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The Need for Reality Checks: An example from the Netherlands

On 31 May 2005, the Court of Rotterdam in the Netherlands annulled a decision by the NMa, the Dutch competition authority, concerning the proposed merger between electricity companies Nuon and Reliant.[1] After a detailed inquiry, the NMa had cleared the merger conditional on a structural remedy whereby the merged entity was required to auction a part of its electricity generation capacity to third parties for a period of five years. In the Court's view, however, the NMa had not demonstrated to a sufficient standard that the merger would lead to the creation or strengthening of a dominant position as a result of which competition would be significantly impeded.[2]

In common with those CFI judgments which annulled certain EC merger decisions, economic analysis was an important element in the Rotterdam Court's judgment.[3] The NMa's decision had relied on estimates of the impact of the merger on prices derived from simulation models. However, after subjecting these models to a "reality check", the Court was unconvinced that the results of the NMa's simulation models adequately reflected *actual* market outcomes.

This *Brief* reviews the bases on which the Court rejected the economic analysis undertaken by the NMa and discusses some of the wider implications this judgment has for the competitive assessment of mergers in all jurisdictions.[4]

Details of the Transaction

The Nuon/Reliant merger combined a large Dutch electricity generator and a large electricity distribution company that was also active in electricity generation in the Netherlands. The NMa's concerns focused on the horizontal impact of the merger in the market for the production and wholesale supply of electricity. Pre-merger, this market was served by five main players with market shares between 10 and 30 per cent, as well as a number of other participants. The merger would have given Nuon and Reliant a combined market share of between 20 and 30 per cent, similar to that of the two largest operators in the market.

As is the case with the competitive assessment of all mergers, it is important to understand the specific nature of competition in the particular industry concerned. The demand for electricity fluctuates significantly during the day and between days. Electricity cannot be stored and it is therefore necessary that at each point in time the total amount of electricity produced matches demand. On the supply side, electricity production is characterised by a number of generation units of different types (for example coal-fired, gas-fired or nuclear). Due to the different technical characteristics and input costs of each type of generation unit, there are substantial differences in the marginal cost of each generator. Nuclear plants, for example, have high fixed costs but relatively low marginal costs, and cannot be switched on or off at short notice. Other types of plants have relatively higher marginal costs but are also more flexible.

These different characteristics give rise to a "merit order" of plants whereby generation units with low marginal costs provide the base load electricity production and those with higher marginal costs are switched on only as demand increases during peak hours. In the Dutch wholesale market, operators submit bids to provide particular amounts of capacity at particular prices for each hour during the day, or for a period of consecutive hours. For each period the market is cleared at a single price determined by the

1 NMa decision of 8 December 2003, Case 3386 / Nuon – Reliant Energy Europe. Judgment of the Court of Rotterdam of 31 May 2005, LJN: AT6440.

2 This is the current test in the Dutch Competition Act. A proposal to amend the act to bring the test in line with the new test in the EC Merger Regulation (Council Regulation (EC) No 139/2004,) is currently before the Dutch parliament.

3 See for example Case T-342/99 Airtours v Commission, Case T-05/02 Tetra Laval v Commission, Case T-310/01 Schneider Electric v Commission.

4 One of RBB's senior economists was part of the team assisting Nuon during the detailed inquiry carried out by the NMa.

generation unit with the highest bid that is required to operate at that time. That market price allows plants with lower marginal costs to earn a margin over these costs.

The NMa's Analysis of the Proposed Merger

In its first, essentially qualitative, line of analysis, the NMa argued that there was scope for *strategic behaviour* in electricity production markets, particularly at peak times. At such times, an operator with various types of generation capacity may have an incentive to submit prices for some of its units well in excess of their short run marginal cost.[5] Such a strategy might result in higher market prices, either because one of these units is the price-setting unit, or because the strategy might change the identity of the price-setting unit to a plant bidding a higher price. Even though the operator might lose revenue from the unit for which the high bid is submitted (since it may be priced out of the market), this loss may be more than compensated by the higher market prices it thereby earns from its other generating units.

The NMa considered that the possibility of such bidding behaviour made it more likely that generators could behave in an anticompetitive manner and presented examples of electricity markets in other countries where, according to the NMa, such anticompetitive strategic behaviour had indeed been observed. Moreover, the NMa argued that that the scope for such anticompetitive bidding behaviour would be strengthened as a result of the merger.[6] On this basis, the NMa concluded that the merger would result in the creation or strengthening of a dominant position as a result of which competition would be significantly impeded.

Having set the scene with this first part of the analysis, the NMa went on to conduct a quantitative estimate of the impact of the transaction on prices. To this end, two external consultancies were commissioned to analyse the impact of the merger on prices using simulation models of the Dutch electricity market. Using different methodologies, both models predicted that the merger would be likely to result in price increases in the wholesale market (under base assumptions) in the order of 10 per cent. The NMa considered these predicted price increases to be robust and significant. In combination with its qualitative analysis, the NMa regarded the estimated price increases sufficient to justify a finding against the merger.[7]

Assessing the NMa's Analysis

The NMa's competitive assessment raises a number of important issues that have implications far wider than just this case.

The first issue concerns the meaning of "strategic behaviour". A significant basis for the Court's decision to annul the NMa decision was that the scope for strategic post-merger behaviour had not been proven to a sufficiently high standard. The Court pointed out that there was no evidence that such strategic behaviour was already taking place before the merger in the Dutch market. This led the Court to question the results of the modelling work that assumed that incentives for strategic behaviour were present both before and after the merger, and that these incentives would be strengthened. The examples from other geographic markets that the NMa had provided were not considered sufficient to overcome this objection.

The wider question raised by this discussion concerns what implications for the competitiveness of an industry that can legitimately be drawn from demonstrating that firms engage in strategic behaviour. Strategic behaviour can mean nothing more

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A decision to withdraw capacity (equivalent to bidding a very high price) can have a similar effect.

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The main reason for that assertion was that a number of "marginal" generation units (units that are often the last one to be used so that the price bid for those units subsequently determines the market price) that were previously owned by Nuon and Reliant would be brought under common ownership following the merger, increasing the strategic position of the combined portfolio. In addition, the advantage for the merged parties to withhold capacity would increase as a result of the greater amount of base load capacity under their control that would benefit from the higher prices.

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The NMa estimated that the merger would in the absence of remedies have resulted in an increase of the total costs of electricity paid by electricity users in the Netherlands of, under median assumptions, €600 million per annum.

than that firms when taking commercial decisions (including pricing decisions) take into account the likely reactions of their competitors. But this is true of nearly all real-world markets and by itself can provide no information as to whether competition is effective or not. That fact was recognised (in a non-merger context) by the UK's Competition Commission in a report which rejected proposals from the UK energy regulator to impose new restrictions on the bidding conduct of electricity generators.[8] The Competition Commission dismissed the regulator's request for additional regulatory powers to intervene against short term "market abuses" alleged to arise from such strategic behaviour, concluding that the exercise of market power would need to involve something more permanent that mere short term gaming of the generation market.

In short, even if the NMa had successfully demonstrated that strategic behaviour did exist pre-merger, this could not provide an alternative to a more detailed assessment of how the merger would affect the nature of competition.

The second issue concerns the appropriate use of market shares in the assessment of unilateral effects. The Court held that the analysis of the likely competitive effects of a merger must be related to the structural impact of the merger and in consequence the NMa's analysis of dominance should have taken account of market shares and market concentration indicators. The NMa acknowledged that the combined market share of the merging parties was only around 20 to 30 per cent, but drew attention to the specific features of electricity production and concluded, on the basis of these features, that a dominant position would be created or strengthened at certain times.

A merger is said to give rise to unilateral effects when it removes an important competitive constraint on one or both of the merging parties and in so doing permits the merged entity to increase prices regardless of the reactions of the remaining competitors. This raises an important issue as to how to distinguish "important" from "unimportant" competitive constraints. 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. The standard benchmark is normally held to be between 40% and 50%.

However, where firms offer differentiated products, as is the case in this industry, market shares do not necessarily tell the whole story. The NMa argued (at least implicitly) that market shares would understate the degree to which the two parties compete with one another. But the NMa provided no basis on which to make such claims except to point to the possibility of varying occasions of short term market power which could not be adequately addressed via a structural assessment. The Court correctly rejected such arguments.

The third, closely related, issue concerns the need to ground the use of simulation models in the basic facts of the industry. In its inquiry, the NMa relied heavily on simulation models to construct estimates of the impact of the merger on prices. However, the Court's ruling shows that an assessment of the impact of a merger on the basis of hypothetical actions that are not supported by actually observed behaviour by market participants does not meet the required standard of proof. The Court questioned the results of a model that was based on a presumption of a particular mode of per-merger strategic behaviour, without there being evidence of such behaviour actually occurring.

Proponents of merger simulation models argue that all merger analysis is "speculative" in that it requires assumptions to fill in the inevitable gaps that prevent us from forming a complete view of how the world would look after the merger. They argue that at least the assumptions in a simulation model are explicit to anyone who cares to look at the mechanics of the model itself. This is valid up to a point, but, as the Court rightly noted,

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AES and British Energy: A report on references made under section 12 of the Electricity Act 1989, Competition Commission, 2001.

the fact that simulations are based on complex mathematics and algebra does not excuse the authority from subjecting their conclusions to a reality check. On the contrary, the abstract nature of these models underscores the importance of doing so, especially since markets are invariably subject to dynamic influences that are not easily captured, and are frequently ignored, in these models.

The Nuon case illustrates this perfectly. The NMa had based its assessment on an increased scope for strategic behaviour following the merger and argued that there was already scope for such behaviour prior to the merger. Yet it was unable to demonstrate that such strategic behaviour was actually occurring, even though the model indicated that market participants already had both the possibility and the incentive to behave strategically in the pre-merger setting.

The fourth issue concerns transparency. The assumptions on which the predictions of simulation models are based can only be considered to be explicit when the authority's investigative procedures allow the workings of these models to be made available to all the key participants. The simulation models used by the NMa's advisers were subject to detailed discussions between the merging parties and the NMa. The transparency of the NMa's investigation was, however, significantly hampered by the fact that the models were confidential and that the merging parties were not given access to them. This meant that independent verification of the predictions generated by the simulation models was not possible. Instead, Nuon's advisers were obliged to create a "shadow model" that tried to replicate the results of the NMa's analysis but without detailed information on the precise specification of the authority's models.

The Court's judgment in the Nuon case confirms that this "black box" approach to merger control is not sustainable. Indeed, the lack of transparency in this case contrasts sharply with the way complex quantitative analysis has been handled in a number of merger cases before the European Commission. In recent high-profile merger cases such as *Sony/BMG* and *GE/Instrumentarium*, the economic advisers to the merging parties have been granted access to a confidential data room so that they can fully replicate and verify the economic analysis carried out by the Commission and/or third party complainants.[9] The way the EC Commission has responded by increasing the transparency of its procedures provides a model for the NMa to follow in this respect

9 RBB acted as economic advisers to the merging parties in these cases.

Conclusions and implications

The judgment of the Dutch Court represents not only a significant development in Dutch merger control but also offers a number of important lessons for merger control in general. Most important of these is the need to ground any theory of competitive harm firmly in the facts of the particular industry under investigation. As Mark Twain once noted: "Supposing is good, but finding out is better".