CRA Competition Memo

Oracle/PeopleSoft: assessing competitive effects

In the early years of an antitrust system, market definition and structural analysis – i.e. analysis of competitive effects based on market shares – usually tend to dominate. But as the system matures, the structural approach tends to give way to a more economically sophisticated analysis of competitive effects. The *Oracle/PeopleSoft* merger provides an illustration of this trend, and gives a flavour of the type of analysis we can expect to see increasingly often as the European Commission applies the new EC Merger Regulation (ECMR).

Oracle/PeopleSoft, at over 12 months from notification to decision, was the longest proceeding in the history of EU merger control.[1] There are many facets of interest: it was a true "gap" case as it was decided under the old ECMR, but fitted neither the traditional single dominance nor collective dominance (coordinated effects) models.[2] Moreover, it involved an interplay between the EU process and evidence brought out in simultaneous court proceedings in the US, where a federal court in San Francisco defeated the DOJ's attempt to challenge the merger. It was also characterised by the collection of a substantial amount of new evidence (both from the US trial and from Oracle) at a very late stage in the EU process, facilitated by a 6-month "stop the clock" period.

But in this memo we concentrate on the competitive effects analysis that led the Commission to its eventual clearance decision, which well illustrates the decline of traditional structural analysis in favour of economics-based analysis of effects.

Background to the transaction

Oracle is the world's second largest supplier of software, after Microsoft. Its traditional strength is in database products, which are a key part of the infrastructure on which business software applications run. In recent years, Oracle has also become a major supplier of enterprise application software (EAS), the software that is used to automate a wide variety of business processes, including areas such as accounting, human resources management, manufacturing processes, supply chain management and customer relationship management.

The worldwide leader in EAS supply, by some distance, is the German company SAP, which is among the foremost suppliers in all the major areas of EAS. PeopleSoft, the target of Oracle's hostile bid, was a pioneer in the development of human resources (HR) software, but has expanded into all the major areas of EAS. Overall, the worldwide EAS industry remains highly fragmented, but the competition agencies on both sides of the Atlantic feared that an Oracle/PeopleSoft combination would bring together two of only three serious players in a segment of the industry, especially in relation to HR and financial management systems (FMS) software.

"High end" market definition

Both in the US and in the EU, the agencies' concerns focussed on the "high end" of HR and FMS supply – defined in terms of product features and capabilities; and in terms of the size and complexity of the customer organisation.[3] EAS transactions are concluded by individual negotiation, and the agencies' aim was to identify a subset of transactions that could be regarded as a single relevant market, corresponding to the "high end". This was where the agencies saw the greatest overlap between the merging parties, and the least constraint from rival vendors.

The Commission's approach was based on a general view that SAP, Oracle, and PeopleSoft are particularly prominently represented in the largest HR and FMS deals, involving supply to the biggest customers; and that these three vendors' products are generally technically superior to other vendors' offerings. In accordance with this view, the Commission defined a separate relevant market for "*high-function EAS purchased by large enterprises with complex needs*". This definition has a customer-related dimension ("large and complex enterprises" – defined for practical purposes as organisations with over 10,000 employees and/or with revenues of at least €1 billion); and also a product-related dimension ("high function" – notionally related to the capabilities of the product, but identified for practical purposes by contracts involving at least €1 million in net new license revenue).

Not surprisingly, the Commission struggled to put the concept of the "high function" market into practice – in particular, it had to acknowledge the difficulty of finding meaningful criteria to use in order to draw the line between "high function" deals and others. Precisely the same issues arose in the US trial, where the judge emphatically rejected DOJ's attempt at defining a "high end" market:

> *the court cannot delineate product boundaries in multi-billion dollar merger suits based upon the mere notion that there is "something different" about the merging products and all others, especially when that "something different" cannot be expressed in terms to make a judgment of the court have meaning. More is required.*[4]

While the Commission's basic approach of defining a separate "high function" market did not change materially throughout its investigation, its conclusion on *who competes* in that market did change crucially. The Commission's hypothesis at the time of its Statement of Objections (SO) in March 2004 was that only SAP, Oracle and PeopleSoft

---

1 Lexecon Ltd advised Oracle throughout the EU merger review.

2 Many commentators argued that the old ECMR suffered from a "gap" in its scope of application, being unable to deal with cases that involve neither a clear market leader (single dominance) nor scope for coordinated behaviour (collective dominance).

3 The only area where the Commission and DOJ disagreed materially was on geographic market definition: DOJ argued for a separate North American market (which was rejected by the US court), while the Commission defined the market as global.

4 Final Order of Judge Vaughn Walker in *USA v. Oracle* (Case C 04-0807).

were credible suppliers in the market. By contrast, the final decision (October 2004) acknowledges that a number of other vendors – including Microsoft, which is one of the leading suppliers in the EAS industry overall, but less focussed on the largest customers – should be regarded as credible competitors for at least some customers in the "high function" market.

Unilateral effects assessment

Both the Commission's and the DOJ's substantive assessment of the effects of the merger focussed on unilateral (or "non-coordinated") effects – that is, on effects that would arise directly as a consequence of lessened competition between the merging parties, without any coordinated response from other rivals remaining in the market. A coordinated effects theory was unsustainable in the light of industry circumstances,[5] while a traditional single-firm dominance finding was similarly hard to justify in the light of the very strong position of SAP in the relevant markets, however defined. From an economic perspective, a unilateral effects analysis was clearly the most appropriate way of assessing the transaction, given the reality of competition in EAS supply.

In a unilateral effects analysis, the key questions are how directly the merging parties' products compete, and how closely they would be constrained post-merger by non-merging rivals. This determines the extent of any loss of competition resulting from the merger. The more closely the parties compete before the merger, and the less effectively others are able to constrain them post-merger, the more likely it is that the merger will reduce competition.

The investigation of these questions is well suited to empirical analysis. In the case of a market where prices are individually negotiated, as in the present case, the key empirical evidence takes the form of *bid data*, showing who is actually competing in individual bids, and what effect the presence of particular competitors has on the terms offered by the merging parties. Formal market definition is not a central issue when there are data that allow a direct assessment of the closeness of competitive constraint between the merging parties and others in the market, because market shares become largely irrelevant in this situation.

Economic analysis of merger effects

At the time of the SO, the Commission had only limited evidence on unilateral effects available to it. But nevertheless, it concluded provisionally that there was a serious prospect of anti-competitive unilateral effects. Its evidence consisted of data on a small selection of individual bids, supposedly showing close competition between Oracle and PeopleSoft, as well as two more formal economic analyses:

- an econometric analysis provided by PeopleSoft, claiming that there was a link between the number of bidders and the discount offered in a set of PeopleSoft's bids; and
- a theoretical merger simulation model, calibrated only on estimated market shares, predicting that a reduction from three to two bidders would harm customers by raising prices and reducing product variety.

[5] Coordination is implausible in the EAS industry owing to a combination of factors such as highly differentiated products and heterogeneous customer preferences, lack of transparency regarding prices and other terms offered, scope for disruption of any attempted coordination by "fringe" vendors, and the importance of technological innovation.

Neither of these provided economically robust or convincing evidence against the merger, and the Commission did not ultimately rely on either as evidence in its decision.[6] Instead, the Commission's decision was able to draw on a substantial amount of new evidence that had not been available earlier in the procedure – notably from the US trial, and from the additional bid data gathered by Oracle in response to the Commission's request after the oral hearing. Detailed econometric analysis of these new data sources formed an important part of the basis for the eventual clearance decision, despite the concerns expressed by the Commission earlier in the process.

We used the extensive bid data provided to the Commission by Oracle, covering hundreds of bids potentially falling into the "high function" markets, to perform a detailed econometric analysis that was submitted to the Commission. Our analysis addressed two key questions:

a) does the *number of rival bidders* systematically affect the discounts offered by Oracle?

b) does the *identity of the rival bidders* systematically affect the discounts offered by Oracle – in particular, does the presence of PeopleSoft lead to especially high discounts?

Thorough econometric analysis allowed both of these questions to be answered in the negative. The Commission accepted these conclusions in its decision, and agreed that the bid data offered no evidence in support of the hypothesis that a merger between Oracle and PeopleSoft would eliminate a particularly important and irreplaceable competitive constraint. While the use of bidding analyses to assess merger effects is not new,[7] both the scope of the econometric analysis in the present case, and the weight given by the Commission to its conclusions, were remarkable. Econometric bidding studies are now firmly established as a mainstream, powerful technique in unilateral effects cases.

Final observations

The EU review of *Oracle/PeopleSoft* ended with an unconditional clearance, despite the earlier issuance of an SO expressing strong concerns. This places it in a small group of cases where the Commission substantially revised its assessment between SO and final decision. The basis for the clearance decision – namely the collection and analysis of a significant amount of additional data after the oral hearing – was also highly unusual, as was the interplay between evidence aired in a US court and the analysis carried out by the Commission.

The Commission's willingness to accept new evidence late in the process, and ultimately reach an unconditional clearance after an adverse SO, suggests that the new system of internal checks and balances within the Commission is working. The central role played by sophisticated econometric analysis in the final decision is testament to the importance of the chief economist's team in major merger cases. Both of these are welcome developments.

December 2004

© Charles River Associates (published originally by Lexecon Ltd, prior to the acquisition of Lexecon by Charles River Associates)

[6] We provided the Commission with a detailed critique of the PeopleSoft econometrics. The Commission's decision agreed that the PeopleSoft results were unreliable.

[7] We have used econometric bidding analyses to predict competitive effects in numerous merger cases – for a description of an early example of the use of such techniques (in the 1997 *Boeing/McDonnell Douglas* case), see http://www.lexecon.co.uk/assets/boeing_mcdonnelldouglas.pdf.