Oxera

Ideas on profitability assessment: statutory audit services market investigation

Presentation to the Competition Commission

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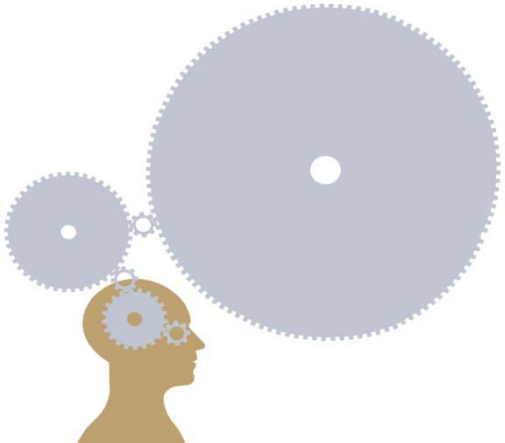

Overview

- entry profitability model
- indicators of profitability
- investor interviews

Context

- assessment of profitability of entry/expansion into large company audit formed part of Oxera's 2006 and 2007 reports for the FRC/DTI and European Commission[1]
- similar exercise could be undertaken for current CC inquiry
- sheds light on the question of profitability/likelihood of investment by mid-tier firms
- link to remedies through one key variable in model: frequency of tendering

[1] Oxera (2006), 'Competition and choice in the UK audit market', prepared for the Department of Trade and Industry and Financial Reporting Council, April. Oxera (2007), 'Ownership rules of audit firms and their consequences for audit market concentration', prepared for DG Internal Market and Services, October.

Entry profitability model (Oxera, 2006)

Structure of the costs of entry

- a significant jump in the size of audit client(s) (eg, straight to the bottom of the FTSE 100) requires *prior* investment
- with some economies of scale across a number of such clients (as well as the perception/reputation chicken and egg problem)
  - lumpiness of resource requirement
  - ability to rotate audit partner
  - technical infrastructure/capability
  - international network and group/subsidiaries audit capability
- timing gap between investment and return is critical

Entry profitability model (Oxera, 2006)

Structure of the costs of entry

- incremental movement up the client size scale
  - reduces the additional investment costs needed at any one time
  - reduces the time delay between investment and return
  - reduces the perception/reputation chicken and egg problem
- time to reach full Big Four substitution capability is considerable
  - interaction with the time horizon of partners (as source of investment finance)

The entry model (Oxera, 2006)

- business case based on data from audit firms
  - model of immediate FTSE 100 entry
  - model of step-wise entry, based on building reputation

    Step 1 Foothold in the lower end of the FTSE 250 market by gaining up to ten medium-sized clients

    Step 2 Expanding and consolidating its position in the FTSE 250 market by acquiring up to 20 additional clients

    Step 3 Foothold in the lower end of the FTSE 100 market by gaining up to ten large clients, but not clients in banking or insurance

- strong assumption that entrant has same probability as Big Four of winning a tender
  - but assumes that tendering rate remains low (c. ten per year in FTSE 250)

The entry model: results (Oxera, 2006)

- immediate FTSE 100 entry seems unlikely
- even foothold in FTSE 250 (beyond small number of mainly domestic clients) is difficult
- currently expanding to challenge the Big Four may not be profitable (at least in the short run)
  - building reputation, international network and expertise takes time and investment
  - model abstracts from problem of international coordination and assumes generous level of revenue per client
- low switching rates and importance of reputation make entry difficult

Example results from the 2006 report

Table 6.4 IRR (%) sensitivity to assumptions on initial investment, FTSE 250 foothold (step 1)

	Probability of success (%) = (1 – probability of downside scenario)				
Initial investment (£m)	**30**	**40**	**50**	**60**	**70**
£10m	–3.0	0.7	3.9	6.6	9.1
£15m	–7.8	–4.4	–1.7	0.7	2.9
£20m (£2m x 10 years)	–10.8	–7.8	**–5.2**	–3.0	–1.0
£25m	–13.1	–10.2	–7.8	–5.7	–3.8
£30m	–14.9	–12.0	–9.7	–7.8	–6.0
£50m	–19.5	–16.9	–14.9	–13.1	–11.5

Source: Oxera calculations based on the interviews.

Intervention to move the outcome towards top right

The entry model: implications (Oxera, 2006)

- process of movement (or lack thereof) up the client size range is important
- expansion with (growing) clients/acquisition of new clients both potentially important
- tender success rate and tender opportunities have significant impact on economics of expansion
- incremental expansion—better economics but longer timeframe to achieve additional capability and capacity at the FTSE 100 level

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Ideas on assessing profitability

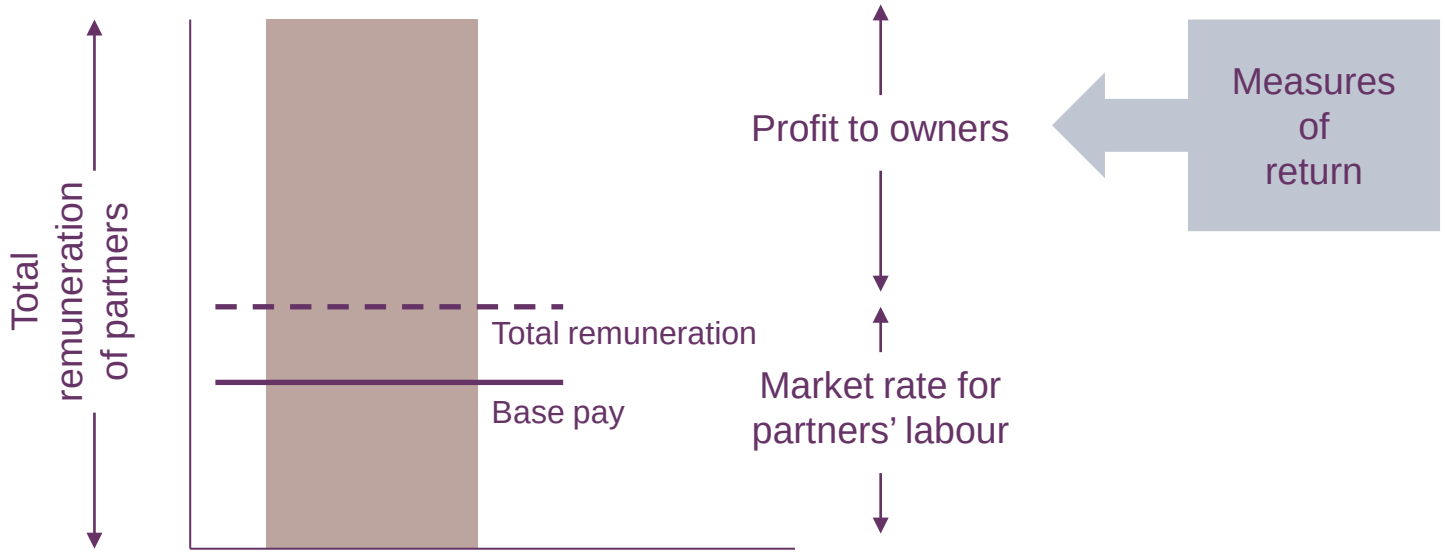
Introduction

- IRR/WACC subject to measurement problems
  - but IRR/WACC framework is thought superior to alternatives that ignore investment and risk (Return on Sales, RoS), and should be given weight
- basic idea:
  - if competition in this market is not working well, what do we expect to observe?
    - eight suggested indicators (alternatives to RoS)
  - we assume for now no limitations on access to data

Ideas on assessing profitability

Key concept: profit to owners

- assessment of profitability requires estimation of true return to owners



Ideas on assessing profitability

Indicators (I)

1. intangible assets valued as capitalised costs, and measured as ‘balancing factor’ in IRR/WACC equation
   - hypothesis: asset base required to support IRR in reasonable range is comparatively large
2. relative investment (Big Four versus mid-tier) as explanation for current market structure
   - hypothesis: level of economic investment (capitalised costs) is insufficient to explain entry barriers/high profits
3. implied equity beta
   - hypothesis: volatility of audit revenue does not support a high implied systematic risk

Ideas on assessing profitability

Indicators (II)

4. variations on price-concentration analysis
   - hypothesis: +ve coefficient on price-concentration and profit-concentration; no +ve coefficient on quality-concentration
5. distribution of within-firm remuneration
   - hypothesis: relationship between fees and rewards is disproportionally biased towards owners of capital (partners)
6. profitability in industry sectors where the provision of audit services is concentrated versus in sectors where it is not
   - hypothesis: profits are higher in more concentrated segments, and lower where B4 and mid-tier compete

Ideas on assessing profitability

Indicators (III)

7. long-term time-series analysis of Big X premium (price, profit or pay)
   - hypothesis: B4 premium has increased with consolidation
   - attempt to control for other explanations by (for example) matching with levels of investment and changes to partner:non-partner staff ratio
8. partner IRR
   - hypothesis: the IRR of partner remuneration, from initial equity investment to retirement, may show high returns

Ideas on assessing profitability

Conclusion

- given difficulties with IRR/WACC, suggest a range of profitability indicators required
- individually, these indicators are imperfect, but their imperfections are heterogeneous
- therefore, if these indicators point in the same direction, it may be reasonable to draw inferences on market power

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Investor interviews

- Oxera will undertake a series of structured interviews with investors
- the questions and sample have been shared with the CC
- the results will be reported to the CC

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