May 2004

RBB Brief 14

RBB | Economics

Assessing Unilateral Effects in Practice: Lessons from *GE/Instrumentarium*

The recently published EC horizontal merger guidelines introduce the concept of non-coordinated effects into EC merger control.[1] Some commentators have claimed that the concept of unilateral effects is necessary to close the "gap" in merger control that is said to exist under the concept of single firm dominance. But regardless of whether the gap exists, one consequence of the introduction of the concept of non-coordinated effects is to open up a wide area of enforcement discretion beyond that envisaged by the proponents of the gap theory by reducing the market share threshold at which mergers might be considered to be problematic from the traditional 40% threshold to 25%.[2,3]

The guidelines justify this reduction in the threshold for regulatory intervention on the grounds that even at relatively low levels of concentration, horizontal mergers might remove an "important" competitive constraint. This raises an important issue as to how to distinguish "important" competitive constraints from "unimportant" ones. By definition all horizontal mergers involve firms active in the same relevant market and therefore remove some competitive constraint. In most cases, in line with the traditional analysis of single firm dominance, the importance of pre-merger competitive constraints can be assessed with reference to a firm's market share. However, as the guidelines note, where firms supply differentiated products some firms may be closer competitors than others.[4] The closer competitors the merging parties are, the more likely it is that a merger will give rise to significant unilateral effects.

The crucial issue, which is not addressed in the guidelines, is how to assess closeness of competition in practice. This is an important issue, since in many instances it is not clear a priori which products are closer to those of each merging party, let alone how to evaluate the relative strength of existing competitive constraints. This Brief illustrates how assessing such issues can be done in practice with reference to the GE/Instrumentarium merger, the most recent case in which the Commission explicitly assessed closeness of competition.[5]

Overview of the case

The GE/Instrumentarium decision approved the acquisition by General Electric Medical Systems (GE) of Instrumentarium, a leading hospital equipment manufacturer. The main market segments affected by the transaction included: patient monitors, C-arms, and mammography devices. Patient monitors were further distinguished between perioperative and critical care monitors.[6] In each of these markets, the merging parties faced competition from two large suppliers – Philips and Siemens – and a number of smaller firms, which were often present in only some national markets.

In each relevant product market, the merged entity would have enjoyed high market shares in a number of national markets (in some cases significantly in excess of 50 per cent). However, the Commission's analysis of the likely competitive effects of the merger went beyond a mere analysis of post-merger market shares by investigating whether those market shares either over- or understated the competitive constraint exerted by one merging party on the other. In assessing these issues, the degree of closeness of competition between GE and Instrumentarium was assessed in two ways:

– an analysis of win/loss data; and
– an econometric analysis.

We discuss each of these in turn.

1 See Guidelines on the assessment of horizontal mergers under the Council regulation on the control of concentrations between undertakings, DG COMP, 28 January 2004. The concept of non-coordinated effects is equivalent to the economic concept of unilateral effects and the two terms can therefore used interchangeably. The other economic concept of potential competitive harm is known as coordinated effects. Clearly, unilateral effects are distinct from coordinated effects and therefore fall outside the notion of collective dominance.

2 See for example, Vickers, *Merger policy in Europe: retrospect and prospect*, February 2004 who states that "numerous mergers could seriously jeopardise competition without crossing the threshold of dominant market power".

3 The HHI thresholds contained in the guidelines are set so low that they cease to provide an operational filter for merger control. For example, many mergers that reduce the number of players in a market from 9 to 8 will find themselves outside the guidelines' HHI safe harbours, since a market with 8 players will always have an HHI in excess of 1,000, and a merger between two firms with 11.5% each will exceed the guidelines' 250 HHI delta threshold.

4 Closeness of competition is defined with reference to the propensity of the customers of one of the merging parties to switch to products supplied by the other merging party. The greater that propensity, the closer competitors the two firms are said to be. See paragraph 28, EC Merger Guidelines.

5 Case COMP/M.3083 GE/Instrumentarium, 2/9/2003. RBB Economics acted as advisers to GE on this merger. Unilateral effects have also been assessed by the Commission in past cases (see, for example COMP/M.2256 Philips/Agilent, 2/3/2001).

6 Each of these products was defined to constitute a separate relevant product market.

Assessing Closeness: Win/Loss Analysis

A win/loss analysis can be usefully undertaken in those markets in which competition between suppliers takes the form of bidding for contracts placed by customers, and where, both the winning bidder and the identification of the runner-up can be identified. Such win/loss data offer complementary information to that provided by market share data because they help identify the strength of the competitive constraints on each of the merging parties provided by each existing competitor. If the two merging firms represent the closest competitors for one another, then one would expect the data to show that in those bids won by one of the merging parties, the other is the runner-up to a much greater extent than would be suggested by considering market shares alone.[7] If that were the case, absent any product repositioning on the part of the remaining suppliers, it is more likely that the post-merger entity could raise prices.[8]

In the relevant markets for critical care monitors, C-arms and mammography devices, the Commission accepted the results of analyses presented by the parties as providing evidence that the two parties were not each others' closest competitors. For example, the decision, in relation to the C-arms market, states:[9]

> "On the basis of bids where GE won, at the EEA level Siemens is reported as runner-up in [40-50]% of all cases, followed by Philips ([30-40]%) and Instrumentarium ([0-10]%). [Instrumentarium] occurs as runner-up less frequently than one would expect if all suppliers were equally close substitutes."[10]

The Commission therefore concluded that:

> "the bidding data presented by the notifying party tend to indicate that market shares in this case overstate the impact of GE's and Instrumentarium's combined market power to the merger."[11]

In the perioperative monitoring market, however, the interpretation of the win/loss analysis was complicated by the fact that until 2002 GE's monitors were distributed by Dräger, a German producer of medical equipment specialising in anaesthesia delivery systems. The analysis showed that in some countries – France, Germany and Spain – Dräger was the most frequently selected runner-up in those projects won by Instrumentarium. The parties argued that this evidence did not prove that GE represented Instrumentarium's closest competitor since the success enjoyed by Dräger/GE was due to Dräger's established anaesthesia products (which are often sold in combination with perioperative monitors) and its distribution infrastructure and not to the strength of GE's perioperative monitoring offering.[12] That conclusion was supported by the fact that, following the termination of the GE/Dräger alliance, GE's market position in the perioperative market in these three countries had deteriorated significantly, while Dräger's continued to be very strong. Indeed, Dräger's position in this market was expected to become possibly even stronger following the creation of a joint venture with Siemens.[13]

The Commission, however, ascribed the strong historic performance of Dräger to GE's influence and therefore reached the conclusion that in France, Germany and Spain, GE was the closest competitor to Instrumentarium. On this basis, the Commission considered that the merger would raise significant competition concerns in the supply of perioperative monitors.[14]

Assessing Closeness: Econometric Analysis

In order to test the issues further, the Commission considered a number of econometric studies that sought to estimate the degree of closeness of competition between Instrumentarium and GE. These studies were submitted by the parties and by a competing

7

In most circumstances, it is the second-placed bidder that effectively determines the price that is the result of a bidding contest. In order to win, a firm has to set a price that is just slightly more attractive to a customer than the next-best alternative – there is no incentive for the winning firm to set the absolute lowest price its marginal cost levels allow for if a higher price would also suffice to win the deal.

8

Of course it is also possible that the products offered by the third and fourth placed bidders represent sufficiently close substitutes to those offered by the runner-up that even in the absence of repositioning, the merger would not lead to a significant loss of competition.

9

See paragraph 244 of the Decision.

10

See paragraph 244 of the Decision.

11

See paragraph 245 of the Decision.

12

Dräger also sold perioperative monitors manufactured by suppliers other than GE.

13

See Case COMP M.2861 Siemens/Drägerwerk, 30.04.2003.

14

See paragraph 147 of the Decision. Note that the Commission's conclusion that the two merging parties were particularly close competitors was also based on the fact that GE and Instrumentarium tended to bid more often against each other than against other suppliers.

third party. In addition, the Commission also undertook its own internal analysis based on a database compiled from information obtained from each of the four major market participants. Each of these studies sought to address the extent to which the prices at which tenders were won were affected by the presence of other firms in the tendering process.

The rationale for this exercise was as follows.

- If the studies were to show that each merging party offers relatively higher discounts (i.e. a lower price) whenever the other merging party participates in the bid compared to the discount offered in those tenders in which the other party does not participate, then this would indicate that the merging parties currently exert an important competitive constraint on one another. This would in turn suggest that the proposed merger may be expected to lead to a post-merger price increase.
- Alternatively, if the studies were to show that the variation in the discounts offered by each merging party is largely unaffected (after taking into account all other relevant factors such as the size of the contract and the number of bidders) by the presence of the other merging party, this would indicate that there is nothing unique about the competitive constraint that GE and Instrumentarium exert on one another and that, therefore, the proposed merger would be unlikely to give rise to significant unilateral effects.

Econometric analysis using multiple regressions is ideally suited to address such questions. A regression analysis seeks to explain how changes in one variable (the "dependent variable") are explained by a group of other variables (the "independent variables"). In other words, by taking other important factors into account, it isolates the impact of the presence of GE on the discounts offered by Instrumentarium and vice versa.[15]

Consistent with the win/loss analysis, the results of the econometric analysis for the critical care monitor, C-arms and mammography markets showed that neither party had a significant impact on the size of the discount offered by the other party. For instance, paragraph 248, reads:

> "The results of this extended empirical assessment were that the presence of Instrumentarium as a bidder in the auction … does not appear to have had any systematic influence over the size of the discount offered by GE in its bids. In none of the models that the Commission estimated was the coefficient of the … variable capturing the presence of Instrumentarium in the auction statistically significant."[16]

In the perioperative monitoring market, however, the results of the various econometric studies were at odds. The study presented by GE's economic experts showed that the presence of GE in those bids won by Instrumentarium did not have a significant effect on the discount offered by Instrumentarium. That study also showed that Philips exerted the main competitive constraint on Instrumentarium's price. Conversely, the study presented by a third party showed that its own discounts were higher when both GE and Instrumentarium were participating in the bid than when one or both were absent was present. As the merger would eliminate the competition between GE and Instrumentarium, this would result in the third party (and presumably also GE) increasing its price post-merger.[17]

In a welcome and significant move to increase transparency, GE's economic experts were given confidential direct access to the data and analysis submitted by the third party and also that undertaken on behalf of the Commission. Such access permitted the kind of scrutiny of the robustness of the Commission's conclusions that has often been missing in past cases. Furthermore it revealed significant criticisms of the third party's econometric analysis.[18] In the event, however, this debate was never definitively resolved since the

15 Since in perioperative monitors GE's market share was much lower than Instrumentarium's, the focus of the analysis ought to be the impact of removing GE as a competitor on Instrumentarium's pricing behaviour.

16 See paragraph 248 of the Decision.

17 As an aside, one might question why a competing supplier would complain about a merger effect that would raise its margins, but the Commission apparently did not consider that this cast doubt on the credibility of the evidence.

18 In particular, the complainant's study could at best only provide an indirect assessment of the effects of the merger and not a direct assessment as the parties' own analysis.

Commission accepted the divestment of part of Instrumentarium's Spacelabs business, including its worldwide patient monitoring business, as a remedy to allay its concerns in this area.

What impact on post-merger prices?

An econometric analysis of the type described above provides some indication of the degree of cross-price elasticity of demand between the various products and hence assists in the assessment of the closeness of competition between the merging parties. However, it is important to note that this type of econometric analysis does not in itself provide an estimate of the likely impact of the merger on price. Such estimates can only be obtained at the price of imposing extreme assumptions as to the nature of competition between firms in the relevant market.[19]

19

See "The Emperor's New Clothes? – the role of merger simulation models", RBB Brief 12, January 2004.

Moreover, this econometric analysis, in common with all such analyses, does not take into account the possibility of either demand or supply side responses that might be expected to occur should the merged entity attempt to increase prices post-merger. These limitations were particularly relevant in the GE/Instrumentarium case. Even ignoring the criticisms of the complainant's econometric study, the fact that each of the main global players supplied a range of products that covered low end, mid-range and high-end perioperative monitors implied a strong likelihood of supply-side responses that would render the risk of a post-merger price increase much less likely. Indeed, no-where in the decision does the Commission articulate the source of the alleged closeness of competition. Furthermore, the risk that historic observations would not adequately capture the nature of post-merger competition is further accentuated by the changes arising from Dräger's switch in alignment from GE to Siemens.

Conclusions

The GE/Instrumentarium case illustrates that the explicit introduction of unilateral effects in EC merger control is likely to signal a much more data-intensive approach to the assessment of mergers. Although market shares will continue to represent central elements of the competitive assessment even in markets characterised by differentiated products, more attention will need to be given to assessing the closeness of competition between the merging parties. In some cases, the closeness of competition may be straightforward, but in most cases, this will not be the case and assessing the closeness of competition will inevitably require detailed empirical analysis. Merger analysis can never be reduced to arithmetic alone, and the GE/Instrumentarium case illustrates the need to analyse the market in its full commercial context.

As more emphasis is placed on such empirical analyses, it is important that all such analyses are properly assessed regardless of whether they are undertaken by the merging parties, the Commission itself or by third parties. This is particularly important for merging parties given the implicit extension of merger control to cover those mergers that would previously not have been seen as raising competition concerns. The steps the Commission took in the GE/Instrumentarium case to provide full access to not only its own analysis but also that submitted by third parties represents a welcome development.