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DIRECTORATE FOR FINANCIAL AND ENTERPRISE AFFAIRS
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Working Party No. 3 on Co-operation and Enforcement

ECONOMIC EVIDENCE IN MERGER ANALYSIS

-- Japan --

15 February 2011

The attached document is submitted to Working Party No. 3 of the Competition Committee FOR DISCUSSION under item III of the agenda at its forthcoming meeting on 15 February 2011.

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1. Use of economic analysis in merger review in Japan

1. The Japan Fair Trade Commission (hereinafter, "the JFTC") publishes the underlying principles as to whether the effect of a business combination may be substantially to restrain competition in any particular field of trade or not in its "Guidelines to application of the antimonopoly act concerning review of business combination" (hereinafter, the "Merger Guidelines").

2. The Merger Guidelines describe, based on economic viewpoints, the underlying principles in determining when the effect of a business combination may be substantially to restrain competition in a particular field of trade through unilateral or coordinated conduct. In defining a particular field of trade and determining substantial restraint of competition based on the Merger Guidelines, the JFTC sometimes makes use of economic analyses.

2. Organization of the JFTC for making use of economic viewpoints

2.1 Involvement of economists in the review of business combinations

3. The JFTC recruits and trains new university/college graduates who have passed the examination for national public service personnel (government officials) in the field of law or economics. Such personnel make up the majority of staff members currently working for the JFTC.

4. In addition to such standard systems for recruiting and training staff members, the JFTC recruits mid-career employees, such as economists (economists of postgraduate level including economists having degrees of Ph.D.in economics) and specialists in other fields (lawyers, CPAs, and IPR specialists) from universities or the private sector.

5. Seven such staff members recruited from outside, including economists, worked for the Mergers and Acquisitions (M&A) Division, which is in charge of the review of business combinations, in FY 2009. They are engaged in reviewing business combination cases as members of case teams depending on the cases.

2.2 Measures taken by the JFTC for strengthening expertise in economic analysis

6. The JFTC newly established in June 2003 the Competition Policy Research Center (hereinafter, "CPRC"), which is an internal organization of the JFTC. Now, the CPRC is headed by Hiroyuki Odagiri (Director of the CPRC, Professor at the Faculty of Social Innovation, Seijo University). The CPRC appointed 10 economists and 7 jurists (all of them external experts) as its researchers (Chief Researchers and Visiting Researchers). These researchers are engaged in research on competition policies and economic/legal studies. In addition, JFTC staff economists at the Economic Research Office are engaged in joint research with them as CPRC researchers on topics including mergers. However, it should be noted that these researchers are not involved in reviewing individual business combination cases.

3. Cases where economic analyses were employed

3.1 Use of Hypothetical Monopolist Test/Test of Small but Significant and Non-transitory Increase in Price (hereinafter, the "SSNIP Test") in determining a particular field of trade

7. The Merger Guidelines stipulate that a "particular field of trade" shall be determined based on the concept of the Hypothetical Monopolist Test/SSNIP Test. This means that the concept of the Hypothetical Monopolist Test/SSNIP Test shall be applied in determining a "particular field of trade" although the

number of cases in which the Critical Loss Analysis (hereinafter, the "CLA") was actually exercised by using data is limited.

8. While there is no published business combination case where the CLA was performed, the CLA was attempted for a hypothetical business combination case in the following study.

9. In a report titled "Differentiated Products and Economic Analysis of Mergers" published in 2006 as the result of joint studies by a Visiting Researcher of the CPRC and economists at the M&A Division, several demand function models (the AIDS model and the double-*log*-form demand function model) were estimated using scanner data of butter and margarine to perform the CLA. The report drew the following conclusions: when the CLA was performed by using the estimated demand function under the assumption of the AIDS model, it was implied that butter and margarine respectively were not defined as separate fields of trade, but were both included in a larger field of trade. On the other hand, under the assumption of the double-log-form demand function, butter and margarine each constitutes a different field of trade. Therefore, it was suggested that depending on the demand function used therein, the CLA would lead to different market definitions. Designing sophisticated models and methods under a limitation of data remains a major challenge.

3.2 Measurement of market concentration

10. The Merger Guidelines stipulate the range (safe harbor) prescribed as "the effect of a business combination may not be substantially to restrain competition in a particular field of trade" by means of HHI after the business combination and the increment of HHI in the following manner:

Horizontal Business Combinations	(1) HHI after the business combination is not more than 1,500 (2) HHI after the business combination is more than 1,500 and not more than 2,500 while the increment of HHI is not more than 250. (3) HHI after the business combination is more than 2,500 while the increment of HHI is not more than 150.
Vertical and Conglomerate Business Combinations	(1) Market share after the business combination is not more than 10% (2) HHI after the business combination is not more than 2,500 and the market share after the business combination is not more than 25%.

11. Hence, whenever the JFTC reviews business combinations, whether a case falls under the safe harbor or not is scrutinized by measuring shares of market participants including the concerned parties, and thereby calculating the degree of market concentration (HHI) before and after the business combination in a particular field of trade.

12. Higher market share or higher market concentration resulting from a business combination does not necessarily mean the potential anticompetitive effects of a business combination. However, the market share or the market concentration is thought to imply the degree of competition after the business combination to a certain degree.

3.3 Cross-sectional and time-series analysis relating concentration to price or price/cost margins or showing the effects of entry, exit, or merger on price

13. The effects of a business combination on price were analyzed in the following published case: in the case of "Capital Alliance of Kirin Group and Kyowa Hakko Group[1]" in FY 2008, it was analyzed how

1 See tentative translation at: http://www.jftc.go.jp/epage/pressreleases/2009/June/090609_major_business_combinations_fy2008.pdf.

the concerned acquisition of shares had an impact on drug prices (reference prices based on which medical institutions charge medical service fees and which are revised once in two years by the Ministry of Health, Labor and Welfare) of a medicine called Gene-recombination type human granulocyte colony stimulating factor product (hereinafter, a “G-CSF”) and prevailing pharmaceutical market prices (prices based on which the drug wholesalers sell the medical drug to medical institutions and which reflect competition among pharmaceutical manufacturers).

14. Kyowa Hakko Kogyo Co., Ltd. (hereinafter, “Kyowa Hakko”) entered the market in question two and half years later than the two competitors (one was Kirin Pharma Co., Ltd.) and has been growing in the market in question by depriving the market shares of the two competitors. The product manufactured by Kyowa Hakko (called “Neu-up”) was cheaper than the products manufactured by the other two competitors, and as a result, the rate of decline in the prices of the products of the two competitors expanded after the entry of Kyowa Hakko.

15. Regarding the prices of medical drugs, there is a tendency where their prevailing market prices delivered to medical institutions decline with the elapse of time after the revision of the reference drug prices. Based on the monthly data regarding the prevailing market price of Neu-up manufactured and sold by Kyowa Hakko, when multiple linear regression analysis was performed by using the prevailing market price of Neu-up as the dependent variable and a dummy variable indicating “before” or “after” the announcement of the business combination in question (“merger announcement dummy variable”) as one of the independent variables together with a secular change variable that represents a price declining tendency over time and a seasonal dummy variable, the merger announcement dummy variable showed a positive value with a significance level of 5% (the other values were significant at 1% level and the adjusted R square *was 0.935).* The result suggested that the decline in prevailing price of Kyowa Hakko product tended to show the sign of touching the bottom since the acquisition of shares in question had been announced.

16. The above analysis is thought to suggest that Kyowa Hakko has been leading the competition in the G-CSF market and it was determined that there was a concern that the capital alliance in question would suppress the tendency of decline in the prevailing price of G-CSF, leading to a hovering of the drug price by removing the competitive pressure from Neu-up.

17. As a result of analyses of the status of competition through interviews with doctors in addition to the above discussed economic analysis, the JFTC concluded in its review that the effect of the capital alliance in question may be substantially to restrain competition in a particular field of trade. The JFTC approved the capital alliance on the condition that appropriate remedies would be taken.

3.4 Unilateral price effects based on diversion ratios, price/cost margins, Upward Pricing Pressure (UPP), simplified merger simulation such as illustrative price rises, or full-blown merger simulation

18. Unilateral price effects of a business combination were analyzed in the following published case: in the case of the acquisition of shares of YAMAKI Co., Ltd. (hereinafter, “YAMAKI”) by Ajinomoto Co., Inc. (hereinafter “Ajinomoto”) in fiscal year 2006, the JFTC estimated cross price elasticity of demand between products of respective manufacturers to measure the degree of substitutability between the products of the parties. The products in question were household-use seasonings. Each manufacturer tries to differentiate its products by enhancing its brand names with active advertisement through TV commercials and by putting forward its product characteristics such as high qualities. The cross price elasticities of demand between respective manufacturers’ products were estimated by using price/quantity data (scanner data) of respective products submitted by the parties. As a result thereof, it was estimated that

the degree of the substitutability between the products of the parties and those of other manufacturers was higher than the degree of the substitutability between the products of the parties themselves.

19. As a result of the consideration of other factors in addition to the above analysis, the JFTC concluded that the results of the business combination in question may not be substantially to restrain competition in a particular field of trade.

20. Moreover, among the published reports or press releases, the above mentioned joint study titled "Differentiated Products and Economic Analysis of Mergers" implemented merger simulations.

21. The merger simulation was implemented, in the joint study, on the assumption of a hypothetical business combination, that is, the business combination between a company ranked at the 1st place and a company ranked at the 2nd place in the butter and margarine market. The demand function was estimated by using multiple models (Antitrust Logit model, AIDS model, and PCAIDS model) to compare the results of merger simulations. Merger simulation using ALM and PCAIDS models suggested that the effect of a price increase after the merger would be limited even if each company occupies a large share in the butter and margarine market. On the other hand, when demand estimation based on the AIDS model was used, merger simulation could not be run because the calculated marginal costs of branded products showed negative values or became larger than their prices under the hypothesis of Bertrand competition.

4. How to obtain the data

22. Materials used in economic analysis are mainly submitted by the concerned parties. Reviews of business combinations in Japan are frequently initiated by a prior consultation requested by the concerned parties in addition to the initiation of reviews upon notifications. In the course of prior consultations, the JFTC requests the concerned parties to provide necessary materials. In either case, the concerned parties are willing to cooperate with the requests by the JFTC, so that the JFTC can normally obtain necessary materials except for the cases where the companies in question are unable to collect the necessary data.

23. Moreover, when the case in question is made public, the JFTC sometimes requests related information/data from competitors, third parties, and so on.

24. While the JFTC is capable of issuing an order requiring the submission of reports to the concerned parties and the related parties pursuant to the Antimonopoly Act, which is assured by the imposition of a penalty on non-compliance to the order, when the prior consultation is requested by the parties before the notification, this order is not issued because the necessary materials have already been obtained through the cooperation of the concerned parties.

5. Interaction with the concerned parties' or interested groups' economists

25. In some cases, concerned parties or interested groups may ask economists for economic analysis. In such cases, they voluntarily submit the result of economic analysis as reference materials. Upon receipt of such materials, the JFTC requests explanations by the economists of the concerned parties or the interested groups so that the analysis can be scrutinized by the staff and the economists in charge of the case. The JFTC sometimes requests the concerned parties or the interested groups not only the submission of the data used for their analysis but also the process of the estimation in their analysis. In addition, the JFTC sometimes points out questions or problems regarding the analysis submitted by the concerned parties or the interested groups.