

Unclassified

English - Or. English

20 May 2021

**DIRECTORATE FOR FINANCIAL AND ENTERPRISE AFFAIRS
COMPETITION COMMITTEE**

Global Forum on Competition

ECONOMIC ANALYSIS IN MERGER INVESTIGATIONS

Summary of Discussion

9 December 2020

This document is a summary of the discussion held during Session III of the 19th meeting of the Global Forum on Competition on 7 – 10 December 2020.

More documents related to this discussion can be found at oe.cd/eami.

Please contact Mr. James Mancini if you have any questions regarding this document [James.Mancini@oecd.org].

JT03476743

Summary of Discussion

By the Secretariat

1. Introduction by the Chair

1. The **Chair** noted that economic analysis in merger investigation had been flagged in past Forum questionnaires as an important topic for delegates. He said this was understandable since merger reviews are fundamentally an economic exercise as well as a legal one. Economic expertise is necessary throughout a merger investigation, including in planning document requests and in reviewing the qualitative evidence, and not only in the quantitative analysis of the state of competition after the merger.
2. In applying economics to merger control, agencies face challenges in selecting the most appropriate methods of analysis; conveying complex economic arguments to lawyers, decision-makers, and courts; prioritising which cases to deploy their economic resources on; and integrating economic insight in the overall legal strategy of the case, for example when assessing the adequacy of remedies offered by the merging parties.
3. The expert panel consisted of:
 - **Herbert Fung**, Senior Director (Business and Economics) at the Competition and Consumer Commission of Singapore (CCCS)
 - **Guilherme Mendes Resende**, Chief Economist at the competition authority of Brazil, the Administrative Council for Economic Defence (CADE)
 - **Pierre Régibeau**, Chief Competition Economist at the European Commission
 - **Oren Rigbi**, Chief Economist at the Israel Competition Authority
 - **Jill Walker** (author of the background paper), a member of the Australian Competition Tribunal and former Commissioner at the Australian Competition and Consumer Commission (ACCC) and the New Zealand Commerce Commission (NZCC).

2. Expert presentations

4. **Dr Walker** explained that she had recorded a presentation of the background paper and therefore would limit her remarks to a few key points. Her views were not necessarily those of the Australian Competition Tribunal.
5. She echoed the Chair's point that competition law is economic law, and so economic analysis, including in merger review, must be central. However, because it is law, it is also essential that economists understand something of the legal framework. Their role is to apply economic reasoning to the evidence against a legal standard.
6. Merger review is distinctive because it is the "preventive medicine" of competition law, which seeks to prevent conduct that harms consumers before it happens rather than punishing it after the fact. Its forward-looking nature presents a challenge in a legal environment that is used to dealing with retrospective facts and evidence. Merger review is inevitably a matter of judgment, and economists should not offer false precision or predictive certainty.

7. Economics is important throughout the merger review process from initial screening to ex post review and provides the scaffolding with which to create the most coherent picture of the possible competition and efficiency effects. Dr Walker emphasised that economists should not rush to complex analysis. They should start with descriptive information and statistics about how the relevant market operates and the potential impact of the proposed merger, and then think about what analysis is both possible and useful, which are not necessarily the same thing.

8. **Dr Régibeau** praised Dr Walker's background paper and explained that he would talk about the use of economic models in merger reviews. Such models should provide an organising principle for the case, but there is sometimes a lack of communication between economists and lawyers about the limitations of theory and models, with the result that lawyers may advance arguments that lack sufficient basis.

9. He talked through three generalised examples where benchmark models are misused. The first was a merger within an oligopolistic setting with capacity issues, where a workhorse is the Bertrand–Edgeworth model assuming a homogenous good. It can be applied either by a full simulation based on mixed strategies, or more simply by considering which players are pivotal in the industry and whether the others have enough capacity to undo an attempt to increase prices. A case begins with the parties emphasising this approach and arguing that they are not pivotal. The authority discusses these questions but also examines concepts such as closest competitors and diversion ratios, drawn from a differentiated products framework. The parties' lawyers then argue that they are being denied a right of defence by the failure to identify which framework is to be used. Dr Régibeau said this was a ludicrous objection since real industries have features of both frameworks. Unless one builds a specific model for the industry, there is no choice but to use the two models flexibly to test the merger from different angles.

10. The second example was common in mergers in the airline industry, where it is not obvious that there are significant barriers to entry, but hard to identify potential entrants. The parties to a merger cite traditional contestability theory to argue that potential entry keeps prices low. However, the theory only holds if entry is more rapid than the price reaction, which lacks empirical support. A complete argument would therefore need to show why price reaction would be especially rapid.

11. Dr Régibeau's final example was of mergers in markets where imports are significant. Parties may cite models from international trade theory to argue that prices are constrained by imports, so that a merger even from three to two or two to one is not harmful. However, this depends on the level and flatness of the import supply curve. Direct evidence (even qualitative) that the parties compete for sales pre-merger would contradict the notion that imports determine market price. Also, some segments of the market may have greater access to imports than others. Thus, the model is only a starting point for a full argument that must also take account of these factors.

12. The Chair turned to **Oren Rigbi** for a positive example of useful economic analysis in a merger case. Dr Rigbi first briefly described the operation of merger control activity by the Israel Competition Authority (ICA). The merger control regime in Israel¹ is a suspensory regime, meaning that all mergers above a certain threshold must be ex ante approved by the ICA.

¹ This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

13. The ICA receives over 200 merger requests annually. Around 90% are approved after a short examination, while the remaining 10% go through a type two examination. 1.5% are rejected and a slightly larger share are approved with remedies. Mergers are handled mainly by the ICA markets department, which consists of 24 economists and lawyers in sectoral teams. The economic department provides support in more complex merger cases.

14. Dr Rigbi gave a case study of economic analysis in a merger request between a large hotel chain and single hotel located in the Red Sea resort town of Eilat in southern Israel², around 250km from the nearest major city and 350km from Tel Aviv. At the time there were 47 hotels in the resort of which nine belonged to the hotel chain concerned. The economic analysis had two key components: geographic market definition and estimation of the diversion ratio.

15. The merging parties claimed that the relevant geographic market included not only Eilat but islands in the Mediterranean that are popular with Israeli tourists and contain many similar resorts. On this market definition the standard concerns of unilateral effects would be mitigated, whereas if the relevant geographic market were only Eilat, an in-depth examination might be required.

16. If Eilat is in the same market, then local hotel prices should respond to exogenous variation to the availability or supply of hotels in the Mediterranean islands. The ICA identified a source of such variation in the variable timing of the week-long Jewish holiday of Sukkot in relation to the solar year. Depending on the lunar calendar Sukkot can fall between September 20th and October 20th. By October, many Mediterranean island hotels are closed but in Eilat the weather is still suitable for beach holidays and they remain open. The team collected data on the three years prior to the merger. They found that the number of Israeli passengers flying to the Mediterranean island destinations did indeed fall when Sukkot was in October, but hotel prices in Eilat were not higher in those years. Thus the ICA concluded that the geographic market definition should not include the Mediterranean islands.

17. The investigation moved on to estimating the diversion ratio in order to assess whether, in response to a price increase by the acquired hotel, the chain would recapture a high fraction of guests that would substitute away from it. This would raise concerns about unilateral effects on competition in the resort. The ICA collected detailed daily price and quantity data by room type from each hotel in Eilat for several years. To estimate how the number of guests in one hotel was affected by a price increase in another hotel, they used the number of group guests in a hotel (reflecting conference events) as an instrumental variable for the price of non-group guests in that hotel. The analysis found that the hotels of the acquiring chain would not attract a significantly disproportionate share of guests substituting away from the acquired hotel. This was one reason why the merger was approved.

18. The Chair turned to the **United States**, which had produced a very thorough and wide-ranging written contribution. He asked the delegate to present specifically on the use of economics in ex post merger assessment.

19. The US delegate explained that the US Federal Trade Commission (FTC) had announced a Merger Retrospective Program in September 2020. The program aims to evaluate how well the tools currently used in merger investigations would have predicted the impact of past mergers, so that in future cases FTC resources can be allocated efficiently and economic models chosen that are appropriate to the facts. The FTC will take data on

² The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

consummated mergers, apply its typical prospective tools to the pre-merger data, and then assess the predictions against the actual post-merger outcomes.

20. There is already a considerable body of work by economists from the FTC and DoJ in this area. One of the earliest looked at the performance of merger simulations in the airline industry. Another looked at screening methods (such as HHI, diversion ratios and upward pricing pressure indices) applied to hospital mergers to see which of them gives the best indication of the post-merger impact.

21. As well as merger simulations and other structural models, the US is also interested in studying reduced-form approaches. This is sometimes referred to as “Staples-type” analysis after an analysis of office supply chains in the 1990s. The idea is to use entry and exit events to estimate the impact of a change in competition on prices in the market, which can then be applied to merger analysis. A study of entry, exit and merger events in local grocery markets found that the price effects of entry and mergers in markets of similar concentration have a similar magnitude, which supports using entry events as a predictor of merger effects.

22. The delegate encouraged other jurisdictions to perform similar analysis and referred them to a bibliography and other resources on the FTC Merger Retrospective Program web page.

23. The **Chair** introduced the second part of the discussion, which was devoted to practical considerations for managing the economic resources in a competition authority or economics team.

24. **Guilherme Mendes Resende** of the Administrative Council for Economic Defence (CADE) in Brazil discussed the importance of a team of economists, ways of collecting information related to merger cases, and the use of qualitative evidence in these investigations.

25. CADE created its department of economic studies in 2009, since when there has been a significant improvement in both the quantity and the quality of its antitrust reviews including merger investigations. Staff numbers have doubled since 2015 to around 30, of whom eight work solely on merger review, with the intention of growing to 40 by the end of 2021. CADE also emphasises constant training to keep up to date with the economic analysis required by new challenges such as the digital economy.

26. The department has produced a guide to best practice in requesting quantitative data from companies based on its own experience. It deals with the need to collect data from different companies in a consistent and uniform way in order to analyse well-defined questions relating to the theory of harm at issue. A similar guide is in preparation for gathering qualitative information, which is often crucial in more complex merger cases.

27. Dr Resende felt it was important to make use of both qualitative and quantitative information in merger cases. This exercise may highlight areas where the two types of information contradict each other, requiring further information-gathering and analysis.

28. **Herbert Fung** of the Competition and Consumer Commission of Singapore (CCCS) discussed the question of allocating economic expertise to merger cases from the perspective of a smaller jurisdiction.

29. Mr Fung referred to his video, which gave a fuller presentation. His theme was: how to economise the economic analysis of mergers. As a relatively small agency, it is essential for the CCCS to take a pragmatic angle to merger reviews. However, this did not mean that he was advocating against doing more economic analysis or adopting more sophisticated tools to make the results more robust.

30. His first point concerned economising the need for conducting merger reviews. Many jurisdictions have mandatory merger review regimes while others have none. Singapore has adopted a compromise of a voluntary notification regime based on both turnover thresholds and market share thresholds. The authority recognises that over 90% of M&A transactions are competitively benign, but that just a few anti-competitive mergers can cause significant economic harm. The voluntary regime allows the authority to focus resources on those mergers that are the most likely to be harmful.

31. His second topic was economising the deployment of economists in merger cases. The CCCS does not have dedicated merger or investigation divisions but instead has a pool of lawyers and a pool of economists from which ad hoc case teams are formed. This system allows the CCCS to involve economists from the start of a case in designing surveys and reviewing information. The team's competition assessment and recommendation must be cleared by a college of seven management members consisting currently of four economists and three lawyers, and by a commission in which senior economists including the president of the Economic Society of Singapore are also represented. Mr Fung also noted that the CCCS draws in external economic experts in selected Phase II cases or appeals.

32. Mr Fung turned to economising the substantive review of mergers. In line with international best practice, Singapore has a two-phase merger review system. In Phase I the CCCS typically uses simple indicators such as market share thresholds as rapid screening tools to decide whether to clear the merger quickly or to proceed to Phase II. Mr Fung said that being a smaller jurisdiction presents opportunities as well as constraints: the CCCS can often examine economic evidence at a level of granularity that may not be feasible for larger volumes of evidence in larger jurisdictions. For example, in a merger of kidney dialysis centres, they were able to examine commute patterns of patients across different parts of Singapore as part of the geographic market definition analysis. In a merger of shipbuilders, the paucity of data points meant that the CCCS was able to analyse individual tenders and rivalries extremely closely.

33. With regard to economising quantitative analysis, Mr Fung cited the analysis of the completed merger of Grab and Uber, in which the data provided natural experiments of price increase and substitution that obviated the need for economic modelling. Other key evidence was the due diligence reports of the parties' financial advisors containing very detailed financial projections of price, quantity and cost driven by efficiencies that the merger parties expected to achieve.

34. Summing up, Mr Fung said that economising economic analysis is neither purely expansionary nor contractionary, but rather involves optimising in order to achieve the best outcomes for the least resources. This approach, he said, was key to understanding Singapore's voluntary measure notification regime.

3. Questions & Answers

35. Following the invited presentations, the **Chair** opened the discussion with a question about the relationship between the use sophisticated econometrics in the analysis of merger cases and the legal burden of proof involved. He recalled a merger case in Spain some years previously where the competition authority had used sophisticated models that showed that there were several scenarios under which prices would increase, but that this was not certain. The courts overturned the decision to block the merger on the grounds that the authority's findings did not meet the required standard of proof.

36. **Dr Rigbi** recommended starting with the simplest method and moving to more complicated ones only if it could not do justice to the issues presented by the merger.

However, he also noted that it was not always up to the competition agency since the merging parties might choose to use sophisticated methods which the agency would then have to match. He agreed that it can be very difficult to make econometric methods comprehensible to a court.

37. **Dr Régibeau** said the question raised the broader issue of the relationship between probabilities in economics and the concept of burden of proof. He said that personally he turned to sophisticated methods for confirmation if he felt uncertain about the basic economic issues at stake in a case. There is then a choice to be made about whether this analysis is kept out of the decision, published as an appendix, or placed at the core of the argument. He urged caution about the third option.

38. **Mr Fung** said it was important to convey that economic analysis is based on facts and evidence, not just subjective or theoretical arguments. He also said it was important to make decisions understandable to the public as well to lawyers. If an analysis can be translated into comprehensible terms for the public, it should certainly be understood by lawyers.

39. **Dr Walker** commented that the issue of burden of proof underlined the unique nature of merger analysis as a forward-looking exercise. Merger simulation cannot give precise scientific predictions and can create problems with the courts by setting an expectation of precision that cannot be delivered. There are no certainties, only likelihoods, in merger review and it is therefore important for economists and lawyers to work together to put the data, the documents and the witness evidence into coherent whole.

40. The **Chair** put a second and final question to the panel, which asked the experts to comment on the risk of “garbage in, garbage out” in sophisticated modelling such as upward price pressure analysis using financial and accounting data.

41. **Mr Fung**, who had previously worked as a banker, said there was a trade-off between accepting data from financial statements which are subject to accounting policies, accruals methods etc., and attempting to adjust the data to better reflect the economic situation. The economic value-added approach uses sophisticated techniques to translate operational profits into net operating profit before tax, but is controversial. He said that the decision whether to use such methods was similar to the decision whether to use formal economic modelling in a competition case.

42. **Dr Resende** repeated that it is important to be very precise in requesting data from companies and cross-checking with public datasets where possible.

43. **Dr Walker** fully agreed and said that the background paper made the point that understanding and preparing the data, making sure it is useful and reflects the reality of the market, is a vital step.

44. The **Chair** thanked the panel and participants and closed the session.