industry benchmarks such as the average salary for FTSE 250 Financial Directors or similar (in 2010 the median total remuneration for FTSE 250 Financial Directors £489,000).²⁶ Although it is not clear that all partners have comparable responsibility to a FTSE 250 Financial Director.

PwC partner salary benchmarking

34. PwC submitted that using the £[x] figure in its CPy measure or the salaries of directors with audit signing power was likely to understate the true 'partner salary'

²⁴ The notional salary that firms include in their management accounts to represent the cost of a partner's labour.

²⁵ CPy is the measure PwC uses to assess engagement level profitability including partner time.

²⁶ FTSE Financial Director salary survey 2010.

cost as it did not reflect (i) the full opportunity cost of partner labour (as CPy estimate was only intended to facilitate comparisons across the business and so was a notional base pay only) and (ii) the distribution of partner seniority required to deliver audit services. A single CPy measure did not reflect the significant differences in the relative labour costs of partners at different partner role levels.²⁷

35. For the purposes of our investigation PwC undertook a job evaluation assessment, this involved matching each of its four partner 'bands' to comparably 'sized' roles within the finance functions of UK companies. It assessed 'size' based on six metrics: knowledge; specialist skills; people skills; customer service/external impact; decision-making and creative thinking.²⁸

36. PwC partners were allocated to 15 responsibility levels across four levels of partner. PwC benchmarked a partner from each role level; however, for Level 1 (the highest partner role level) it evaluated two partners at different ends of the scale because of its wide span.²⁹

37. Table 1 sets out the nature of the market comparator roles that PwC considered in its benchmarking assessment, and the proportion of its partners that it assessed under each category. The 'Monks' points score refers to the points allocated to each level of partner based on the six factors considered (the maximum score is 110).³⁰

²⁷ PwC [Observations on the assessment of audit profitability](#), 7 August, paragraph 3.4.

²⁸ PwC [Observations on the assessment of audit profitability](#), 7 August, Table 6.

²⁹ PwC [Observations on the assessment of audit profitability](#), 7 August 2012, paragraph A5.9.

³⁰ PwC [Observations on the assessment of audit profitability](#), 7 August 2012, Table 7.

TABLE 1 Audit partner peer groups by role level

Partner role	Monks points	Pay levels	Proportion of partners	Market comparisons	Sample size (of market comparators)	
Role 4	80	4.2 to 4.1	X	Listed and private companies	<ul style="list-style-type: none"> Heads of Internal Audit, revenues £1.25-5bn Financial Controllers, revenues £1.25-5bn Divisional Financial Directors, revenues < £500m, >25% UK source 	67
Role 3	83	3.3 to 3.1			<ul style="list-style-type: none"> Heads of Internal Audit, revenues £5-20bn Financial Controllers, revenues £5-20bn UK focussed Divisional Financial Directors, revenues £500m - £2bn, >25% UK source 	51
Role 2	88	2.5 to 2.1	X	<ul style="list-style-type: none"> Finance Director jobs in listed companies in the FTSE small-cap index and private companies with revenues of less than £1,000 million 	150	
Role 1	95	1.5	X	<ul style="list-style-type: none"> Group Finance Director jobs in listed companies in the FTSE 250, but with less than 25% of annual revenue from outside the UK 	68	
	104	1.1		<ul style="list-style-type: none"> Group Finance Directors jobs in listed companies with market capitalisation of between £1,000 million and £3,000 million 	73	

Source: PwC analysis.

38. PwC benchmarked the total reward received in the market for the roles it considered comparable to its partner roles (this included salary, actual bonus paid, expected value of long-term incentives and employer pension contributions). The results are set out in Table 2 below.³¹

TABLE 2 External benchmarks for the 'partner salary' component of remuneration by partner role

	Partner salary £'000					
	Role 4	Role 3	Role 2	Role 1.5	Role 1.4	Role 1.1
Lower quartile	152	204	365	509	745	781
Median	214	314	487	762	876	1,002
Upper quartile	317	619	619	1,052	1,095	1,308

Source: PwC.

³¹ PwC [Observations on the assessment of audit profitability](#), 7 August 2012, paragraph A5.12.

39. PwC said a further sense check on the benchmarking results was that the fact that there was comparability of the lower quartile Role 4 partner salary with its Core Assurance director salaries. The average Core Assurance director salary at PwC was £[redacted] in FY11. It said that this showed a continuum in average salaries from director to most junior partner.³²
40. PwC's expectation was that: 'the firms which compete closely with us would have broadly equivalent levels of 'partner salary', while smaller firms which are generally only competitive with us in relation to the audits of far smaller companies would employ partners with lower 'partner salaries', as the majority of their audit partners would be ranked at the lower partner role levels, or as directors, if they worked in the large firms.'³³

CC discussion

41. An approach of benchmarking partner roles to external roles with comparable responsibility appears to be reasonable. However, we have not cross-checked the outputs of the analysis that PwC has undertaken nor have we formed an independent view on the proposed salary figures or partner equivalent jobs.
42. However, if we were to accept the benchmark salaries in Table 2 and the likely proportion of partners in each category, the average PwC partner salary suggested by the PwC information was £[redacted] (as calculated in Table 3). We consider it a reasonable assumption that the other Big 4 firms would have similar average partner salary costs.

³² PwC [Observations on the assessment of audit profitability](#), 7 August 2012, paragraph A5.15.

³³ PwC [Observations on the assessment of audit profitability](#), 7 August 2012, paragraph 3.7.

TABLE 3 **Average PwC audit ‘partner salary’**

Partner level	Median salary £'000 (A)	Proportion of partners % (B)	Contribution to average salary £'000 (A*B)
4	214	✂	✂
3	314	✂	✂
2	487	✂	✂
1	876	✂	✂
Average partner salary (£'000)			✂

Source: CC analysis.

Note: Median salary does not include National Insurance Contributions.

43. If as a working assumption we were to assume that on average the Big 4 firms’ partner responsibilities fell evenly across the four categories then the average partner salary at these firms implied by the PwC data would be £473,000. If we were to assume that most of the larger Mid Tier firms’ partner responsibilities fell evenly in categories 3 and 4 then the average partner salary at these firms implied by the PwC data would be £264,000.

44. We noted that the mean scale rate difference between a PwC partner and director in 2011 was [✂] per cent.³⁴ However, the difference in average ‘salary’ (ie excluding partner return on investment) was [✂] per cent.³⁵ [✂]. PwC considered that its approach reflected competitive market conditions and was the same approach as taken by other professional services partnerships to the best of its knowledge.

45. The range of possible partner salary values we have considered for a Big 4 firm varies from around £[✂] to £[✂].

[✂]

Capital base

46. Our understanding is that partners are required to invest in firms when they join and are sometimes required to make subsequent investments as they progress to a different tier of the partnership or if the firms require additional capital from all partners. This investment is returned when the partners retire from or leave the partnership, and in some firms without interest.³⁶ The contributions of new partners in some firms are based on the allocation of a number of units of equity dependent on role.³⁷ The contribution per unit of equity may be revised periodically to reflect the working capital and investment needs of the firm and is not adjusted to reflect a calculated market value of the equity.
47. The assets in a professional services firm's balance sheet include tangible assets (eg property, plant, equipment; working capital) and intangible assets that are recognizable under accounting standards such as goodwill and software licences. The costs incurred by the firms relating to brand development, human capital, reputation, and some intellectual property are not allowed to be recognized as assets on the balance sheet. However, the firms derive value from these and such non-recognized intangibles are likely to have significant value for a professional services firm.
48. In addition, the capital base from which the firms' Assurance businesses operate is common to each firm as a whole (ie is shared with other service lines).

Oxera submission on behalf of BDO and Grant Thornton

49. Oxera proposed an approach which effectively built an asset base by considering costs incurred in creating the firms' intangible capital as being capital in nature, even

[36]

if they were not recognized as such in accounting terms. Use of such an approach takes costs that might be considered to be incurred in creating intangible assets, allocates them a useful economic life (UEL) and converts them into a capital asset.

50. A similar approach was used by Oxera in Ofcom's market investigation in the pay-TV market. In that case, subscriber acquisition costs were readily identifiable and were used to value the subscriber base (an intangible asset) at replacement cost.

PwC

51. PwC said that compared with the businesses involved in pay-TV and SME banking, professional services firms were far more reliant on intellectual property and other intangible assets as a relative proportion of their asset base to provide their services. It said that this presented substantial challenges in applying the CC's previous methodology including: agreeing a consistent definition of intangible assets across the audit firms; deciding on how to measure the 'replacement cost' of such assets; and determining the 'asset life' of various types of intangible assets, some of which may have relatively long asset lives that are difficult to determine (in particular intellectual property, which would be unlike, for example, IT systems for SME banking).³⁸

52. It considered particular challenges to include:³⁹
- (a) Identifying specific costs associated with intangible assets and intellectual property: given that developing intellectual property and other intangible assets was such an integral part of a professional services firm's business, identifying the associated specific costs (eg developing methodologies, producing thought leadership, developing relationships, marketing by client services staff and

³⁸ PwC [Observations on the assessment of audit profitability](#), 7 August 2012, paragraph 2.12.

³⁹ PwC [Observations on the assessment of audit profitability](#), 7 August 2012, paragraph 2.13.

partners etc) within the firm's financial information would be a considerable undertaking. PwC's systems for recording hours were primarily designed to keep track of billable client work, rather than to distinguish in detail between time spent on different aspects of our non-billable work. It said that this was unlike, for example, the development of IT systems in SME banking, which was likely to have identifiable associated costs.

(b) Distinguishing between costs which are necessarily incurred in running the business, and those which are additional: because professional services firms depend to such a high degree on their expertise and reputation for their operations, trying to distinguish consistently and reliably across a number of firms those intangible asset costs which are additional to those necessarily incurred at the time in running the business would be a significant (and perhaps fruitless) endeavour.

(c) Recognizing that intangible assets and intellectual property are developed in the normal course of business: such assets and property are frequently essential to the delivery of future client services. For example, it was usual for professional services firms to be asked when bidding for work to present their past client work credentials and demonstrate a history of delivering similar work successfully. Such credentials and experience (which form part of reputation) are products of previous assignments undertaken in the normal course of business for which the professional services firm was paid, but are demonstrably of interest and value to future clients, and are therefore an asset of the business.⁴⁰

CC discussion

53. We recognize that in industries with a relatively low level of tangible assets, such as service and knowledge-based industries, the book value of capital employed may

⁴⁰ PwC [Observations on the assessment of audit profitability](#), paragraphs 2.12 & 2.13.

bear little relationship to the economic value because of the presence of significant intangibles. We therefore may consider making adjustments to accounting data to reflect certain intangible assets. In previous inquiries, we have considered the inclusion of certain intangibles where the following criteria are met:⁴¹

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

- 54. In the case of accounting firms, much of the asset base is intangible in the form of clients, reputation, brand and human and intellectual capital (staff and partner experience and skills, and internally developed methodologies and know-how). In other inquiries we have been able to identify specific costs incurred in addition to running costs that create an asset (see paragraph 53). In this case such an approach would be complicated as, there seems to be no obvious way to identify the appropriate costs.
- 55. We considered in particular whether we might identify a sub-set of costs that related to client acquisition and which might therefore qualify to be recognized as creating an intangible asset under the criteria set out above.
- 56. If these costs could be identified, we would then look to convert these into an appropriate asset base by making assumptions about the UEL for example; using average client life in the case of client acquisition costs. We reviewed the firms'

⁴¹ [Guidelines for market investigations consultation document \(June 2012\)](#), Annex A, paragraph 13.

management accounts to assess whether we would be able to make assumptions about the nature of the operating costs to identify where these might be considered to represent client acquisition costs or intellectual capital development. The degree of detail provided varied but in all cases was insufficient to be able to conclude as to the specific nature of the cost incurred and in particular whether it related to the ongoing running of the business or could be regarded as additional expenditure to create an asset. In addition, we recognized that many of the costs incurred in client acquisition and intellectual capital development would be staff and partner time and that this, in itself, would be difficult to allocate between the above categories in the absence of any established business methodology for doing so.

57. We also considered that it would be conceptually difficult to isolate Assurance or audit-specific intangibles given the integrated nature of the firms and because many operating costs were allocated to the Assurance division from the firm's central overheads.
58. Given the conceptual and practical difficulties involved we considered that we would not be able to reliably assess the intangible asset base. Because the intangible asset base could have substantial value, and be long-lived, in contrast to the relatively small tangible asset base, this leaves us in a position of being unable to reliably measure the appropriate capital employed.

Appropriate benchmarks

59. To say whether a firm's return is high or low, it must be compared with the appropriate cost of capital. Normally, the cost of capital for a business is assessed using the Capital Asset Pricing Model (CAPM). However, the key assumption of the CAPM of efficient capital markets with fully diversified investors is violated in this case because the partners are the investors and are unlikely to hold fully diversified

portfolios and thus are exposed to firm-specific risks and illiquidity risk. The implication of this is that the returns from the audit market will need to be significantly higher to compensate for the additional risk but there is no established theoretical framework by which to quantify how much higher. Oxera (2007) consider this issue and estimate a range for the premium on the required rate of return of between 10 to 20 per cent.⁴²

60. PwC proposed a measure of its cost of equity of 10.7 per cent based on the CAPM framework, see Table 4.⁴³ To estimate beta it looked at companies (in the UK, North America and ‘developed European’ markets) with an industrial classification that included accounting, auditing and taxation services or comparable consulting services (management consulting services, agriculture and economic consulting services). From this list it excluded any where the company description included defence, engineering or real estate sectors.⁴⁴

TABLE 4 PwC’s estimate of its cost of equity—key components

	FY07	FY08	FY09	FY10	FY11	5-year average
Risk-free rate (%)	4.5	4.7	4.5	4.1	3.9	4.4
Equity beta	1.0	0.9	0.8	0.8	0.7	0.8
EMRP (%)	4.5	4.5	4.5	5.0	5.0	4.7
Post-tax cost of equity (%)	8.8	8.6	7.9	8.0	8.4	8.3
Average UK corporation tax rate (%)	30.0	29.5	28.0	28.0	27.5	28.6
Pre-tax cost of equity(%)	11.5	11.1	10.1	10.3	10.7	10.7

Source: PwC.

61. Deloitte’s MFQ response also highlighted the difficulty of establishing the appropriated WACC in relation to a business such as Deloitte which had no traded equity from which to obtain a beta value and also that the CAPM captured only

⁴² Oxera (2007), Table 6.23.

⁴³ PwC [Observations on the assessment of audit profitability](#), 7 August 2012, Table 12.

⁴⁴ PwC [Observations on the assessment of audit profitability](#), 7 August 2012, paragraph 7.17.

systematic risks and not the specific risks that characterized partners' investment in large audit firms.⁴⁵

CC discussion

62. We have not formed a view on the appropriate cost of capital. PwC's general approach does not appear unreasonable; its parameters for the risk-free rate and the ERP appear to be within a reasonable range; however, if the cost of equity became a key component of our analysis then we will need to consider more carefully in due course how appropriate PwC's equity beta estimate of 0.8 is. In particular we note that audit is a relatively non-cyclical business and therefore may be considered to have low systematic risk in comparison with other activities undertaken by professional services firms and consultancies.
63. We consider there to be some merit in the Oxera 2007 view that there should be an uplift in the cost of capital assessment to take account of the fact that investors in audit firms are not diversified.

Review of measures of profitability

ROCE

64. ROCE is a standard measure of profitability that compares profits with the investment in the company and that can be compared with the company's WACC.
65. In this investigation, calculating the return of the audit firms requires assumptions to be made about cost allocation and partner salaries (as discussed above). Additionally we need to obtain an appropriate value for capital employed.⁴⁶

⁴⁵ [Summary of Deloitte's response to the Competition Commission's marketing and financial questionnaire](#)—non-confidential version, paragraph 7.7(c).

Parties' views on ROCE

66. PwC stressed the sensitivity of any ROCE calculation to (i) changes in estimated profit, and (ii) the range in the value of the intangible assets. It provided the following example:

TABLE 5 PwC's example of the effect of changes in profit and asset base assumptions

	<i>Effect of change in profit based on tangible assets only</i>		<i>Effect of change in profit where full possible value of intangibles are included</i>	
Profit	5	1	5	1
Tangible assets	10	10	10	10
Intangible assets	0	0	20	20
ROCE (%)	50	10	17	3

Source: PwC presentation to CC dated 12 July 2012, p6.

67. Deloitte said that whilst the CC had previously considered circumstances in which items such as brand or intellectual capital might constitute intangible assets, these circumstances were difficult to apply as brand and intellectual capital were intrinsic to the service offering of Deloitte and also were part of the off-balance-sheet capital that it had built up over time, it considered that a return on sales-based analysis might be more appropriate.⁴⁷

68. Oxera considered that ROCE could be used as an indicator of profitability and proposed a method of building an asset base to reflect intangibles (see paragraph 49). Oxera hypothesized that the asset base to support a suitable IRR would be comparatively large.⁴⁸

CC discussion—ROCE

69. We recognized the issues associated with cost allocation and partner salaries above; however, we consider that an appropriate cost allocation could be made to assess

⁴⁶ Guidelines for market investigations consultation document (June 2012), Annex A, paragraph 11.

⁴⁷ Summary of Deloitte's response to the Competition Commission's marketing and financial questionnaire—non-confidential version, paragraph 7.8.

⁴⁸ Oxera ideas on profitability assessment presentation slide 13.

the revenue and return from the firms' Assurance businesses and that appropriate assumptions could be made regarding 'partner salary'. We considered that the assessment of an appropriate capital base was perhaps the most difficult issue in considering a ROCE style analysis in this investigation (see paragraph 56 above). We considered that we were unlikely to be able to assess the intangible asset base of the audit firms' Assurance businesses with a great degree of certainty. Obtaining consistent evidence across firms (in terms of having the same level of detailed cost information) is difficult and our understanding is that the firm's reporting systems do not provide sufficient detail as to the nature of the costs to be able to identify intangible capital costs. Given the importance of the capital base to the ROCE assessment, together with the number of assumptions that we would need to make in undertaking a ROCE analysis for the audit market (eg cost allocation, partner salary and appropriate benchmarks) we considered that any analysis was unlikely to be robust enough for us to be able to draw any conclusions from it.

70. We therefore accept the view of Deloitte and PwC that a ROS-type analysis may be more appropriate in this context and consider this below.

ROS-based measures

71. Our guidelines state that in situations where capital employed cannot be reliably valued the CC may consider alternative measures, such as the ROS or other relevant financial ratios. For instance, comparisons with businesses operating in different but similar markets may on occasion be helpful.⁴⁹

⁴⁹ [Guidelines for market investigations consultation document \(June 2012\)](#), Annex A, paragraph 14.

Views of the parties

Oxera

72. Oxera in its presentation to the CC said that whilst IRR/WACC approaches were subject to measurement problems, the framework was superior to alternatives, such as ROS, that ignored investment and risk. Oxera therefore considered that IRR/WACC approaches should be given weight.⁵⁰

PwC

73. PwC considered a variant of ROS (which it termed the 'economic profit margin') to be its preferred measure. In assessing the 'economic profit' of its business, PwC adjusted its audit business returns (revenue less attributable costs – staff, direct and indirect costs) for: assumed partner salary (as discussed in paragraph 35); it made an 'ACA adjustment' to reflect the costs incurred in training staff who gained the ACA qualification and then moved to non-audit parts of PwC (ie it assumed that those parts of the business would otherwise have to pay to train ACA qualified staff); and it calculated a return on partners' invested capital.⁵¹ It calculated the 'economic profit margin' by taking its measure of economic profit and dividing by revenue.
74. PwC considered its economic profit margin measure had significant advantages over both return on capital based measures and benchmarking profit per partner to other partnerships. In particular it said that:⁵²
- (a) Margins analysis reduced the need to focus on accurately estimating the value of intangible assets, although the results needed to be interpreted in the context that if such assets did exist they had not been taken into account.
 - (b) Margins analysis used revenue as its denominator, which provided more stable results and was less sensitive than both ROCE and truncated IRR analysis to:

⁵⁰ Oxera presentation to CC dated 29 May 2012, p11.

⁵¹ PwC [Observations on the assessment of audit profitability](#), 7 August 2012, paragraph 2.21.

⁵² PwC [Observations on the assessment of audit profitability](#), 7 August 2012, paragraph 2.22.

- (i) a missing valuation for intangible assets; and
 - (ii) the precise level of audit profit.
- (c) A key issue in competition analysis was whether the level of profitability was sufficiently large to be indicative of a competition problem. Positive economic profits would frequently be observed in a competitive industry and could be compatible with effective competition or result from measurement error. For a business such as an audit firm, where the amount of tangible capital was small but the size of the business (measured by sales) was large, whether the level of profitability was sufficiently large to be indicative of a competition problem could not be judged by the yardstick of return on tangible capital. Margins analysis gave a far more reliable indication of the materiality of any identified positive economic profit.
- (d) Compared with profit per partner analysis, margins analysis was not as reliant on benchmarking audit profits against those for other businesses that may or may not operate in sectors that were both comparable and could be regarded as effectively competitive. In applying its economic profit margin methodology to its own audit services, PwC said that it had also been able to factor in a calculation of notional 'partner salary'—one of the main concerns with profit per partner analysis based simply on publicly available data (eg from Transparency Reports).

75. PwC said that using partners' invested capital as a proxy for tangible assets implicitly assumed that most of the firm's balance sheet operating tangible assets were funded by the capital that partners have invested (PwC had almost no borrowings). PwC used a proportion of reserves (ie retained earnings) to fund tangible assets and working capital, which it said should also be considered part of the firm's asset base. However, to prevent any concerns that there may be a degree of circularity in attempting to estimate the reasonableness of profits based on a return on retained profits, PwC did not include this element of reserves in its calculations. It said that its

measure should therefore be regarded as understating total tangible capital employed. Average partners' invested capital for audit services was estimated by multiplying average invested capital per partner by PwC's calculated number of audit partner FTEs. PwC Audit's cost of equity was calculated based on the CAPM (as set out in paragraph 60).⁵³

76. PwC presented its results as follows in Table 6.⁵⁴

TABLE 6 Summary financials for PwC Audit business, FY07–FY11

	PwC Audit (£m)					
	FY07	FY08	FY09	FY10	FY11	5 year Av.
Total Revenue	588.0	576.4	558.0	547.5	546.6	563.3
Cost of sales disbursements	×	×	×	×	×	×
Net revenue	×	×	×	×	×	×
Client Service Staff (CSS) costs	×	×	×	×	×	×
Gross profit	×	×	×	×	×	×
Gross profit margin	×	×	×	×	×	×
Direct costs ⁵⁵	×	×	×	×	×	×
Direct profit	×	×	×	×	×	×
Direct margin	×	×	×	×	×	×
Indirect costs	×	×	×	×	×	×
Unadjusted profit	×	×	×	×	×	×
Unadjusted profit margin	19%	18%	20%	22%	19%	19%
ACA adjustment	×	×	×	×	×	×
"Partner salary"	×	×	×	×	×	×
Return on partners' invested capital	×	×	×	×	×	×
Economic profit	×	×	×	×	×	×
Economic profit margin	4%	(1%)	0%	1%	(1%)	1%

Source: PwC data and analysis.

77. PwC said that having allocated costs on an FAC basis, and deducted estimates of partner labour and capital costs, in theory the observed economic profit margin might be expected to be close to 0 per cent in a competitive market. This was because in a

⁵³ PwC Observations on the assessment of audit profitability, 7 August 2012, paragraphs A7.3–7.7.

⁵⁴ PwC Observations on the assessment of audit profitability, 31 July 2012, Table 1.

hypothetical perfectly competitive industry in long-run equilibrium, a company would not make any profits in excess of what it needs to pay for its labour, capital and other factors of production.⁵⁵

78. It considered that in practice, economic profit margins in a competitive market were likely to differ from 0 per cent for a number of reasons. These reasons included:
- (a) a return on intangible assets that have not been quantified;
 - (b) extra risks borne by partners in an audit firm that have not been reflected in the cost of equity estimate, eg because they are not as fully diversified investors as is assumed within the CAPM framework;
 - (c) the industry or individual business may not be exactly in long-run competitive equilibrium;
 - (d) differing requirements for each business area on how much they are expected to contribute to the firm's overall costs (we have used fully allocated costs for our audit services); and
 - (e) some error in measuring audit profitability, given the need to use judgement (for example, in cost allocation).⁵⁶
79. PwC concluded that a 1 per cent 'economic profit margin' for its audit services over the last five years strongly indicated that profits were not excessive given these factors. In principle, it would be instructive to benchmark this 1 per cent audit economic profit margin against similarly calculated margins for comparable companies in other effectively competitive industries. However, because it had not identified any appropriate comparators, it had not carried out such analysis.⁵⁷

⁵⁵ PwC [Observations on the assessment of audit profitability](#), 7 August 2012, paragraph 4.7.

⁵⁶ PwC [Observations on the assessment of audit profitability](#), 7 August 2012, paragraph 4.8.

⁵⁷ PwC [Observations on the assessment of audit profitability](#), 7 August 2012, paragraph 4.9.

CC discussion—adjusted ROS

80. The method proposed by PwC requires a similar approach to assessing the distributable profits as for the ROCE analysis because cost allocation and partner salary are still key assumptions. The method requires the application of an appropriate WACC to an appropriate capital base this therefore involves similar issues to those for a ROCE-based approach. The question is then whether the profit after a deduction of a return on tangible assets/invested capital would leave an adjusted ROS figure that could be assessed in a more meaningful way than a ROCE figure. The method proposed by PwC addresses the issue of investment made by the firms, by assuming that invested capital was a proxy for tangible assets.
81. The theory that taking into account an appropriate return on a meaningful asset base and adjusting profits accordingly would lead to an expectation of no additional profits is correct. Dividing any remaining return by sales to give a percentage metric is only helpful if there is a benchmark against which to compare it. We agree with PwC that finding a suitable benchmark is difficult. We considered similar calculations for law firms, although such an exercise would require an assumption about the appropriate salary for a law firm partner (we discuss the comparability of law and audit firms in the Profitability – part 2 paper). Without a benchmark, PwC's resulting figure of 1 per cent is difficult to interpret. The argument that the adjusted ROS is overstated as the capital invested does not reflect any element of retained profit has some merit, but it is difficult to assess the scale of any effect.
82. Review of PwC's methodology and the figures in Table 6 highlights the sensitivity of the analysis to the assumptions made as [✂].

83. We note, for example, that if the PwC benchmarked salaries were say 10 per cent overstated, the 'economic profit' across the period would be in the region of £[~~3~~] million (rather than £[~~3~~] million).
84. PwC's cost allocation to its audit business may well be correct but we note that the difference in net margin for the Big 4 firm's Assurance net margins varies over the period 2007 to 2011 (see Profitability – part 2 paper).⁵⁸ Whilst some of this difference in net margin (which is measured pre- partner salary costs) may be offset by differences in invested capital and hence the return on that capital to be deducted from the net margin or because of differences in the number of partners (or differences in their salaries) between firms, an initial review suggested that this would not align the returns of the Big 4 firms (in particular Deloitte maintains a higher margin than the other Big 4 firms). We would not expect the firms to have perfectly consistent returns; however, the scale of this difference calls into question the comparability of the cost allocation methods used by the firms.
85. Given the difficulties in assessing an appropriate cost allocation (as discussed above), the difference in net margins (pre-partner salary costs) of the Big 4 firms, the variation in potential benchmark salaries for partner (see paragraph 45) and the sensitivity of any adjusted ROS to those assumptions, we do not think that an adjusted ROS can be accurately computed and assessed against a suitable benchmark. There are a wide range of assumptions that could be used for such an assessment.

⁵⁸ Net margins here are calculated on the basis of billable revenue, less the costs of employing staff in the service line, the direct costs of the service line and any allocation of central costs. Notional partner costs have not been deducted.