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MERGER CONTROL IN DYNAMIC MARKETS

-- Summary of Discussion --

6 December 2019

This document prepared by the OECD Secretariat is a detailed summary of the discussion held during Session III of the 18th meeting of the Global Forum on Competition on 5-6 December 2019.

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

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Summary of Discussion

By the Secretariat

1. On 6 December 2019, the Global Forum on Competition held a discussion on merger control in dynamic markets chaired by Mr. Pedro Gonzaga. The topic was also discussed in breakout sessions focused on the competitive assessment of mergers, efficiency effects and the design of remedies, and in a subsequent recap plenary session.

1. Morning Session

2. **The Chair** introduced the topic by noting competition authorities face considerable challenges when addressing mergers in dynamic sectors, such as high-tech, consumer services, media, online retail etc., which are characterised by high entry and exit rates, disruptive innovation, and continuous development of new business models. Competition authorities' decisions tend to focus on the relatively near future, albeit the importance of preserving dynamic competition in rapidly evolving markets in the long run. The discussion will focus on the tools and methodologies for defining the relevant timeframes for merger control, and on the adaptation of the merger review process to better assess and address mergers' medium and long-term effects without resorting to speculative exercises.

3. The Chair introduced the panellists: **Giulio Federico**, head of unit, Chief Economist Team, DG COMP, European Commission; **Geoffrey Manne**, president and founder, International Center for Law and Economics and fellow at Northwestern University's Center on Business and Economics; and Professor **Helder Vasconcelos**, professor of economics and vice-rector at Porto University, a former member of ANACOM – the Portuguese telecom regulator and a consultant for the Portuguese competition authority. The Chair asked the Secretariat to present the findings of the background note.

4. **The Secretariat** noted that it is generally accepted that competition fosters innovation, despite some arguments to the contrary and some ambiguous empirical evidence.

5. Horizontal mergers can reduce actual or potential competition in a market, but they also generate efficiencies. Efficiencies are unlikely to sufficiently mitigate competitive harm in static markets characterised by relatively little innovation. In dynamic markets, however, it is more challenging to predict the long run outcome of the trade-off between competitive harm and efficiencies. For example, a merger in a competitive market may benefit consumers in the short term, but may also reduce competition in dimensions of innovation which would eventually reduce competition over future products. In contrast, there may also be cases where short term anticompetitive effects are mitigated by dynamic efficiencies or competitor entry. Enforcement decisions are therefore prone to both "type I" and "type II" errors.

6. Regarding the adjustment of traditional tools for the purpose of assessment of mergers in dynamic markets, the background paper's first key finding is that assessment should focus on substitutability. To go beyond the short term, some authorities analyse the merging parties' future plans to develop products and expand to new locations. But to assess competitive effects over an even longer timeframe, competition authorities should consider overlaps in innovation resources and capabilities (e.g. IP rights, skilled labor, etc.).

Second, competition authorities should consider the development of market share over time, rather than focus on current shares. Third, assessment of barriers to entry is crucial for evaluating long-term competitive harm, but since it is difficult to obtain direct evidence related to entrants entry and exit costs, competition authorities tend to rely on indirect evidence for this purpose. Forth, efficiency effects are especially important in the analysis of dynamic markets especially considering the link between competition and innovation. Sometimes, even mergers that increase concentration can enable the merging parties to achieve economies of scale in R&D activity, to appropriate inefficient spillovers and create profitable exit strategies for entrepreneurs, and thereby lead to additional innovation. The burden of demonstrating such efficiencies are verifiable and merger-specific rests with the merging parties. Finally, where uncertainty is significant, competition authorities may consider flexible remedies to tackle competitive concerns, for example, remedies that are contingent on market evolution, lack of entry, the development of new technologies etc.

7. **The Chair** gave the floor to Helder Vasconcelos.

8. **Helder Vasconcelos** noted that it is generally believed that *ex ante* competition fosters innovation, but that it is also important for innovators to reap the rewards from their investments *ex post*. Empirical research on the link between market structure and innovation is mostly inconclusive, but competition appears to have a positive effect on productivity thanks to higher investments.

9. The literature concerning the relationship between mergers and investment highlights the importance of analysing non-price effects, in particular effects on incentives to invest and innovate. This relationship was discussed in the context of a recent stream of mergers between cellular network operators, who argued that these mergers would allow them to achieve economies of scale and to increase their profitability to a level that would enable to them to invest in their networks. However, it is unclear whether the argued efficiencies were merger-specific, as they may have been achieved in other, less restrictive, means; moreover, further empirical research suggests that competition provides incentives to invest.

10. He noted that waves of mergers are more likely to occur in dynamic markets, that while each individual merger's negative effect may be limited, their combined impact may be significant and that the requirement under competition law that mergers be reviewed sequentially creates problems.

11. The question raised in respect of the relevant timeframe from merger control is whether competition authorities should focus on the one-shot deviation from the current market structure caused by the merger (which may also lead to subsequent mergers), or whether they should attempt to anticipate the approval's effect on the market's ultimate structure. The latter approach is considerably more challenging.

12. He stressed the importance of addressing questions related to data, which should be considered as a commodity. The combination of data sets can facilitate price discrimination – a practice that could have different welfare implications, depending on the context. In addition, network effects may be amplified in data driven markets. He noted that consumers' consent to provide data to a given firm does not necessarily cover the sharing of that data with a merging firm.

13. The issue of notification thresholds has recently gained much attention because of concerns about so called "killer acquisitions", where big firms buy acquire small firms which have the potential of becoming future strong competitors. Two countries have introduced transaction value thresholds in order to tackle this issue. While there may be room for concern, further research is necessary in order to understand the welfare implications of such mergers. There is a risk that such mergers would prevent new and improved products from reaching consumers; however, prohibiting such mergers could

have significant adverse effects on small firms' incentives to innovate in the first place. Policy choices are likely to influence the type of innovation that occurs: recent research demonstrated that merger policy can trade-off incremental innovation and competition within the market, against breakthrough innovation and competition for the market. Finally, firms may have the ability to circumvent transaction-value based thresholds. There may be room to consider adopting a lower threshold for R&D intensive industries, which could be identified based on different indicators such as those proposed by John Sutton.

14. Regarding remedies, the European Commission seldom intervenes in mergers. Standard divestiture is prescribed only in a minority of these cases, despite it being considered the primary remedy according to the Commission's remedies guidelines. The Commission is apparently resorting to more complex and creative remedies over time, but these are untested, and they risk of failing to adequately correct anticompetitive effects. Remedies whose implementation is contingent on market development may require constant monitoring of the market, and their administration may require competition authorities to assume the role of sector regulators. The use of capacity-based mobile virtual operator network (MVNO) remedies in the European Union is an example of the implementation of an untested remedy which risks failing, considering the rapidly changing nature of the industry and that its success depends on the MVNOs' access to incumbent operators' networks.

15. An *ex post* evaluation of interventions is necessary, considering the uncertainties associated with their implementation. Such an evaluation should consider, first, whether the intervention's objectives were fulfilled; second, it should test the effectiveness of the prediction techniques used in the process of merger review; and third, it should foster accountability. Such evaluation are especially important in dynamic markets because of the difficulty of identifying the right counterfactual to test against, and also because non-price effects are very relevant in such markets. For the latter reason, qualitative methodologies should be implemented in such *ex post* evaluations.

16. Regarding digital ecosystems, the industry is essentially comprised of three layers: equipment producers, telecom operators which provide access, and the service layer where applications and content are provided. Most of the value is generated and most of the innovation occurs in the service layer, which is essentially free-riding on the access provided by the telecom operators. The latter may have insufficient incentives to invest in their networks considering their inability to monetize the service layer.

17. The firms operating in the digital sector are mostly multi-sided platforms, which serve at least two groups of consumers, and which are characterised by indirect network and cross-group externalities. For example, internet service providers (ISP) connect consumers with content providers while over-the-top (OTT) players connect consumers with advertisers. Tracking multiple prices charged from different types of consumers raises complicated issues in this context. Typically, consumers on the side which creates more significant network externalities are charged a lower price or even nothing at all, but this does not imply the absence of a market. Interestingly, OTT players and ISPs may belong to the same market.

18. Substitutability is the criteria for market definition in this sector. Multiple technologies serving the same purpose should be considered substitutable. Performing a SSNIP test in this sector is complicated since all possible substitutes should be considered. For example, OTT services and voice calls may be substitutable.

19. In conclusion, there is ample discussion on whether consolidation is required to encourage investments in this sector and about the trade-off between investment and regulatory intervention. When dealing with this sector competition authorities must adopt

a broad perspective and devote attention not only to the layer in which mergers are taking place, but also to the merger's effects on other layers. Additionally, competition authorities should cooperate with national regulatory authorities which can provide a significant contribution to the design of remedies.

20. **The Chair** asked Helder Vasconcelos how competition authorities should account for the prospect of a given merger leading to subsequent mergers and whether, considering his view that competing technologies belong in the same market, Google Android and Apple should be regarded as competitors.

21. **Helder Vasconcelos** noted that his work with Massimo Motta on the "efficiency offence" argument addresses the possibility of a merger generating such efficiencies that competitors may be unable to remain on the market unless they merge as well. The idea would be to try to account for the ultimate market structure when analysing the first merger, rather than focus on the immediate deviation from the current market structure. This is however a very complicated exercise to perform. As for competition between technologies, he explained the question raised was very complex, and clarified that what he had in mind was competition between WhatsApp and classical telecom operators.

22. **The Chair** then gave the floor to Giulio Federico.

23. **Giulio Federico** stressed that conducting a merger investigation with a clear theory of harm in mind helps focus the investigation and guide the empirical assessment and the collection and weighing of evidence.

24. Dynamism is a feature of most markets, and the analysis of dynamic competition is key in almost any merger assessment. Digital markets have been in focus, but there has been relevant enforcement practice in sectors like defence, pharma, agrochemicals, oil equipment, semiconductor manufacturing, airlines etc. The object of competition is for firms to capture rivals' sales, including future sales, and protect their own. Firms therefore seek to lower their future costs and prices and to introduce new and better products. A merger leads to the internalization of business ceiling effects (or the costs of competition between the merging firms) and is essentially an agreement between firms to coordinate all competitive parameters, including dynamic ones like future prices and innovation efforts. The intensity of competition between the merging firms is naturally reduced, and absent countervailing effect, a merger between close competitors could significantly harm competition and hinder the dynamic competitive process.

25. Competition authorities tend to focus on static effects that are simpler to assess, but merger control applies to dynamic competition as well, and the challenge of increasing the focus on dynamic effects is mostly practical and not conceptual. The standard checklist used in merger review is applicable to dynamic effects as well: are the merging parties significant and close competitors? Are there overlaps in activities today or in capabilities to innovate in the future? How concentrated is the innovation space? Is the business ceiling effect large considering fewer competitors will remain in the market post merger)? How high are barriers to entry to innovation and R&D? How likely is innovation to occur from unexpected sources from outside the market? How likely is disruptive entry? In practice, one should look at the merging parties' current overlaps in product markets and development pipelines, and even higher upstream – in research and R&D capabilities, and to assess whether other close competitors are present in the overlapping areas. A product currently being developed may compete with an existing one; it is therefore important to look both within and across the different stages of the competitive process. As for the sources of evidence, in some cases there is ample information on product pipelines, in others, data on patterns may indicate where the parties have strong innovations capabilities. Sometimes internal documents detailing firms' perceptions of their rivals are the best

source of information. The key is not only to identify current overlaps, but to predict where future overlaps could be created by competitive dynamics absent the merger.

26. While the economic analysis presented is rather straightforward, the economic literature is misrepresenting and provides little guidance. This literature usually focuses on links between innovation and concentration, but the latter is not always a result of mergers. Further, the literature often analyses exogenous symmetric variations in downstream market competition, and then tries to infer the impact of those downstream competition effects on upstream innovation. But mergers bring rivals together in both the upstream innovation and downstream product markets, but reality is very different from the simple models discussed in the literature. Some recent literature demonstrates the adverse effect of horizontal mergers on both static and dynamic efficiencies. Even in models which result in increased innovation, an even greater increase in prices and overall lower consumer welfare are observed. Rather than focusing strictly on future innovation, the focus should be on future competition and consumer welfare.

27. The scope of procompetitive effects in dynamic mergers is relatively greater, since the parties may have ample time, post-merger, to transform the combined entity into a more efficient competitor. It is important to apply a consistent standard of proof to both harm and efficiencies. For example, if harm is considered on a long-term horizon of 5 to 10 years and if the evidence is qualitative in nature (e.g. internal documents), the same timeframe and types of evidence would be relevant to the analysis of efficiencies. However, the burden to prove procompetitive impacts of efficiencies that could mitigate such concerns is on the merging parties. One possible efficiency is the internalisation of knowledge spill-overs, which increases the incentive to innovate. Complementarities between R&D and distribution activities may also be a source of efficiencies. Importantly, efficiencies must be merger-specific; if the same efficiencies are achievable by less restrictive means (e.g., joint ventures or alternative transactions), they should not be recognised. Increased profitability resulting from greater market power and higher prices is not a valid efficiency claim. Similarly, the elimination of duplicate R&D efforts is seldom recognised as a valid efficiency, as it is likely to eliminate competition from rival R&D facilities.

28. Uncertainty is inherent to merger control, but is should not preclude its effectiveness. Competition authorities should endeavour to optimise consumer welfare, and therefore account for costs of “type II” (or under-enforcement) errors, which depend, among other things, on the probability of future overlaps. Competition authorities may have to consider several dynamic counterfactuals (e.g., one of the merging firms succeeds and fails to develop a competing product). In the context of pay-for-delay arrangements, United States and European Union courts ruled that even the removal of the risk of competition to the incumbent firm is considered a restriction worthy of intervention.

29. As for remedies, the complexities and uncertainties in dynamic markets actually call for cleaner structural remedies, rather than complicated, flexible ones. The divestiture of capabilities or technologies is a more “future-proof” remedy. The question is often whether divestiture of developing products and pipelines is sufficient, or whether it is necessary to divest the underlying R&D capabilities in their entirety. In other words, is the competition problem restricted to downstream products, or are the merging parties in control of the assets, IP and personnel necessary for future innovation.

30. To conclude, while assessment of mergers in dynamic markets is challenging, the challenges are mostly practical, and there are broad economic and legal principles that can guide the process of merger review.

31. **The Chair** noted that he was concerned about Giulio Federico's argument that the link between competition and innovation is rather clear considering the analytical model of the effects of the internalisation of R&D employed in the Dow-DuPont case was highly criticized.

32. **Giulio Federico** noted that in the Dow-DuPont case the parties argued there was an ambiguous relationship between merger effects and innovation, and this led the Commission to review the literature. As other concluded beforehand, the Commission found the models in the literature to be inapplicable to merger control. The Commission's subsequent contribution to the literature is based on its review and is rather mainstream. The distinguished economists who authored the rebuttal were commissioned by interested parties, and it therefore cannot be considered academic. Under some of the models (which were not written in the most transparent manner) prices rise significantly so that overall, consumer welfare is harmed despite increased innovation. The Commission was not convinced that the merger would generate efficiencies such as internalisation of spill-overs or R&D complementarities. The IP regime in the relevant sector was very effective, the firms were earning high margins on their products for a long time, imitation did not seem to be a clear concern for the parties, and the parties failed to present convincing efficiency arguments. To conclude, the literature should be considered, but the broad framework presented provides good guidance for merger control. There may however be room to consider deviating from standard authority practice in particular cases.

33. **The Chair** asked Giulio Federico whether competition authorities could in fact measure and balance the expected cost of over-enforcement with that of under-enforcement.

34. **Giulio Federico** stressed the importance of considering multiple counterfactuals. Clearly, the scenario of the target company's development of a competing product should be taken into account if it is relatively likely. However, if it the likelihood is relatively small and there is no evidence that the prospect of such a development guided the merger rationale, the risk of a "type II" error is probably small. As for "type I" errors, the question is how plausible the efficiency mechanism is. The existing framework which focuses on verifiability, merger-specificity and benefits to consumers is adequate.

35. **The Chair** gave the floor to Geoffrey Manne.

36. **Geoffrey Manne** focused on the concept of "kill zones" or "killer acquisition". Such acquisitions are motivated by the prospect of decreasing future competition, rather than by enhanced efficiencies or product innovation. One main concern raised in this context is that incumbents have reached such a degree of dominance in their respective markets as to dissuade venture capitalists from funding competing start-ups, and that this in turn contributes to the incumbents' entrenchment in their dominant position. A second main concern is that large incumbents are able to acquire potential competitors and reduce competition independently from the secondary effects in capital markets. The third main concern is related to the large platforms' use of data acquired from users, which may facilitate platforms entry into the users' field of activity through merger or imitation.

37. The recent discussion of this topic originated in concerns expressed by Albert Wagner, the managing director of Union Square Ventures, who explained that venture capitalists refrain from investing in anything that is within Facebook, Apple, Amazon or Google's "kill zone". Implicitly, this means that potential acquisitions of start-ups do not yield sufficient returns, and that their eventual success and the subsequent initial public offering of their shares are the only means of rendering venture capitalists' investments worthwhile. This notion was picked up by the media, which focused on the concern that

the tech giants are engaged in a practice of purchasing start-ups to suppress potential competition.

38. Regarding potential competition, first, if there indeed exists a problem with incumbent firms' purchase of start-ups, this implies entry to these markets is routine and that markets are contestable. While not undermining the concepts under discussion entirely, this does raise doubts regarding assumptions that the large incumbents have durable and inviolable market power.

39. Second, there is no "symmetry" in this context in the sense that incumbents may be restrained by potential competition from start-ups even when the latter have no presence in the market. However, considering there could be many start-ups vying to take over a given market and that entry barriers are relatively low, the purchase of one start-up is unlikely to remove much of the competitive threat. An incumbent's purchase of one start-up, however, may reduce the prospect of other start-ups being purchased by that incumbent, thereby likely reducing the return on investment in that start-up.

40. Third, empirical studies show that the effects of the removal of potential competition are modest compared to the removal of actual competitors. While mergers between incumbents and potential competitors merit attention, potential and actual competition should nevertheless be distinguished.

41. Cunningham, Ederer and Ma's empirical paper on killer acquisitions presents alarming results, but one cannot rely solely on this study. First, the paper analyses acquisitions in the pharmaceutical sector in which it is relatively simple to identify potential competitors. Second, only 6% of acquisitions were found to be "killer acquisitions" that are presumed to be harmful, and this raises questions related to error costs. Additionally, it is very difficult to determine causality in cases where the target firm's development of a specific drug was terminated: was the purchase motivated by the desire to reduce competition? Or, was the decision to terminate the development process a product of greater efficiency?

42. Interestingly, Fred Wilson, one of Wenger's partners, has a very different view about investing in potential competitors of Google, Facebook etc., and it is therefore doubtful if the problem is indeed systemic. Moreover, this disagreement between colleagues who are privy to the same information highlights the information deficit that regulators operate under and implies regulators may have difficulties to interpret dynamic effects and understand the counterfactual. For example, in the Microsoft case, Microsoft's contribution to potential competition was overlooked. At the time, even Microsoft was unable to be certain about the extent of its contribution to the subsequent entry of rivals.

43. As for the risk to venture capital resulting from incumbents' acquisitions or practice of copying platform users' behaviour, the empirical evidence is inconclusive, and the alleged effects are not well-established.

44. The paper by Cunningham et al. is apparently the only paper that alleges that "killer acquisitions" pose a major risk, but many appear to rely on it without noting the paper's methodological and empirical deficiencies and the difficulties of applying its findings to other industries. There is always some mention of the benefits of large acquisitions in discussions of the topic, but hardly any attention devoted to error costs and to the difficulties of distinguishing between benign and problematic acquisitions. Additionally, from a consumer welfare standpoint It is unclear whether it is indeed important for the source of innovation to be many small firms, or few large firms.

45. Finally, Phillips and Zhdanov's recent paper highlights the error costs of over-intervention; the trade-off is such that intervention is considered risky even under the assumption that the phenomenon of "killer acquisitions" poses a significant risk. They briefly note that concerns about incentives to innovate do not necessarily necessitate a different treatment of mergers, and suggest that improved IP protections could better protect start-ups' innovations from being captured by incumbents.

46. **The Chair** noted that Geoffery Manne appears to oppose the notion that competition authorities should have the ability to review potential "killer acquisitions" either by lowering notification threshold or by allowing them to revisit consummated mergers. He then gave the floor to Germany.

47. **Germany** noted that it is aware of the challenges presented by the experts, and that it is one of two jurisdictions that introduced a value-based notification threshold. Germany would have wanted to review the acquisition of WhatsApp and Instagram, but it is aware that other agencies had experienced difficulties assessing those transactions on the merits. The valuation of a start-up by the acquiring party could be a proxy of its competitive potential. Around 25-30 cases were notified in the past year, but none of them was a typical purchase of a digital start-up. Germany is following the discussion held on this topic. It hopes to be better prepared when an interesting case comes along, and to be able to develop a theory of harm in close co-operation with fellow agencies.

48. **The Chair** asked Giulio Federico and Helder Vasconcelos to react to Geoffrey Manne's presentation.

49. **Giulio Federico** noted that the ratio of problematic mergers identified in the paper by Cunningham et al. (6%) should not be downplayed. This ratio is identical to that of mergers the European Commission intervenes in; moreover, it catches mergers that result in the suppression of the development of rival drugs, but does not account for mergers that have other adverse effects.

50. Regarding incentives for innovation and start-ups, merger control is aimed at maximising consumer welfare, and not at maximising venture capital. In many cases, venture capital funds that sell-off start-ups share market power rents with incumbents seeking to pre-empt competition and entrench their dominance, while consumers see no beneficial outcome. Therefore, only merger-specific efficiencies, such as synergies that would enhance the start-up's development, should be recognised. In some cases, liquidity that is uniquely placed to support the start-up would qualify. Competition authorities may be required to consider a counterfactual of the start-up's merger with a different firm.

51. **Helder Vasconcelos** noted that Geoffrey Manne's presentation clarified that there is much to learn about the issue and that competition authorities should exercise caution before intervening. He asked for Geoffrey Manne's opinion on transaction value notification thresholds, considering the possibility of circumventing them, and on the prospect of enhancing IP protections as a substitute for merger control.

52. **Geoffrey Manne** replied that IP policy could be tweaked to make it easier for rivals to protect their innovation without overly entrenching incumbents. One of many examples of such tweaks would be to change the rules on fee shifting in infringement litigation and on how the losing party is allowed or required to compensate the winning party. Such a change would facilitate the protection of rivals' innovation to a certain extent, but would not constitute a strengthening or weakening of patent protection system overall.

53. Research demonstrates that when exit by merger is restricted, this also leads to a decrease in exit by IPO. Data on venture capital does not necessarily say much about consumer welfare, but it is nevertheless an important determinant of ongoing innovation in the market. Mergers are the predominate method for venture capital funds to receive return on their investments. IPO's are much rarer, and while they are far more significant in terms of value, they occur much later in the process.

54. **The Chair** adjourned the morning session and invited the participants to join the breakout sessions.

2. Afternoon Recap Session

55. **The Chair** asked Breakout Group I to report on the discussion it held.

56. **Breakout Group I** focused on the incorporation of dynamic effects in the assessment of mergers, the challenges competition authorities face in this context, and the ways to overcome them. The discussion included presentation by the delegations of Brazil, Germany, India and Japan. Brazil noted that classic merger review tools are insufficient to review mergers in dynamic markets, and that it may rely on complementary and alternative methods such as counterfactual analysis and simulations. Rather than focusing on HHI levels, concerns about the elimination of "maverick" competitors and the economics of two-sided markets played a key role in the assessment of the merger between Itaú and XP, the latter being a maverick in the brokerage and distribution of investment products platforms market.

57. **Germany** presented a case concerning online dating multi-sided platforms, which generated indirect network effects. The Bundeskartellamt considered feedback loop effects, barriers to entry and the dynamic nature of the market, and found it unlikely the parties had market power considering the existence of other popular platforms and dating apps, users' tendency to practice multihoming, etc.

58. **India** noted that the inability to identify potential market entry and the uncertainty and opacity characteristic of short-term developments in dynamic markets pose significant challenges. Nevertheless, the Competition Commission of India considers competitive pressures exerted by potential competitors and the evolution of new technologies in its assessments of mergers. For example, in a case involving a merger of cable TV operators, the CCI examined the competitive constraints posed by new technologies such as DTH, which led to the emergence of OTT platforms. The timeframe relevant for assessment of effects in dynamic markets is relatively short, and ranges between two to five years.

59. **Japan** has gained experience in dynamic markets exhibiting rapid technological developments and competitive constrains posed by potential competitors. In its revised merger guidelines of October 2019 the Japan Fair Trade Commission (JFTC) clarified that its position vis-à-vis overlapping R&D activities would be determined by an analysis of the stages of development of the competing products. Experience handling conglomerate mergers has also informed the JFTC's treatment of potential competition. The JFTC discussed a case from 2015, where it conducted an assessment of innovation, competitor growth, potential competition, pressure exerted by users and the duration of product lifecycles.

60. The members of Breakout Group I appear to agree that dynamic effects on innovation, investment and future prices may be equally or even more important than short term effects. They noted that competition authorities should adjust their tools accordingly, for example by assessing whether the merging parties own substitutable innovation resources, observing market share evolution over time, evaluating barriers to entry or exit

and adapting standard pricing pressure tests to quantify effects on innovation. Russia stressed the importance of international cooperation. BIAC stressed the importance of legal certainty and argued that broad and flexible market definitions would better fit the nature of dynamic markets characterised by network effects and innovation, would mitigate the risk of over-enforcement and would therefore be beneficial to consumers. Germany, France, Gabon and Australia discussed the relationships between competition authorities and sector regulators, and all agreed that such constructive relationships are required. Finally, France and Germany shared their experiences dealing with real estate platforms and stressed the importance of considering potential entry by Google, Apple, Facebook or Amazon.

61. **The Chair** then gave the floor to Breakout Group II.

62. **Breakout Group II** focused on the same issues as the first group and heard presentation given by Korea, Kenya, the European Commission, Chinese Taipei and the United Kingdom. Korea highlighted the February 2019 amendments to its merger guidelines, which deal with market definition, estimation of market concentration and analysis of anticompetitive effects in dynamic markets, and its experience dealing with a merger that raised concerns that development of next-generation semiconductor equipment would be suppressed. Similarly, Kenya highlighted amendments to its merger guidelines, which include regulations designed to promote innovation. The European Commission discussed the assessment of merging parties' capacity to develop future products, and stressed that in dynamic markets, static measures may be inconclusive. Chinese Taipei focused on market definition in dynamic markets and discussed the case of a merger between the top two karaoke service providers. The United Kingdom provided a brief overview of the characteristics of dynamic markets, presented the relevant jurisdictional and substantive tools, sources of evidence and remedies, and discussed the Furman and Lair reports that focus on digital markets and cover issues relevant to merger control.

63. The general discussion centred on the construction of counterfactuals and post-merger scenarios. The United Kingdom shared its experience with constructing evolving counterfactuals that strive to account for the dynamic nature of markets, and the challenges of predicting the post-merger scenario.

64. **The Chair** asked Breakout Group III to report on its discussion.

65. **Breakout Group III** discussed efficiency effects and the design of remedies. The main dilemma is whether to address static or dynamic effects, or in other words, to prioritise price or quality today over innovation spill-over or other dynamic efficiencies tomorrow, or vice versa. The panellists from the United States, European Commission, South Africa and Singapore were asked to define how remedies could address dynamic effects, and frequently discussed the Bayer-Monsanto case in this context. The participants agreed that dynamic efficiencies are under the scope of merger control, and stressed the importance of the relevant provisions in competition laws or merger guidelines. Efficiency effects must be merger specific, verifiable and benefit consumers. The also agreed that structural remedies are preferred in dynamic markets, but behavioural remedies may also be employed in combination with structural ones in complicated cases. Divestiture of pipeline products may be a possible remedy. However, divestiture of entire R&D departments could prove more beneficial than the divestiture of a set of assets. Access remedies could resolve concerns related to interoperability or licensing. International cooperation in the design of remedies is important where several jurisdictions are facing the same big companies.

66. **The Chair** then asked for the panellists' comments.

67. **Giulio Federico** found Korea's revision of its guidelines based on lessons learned from some international cases to be insightful, since they provide helpful guidance on methods of identifying innovation markets, the relevant metrics for measuring concentration, and the identification of theories of harm.

68. While there are relatively few cases where concerns are clearly raised, dealing with such cases encourages competition authorities to consider systematically dynamic effects in other cases, rather than focusing only on static overlaps or market shares. Making the reasons for clearance decisions public is a beneficial learning experience and can provide guidance to the market.

69. As for remedies, R&D capabilities and the relevant products are often interdependent and form their own "ecosystem". Divestiture of R&D capabilities should usually be accompanied by a divestiture of relevant products. In both the Dow-DuPont and Bayer-Monsanto cases, it was beneficial to have credible buyers acquire viable divestment which comprised of a package of R&D capabilities and relevant products.

70. Finally, innovation deals are often global, and International cooperation on remedy design is essential.

71. **Geoffrey Manne** agreed with Giulio Federico's comment regarding the divesture of R&D capabilities. He noted all delegations appeared to be adequately circumspect about the treatment of mergers in dynamic markets. More research is required before action is taken and there is a real risk that policy decision will be made based on limited information, bureaucratic or political considerations. He found competition authorities reserved attitude reassuring considering the tone of recent discussions of the topic.

72. Regarding the point made by Giulio Federico that the ratio of problematic mergers identified by Cunningham et al. is equal to the ratio of mergers that were found to merit intervention by the European Commission, he questioned whether one could be sure that the same mergers were caught; absent additional information, aggressive intervention may target the wrong mergers.

73. There is a problematic tendency to believe that start-ups are the only source of innovation and to disregard innovation occurring within large firms, despite their platforms often being the primary source thereof. Vertical and even horizontal mergers often contribute to platforms' innovation capabilities.

74. The markets under discussion tend to monopoly. In some cases, intervention primarily aimed at conserving the prospect of entry may result in the transfer of dominance from one firm to another, without doing much to improve consumer welfare.

75. Finally, it is important to note that in the short run, when a dominant platform imitates or merges with an innovative potential competitor and implements its technology, a large set of consumers benefit. While there may indeed exist long-term dynamic effects, the short-term effect of many consumers benefiting from the transaction should be taken into account as well.

76. **Helder Vasconcelos** noted that the participants in the session dedicated to efficiencies and remedies easily agreed that only merger-specific efficiencies should be recognized, but he questioned whether competition authorities indeed have this in mind while reviewing mergers. Regarding efficiency verifiability, he was expecting to hear what types of evidence are relevant for the purpose of assessing efficiency verifiability and was surprised that the use of structural simulation models to predict mergers' effects on the main economic indicators is the European Commission's method of choice for this purpose. He was also surprised that the European Commission appeared to be treating innovation

efficiency gains as having only an indirect effect on consumers since he believes they are as important as price effects.

77. As for remedies, he was not surprised there was consensus regarding the superiority of structural remedies. However, the classification of behavioural remedies as second best is surprising considering that structural remedies are only prescribed in a minority of cases, and that, sometimes, structural remedies are unavailable. A combination of both types of remedies is often beneficial. Finally, the European Commission's note that it was exploring more flexible remedies, e.g., structural remedies that are contingent on market developments, was encouraging.

78. **The Chair** noted the discussions covered both analytical difficulties and pragmatic approaches. Market definition is clearly less important in this context, and one must adopt a more dynamic view of structural competition - at least in one group there were participants who believed that different technologies could belong in the same market. The participants discussed various institutional aspects that were not brought up in the plenary sessions. Participants stressed the importance of international co-operation and of constructive dialogue with sector regulators.

79. As for remedies, as Helder Vasconcelos suggested, competition authorities often state their preference for structural remedies but, in practice, often prescribe behavioural ones. One of the main challenges for competition authorities is the construction of a dynamic counterfactual, which sometimes requires much imagination. It is clear, however, that divestiture of R&D facilities on their own is insufficient, and that a commercial presence is necessary for the remedy to be adequate. He concluded the discussion by thanking the experts on the panel, the participants, the group rapporteurs and the secretariat.