Major Business Combination Cases in Fiscal Year 2019

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The Japan Fair Trade Commission

For the purpose of ensuring the transparency of reviews by the Japan Fair Trade Commission (hereinafter referred to as "JFTC") and improving the predictability of the reviews, the JFTC has published "Guidelines to Application of the Antimonopoly Act concerning Review of Business Combination (May 31, 2004, JFTC; hereinafter referred to as the "Business Combination Guidelines")"in order to clarify its stance for applying the Antimonopoly Act (hereinafter referred to as the "AMA") to its business combinations reviews. In addition, the JFTC has publicized the review results each fiscal year with respect to major business combination cases.

This year also, the JFTC is going to publicize the review results about major business combinations cases of fiscal year 2019.

The JFTC sincerely hopes that companies planning business combinations will make use of the published outcomes of the JFTC's reviews of major business combination cases, as well as the Business Combination Guidelines.

* As this is a tentative translation, please refer to the original that written in Japanese form more details.

Major Business Combination Cases in Fiscal Year 2019

Number	Case (Major field of examination)	Type of business combination, etc.					Page
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1	Integration of Bristol-Myers Squibb Company and Celgene Corporation (prescription drugs)	○					1
2	Acquisition of the neodymium magnet alloy research and development business of Showa Denko K.K. by TDK Corporation (neodymium magnet alloys and others)		○		○		11
3	Integration of Kobelco & Materials Copper Tube Co., Ltd. and the copper tube business of Furukawa Electric Co., Ltd. by Japan Industrial Partners, Inc. (copper tubes)	○				○	19
4	Acquisition of shares of Kokusai Electric Corporation by Applied Materials, Inc. (semiconductor manufacturing equipment)			○			25
5	Integration of General Electric Company's business of manufacturing and sales of biopharmaceutical production equipment and others by Danaher Corporation (biopharmaceutical production equipment and others)	○		○			31
6	Establishment of a joint investment company concerning on-board lithium-ion battery business and		○		○		38

	others by Toyota Motor Corporation and Panasonic Corporation (on-board lithium-ion batteries and others)						
7	Integration of Hewlett Packard Enterprise Company and Cray Inc. (high performance computing systems)	○	○				50
8	Acquisition of shares of Nihon Ultmarc Inc. by M3, Inc. (drug information service platform operation business and others) (released on October 24, 2019)		○	○	○		55
9	Acquisition of shares of Cocokara Fine Inc. by Matsumotokiyoshi Holdings Co., Ltd. (drugstore business)	○				○	70
10	Acquisition of the aircraft finance business from DZ Bank AG by MUFG Bank, Ltd. (aircraft finance business)	○					81

(Note 1) The order of the cases in this document complies with the order used in the Japan Standard Industry Classification, applied to business concerning products and services subject to reviews of business combinations.

(Note 2) Confidential information and competitor names, etc. associated with the companies concerned are not disclosed in the respective cases. Each competitor is represented by a random alphabet letter.

(Note 3) Market shares, HHI levels after business combinations, and number counts, e.g., the increment of the HHI after business combinations, are shown as approximate figures estimated by the JFTC based on the documents/materials submitted by the concerned companies (note that the term “HHI” in this context refers to the Herfindahl- Hirschman Index; the same shall be applied hereinafter). When it comes to market shares, in principle, these figures are shown at 5% intervals. (For example, any number that is 37.5% or larger and less than 42.5% is expressed as “around 40%.”) Accordingly, their total is not necessarily 100.

(Note 4) In each case, a horizontal business combination refers to a business combination between companies competing in the same particular field of

trade; a vertical business combination refers to a business combination between companies operating at different transaction stages such as a merger between a manufacturer and a distributor selling the manufacturer's products and ; a conglomerate business combination refers to a business combination that is neither a horizontal business combination nor a vertical business combination such as a merger between companies operating in different industries and the acquisition of shares between companies operating in a particular field of trade but in different geographical scopes.

Case 1 Integration of Bristol-Myers Squibb Company and Celgene Corporation

Part I The Parties

Bristol-Myers Squibb Company (headquartered in the US) and Celgene Corporation (headquartered in the US) are both companies conducting manufacturing and sales of mainly prescription drugs.

Hereinafter, Bristol-Myers Squibb Company shall be referred to as "BMS" and a group of companies which have already built joint relationships with BMS shall be referred to as "BMS Group." As well, Celgene Corporation shall be referred to as "Celgene" and a group of companies which have already built joint relationships with Celgene shall be referred to as "Celgene Group." In addition, BMS and Celgene shall be collectively referred to as "the Parties" and BMS Group and Celgene Group shall be collectively referred to as "the company group."

Part II Outline of this case and its applicable provision

This case concerns a plan in which a subsidiary of BMS would merge with and into Celgene, with Celgene as the surviving company, and subsequently BMS would acquire all of the voting rights with regard to shares of Celgene (hereinafter referred to as "the conduct of this case").

The applicable provisions in this case are Article 10 and Article 15 of the AMA.

(FYI) Coordination with foreign authorities

This case was also reviewed by foreign authorities and the JFTC reviewed this case while exchanging information with European Commission and the Federal Trade Commission of the US (FTC).

Part III Particular field of trade

1 Product range

(1) Prescription drugs

With regard to prescription drugs (hereinafter referred to as "drugs"), it is appropriate to define a product range for every group of drugs that are deemed to have the same type of functions/effects from the perspective of users, namely, doctors, medical institutions, etc.

While the Parties are manufacturing/selling multiple drugs, it is concerning drugs for treating cancer and those related to immunoregulation that the conduct of this case is considered to exert a relatively large impact

on competition.

If, as in the case of cancer treatment drugs and drugs related to immunoregulation, the same drug is used for multiple diseases or drugs that are totally different in their action mechanism[1] are used for the same disease, it is required to examine a range of competing products for every indication in terms of whether functions/effects are deemed to be the same from the perspective of users. Under this understanding, the JFTC examined these drugs in the following to identify a product range for each indication.

There is a way of classification of drugs called the ATC Classification System[2] established by European Pharmaceutical Market Research Association (EphMRA). Classification made as per the ATC Classification System may be used as a product range in cases where classification through the said system matches the product range based on functions/effects perceived by users.

With regard to drugs, usually no supply substitutability is recognized between different products as each product has to be approved for manufacturing and sales by the Minister of Health, Labour and Welfare and takes a lot of time from the start of a clinical test before it is manufactured and sold.

(2) Cancer treatment drugs

A Cancer treatment methods

For treating cancer, operations, radiation therapy, and drug therapy are mainly used whether independently or together.

Drug therapy is mainly divided into chemotherapy, molecular target therapy, and immunotherapy. Chemotherapy uses anticancer drugs which kill multiplying cells; molecular target therapy, molecularly targeted drugs which act on mutated molecules specific to particular cancers; immunotherapy, immune checkpoint inhibitors which inhibit immunosuppressive functions as well as drugs and others which stimulate the immune system.

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1 A pharmacology term meaning a system or mechanism for medicine to produce a certain effect in an organism.

2 It stands for "Anatomical Therapeutic Chemical Classification System." It classifies drugs according to the anatomical site of action, the indication, the usage, the chemical formula, and the action mechanism. Under the ATC Classification System, any drug is assigned with a code comprised of four different levels (the first level to the fourth level) thereby being divided into groups.

Based on clinical practice guidelines[3], the patient's age, the state of the whole body, other diseases, etc., doctors choose treatment methods/drugs in light of the cancer type and the so-called "stage," the clinical stage which indicates the extent of the cancer (hereinafter referred to as "stage").

B Competing products of the company group

With regard to cancer treatment drugs, the company group compete in many products, among which the four drugs listed in the following table are deemed to have a large impact on competition as their market shares are relatively large or likely to be relatively large after their launch.

Company	Product name	Treatment method	Classification based on the action mechanism
BMS	Taxol	Chemotherapy	Microtubule inhibitor as part of anticancer drugs
Celgene	Abraxane		
BMS	Opdivo	Immunotherapy	PD-1 inhibitor as part of immune checkpoint inhibitors
Celgene	BGB-A317		

While BMS Group's Opdivo, which has been released, is approved by the Minister of Health, Labour and Welfare for multiple types of cancer including non-small cell lung cancer and stomach cancer as indications, the said drug was at the phase III clinical test[4] for other multiple types of cancer as indications when this case was reviewed. In the meantime, Celgene's BGB-A317 had not been approved for any indication when this case was reviewed, and was at the phase III clinical test for multiple types of cancer as indications.

All of the above four drugs are indicated for the treatment of multiple types of cancer and have been released or in the phase of a clinical test, and in the review of this case the JFTC examined the company group's products which have the same indications. Of the products examined, the following details, as an example, drugs for treating non-small cell lung cancer that all of the above four drugs are indicated for.

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[3] Guidelines which provide a systematic summary of treatment methods (standard treatment) recommended for each disease by the society of the relevant specialists using the means of Evidence-based Medicine (EBM) for the purpose of assisting appropriate diagnosis and treatment in healthcare settings

[4] There are three development phases for drugs from the phase I clinical test to the phase III clinical test. As the possibility of commercialization is small for drugs that have not reached the phase III clinical test and they take a long time before they are released, the review of this case is in general focused on drugs that are in the phase III clinical test.

C Non-small cell lung cancer treatment drugs

(i) Outline

In general, treatment of non-small cell lung cancer follows a certain order (hereinafter referred to as "treatment line") according to the cancer stage based on the lung cancer treatment guidelines, and drugs for chemotherapy, molecular target therapy, and immunotherapy are used as per the treatment line. The company group has released or is in the development of the four drugs used for chemotherapy or immunotherapy, as discussed in B above.

(ii) Examination on a product range

a Chemotherapy, molecular target therapy, and immunotherapy

In general, drug therapy for non-small cell lung cancer is chemotherapy. Molecular target therapy precedes chemotherapy only in cases where the patient was found positive for genetic mutation specific to cancer growth as a result of genetic testing or they were found to have specific genes, with regard to some types of non-small cell lung cancer. Immunotherapy is used in the same conditions as molecular target therapy is used if molecular target therapy is not applicable or effective to the patient. Accordingly, drugs for chemotherapy, molecular target therapy, and immunotherapy as part of drug therapy are different in functions/effects and used for their respective purposes, and therefore, demand substitutability is not recognized.

b Chemotherapy

In general, chemotherapy for non-small cell lung cancer uses a platinum-containing drug[5] and another chemotherapeutic drug together. Due to the action mechanism, chemotherapeutic drugs to be used along with platinum-containing drugs are mainly antimetabolic agents, alkylating agents, anticancer antibiotics, and microtubule inhibitors[6], and products manufactured/sold by the company group fall into microtubule inhibitors. Microtubule

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[5] Platinum-containing drugs are anticancer drugs which inhibit DNA replication and induce the self-destruction of cancer cells by combining with DNA. They are called platinum-containing drugs as they have platinum in their chemical structure.

[6] Antimetabolic agents are matters similar to metabolites which are required for cell division. Antimetabolic agents take the place of metabolites, being absorbed and thereby producing the effect of inhibiting the growth of cancer cells. Alkylating agents produce the effect of inhibiting the growth of cancer cells by damaging DNA at the time of cell division. Anticancer antibiotics are antibiotics which have chemical structures modified to be effective in killing cancer cells. Microtubule inhibitors produce the effect of killing cancer cells by stopping the working of microtubules that are important for cell division.

inhibitors and other drugs used for chemotherapy both attack growing cancer cells and inhibit their growth but are used for different purposes as these drugs have different characteristics, side-effects, etc. Accordingly, in light of actual practice of administration to patients or doctors' judgment, these drugs do not have the same type of functions/effects. Therefore, microtubule inhibitors and other types of drugs have no demand substitutability with each other and are each recognized to form their own product range.

c Immunotherapy

Approved drugs for immunotherapy indicated for the treatment of non-small cell lung cancer are only PD-1 inhibitors and PD-L1 inhibitors[7], both belonging to immune checkpoint inhibitors. As PD-1 inhibitors and PD-L1 inhibitors are basically the same in their action mechanism and deemed to have the same types of functions/effects in light of actual practice of administration to patients or doctors' judgment, demand substitutability is recognized.

(iii) Summary

Based on the above, the JFTC defined product ranges as "microtubule inhibitors for non-small cell lung cancer" and "PD-1 inhibitors/PD-L1 inhibitors for non-small cell lung cancer."

(3) **Psoriasis vulgaris treatment drugs**

A Outline

Psoriasis vulgaris is an immune disorder associated with abnormal immune functions and an inflammatory skin disease. Its severity is measured and converted into numbers by evaluative standards such as BSA and PASI[8], according to which the disease is classified as a mild, moderate or serious case. Treatment methods vary depending on the

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7 PD-1 inhibitors and PD-L1 inhibitors produce the effect of maintaining an immune reaction against cancer cells by combining with PD-1 or PD-L1, cells that have immunosuppressive functions.

8 BSA (Body Surface Area) calculates the percentage of the area with an exanthem to the total skin area of the whole body, whereas PASI (Psoriasis Area and Severity Index) calculates a score based on the observations of the skin, the area of the affected section, and a weighting of the section.

extent of severity and the treatment line is specified accordingly. A mild case is treated with topical therapy where an ointment such as a steroid is applied locally or phototherapy where ultraviolet rays are applied; a moderate or more severe case, with oral administration of small-molecule drugs[9]; a serious case where the effect of oral administration is not sufficient, with a biopharmaceutical[10] administered with a choice of IV or a subcutaneous injection.

At the time of the review of this case, Celgene Group had released an orally administered drug called "Otezla" and BMS was in the development of an orally administered drug called "TYK2," which was in the phase III clinical test.

B Examination ona product range

As discussed in A above, topical therapy drugs, orally administered drugs, and biopharmaceuticals are each used for patients with a different extent of severity and in a different order, and do not have the same type of functions/effects in light of actual practice of administration to patients or doctors' judgment. Therefore, they have no demand substitutability with each other and are each recognized to form their own product range.

Same as Otezla, TYK2 which BMS is developing is an orally administered small-molecule drug, but is significantly different from other small-molecule drugs in its action mechanism and classified as a Janus kinase inhibitor[11], a drug with an action mechanism which has a strong anti-inflammatory effect. Therefore, TYK2 could be approved as a drug which has functions/effects similar to biopharmaceuticals that are used for serious cases.

Through the examination of this matter, the JFTC found that TYK2 might not be interchangeable with Otezla as TYK2 could be different in the degree of effects and safety from Otezla. Likewise the JFTC found that TYK2 might not be interchangeable with biopharmaceuticals as TYK2 could be different in the degree of effects and safety from

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9 Drugs made of non-natural, chemosynthetic low-molecular compounds

10 Drugs produced by using matters synthesized by not a chemical method but a living organism

11 Janus kinase inhibitors have the effect of controlling inflammation by inhibiting Janus kinases (non-receptor tyrosine kinases which are activated by cytokines combining with receptors; abbreviated as "JAK") in signaling pathways in cells. There are four types of Janus kinases, namely, JAK1, JAK2, JAK3, and TYK2, among which BMS is working on the development of a Janus kinase inhibitor that impedes TYK2.

biopharmaceuticals and is also different in administration (injection/oral).

TYK2, however, had just begun its phase III clinical test and was unclear about the degree of effects and safety at the time of the review of this case. The JFTC, therefore, decided to conduct examination assuming that Otezla and TYK2 would be in a competitive relationship, in other words, they would fall under the same product range in order to provide a careful review.

Based on the above, the JFTC defined a product range as "Orally administered drugs for patients with a moderate or more severe case of psoriasis vulgaris."

2 Geographic range

With regard to any of the products discussed in 1 (2) and (3) above, manufactures have systems and capacities to supply drugs to any part of Japan. Medical institutions or users of those drugs are capable of procuring products from any manufacturers in the country at almost the same prices. In addition, selling drugs in Japan requires an approval from the Minister of Health, Labour and Welfare. Based on the above, the JFTC defined the geographic range as "all regions of Japan."

Part IV "Impact of the conduct of this case on competition

1 Microtubule inhibitors for non-small cell lung cancer

(1) Position of the Parties and conditions of competing enterprises

After the conduct of this case, the following table shows market shares of manufacturers of microtubule inhibitors for non-small cell lung cancer. As HHI, after the conduct of this case, is around 3,500, up around 180, the conduct of this case does not meet the safe-harbor criteria for horizontal business combinations.

The share of Celgene Group concerns Abraxane. In Japan, Company G, a competitor which does not belong to Celgene Group, is licensed by Celgene Group, manufacturing/selling Abraxane. In this respect, although Company G is a business concern independent of Celgene Group, Celgene Group may start manufacturing/selling Abraxane on its own, which would require a careful examination. Therefore, the JFTC determined whether or not the safe-harbor criteria for horizontal business combination could be applicable assuming that the market share of Abraxane belongs to Celgene Group. The JFTC separately examined the licensed manufacturing/sales of Abraxane by Company G later in (2).

[Market shares concerning microtubule inhibitors for non-small cell lung cancer]

Rank	Company name	Market share
1	Celgene Group	Approx. 55%
2	Company A	Approx. 15%
3	Company B	Approx. 15%
4	Company C	Approx. 5%
5	Company D	Approx. 5%
6	Company E	Approx. 5%
7	Company F	0-5%
8	BMS Group	0-5%
-	7 other companies	0-5%
Total		100%
Combined market share/rank: approx. 55%/1st place		

After the conduct of this case, the market share of the Parties will be around 55% (1st place). However, there are influential competitors, Company A and Company B, each holding around 15% of the market.

Therefore, competitive pressure from competitors is recognized.

(2) Others

As discussed in (1) above, Celgene Group's Abraxane is, in Japan, manufactured/sold by Company G, a third party, under a license from Celgene Group. In light of the details of the license contract between Company G and Celgene Group, Company G is likely to continue manufacturing/selling Abraxane, independent of the company group, under a license form Celgene Group. With this as a premise, the conduct of this case is not likely to cause change in the state of competition.

(3) Summary

Based on the above, the conduct of this case would not substantially restrain competition in microtubule inhibitors for non-small cell lung cancer through unilateral or coordinated conduct of the company group.

2 PD-1 inhibitors/PD-L1 inhibitors for non-small cell lung cancer

(1) Position of the Parties and conditions of competing enterprises

The company group's position after the conduct of this case in the

market of PD-1 inhibitors/PD-L1 inhibitors for non-small cell lung cancer is unknown as the product of Celgene Group has not yet been put into market.

The following table shows market shares of manufacturers of PD-1 inhibitors/PD-L1 inhibitors for non-small cell lung cancer that are sold in Japan.

[Market shares concerning PD-1 inhibitors/PD-L1 inhibitors for non-small cell lung cancer in 2018]

Rank	Company name	Market share
1	BMS Group	Approx. 55%
2	Company H	Approx. 40%
3	Company I	0-5%
4	Company J	0-5%
Total		100%

The market share of BMS Group is around 55% (1st place). However, there is an influential competitor, Company H, holding around 40% of the market (2nd place).

(2) Others

BGB-A317 of Celgene was developed based on the fundamental research by Company K, a third party, with which Celgene entered into a license agreement and was granted an exclusive right concerning development and manufacturing/sales in Japan, the US and Europe in 2017. Prior to the completion of the review of this case, however, Celgene and Company K agreed to cancel the said license agreement, and the cancellation took effect on the same day. Accordingly, Celgene has lost its right to take part in development and manufacturing/sales of BGB-A317. In light of the details of the agreement on the cancellation of the said license agreement, Celgene is not likely to again take part in development and manufacturing/sales of BGB-A317.

Based on the above fact, Celgene and BMS are not likely to compete with each other in future in PD-1 inhibitors/PD-L1 inhibitors for non-small cell lung cancer.

(3) Summary

Based on the above, the conduct of this case would not substantially

restrain competition in PD-1 inhibitors/PD-L1 inhibitors for non-small cell lung cancer through unilateral or coordinated conduct of the company group.

3 Orally administered drugs for patients with a moderate or more severe case of psoriasis vulgaris

(1) Position of the company group and conditions of competing enterprises

The company group's position after the conduct of this case in the market of orally administered drugs for patients with a moderate or more severe case of psoriasis vulgaris is unknown as BMS Group's TYK2 has not yet been put into market.

The following table shows market shares of manufacturers of orally administered drugs for patients with a moderate or more severe case of psoriasis vulgaris that are sold in Japan.

[Market shares concerning orally administered drugs for patients with a moderate or more severe case of psoriasis vulgaris in 2018]

Rank	Company name	Market share
1	Company L	Approx. 50%
2	Celgene Group	Approx. 35%
3	Company M	Approx. 5%
4	Company N	Approx. 5%
5	Company O	0-5%
-	7 other companies	0-5%
Total		100%

The market share of Celgene Group is around 35% (2nd place). However, there is an influential competitor, Company L, holding around 50% of the market (1st place).

Therefore, competitive pressure from competitors is recognized.

(2) Competitive pressure from adjacent markets

As discussed in 1 (3) B of Part III above, TYK2 of BMS could have functions/effects similar to biopharmaceuticals used for serious cases, and if it is priced high, users may choose to use biopharmaceuticals instead of TYK2. In this respect, there are multiple biopharmaceuticals indicated for the treatment of psoriasis vulgaris available in the Japanese market.

Accordingly, a certain degree of competitive pressure from adjacent

markets is recognized.

(3) Summary

Based on the above, the conduct of this case would not substantially restrain competition in orally administered drugs for patients with a moderate or more severe case of psoriasis vulgaris through unilateral or coordinated conduct of the company group.[12]

Part V Conclusion

The JFTC concluded that the conduct of this case would not substantially restrain competition in any particular field of trade.

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[12] With regard to the conduct of this case, the Federal Trade Commission (FTC) has decided that it will not be a problem provided that Celgene Group will implement a remedial measure in which Celgene Group's business of manufacturing and sales of Otezla will be sold. (The US is different from Japan in the state of the market, e.g., the Parties hold a greater share in the market of orally administered drugs for patients with a moderate or more severe case of psoriasis vulgaris.) On the other hand, European Commission has decided that the conduct of this case will not be a problem without requiring any particular remedial measure just as in Japan.

Case 2 Acquisition of the neodymium magnet alloy research and development business of Showa Denko K.K. by TDK Corporation

Part I The Parties

TDK Corporation (JCN 7010001034849) (hereinafter referred to as "TDK") is a company conducting manufacturing and sales of neodymium magnets and others.

Showa Denko K.K. (JCN 9010401014548) (hereinafter referred to as "Showa Denko") is a company conducting manufacturing and sales of neodymium magnet alloys and others.

Hereinafter, a group of companies which have already built joint relationships with TDK shall be referred to as "TDK Group." In addition, TDK and Showa Denko shall be collectively referred to as "the Parties" and TDK Group and Showa Denko shall be collectively referred to as "the company group."

Part II Outline of this case and applicable provision

This case concerns a plan in which TDK would acquire neodymium magnet alloy research and development business from Showa Denko (hereinafter referred to as "the conduct of this case"). After the conduct of this case, TDK would start manufacturing neodymium magnet alloys by installing equipment to manufacture the said alloys, and thereby virtually take over the neodymium magnet alloy manufacturing business of Showa Denko. Therefore, the JFTC reviewed this case from the perspective that TDK and the neodymium magnet alloy manufacturing business of Showa Denko would be integrated.

The applicable provision in this case is Article 16 of the AMA.

Part III Particular field of trade

1 Product outline

(1) Neodymium magnet alloys

Neodymium magnet alloys are alloys made of rare-earth elements, i.e., neodymium (Nd), praseodymium (Pr), and dysprosium (Dy) by adding iron and others, and used as a material for neodymium magnets.

Neodymium magnet alloys are mainly manufactured by a method called strip casting (SC) technology. SC technology refers to a casting method in which metal is melted and the resulting hot metal gets rapidly solidified.

Neodymium magnet alloy manufacturing/sales businesses (hereinafter referred to as "alloy manufacturers") produce alloys based on the instructions on mixing ratios of rare-earth elements, cooling temperature, etc. provided by neodymium magnet manufacturing/sales businesses (hereinafter referred to as "magnet manufacturers"). However, as the alloy composition including the size of organization and the quantity of impurities varies depending on the casting conditions, alloy manufacturers also possess the manufacturing know-how, which is kept to each manufacturer as classified information.

(2) Neodymium magnets

Neodymium magnets are permanent magnets made of rare-earth elements and the strongest type of magnet currently manufactured. Due to their strong magnetic force, they are used in automobile driving motors, hard disk drives, air conditioner motors, elevator winches, etc.

Neodymium magnets are largely divided into sintered neodymium magnets (hereinafter referred to as "sintered magnets") and bonded neodymium magnets (hereinafter referred to as "bonded magnets").

Sintered magnets are manufactured by pulverizing neodymium magnet alloys made through SC technology, sintering the resulting powder into blocks in a strong magnetic field, and heat-treating them. Bonded magnets, on the other hand, are manufactured by pulverizing neodymium magnet alloys into magnetic particles, mixing them with resin, and molding and solidifying the result. Bonded magnets are different from sintered magnets in that they generally have less magnetic force and heat-resistance as they contain resin while being easier to process and less costly.

2 Product range

(1) Neodymium magnet alloys

Neodymium magnet alloys are only used as a material for neodymium magnets. As no other alloy can substitute for neodymium magnet alloys as a material for neodymium magnets, no demand substitutability is recognized between neodymium magnet alloys and other alloys. As well, manufacturing facilities/processes of neodymium magnet alloys are different from those of other alloys, and switching from manufacturing of other alloys to neodymium magnet alloys would require a large amount of capital investment as well as manufacturing know-how. Therefore, it is not easy to

switch from manufacturing of other alloys to neodymium magnet alloys and no supply substitutability is recognized between neodymium magnet alloys and other alloys.

Neodymium magnet alloys are divided into alloys made through SC technology (hereinafter referred to as "SC alloys") and alloys made through other manufacturing methods including centrifugal casting (hereinafter referred to as "non-SC alloys"), and Showa Denko and competitors mainly manufacture SC alloys. In this respect, as there is quality difference between non-SC alloys and SC alloys, in some cases end users designate SC technology or any other method to be used for manufacturing neodymium magnet alloys. Therefore, demand substitutability is limited between SC alloys and non-SC alloys. As well, manufacturing facilities and required patents are not the same between SC alloys and non-SC alloys, and switching of manufacturing methods is not easy either. Therefore, no supply substitutability is recognized.

Based on the above, the JFTC defined a product range as "SC alloys" (hereinafter, SC alloys referred to as "neodymium magnet alloys").

(2) Neodymium magnets

While there are different kinds of permanent magnets than neodymium magnets, no other permanent magnets have magnetic force as strong as neodymium magnets. Therefore, no demand substitutability is recognized between neodymium magnets and other magnets. As well, manufacturing know-how among others is not the same between neodymium magnets and other magnets, and switching of manufacturing methods is not easy either. Therefore, no supply substitutability is recognized.

Regarding sintered magnets and bonded magnets, there are differences in price and quality but end users use either kind of products as long as they meet the quality standards set by end users (magnetic-flux density, coercive force, etc.) rather than choosing one or the other and setting specifications based on the choice. Therefore, a certain degree of demand substitutability is recognized between sintered magnets and bonded magnets.

Based on the above, the JFTC defined a product range as "neodymium magnet alloys."

3 Geographic range

No restrictions apply to domestic transportation of neodymium magnet

alloys, and there is no regional price difference either. As well, alloy manufacturers sell neodymium magnet alloys to magnet manufacturers, the users, in all regions of Japan, and magnet manufacturers also procure materials from alloy manufacturers regardless of where the suppliers are located. The same applies to neodymium magnets as well.

Accordingly, the JFTC defined the geographic range of both neodymium magnet alloys and neodymium magnets as "all regions of Japan."

Part IV Impact of the conduct of this case on competition

As Showa Denko manufactures/sells neodymium magnet alloys, which are used by TDK Group to manufacture/sell neodymium magnets, the conduct of this case falls under the definition of vertical business combinations, in which neodymium magnet alloys and neodymium magnets are considered upstream market and downstream market respectively.

1 Position of the company group and conditions of competing enterprises

(1) Upstream market

The following table shows market shares of the company group and a competitor concerning neodymium magnet alloy manufacturing/sales. As HHI is around 5,500 and the market share of the company group is around 30%, the conduct of this case does not meet the safe-harbor criteria for vertical business combinations.

Apart from Showa Denko, Santoku Corporation (hereinafter referred to as "Santoku"), holding around 65% of the market, is an influential competitor supplying neodymium magnet alloys to outside customers.

[Market shares concerning neodymium magnet alloys in FY2017]

Rank	Company name	Market share
1.	Santoku	Approx. 65%
2	Showa Denko	Approx. 30%
	Imports	0-5%
Total		100%

(2) Downstream market

The following table shows market shares of the company group and competitors concerning neodymium magnet manufacturing/sales. As HHI is around 3,600 and the market share of the company group is around 15%, the conduct of this case does not meet the safe-harbor criteria for vertical

business combinations.

Apart from TDK Group, there are influential competitors, Company B and Hitachi Metals, Ltd. (hereinafter referred to as "Hitachi Metals"), holding around 50% and 30% of the market respectively.

Incidentally, Santoku, mentioned earlier in (1), has become a subsidiary of Hitachi Metals (hereinafter, the business combination concerned referred to as "Hitachi Metals-Santoku integration"[1]), and Company B is a magnet manufacturer which manufactures neodymium magnet alloys just for self-consumption. As well, Company B is capable of manufacturing neodymium magnet alloys only for self-consumption, not able to sell them to outside customers.

[Market shares concerning neodymium magnets in FY2017]

Rank	Company name	Market share
1	Company B	Approx. 50%
2	Hitachi Metals	Approx. 30%
3	TDK Group	Approx. 15%
	Others	Approx. 5%
	Imports	0-5%
Total		100%

2 Supply refusal, etc. of neodymium magnet alloys

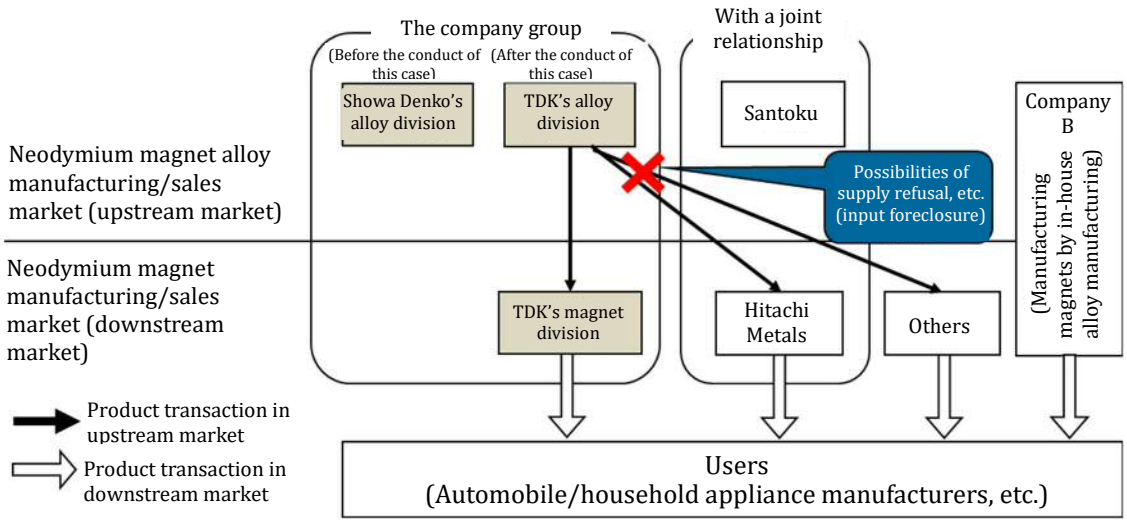
Here, let us examine the possibility that an issue of input foreclosure may arise in the neodymium magnet market if the Parties refuse to supply neodymium magnet alloys to neodymium magnet manufacturers other than TDK Group after the conduct of this case.

In this respect, Hitachi Metals, based on the remedial measure proposed in the Hitachi Metals-Santoku integration, was supplied with neodymium magnet alloys from Showa Denko for a one-year period between April 2018 and March 2019. When the JFTC began review of this case, which was after the completion of the remedial measure period, Showa Denko was supplying neodymium magnet alloys only to TDK and no competitors of TDK in downstream market was supplied with neodymium magnet alloys by Showa Denko.

Accordingly, the company group has no capabilities of implementing input foreclosure. Therefore, the JFTC decided that no issues of closure or exclusivity

[1] See Case 2 "Acquisition of shares of Santoku Corporation by Hitachi Metals, Ltd." of "Major Business Combination Cases in Fiscal Year 2017" (June 6, 2018, the JFTC).

of the market would arise.



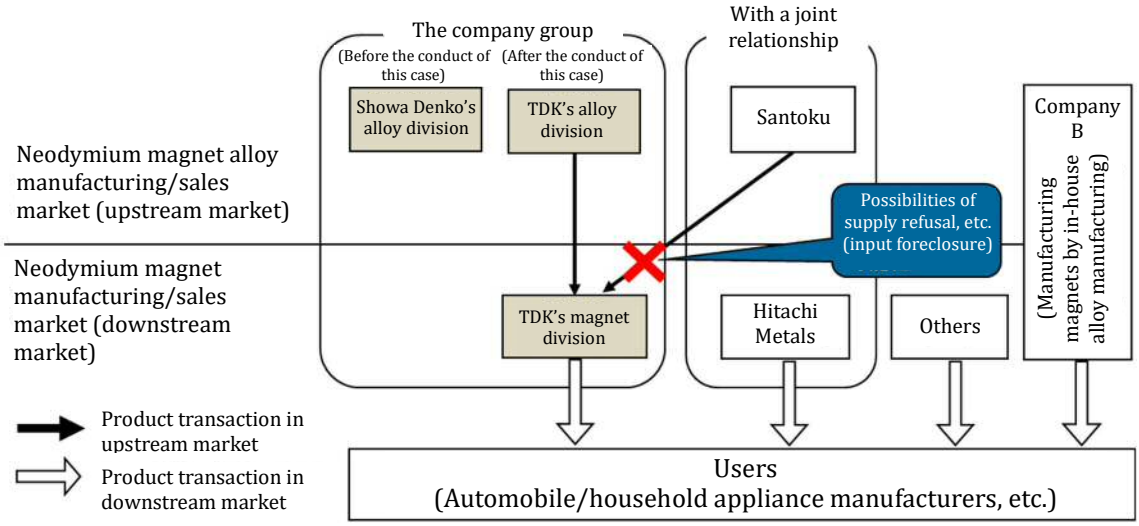
3 Purchase refusal, etc. of neodymium magnet alloys

Here, let us examine the possibility that an issue of customer foreclosure may arise in the neodymium magnet alloy market if TDK Group refuses to purchase neodymium magnet alloys from neodymium magnet alloy manufacturers other than the Parties.

In this respect, although Santoku was continuing to supply neodymium magnet alloys to TDK at the time of the review of this case based on the measure concerning five-year continuation of trade, which is part of the remedial measure proposed in the Hitachi Metals-Santoku integration, TDK may refuse to purchase from Santoku after the conduct of this case. However, neodymium magnet alloys are made to order based on specifications set by magnet manufacturers and TDK is required to continue purchasing from Santoku a certain quantity of neodymium magnet alloys used for neodymium magnets to be sold to some users for a certain period. For this reason, of the amount supplied to TDK by Santoku at the time of the review of this case, the amount TDK may switch suppliers from Santoku to Showa Denko in a certain period is limited to only part of neodymium magnet alloys Santoku supplies to downstream market. As well, in light of increasing demand for neodymium magnets, even if TDK refuses to purchase from Santoku an amount that is switchable from Santoku to Showa Denko, it is reasonable to assume that Santoku is able to sell the equivalent amount of neodymium magnet alloys to its parent company, Hitachi Metals.

Accordingly, the company group has no capabilities of implementing customer foreclosure. Therefore, the JFTC decided that no issues of closure or

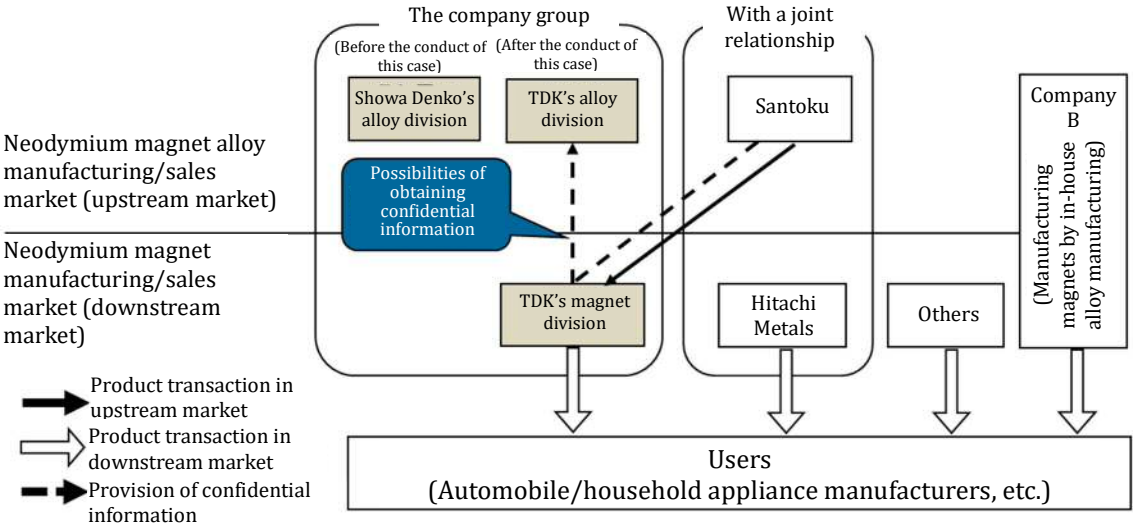
exclusivity of the market would arise.



4 The impact on the market from the company group sharing a competitor's confidential information

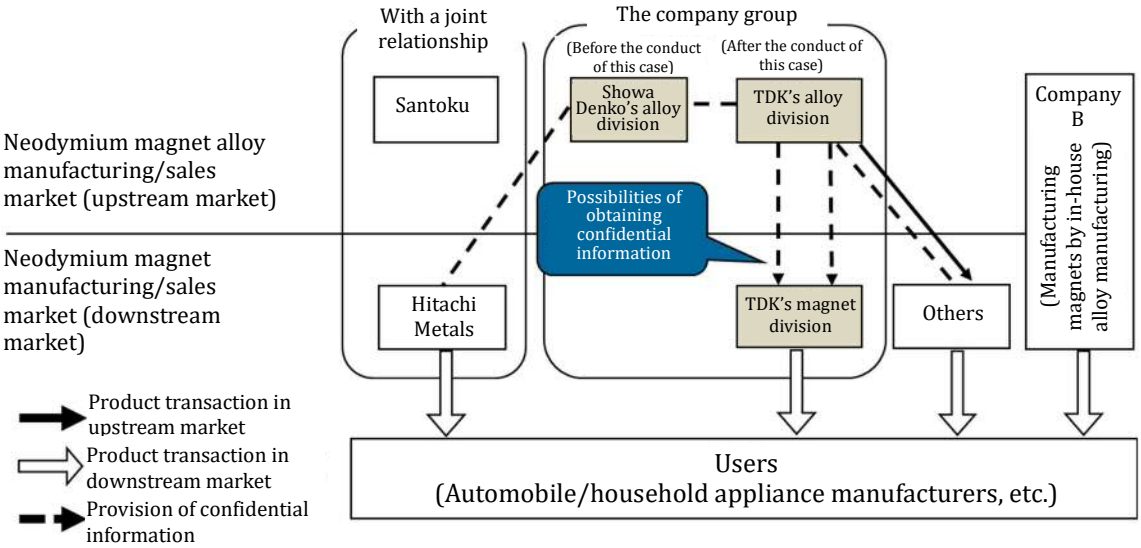
(1) The impact on the upstream market from TDK's alloy division obtaining Santoku's confidential information

After the conduct of this case, TDK's alloy division would be able to obtain Santoku's competition sensitive information (confidential information) including alloy sales price, quantity, and composition through TDK's neodymium magnet manufacturing/sales division (hereinafter referred to as "magnet division"). If TDK's alloy division exploits such confidential information, Santoku will be placed at a disadvantage and there is a possibility that an issue of closure or exclusivity of the market will arise. Also, the competitors shew similar concern to the JFTC.



(2) The impact on the downstream market from TDK's magnet division obtaining magnet manufacturers' confidential information

Showa Denko has confidential information of Hitachi Metals including neodymium magnet alloy procurement price, quantity, and composition as Showa Denko was supplying neodymium magnet alloys to Hitachi Metals until just before the review of this case began.[2] Through the conduct of this case, if the said confidential information is shared among TDK Group and TDK's magnet division exploits it, Hitachi Metals will be placed at a disadvantage and there is a possibility that an issue of closure or exclusivity of the market will arise. Also, the competitors shew similar concern to the JFTC.[3]



2 For recent years, Showa Denko has supplied neodymium magnet alloys to no magnet manufacturers other than TDK and Hitachi Metals.

3 Theoretically, the same issue may arise for not just Hitachi Metals but other neodymium magnet manufacturers.

Part V Proposal of remedy by the Parties[4]

When the Parties were informed that there would be a possibility that an issue of closure or exclusivity of the market would arise from the conduct of this case and that the competitors shew similar concern to the JFTC, the Parties proposed a remedy summarized in the following (hereinafter referred to as "remedial measure of this case").

1 Measures to block the flow of information at the Parties

(1) Organizational blocking of information and restriction of information access

The Parties will take measures to make sure that (1) TDK's magnet division cannot access competition sensitive confidential information held by Showa Denko concerning Hitachi Metals' neodymium magnets and that (2) TDK's alloy division cannot access competition sensitive confidential information held by TDK's magnet division concerning Santoku's neodymium magnet alloys.

(2) Personnel change restrictions

The Parties will restrict transfer of specific employees of TDK's alloy division to TDK's magnet division for five years from the conduct of this case.

(3) Securing of written undertakings

The Parties will inform specific employees mentioned in (2) above that they should not disclose competition sensitive confidential information concerning Hitachi Metals' neodymium magnets to directors or employees of TDK's magnet division, and will make them submit written undertakings that they would follow the remedial measure of this case and that they understand that they would be subject to disciplinary actions based on working regulations, should they violate any of these conditions.

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[4] In this case, TDK did not propose that it continue procurement of neodymium magnet alloys from Santoku. On the other hand, in the Hitachi Metals-Santoku integration, Santoku made a proposal to the effect that it would continue to supply neodymium magnet alloys to magnet manufacturers including TDK. This proposal was also taken into account when the JFTC made its decision. In this respect, the Parties of the Hitachi Metals-Santoku integration submitted a proposal seeking change to the remedial measure. In response, the JFTC, after hearing from TDK and Showa Denko as well, decided that TDK be removed, after a certain period of time, from the list of manufacturers Santoku would continue to supply with neodymium magnet alloys under the said remedial measure, based on the premise that TDK would be no longer need to source raw materials from Santoku.

2 Regular reporting

The Parties will make a report to the JFTC once a year in principle for a period of five years from the day when the conduct of this case is implemented on the state of implementation of measures to block the flow of information discussed in 1 above.

Part VI Assessment of the remedy of this case

Based also on the result of interview with competitors, the JFTC determined that the measures to block the flow of information discussed in Part V 1 above would be appropriate because an issue of closure or exclusivity of the market is considered unlikely to arise in the upstream market or downstream market on the grounds that if such measures are taken, information on competitors' products will not be shared inside the company group.

In addition, regular reporting is considered as an effective measure in terms of monitoring implementation of the remedial measure of this case.

Based on the above, the remedy of this case is considered to prevent issues of closure or exclusivity of the market from arising.

Part VII Conclusion

The JFTC concluded that the conduct of this case would not substantially restrain competition in any particular field of trade, provided that the Parties implement the remedy of this case.

Case 3 Integration of Kobelco & Materials Copper Tube Co., Ltd. and the copper tube business of Furukawa Electric Co., Ltd. by Japan Industrial Partners, Inc.

Part I The Parties

Japan Industrial Partners Co., Ltd. (JCN 8010001094082) (hereinafter referred to as "JIP") is a company conducting investment business.

Kobelco & Materials Copper Tube Co., Ltd. (JCN 8011101037039) (hereinafter referred to as "KMCT") is a company conducting manufacturing and sales of copper tubes.

Furukawa Electric Co., Ltd. (JCN 5010001008796) (hereinafter referred to as "Furukawa Electric") operates two subsidiaries conducting manufacturing and sales of copper tubes.

Hereinafter, a group of companies which have already built joint relationships with Furukawa Electric shall be referred to as "Furukawa Electric Group." As well, JIP, KMCT, and Furukawa Electric Group shall be collectively referred to as "the Parties."

Part II Outline of this case and applicable provision

This case concerns a plan in which JIP, through a company funded by itself, would acquire each of the following (hereinafter referred to as the conduct of this case):

1) More than 50% of voting rights with regard to shares of KMCT;
2) More than 20% of voting rights with regard to shares of one of Furukawa Electric's two copper tube manufacturing/sales subsidiaries, and more than 50% of the other.

The applicable provision in this case is Article 10 of the AMA.

As JIP aims to integrate KMCT and Furukawa Electric Group's copper tube business through the conduct of this case, the following examines horizontal business combination of copper tube manufacturing/sales business in which KMCT and Furukawa Electric Group are in a competitive relationship.

Part III Particular field of trade

1 Product range

Copper tubes are tubes mainly made of copper, characterized by its superiority in electric and heat conductivity, ductility and corrosion resistance

compared to tubes made of other metals. They are used mainly for air conditioners, heat exchangers of refrigerating/freezing machines, water heaters, etc.

Copper tubes are largely divided into pure copper tubes and copper alloy tubes depending on the raw materials used.

(1) Demand substitutability

Pure copper tubes are copper tubes manufactured with copper with a purity of 99.90% or higher (pure copper). A number of pure copper tube types exist depending on the type of pure copper used, including phosphorous-deoxidized copper tubes, oxygen-free copper tubes and the like.

Copper alloy tubes, on the other hand, are manufactured with alloys made by adding zinc, tin, or other matters to copper, the principal element. There are different types of copper alloy tubes including brass tubes, gunmetal tubes and the like depending on the elements of the matters to be added and their ratios. As well, there are special copper alloy tubes which are manufactured with alloys which have improved corrosion resistance and high strength realized by changing the elements of non-copper metals to be mixed and their ratios.

As users choose from these different types of copper tubes according to their characteristics, demand substitutability is limited between pure copper tubes and copper alloy tubes and also among different types of either pure copper tubes or copper alloy tubes.

(2) Supply substitutability

Apart from brass tubes which require special equipment for manufacturing, copper tube manufacturers are able to manufacture any type of pure copper tubes and copper alloy tubes with the same equipment by procuring billets (pieces of metal), the raw materials, from a third party. Accordingly, supply substitutability is recognized among all types of pure copper tubes and copper alloy tubes except brass tubes.

(3) Summary

Based on the above, a distinction should be made between “brass tubes” and “pure copper tubes and copper alloy tubes (except brass tubes)” as separate product ranges and in the review of this case the JFTC defined a

product range as “pure copper tubes and copper alloy tubes (except brass tubes),” which both KMCT and Furukawa Electric Group manufacture/sell. Hereinafter, “pure copper tubes and copper alloy tubes (except brass tubes)” shall be referred to as “copper tubes (except brass tubes).”

2 Geographic range

There are no restrictions in terms of difficulty and costs when transporting copper tubes (except brass tubes) in Japan. The Parties and competitors sell products in all regions of Japan and there is no regional price difference either.

Accordingly, the JFTC defined the geographic range as “all regions of Japan.”

Part IV Impact of the conduct of this case on competition

Since both KMCT and Furukawa Electric Group are conducting business of manufacturing/selling copper tubes (except brass tubes) in all regions of Japan, the conduct of this case falls under the definition of horizontal business combinations.

1 Substantial restriction of competition through unilateral conduct

(1) Position of the Parties and conditions of competing enterprises

The following table shows market shares of manufacturers of copper tubes (except brass tubes). As HHI is around 4,000, up around 500, the conduct of this case does not meet the safe-harbor criteria for horizontal business combinations.

[Market shares concerning copper tubes (except brass tubes) in FY2018]

Rank	Company name	Market share
1.	KMCT	Approx. 45%
2	Company A	Approx. 35%
3	Furukawa Electric Group	Approx. 5%
	Imports	Approx. 15%
Total		100%
Combined market share/rank: approx. 50%/1st place		

After the conduct of this case, there is an influential competitor, Company A, which has a certain degree of excess capacity, holding around 35% of the market. Therefore, competitive pressure from competitors is recognized.

In addition, as Furukawa Electric Group downsized its production scale at the end of 2011, switching its policy to specializing in manufacturing/sales of high value added products used for special purposes, the degree of competition between the Parties is limited.

(2) Import

The sales price of a copper tube, whether it is made in Japan or imported, is decided by "copper ingot price + roll margin (processing charge)."

Of these, the copper ingot price is not much different between domestically manufactured products and imports because the domestic index used is based on an international index. On the other hand, the roll margin for the imported product is around 20% lower than that for the product made in Japan. However, sales prices of the two do not vary greatly, taking into consideration all circumstances facing imports such as the need for purchasing many lots due to the transportation cost and difficulties in quickly responding to quality control issues.

In fact, users use or consider using imports to fend off price hikes by Japanese manufacturers of copper tubes (except brass tubes), and imports account for around 15% of the market of copper tubes (except brass tubes) as discussed in (1) above. Therefore, import pressure is recognized.

(3) Entry

In the market of copper tubes (except brass tubes) in Japan, the number of competing players is on the decline as they are going out of business. Therefore, entry pressure is not recognized.

(4) Competitive pressure from adjacent markets

Aluminum tubes, stainless tubes, or iron tubes are in some cases used as substitutes for copper tubes (except brass tubes).

However, end users including air conditioner manufacturers use these substitutes only in a limited manner because on the whole, cost advantage of these products over purchasing copper tubes is small, considering that although aluminum or stainless ingots are cheaper than copper ingots, they involve processing difficulties in manufacturing end products and also it takes a huge amount of time and money to install from scratch manufacturing equipment for end products made of such substitute materials.

Therefore, competitive pressure from adjacent markets is limited.

(5) Competitive pressure from users

Users of copper tubes (except brass tubes) including air conditioner manufacturers are actively engaging in price competition in end product markets, holding strong incentives for cutting prices of raw material including copper tubes (except brass tubes). For this reason, they source from multiple manufacturers of copper tubes (except brass tubes) home and abroad, and change purchase volume or switch suppliers by the quotes from the manufacturers to reduce procurement cost of copper tubes (except brass tubes). Accordingly, a certain level of competitive pressure from users is recognized.

(6) Summary

Based on the above, the degree of competition between the Parties is limited and competitive pressure from competitors and import pressure are recognized. In addition, a certain degree of competitive pressure from users is recognized. Therefore, the conduct of this case would not substantially restrain competition in any particular field of trade through unilateral conduct.

2 Substantial restriction of competition through coordinated conduct

As discussed in 1 (1) above, Furukawa Electric Group has switched its policy to specializing in manufacturing/sales of high value added products used for special purposes, the degree of competition between the Parties is limited. Neither users nor competitors in Japan had a recognition that Furukawa Electric Group's products were adding to the competition in the market of copper tubes (except brass tubes) and the situation would remain the same even after the conduct of this case.

In addition, as discussed in 1 (2) above, import pressure is recognized, and so is a certain degree of competitive pressure from users, as mentioned earlier in (5). These factors each work as a restrain on competition against coordinated conduct.

Therefore, the conduct of this case would not substantially restrain competition in any particular field of trade through coordinated conduct of manufacturers of copper tubes (except brass tubes) in Japan.

Part V Economic analysis

In the review of this case, the JFTC conducted price correlation analyses by using public data and actual sales data of the Parties, among others, to clarify whether or not copper tubes (except brass tubes) and brass tubes could be regarded as forming the same field of trade; whether or not the state of competition in Japan among manufacturers of copper tubes (except brass tubes) matches the understanding of users and competitors; and whether or not imports could be competitive pressure[1]. When conducting price correlation analyses, the JFTC used roll margins, obtained from subtracting copper ingot prices from copper tube prices, instead of using copper tube prices as is, because the latter is likely to cause what is called "spurious correlation," in which correlation coefficients are calculated extremely high due to the price fluctuation of copper ingots which affects all products across the board.[2]

First, the JFTC conducted coefficient analyses of roll margins concerning copper tubes (except brass tubes)[3] and brass tubes calculated by using available data from Current Survey of Production published by the Ministry of Economy, Trade and Industry and domestic electrolytic copper quotations released by JX Nippon Mining & Metals Corporation among others.

As a result, the JFTC obtained a correlation coefficient of 0.1785, a low value, which supports the qualitative analysis result that supply substitutability is low between copper tubes (except brass tubes) and brass tubes as discussed in Part III 1 (2) above.

Then, the JFTC conducted correlation analyses of roll margins concerning main products of manufacturers of copper tubes (except brass tubes) by using actual sales data of copper tubes (except brass tubes) obtained from the Parties, among others.

As a result, while an extremely high correlation coefficient 0.8730 was

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1 "Ex-post Evaluation of Competitive Pressure from Imports in the Review of Business Combination" (June 28, 2016; Joint research report by Competition Policy Research Center, the JFTC) provides ex-post evaluation of the review of business combination concerning the merger of Furukawa-Sky Aluminum Corporation and Sumitomo Light Metal Industries, Ltd. in 2013 (hereinafter referred to as "the year 2013 integration"). It reports the result of the evaluation to the effect that import pressure can be evaluated by analyzing public data. (However, the joint research does not take into account the impact of increased imports by Japanese manufacturers of copper tubes (except brass tubes) from their own factories in Southeast Asia after the year 2013 integration.)

2 To avoid "spurious correlation," an alternative method is available, which uses residuals obtained through regression analysis between the copper tube price and the copper ingot price. Roughly the same results were obtained in this method as well.

3 Item "Copper products (pipes and tubes)" in Current Survey of Production was used. It includes copper alloy tubes other than brass tubes.

obtained concerning roll margins of KMCT and Company A, the same coefficient between KMCT and Furukawa Electric Group and between Company A and Furukawa Electric Group remained relatively low at 0.3298 and 0.3397 respectively. This is a somewhat consistent result with the understanding of users and others that Furukawa Electric Group's products are not adding to the competition in the market as discussed in Part IV 2 above.

As well, the JFTC conducted roll margin correlation analysis concerning major domestically-manufactured products and imports by using the actual sales data, data of copper tubes (except brass tubes) imported from China[4] sourced from Trade Statistics of Japan published by the Ministry of Finance, among others.[5] As a result, while data is available for the year 2015 and thereafter, if we only look at the period starting from January 2017, statistically significant results are obtained. In particular, correlation coefficients between KMCT and imports and between Company A and imports are somewhat high, 0.4731 and 0.3494 respectively. The result indicates that a certain degree of competitive pressure of imports is recognized although this evaluation should be somewhat discounted due to the data restrictions.

Based on the above, the economic analysis also corroborated the qualitative analysis to a certain degree.

Part VI Conclusion

The JFTC concluded that the conduct of this case would not substantially restrain competition in any particular field of trade through unilateral conduct of the Parties or coordinated conduct with competitors.

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4 The reasons for limiting data to copper tubes (except brass tubes) from China are as follows: 1) Some Japanese manufacturers of copper tubes (except brass tubes) import from their own factories in Southeast Asia. Because of this, using data of import from the world from Trade Statistics of Japan is not appropriate for evaluating import pressure as it includes import by those Japanese manufacturers from their own factories in Southeast Asia for the domestic market. 2) Users of copper tubes (except brass tubes) mainly purchase from China when importing.

5 Manufacturers of copper tubes (except brass tubes) procure copper ingots by hedging against the risk of fluctuations in copper quotations. When calculating roll margins in this analysis, the JFTC used not domestic electrolytic copper quotations released by JX Nippon Mining & Metals Corporation but risk-hedged copper ingot prices included in data submitted by one of the Parties.

Case 4 Acquisition of shares of Kokusai Electric Corporation by Applied Materials, Inc.

Part I The Parties

Applied Materials, Inc. (headquartered in the US; hereinafter referred to as "AMAT") and Kokusai Electric Corporation (JCN 4010003024801) (hereinafter referred to a "Kokusai") are both companies conducting manufacturing and sales of semiconductor manufacturing equipment.

Hereinafter, a group of companies which have already built joint relationships with AMAT shall be referred to as "AMAT Group," and a group of companies which have already built joint relationships with Kokusai shall be referred to as "Kokusai Group." As well, AMAT and Kokusai shall be collectively referred to as "the Parties" and AMAT Group and Kokusai Group "the company group."

Part II Outline of this case and applicable provision

This case concerns a plan in which AMAT would acquire all of the voting rights with regard to shares of Kokusai (hereinafter referred to as "the conduct of this case").

The applicable provision in this case is Article 10 of the AMA.

Both AMAT Group and Kokusai Group are engaging in the manufacture/sales of semiconductor manufacturing equipment. Of many products manufactured/sold by the company group, the following details ALD equipment, epitaxial equipment, and plasma processing equipment, concerning which the conduct of this case is considered to have a relatively large impact on competition.

Part III Particular field of trade

1 Product outline

(1) Semiconductor manufacturing equipment

Semiconductor manufacturing equipment is equipment to manufacture IC[1] by processing silicon wafers[2] (hereinafter referred to as "wafers"). To

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[1] Electronic component made by forming an electronic circuit which has processing capabilities such as information conservation, numerical computation, and logical operation using the properties of semiconductor on a substrate of about one square centimeter.

[2] Disc-shaped thin plate made by cutting columned single-crystalline silicon about 1mm thin, and polishing and cleaning the slice

manufacture IC, processes such as film formation[3], exposure[4], etching[5], and heat treatment[6] are repeated hundreds of times and each of these processes uses various kinds and many pieces of semiconductor manufacturing equipment with different functions and usage. ALD equipment and epitaxial equipment are used in the film formation process, plasma processing equipment in the heat treatment process.

(2) ALD equipment

ALD (Atomic Layer Deposition) equipment deposits atomic layers on a wafer and creates thin films by introducing two kinds of gas alternately into the reaction chamber (hereinafter referred to as "chamber") and causing chemical reaction through the use of thermal or plasma energy. Compared to other equipment used in the film-formation process, ALD equipment can create extremely thin films.

ALD equipment is largely divided into the single wafer system and the batch system depending on the wafer processing method. As the single wafer system processes wafers one by one in a single chamber, it has greater control over wafer processing, e.g., temperature easily adjustable when heating, and is characterized by its ability to create high-quality thin films. The batch system features high productivity, keeping the processing cost per wafer low, as 50 to 150 wafers are processed at the same time in a vertical heating system called "furnace."

(3) Epitaxial equipment

Epitaxial equipment creates a base layer of single crystal structure (hereinafter referred to as "epitaxial layer") on the wafer surface in order to increase the wafer's conductivity. High-quality IC production is made possible by creating a flawless epitaxial layer on the wafer surface at the first process of IC manufacturing.

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[3] Process to create on a wafer thin films including a semiconductor film, which is the basis of a transistor, a metal film, the basis of wiring, and an insulating film which isolate these films

[4] Process in which circuit patterns are copied on the wafer using the principle of photography

[5] Process to selectively remove thin films with a chemical solution or gas as per the circuit pattern copied on the wafer

[6] Process to heat the wafer and change its electric characteristics

(4) Plasma processing equipment

Plasma processing equipment changes the wafer's electric characteristics by using a combination of heat and plasma, typically used to oxidize or nitrogenize the wafer surface by causing a reaction between matters on the surface and plasma.

There are two types of plasma processing equipment: The integration type in which the plasma processing chamber is integrated with the rapid thermal processing (hereinafter referred to as "RTP")[7] chamber and the non-integration type which is not integrated with the RTP chamber. With the integration type, wafers that went through plasma processing can undergo RTP while maintaining the vacuum state because the plasma processing chamber and the RTP chamber are integrated on the same platform.

2 Product range

(1) ALD equipment

As discussed in 1 (2) above, ALD equipment is largely divided into the single wafer system and the batch system depending on the wafer processing method (number of wafers).

In this respect, users, namely semiconductor manufacturers, choose from the two types that are different in characteristics, depending on the manufacturing process and purpose, e.g., choosing the single-wafer-system ALD equipment in the process which requires fine techniques, and the batch-system ALD equipment in the process where they give priority to processing speed and cost per wafer. Therefore, demand substitutability between the two systems is not recognized.

As the single wafer system and the batch system have totally different equipment structures and their manufacturing techniques and know-how are different too, it is difficult to switch manufacturing between the two systems quickly without sizable additional cost or risk. Therefore supply substitutability is not recognized between them, either.

Based on the above, the JFTC defined separate product ranges as "the single-wafer-system ALD equipment" and "the batch-system ALD equipment."

(2) Epitaxial equipment

As no film-formation equipment has functions similar to those of

[7] Rapid Thermal Processing

epitaxial equipment, demand substitutability is not recognized between epitaxial equipment and other film-formation equipment.

In addition, as epitaxial equipment, which is used to create fine films on the wafer surface, requires advanced specialized technology for its manufacturing, it is difficult for manufacturers of other types of film-formation equipment to switch to epitaxial equipment manufacturing quickly without sizable additional cost or risk. Therefore supply substitutability is not recognized, either.

Based on the above, the JFTC defined a product range as "epitaxial equipment."

(3) Plasma processing equipment

As discussed in 1 (4) above, plasma processing equipment is divided into the integrated plasma processing equipment which integrates plasma processing and RTP chambers and non-integrated plasma processing equipment which does not have the RTP chamber integrated with the plasma processing chamber.

In this respect, the integrated plasma processing equipment is used for nitriding of the wafer surface and other usages which require fine techniques, according to the integrated equipment's characteristics of enabling multiple serial processes, i.e., plasma processing and RTP, while maintaining the vacuum state, whereas the non-integrated plasma processing equipment is mainly used for oxidization of the wafer surface. As these two types of equipment have different usages, demand substitutability is not recognized.

In addition, as the integrated plasma processing equipment and the non-integrated plasma processing equipment are different in their equipment structures and manufacturing techniques and know-how, it is difficult to switch manufacturing between the two quickly without sizable additional cost or risk. Therefore supply substitutability is not recognized between them, either.

Based on the above, the JFTC defined separate product ranges as "the integrated plasma processing equipment" and "the non-integrated plasma processing equipment."

3 Geographic range

Both products defined in 2 above cost little in transportation or tariffs, being sold at the same price levels across the world. As well, semiconductor manufacturers, the users, do business with suppliers regardless of whether the suppliers are in or outside of Japan and the suppliers also sell their products to users no matter what countries the users are based in. For this reason, the JFTC defined the geographic range as "worldwide."

Part IV Impact of the conduct of this case on competition

As the single-wafer-system ALD equipment, epitaxial equipment, and the integrated plasma processing equipment manufactured/sold by AMAT Group and the batch-system ALD equipment and the non-integrated plasma processing equipment manufactured/sold by Kokusai Group are sold to the same users, the conduct of this case falls under the definition of conglomerate business combinations.

1 Position of the Parties

HHI of epitaxial equipment is around 5,800, the Parties' market share 75%; HHI of the integrated plasma processing equipment is 10,000, the Parties' market share 100%; HHI of the non-integrated plasma processing equipment is 3,500, the Parties' market share around 40%. As well, the accurate market share is unknown for the single-wafer-system ALD equipment and the batch-system ALD equipment. Therefore, this case will be examined based on the premise that the conduct of this case does not meet the safe-harbor criteria for conglomerate business combinations.

[Market shares concerning epitaxial equipment in FY2017]

Rank	Company name	Market share
1	AMAT Group	Approx. 75%
2	Company A	Approx. 15%
3	Company B	Approx. 5%
	Others	Approx. 5%
Total		100%

[Market shares concerning the integrated plasma processing equipment in FY2017]

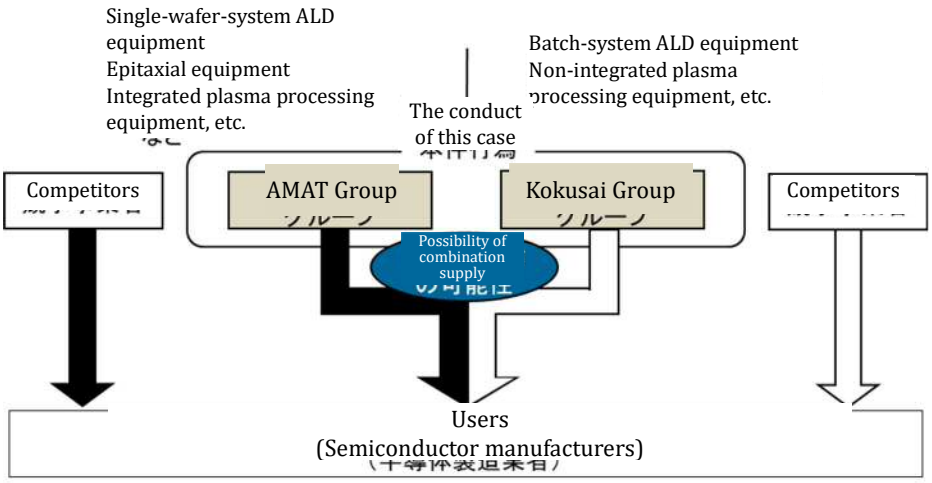
Rank	Company name	Market share
1.	AMAT Group	100%
Total		100%

[Market shares concerning the non-integrated plasma processing equipment in FY2017]

Rank	Company name	Market share
1.	Kokusai Group	Approx. 40%
2	Company C	Approx. 35%
3	Company D	Approx. 25%
Total		100%

2 Examination of closure or exclusivity of the market

Here, let us examine the possibility that an issue of closure or exclusivity of the market may arise in markets of semiconductor manufacturing equipment if a piece of semiconductor manufacturing equipment manufactured/sold by one of the Parties is bundled with another piece of semiconductor manufacturing equipment manufactured/sold by the other of the Parties and supplied to users or if such bundled products are supplied at a price lower than the total sales price of individual products (hereinafter referred to as "combination supply").



(1) Capabilities to implement market foreclosure

As discussed in Part III 1 (1), users, namely semiconductor manufacturers, each set up their own manufacturing lines to achieve the best combination of various types of semiconductor manufacturing equipment used at processes such as film formation, exposure, etching, and heat treatment according to the functions of IC they manufacture, and choose most appropriate semiconductor manufacturing equipment for each process of the said manufacturing lines by assessing the performance individually. Therefore, opportunities are limited for semiconductor

manufacturing equipment manufacturers to offer combination supply. Based on these actual transaction practices, it would be difficult for the Parties to offer combination supply. In fact, users did not express particular concerns regrading combination supply.

In addition, as users, namely semiconductor manufacturers, face active competition in the semiconductor market and are also prime customers who purchase a wide variety of semiconductor manufacturing equipment for various processes as discussed in Part III 1 (1) above, competitive pressure from users is recognized.

As for the epitaxial equipment and the non-integrated plasma processing equipment, there are influential competitors in the market, so if the Parties offer combination supply, users can choose to purchase from those competitors.

Therefore, the Parties are not recognized to have capabilities to implement conglomerate market foreclosure.

(2) Summary

Based on the above, the JFTC decided that no issues of closure or exclusivity of the market would arise from the conduct of this case.

Part V Conclusion

The JFTC concluded that the conduct of this case would not substantially restrain competition in any particular field of trade.

Case 5 Integration of General Electric Company's business of manufacturing and sales of biopharmaceutical production equipment and others by Danaher Corporation

Part I The Parties

Danaher Corporation (headquartered in the US; hereinafter referred to as "Danaher") is a company conducting life science business and medical diagnostics business among others.

General Electric Company (headquartered in the US; hereinafter referred to as "GE") is a company conducting electric power business and air transportation business among others.

Hereinafter, a group of companies which have already built joint relationships with Danaher shall be referred to as "Danaher Group," and a group of companies which have already built joint relationships with GE shall be referred to as "GE Group." As well, Danaher Group and GE Group shall be collectively referred to as "the company group."

Part II Outline of this case and applicable provision

This case concerns a plan in which, as part of another plan in which Danaher would acquire the business of manufacturing/selling biopharmaceutical production equipment and others (equipment and materials used to conduct research, analyses, manufacturing, etc. of biopharmaceuticals; the same shall apply hereinafter), a subsidiary of Danaher conducting business in Japan would acquire all of the voting rights with regard to shares of a subsidiary of GE conducting business in Japan (hereinafter referred to as "the conduct of this case").

The applicable provision in this case is Article 10 of the AMA.

Note that the company group manufactures/sells multiple drugs, of which the following details High Content Screening systems (hereinafter referred to as "HCS system(s)"), protein A resin, and columns for manufacturing, concerning which the conduct of this case is considered to have a relatively large impact on competition.

Part III Particular field of trade

1 Product outline

(1) HCS systems

An HCS system is equipment made of a microscope equipped with

software which makes image and numerical analyses, enabling high-speed analyses of cells. HCS systems are largely divided into widefield HCS systems and confocal HCS systems depending on the analysis method.

The widefield HCS system imports and analyzes 2D images whereas the confocal HCS system is able to import and analyze 3D images. Due to such difference in performance, the two systems vary greatly in price.

(2) Resin

Resin is a gelatinous substance used in chromatography (a process to separate and refine molecules of cells; the same shall apply hereinafter), and can separate and refine cell molecules by getting them adsorbed onto its surface. It is used by filling a container called column. In general, chromatography is conducted multiple times by using various resins in biopharmaceutical production processes. According to the difference in separation and refinement method, resin is divided into affinity resin, ion exchange resin, hydrophobic resin and others. Among these resins, it is affinity resin and ion exchange resin that are mainly used in biopharmaceutical production processes.

Affinity resin is resin which adsorbs and thereby separates and refines molecules of viruses, enzymes, and antibodies by using intermolecular interaction. There are many affinity resins according to the types and properties of molecules to be adsorbed. Of many affinity resins, one that adsorbs antibodies is called protein A resin. Today, the mainstream biopharmaceuticals are antibody drugs which use antibodies, so protein A resin which adsorbs antibodies is essential in biopharmaceutical production.

Ion exchange resin is resin which separates and refines molecules by using the difference in electric charge. There are many ion exchange resins according to the types and properties of molecules to be adsorbed.

(3) Columns

Columns are cylindrical containers and are filled up with and retain resin. Capacities and materials used vary depending on the purpose and there are columns for research and columns for manufacturing.

Columns for research are used mainly in the research and development stage for detailed analysis of solution and separation and refinement of a small amount of solution. With internal diameter of around 1cm to 5cm,

columns for research have a small capacity up to 0.5 liter, made of glass or plastic. The column is attached to a desktop separation and refinement device when used.

Columns for manufacturing are mainly used in the manufacturing stage of experimental or approved drugs for separation and refinement of a large amount of solution. They have internal diameter of around 5cm to 200cm and a capacity of 10 liters to 200 liters. As well, they are made of stainless steel or acrylic glass, providing higher pressure resistance and durability than columns for research, and attached to stationary separation and refinement devices when used.

2 Product range

(1) HCS systems

With regard to the widefield HCS system and the confocal HCS system, while the latter has greater usage than the former, users, namely pharmaceutical companies, universities, research institutions, etc. (hereinafter referred to as "pharmaceutical companies, etc."), choose one or the other according to their purposes, due to a great price difference.

Therefore, demand substitutability is limited between the widefield HCS system and the confocal HCS system.

On the other hand, manufacturers of either system can easily manufacture the other system as manufacturing lines of either HCS system can be switched to the other quickly without sizable additional cost or risk.

Therefore, supply substitutability is recognized between the widefield HCS system and the confocal HCS system.

Based on the above, the JFTC defined a product range as "HCS systems" manufactured/sold by the company group.

(2) Resin

Users, namely pharmaceutical companies, etc., choose the most appropriate separation and refinement method for their purposes and the most appropriate resin accordingly. Therefore, demand substitutability is not recognized among resins used in different separation and refinement methods.

As well, according to the types and properties of molecules to be separated, pharmaceutical companies, etc. choose resin that can separate and refine them in the most efficient manner. Therefore, demand

substitutability is not recognized among different resins even if they may be used in the same separation and refinement method.

In the meantime, as techniques and know-how required for manufacturing resins vary depending on the separation and refinement method for which they are used, suppliers are not able to easily switch from manufacturing of resins for a particular separation and refinement method to resins for another separation and refinement method. Therefore, supply substitutability is not recognized among resins used in different separation and refinement methods.

On the other hand, suppliers are usually able to manufacture many kinds of resins if they are used for the same separation and refinement method.

Protein A resin, a kind of affinity resin, however, requires different manufacturing techniques from other affinity resins, and protein A resin suppliers are also different from suppliers of other affinity resins.

Therefore, supply substitutability is not recognized between protein A resin and other affinity resins.

Based on the above, the JFTC defined a product range as “protein A resin” in this case. Of the company group, GE Group manufactures/sells the product concerned.

(3) Columns

As columns for research and columns for manufacturing are different in their materials, shapes, and sizes as well as required performance of pressure resistance and durability, users, namely pharmaceutical companies, etc., choose columns which have appropriate capacities and materials for their purposes.

Therefore, demand substitutability is not recognized between columns for research and columns for manufacturing.

In addition, as columns for research and columns for manufacturing are different in their materials, shapes, and sizes as well as required performance of pressure resistance and durability, equipment and techniques required for manufacturing are different. As well, suppliers are different between columns for research and columns for manufacturing.

Therefore, supply substitutability is not recognized between columns for research and columns for manufacturing.

Based on the above, the JFTC defined separate product ranges as ”columns for research” and “columns for manufacturing” in this case. Of the

company group, Danaher Group manufactures/sells "columns for manufacturing."

3 Geographic range

As the users, namely pharmaceutical companies, etc., are required to manufacture/sell biopharmaceuticals pursuant to "Ministerial Ordinance on Standards for Manufacturing Control and Quality Control for Drugs and Quasi-drugs" (Ordinance of the Ministry of Health, Labour and Welfare No. 179 of 2004)[1], they not just physically purchase biopharmaceutical production equipment and others but also seek continuous support systems from suppliers, namely manufacturers of biopharmaceutical production equipment and others, so they tend to purchase products of manufacturers which have continuous maintenance systems in place in Japan (Japanese subsidiaries, distribution agents, etc.)

While suppliers supply any of the products defined in 2 above to customers not only in Japan but all over the world, users in Japan do not necessarily purchase biopharmaceutical production equipment and others from suppliers all over the world on equal terms due to the above reasons.

Based on the above, the JFTC defined the geographic range as "all regions of Japan" in this case.

Part IV Impact of the conduct of this case on competition

As Danaher Group and GE Group both manufacture/sell HCS systems, the conduct of this case falls under the definition of horizontal business combinations.

In addition, as protein A resin manufactured/sold by GE Group and columns for manufacturing manufactured/sold by Danaher Group are used in a complementary manner by the same users, namely pharmaceutical companies,
etc., the conduct of this case also falls under the definition of conglomerate business combinations.

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[1] This is called ministerial ordinance on GMP (Good Manufacturing Practice), providing standards which drug manufacturers are required to follow so that experimental drugs and approved drugs would be made appropriately and safely in all steps from receiving raw materials to manufacturing/processing, packaging, and shipping of products and that a certain level of quality would be guaranteed. Manufacturers of biopharmaceutical production equipment and others provide products used for manufacturing of experimental drugs and approved drugs in accordance with the ministerial ordinance on GMP.

1 Horizontal business combination

(1) Position of the Parties

The following table shows market shares of manufacturers of HCS systems. As HHI, after the conduct of this case, is around 3,000, up around 400, the conduct of this case does not meet the safe-harbor criteria for horizontal business combinations.

[Market shares concerning HCS systems in FY2017]

Rank	Company name	Market share
1	Company A	Approx. 35%
2	Company B	Approx. 30%
3	GE Group	Approx. 20%
4	Danaher Group	Approx. 10%
	Others	Approx. 5%
Total		100%
Combined market share/rank: approx. 30%/3rd place		

(2) Conditions of competing enterprises

After the conduct of this case, the company group's market share will be around 30%. However, there are influential competitors, Company A and Company B, holding around 35% and 30% of the market respectively.

As well, the factories owned by competitors have surplus production capacity. Therefore, competitors have excess capacity.

Therefore, competitive pressure from competitors is recognized.

(3) Entry

Although there is no institutional entry barrier regarding HCS systems, no business has recently entered or is expected to enter this market.

Accordingly, entry pressure is not recognized.

(4) Competitive pressure from users

As the prices of biopharmaceuticals are on the decline due to the NHI price revision, users, namely pharmaceutical companies, are highly cost conscious, deciding suppliers by obtaining competitive quotes when purchasing biopharmaceutical production equipment and others.

Other users such as universities and research institutions also place importance on prices and choose suppliers through inviting bids and obtaining competitive quotes when purchasing biopharmaceutical

production equipment and others.

Therefore, competitive pressure from users is recognized.

(5) Summary

Based on the above, the conduct of this case would not substantially restrain competition in the field of trade of HCS systems through unilateral conduct of the Parties or coordinated conduct with competitors.

2 Conglomerate business combination

(1) Position of the Parties

The following table shows market shares concerning protein A resin. HHI is around 7,000 and the market share of the Parties is around 80%. As well, the accurate market share is unknown for columns for manufacturing. Therefore, this case will be examined based on the premise that the conduct of this case does not meet the safe-harbor criteria for conglomerate business combinations.

[Market shares concerning protein A resin in FY2017]

Rank	Company name	Market share
1	GE Group	Approx. 80%
2	Company C	Approx. 5%
3	Company D	Approx. 0-5%
	Others	Approx. 10%
Total		100%

(2) Examination of closure or exclusivity of the market

Here, let us examine the possibility that an issue of closure or exclusivity of the market may arise in the market of protein A resin or the market of columns for manufacturing if, through the conduct of this case, protein A resin is bundled with columns for manufacturing of the Parties and supplied to pharmaceutical companies, etc. or if such bundled products are supplied at a price lower than the total sales price of individual products.

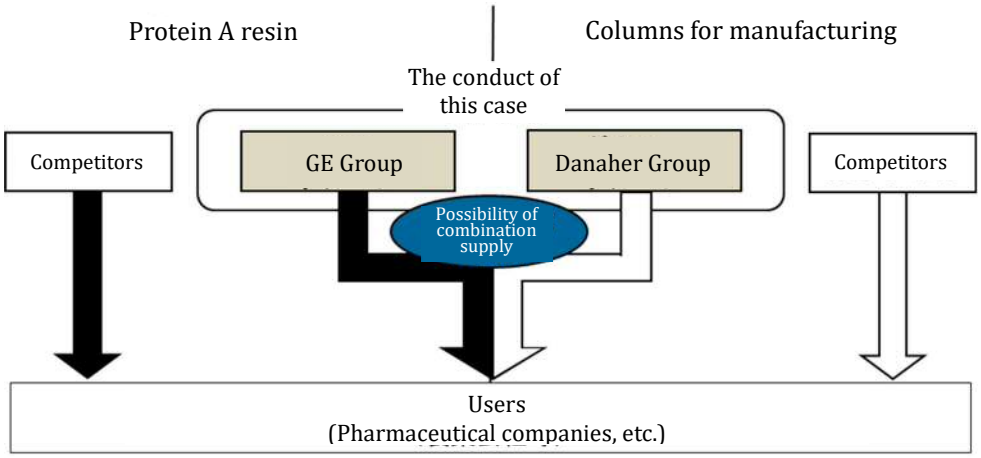
Although protein A resin and columns for manufacturing are highly complementary to each other, users, when purchasing biopharmaceutical production equipment and others including protein A resin and columns for manufacturing, decide equipment to purchase by evaluating the performance of each piece of equipment and then obtaining competitive quotes. In addition, users have powerful price negotiation capabilities.

Although protein A resin is reused after cleaning and sterilization, it is

expendable supplies that are used in large quantities, and bought frequently.

On the other hand, columns for manufacturing last long, usually not replaced unless they break down. For this reason, it is considered that GE Group's protein A resin and Danaher Group's columns for manufacturing are rarely purchased together.

Therefore, the Parties would not have capabilities to foreclose the market of either protein A resin or columns for manufacturing.



(3) Summary

Based on the above, the JFTC decided that no issues of closure or exclusivity would arise from the conduct of this case in the market of either protein A resin or columns for manufacturing.

Part V Conclusion

The JFTC concluded that the conduct of this case would not substantially restrain competition in any particular field of trade.

Case 6 Establishment of a joint investment company concerning on-board lithium-ion battery business and others by Toyota Motor Corporation and Panasonic Corporation

Part I The Parties

Toyota Motor Corporation (JCN 1180301018771) (hereinafter referred to as "Toyota") is a company mainly conducting manufacturing and sales of automobiles.

Panasonic Corporation (JCN 5120001158218) (hereinafter referred to as "Panasonic") is a company conducting mainly manufacturing and sales of electric/electronic devices and others.

Prime Planet Energy & Solutions, Inc. (JCN 3120001225985) is a company expected to conduct mainly manufacturing and sales of on-board lithium-ion batteries and others (hereinafter referred to as the joint investment company of this case").[1] Toyota and Panasonic have 51% and 49% of voting rights respectively with regard to shares of the joint investment company of this case.

Hereinafter, a group of companies which have already built joint relationships with Toyota shall be referred to as "Toyota Group," and a group of companies which have already built joint relationships with Panasonic shall be referred to as "Panasonic Group." As well, Toyota Group, Panasonic Group, and the joint investment company of this case shall be collectively referred to as "the company group."

Part II Outline of this case and applicable provision

This case concerns a plan in which Toyota and Panasonic would establish the joint investment company of this case, more specifically, a plan in which a company which belongs to Panasonic Group would establish a wholly-owned subsidiary, to which the on-board lithium-ion battery research and development/manufacturing divisions of another Panasonic Group company as well as Toyota's on-board lithium-ion battery research and development division and others would be transferred, and then Toyota would acquire 51% of voting rights with regard to shares of the said subsidiary (hereinafter referred to as "the conduct of this case").

The applicable provision in this case is Article 10 of the AMA.

Note that there are multiple specific products manufactured/sold by the

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[1] The company operation began on April 1, 2020.

company
group that are traded among the company group. Among such products, the following examined on-board lithium-ion batteries and electric-powered vehicles, concerning which the conduct of this case is considered to exert a relatively large impact on competition.

(FYI) Coordination with foreign competition authorities

This case was also reviewed by foreign competition authorities and the JFTC reviewed this case while exchanging information with European Commission.

Part III Particular field of trade

1 Product range

(1) On-board lithium-ion batteries

A Substitutability between products to be mounted on vehicles and those for other usages

The lithium-ion battery is a battery charged and discharged by lithium ions moving between a positive electrode and a negative electrode, a type of secondary batteries usable repeatedly. As the positive electrode uses metal oxide compounds including lithium cobalt oxide and lithium nickel oxide, and the negative electrode carbon and silicon compounds, and organic solvent (nonaqueous electrolyte) is used as electrolytic solution, the lithium-ion battery has characteristics such as being able to be made smaller than other secondary batteries (nickel metal hydride battery and others) and has no memory effect[2] and low self-discharge[3].

Lithium-ion batteries have various usages such as mobile phones, laptop computers, and automobiles. Of these, lithium-ion batteries that are mounted on hybrid vehicles and other cars and used as the power source of drive motors (hereinafter referred to as "on-board lithium-ion batteries") are required to have characteristics such as higher capacities, more durability against vibration and high/low temperature, longer life than lithium-ion batteries for other usages. Therefore, demand substitutability is limited between on-board lithium-ion batteries and

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[2] A phenomenon in which the battery holds less voltage despite its sufficient capacity. This occurs when the battery gets repeatedly recharged before much of its stored energy is depleted, as if the battery remembers "use of only a short time period."

[3] A phenomenon in which the amount of electricity stored in the battery slowly declines as time goes along although the battery is not used.

lithium-ion batteries for other usages. In addition, it is not considered easy to switch to manufacturing of on-board lithium-ion batteries from that of other lithium-ion batteries because manufacturing of the former, which is equipped with the said characteristics, requires certain techniques and know-how. Therefore, supply substitutability is also limited between them.

B Substitutability between products featuring different characteristics

Automobiles equipped with on-board lithium-ion batteries are ones which use as the source of power, electricity only or electricity and gasoline and the like (hereinafter referred to as "electric-powered vehicles"). Electric-powered vehicles are divided into hybrid vehicles, plug-in hybrid vehicles, electric vehicles and fuel cell vehicles depending on the structure. Required characteristics of the on-board lithium-ion batteries vary depending on the type of electric-powered vehicles they are mounted on. By the required characteristics, the on-board lithium-ion batteries are divided into the "high output type" (mounted on hybrid vehicles) which puts a greater focus on the amount of electricity that is rechargeable and dischargeable instantaneously, and the "high capacity type" (mounted on plug-in hybrid vehicles, electric vehicles, and fuel cell vehicles) which features large capacity enabling long-distance driving. Demand substitutability is not recognized between these two types. As manufacturing requires different techniques and know-how between the high output type and the high capacity type, it is not recognized easy to switch from manufacturing of one type to the other. Therefore, supply substitutability is not recognized between the two types, either.

Therefore, the high output type and the high capacity type belong to separate product ranges. The joint investment company of this case is expected to manufacture both types.

C Substitutability between products with different forms

Before getting installed to vehicles, first, multiple on-board lithium-ion batteries get bundled together to make what is called a module, and multiple modules get connected with each other so that output/capacity requirements would be met, forming what is called a pack, which is mounted on a vehicle. There are three types in the form of the battery,

namely, prismatic type, laminate type, and cylindrical type. The prismatic and laminate types, when installed to a vehicle, are efficient as they require relatively small, and roughly the same space whereas the cylindrical type needs greater space. How much space is needed for installing a battery pack with equivalent performance to a vehicle is an important issue for users, namely automobile manufactures. The prismatic type and the laminate type of on-board lithium-ion batteries are somewhat substitutable for each other whereas the cylindrical type is hard to use in place of the other forms of batteries. As well, required manufacturing techniques and know-how vary depending on the form of the battery, it is not recognized easy to switch from manufacturing of a particular form of on-board lithium-ion batteries to other forms. Therefore, supply substitutability is also limited among different forms of on-board lithium-ion batteries.

Therefore, "the prismatic type and the laminate type" (hereinafter referred to as "prismatic type, etc.") and "the cylindrical type" belong to separate product ranges. The joint investment company of this case is expected to manufacture the prismatic type only.

D Summary

Based on the above, the JFTC defined separate product ranges as "on-board lithium-ion batteries (high output/prismatic type, etc.)" and "on-board lithium-ion batteries (high capacity/prismatic type, etc.," which the joint investment company of this case is expected to manufacture/sell.

(2) Electric-powered vehicles

A Substitutability between electric-powered vehicles and gasoline-powered vehicles, etc.

Automobiles are divided into those which use as the source of power fossil fuels including gasoline (hereinafter referred to as "gasoline-powered vehicles, etc.") and electric-powered vehicles which use as the source of power electricity only or electricity and gasoline and the like. Electric-powered vehicles have characteristics such as having better fuel efficiency and creating lower environmental burden than gasoline-powered vehicles, etc. that are commonly used today while some types of them share the same feature with gasoline-powered vehicles, etc. in that they can drive just with gasoline and the like without a supply of

electricity or hydrogen.

Based on such circumstances, it is wrong to claim that there are no users who view gasoline-powered vehicles, etc. and electric-powered vehicles as substitutable and choose either one or the other type. However, as some users do not recognize the two types as substitutable due to the growing environmental awareness of these days, demand substitutability is limited between electric-powered vehicles and gasoline-powered vehicles, etc.

In addition, as techniques and know-how required for manufacturing are different between electric-powered vehicles and gasoline-powered vehicles, etc., it is not considered easy to switch from manufacturing of one type to the other. Therefore, supply substitutability is not recognized between them, either.

B Substitutability among different types of electric-powered vehicles

As discussed in (1) B above, electric-powered vehicles are divided into hybrid vehicles, plug-in hybrid vehicles, electric vehicles, and fuel cell vehicles depending on the structure. The hybrid vehicle is an automobile which is equipped with an engine and motors, and drives requiring only gasoline and the like, no battery charging from the outside. The plug-in hybrid vehicle is a hybrid vehicle added with an external charging function, and able to drive only with motors longer distance than the hybrid vehicle. The electric vehicle is an automobile which drives with only motors, and has an external charging function. The fuel cell vehicle is an automobile which drives with only motors, and requires a supply of hydrogen to generate electricity. As above, depending on the type, electric-powered vehicles use different sources of power, and therefore they are different in terms of how easily available power-source filling stations (gas stations, electric charging stations, and hydrogen stations) are, in addition to the degree of environmental burden. As well, the price ranges of electric-powered vehicles vary depending on the type. Based on the differences above, users of electric-powered vehicles choose the types they want. Therefore, demand substitutability is limited among different types of electric-powered vehicles.

In addition, as techniques and know-how required for manufacturing vary depending on the type of electric-powered vehicles, it is not

considered easy to switch from manufacturing of one particular type to another. Therefore, supply substitutability is not recognized among these different types.

Incidentally, automobiles may be divided by various differences; by the difference between passenger vehicles and commercial vehicles or between four-wheeled vehicles and two-wheeled vehicles; by the difference in the body size or the displacement; or by the difference in the body type (sedan, minivan, compact car, etc.) This applies to electric-powered vehicles as well. However, there is no need for rigorous definition of markets based on the above differences including usage, with regard to matters examined in Part IV 2 and 3 later.

C Summary

Therefore, the JFTC defined separate product ranges as "hybrid vehicles," "plug-in hybrid vehicles," "electric vehicles," and "fuel cell vehicles."

Among the four types above, Toyota manufactures/sells "hybrid vehicles," "plug-in hybrid vehicles," and "fuel cell vehicles."

2 Geographic range

(1) On-board lithium-ion batteries

There is no restrictions in terms of difficulty and costs when transporting "on-board lithium-ion batteries (high output/prismatic type, etc.)" and "on-board lithium-ion batteries (high capacity/prismatic type, etc." in Japan. Suppliers sell products in all regions of Japan. There is no regional price difference either.

Accordingly, the JFTC defined the geographic range as "all regions of Japan" for each product range.

(2) Hybrid vehicles, plug-in hybrid vehicles, electric vehicles, and fuel cell vehicles

There is no restrictions in terms of difficulty and costs when transporting hybrid vehicles, plug-in hybrid vehicles, electric vehicles, and fuel cell vehicles in Japan. Suppliers sell products in all regions of Japan. There is no regional price difference either.

Accordingly, the JFTC defined the geographic range as "all regions of Japan."

Part IV Impact of the conduct of this case on competition

After the conduct of this case, the joint investment company of this case, a subsidiary of Toyota, plans to manufacture on-board lithium-ion batteries (high output/prismatic type, etc.) and the same batteries (high capacity/prismatic type, etc.) while selling them to automobile manufacturers including Toyota through the other shareholder, Panasonic. In light of such actual conditions, this case is more appropriately understood as the company group getting together and supplying on-board lithium-ion batteries (high output/prismatic type, etc.) and the same batteries (high capacity/prismatic type, etc.) to automobile manufacturers.

As, of the company group, Toyota Group purchases on-board lithium-ion batteries (high output/prismatic type, etc.) and the same batteries (high capacity/prismatic type, etc.) and thereby manufactures/sells various electric-powered vehicles, this case falls under the definition of vertical business combinations, in which on-board lithium-ion batteries (high output/prismatic type, etc.) or on-board lithium-ion batteries (high capacity/prismatic type, etc.) are considered upstream market and various electric-powered vehicles as downstream market.

1 Position of the company group and conditions of competing enterprises

(1) Upstream market

A On-board lithium-ion batteries (high output/prismatic type, etc.)

The following table shows market shares concerning manufacturing/sales of on-board lithium-ion batteries (high output/prismatic type, etc.) As HHI is around 4,000 and the market share of the company group is around 45%, the conduct of this case does not meet the safe-harbor criteria for vertical business combinations.

There is an influential competitor, Company A, holding around 45% of the market.

[Market shares of manufacturers of on-board lithium-ion batteries (high output/prismatic type, etc.) in FY2017]

Rank	Company name	Market share
1	The company group	Approx. 45%
2	Company A	Approx. 45%
3	Company B	Approx. 10%
4	Company C	0-5%
	Imports	0-5%
Total		100%

B On-board lithium-ion batteries (high capacity/prismatic type, etc.)

The following table shows market shares concerning manufacturing/sales of on-board lithium-ion batteries (high capacity/prismatic type, etc.) As HHI is around 2,800 and the market share of the company group is around 40%, the conduct of this case does not meet the safe-harbor criteria for vertical business combinations.

There are influential competitors, Company D and Company E, holding around 15% of the market respectively.

[Market shares of manufacturers of on-board lithium-ion batteries (high capacity/prismatic type, etc.) in FY2017]

Rank	Company name	Market share
1	The company group	Approx. 40%
2	Company D	Approx. 15%
3	Company E	Approx. 15%
	Others	0-5%
	Imports	Approx. 30%
Total		100%

(2) Downstream market

A Hybrid vehicles

The following table shows market shares concerning manufacturing/sales of hybrid vehicles. As HHI is around 3,100 and the market share of the Parties is around 45%, the conduct of this case does not meet the safe-harbor criteria for vertical business combinations.

[Market shares of manufacturers of hybrid vehicles in FY2017]

Rank	Company name	Market share
1	Toyota Group	Approx. 45%
2	Company F	Approx. 25%
3	Company G	Approx. 15%
4	Company H	Approx. 15%
	Others	0-5%
Total		100%

B Plug-in hybrid vehicles

The following table shows market shares concerning manufacturing/sales of plug-in hybrid vehicles. As HHI is around 5,800 and the market share of the Parties is around 75%, the conduct of this case does not meet the safe-harbor criteria for vertical business combinations.

[Market shares of manufacturers of plug-in hybrid vehicles in FY2017]

Rank	Company name	Market share
1	Toyota Group	Approx. 75%
2	Company I	Approx. 15%
3	Company J	Approx. 5%
	Others	Approx. 5%
Total		100%

C Fuel cell vehicles

The following table shows market shares concerning manufacturing/sales of fuel cell vehicles. As HHI is around 8,200 and the market share of the Parties is around 90%, the conduct of this case does not meet the safe-harbor criteria for vertical business combinations.

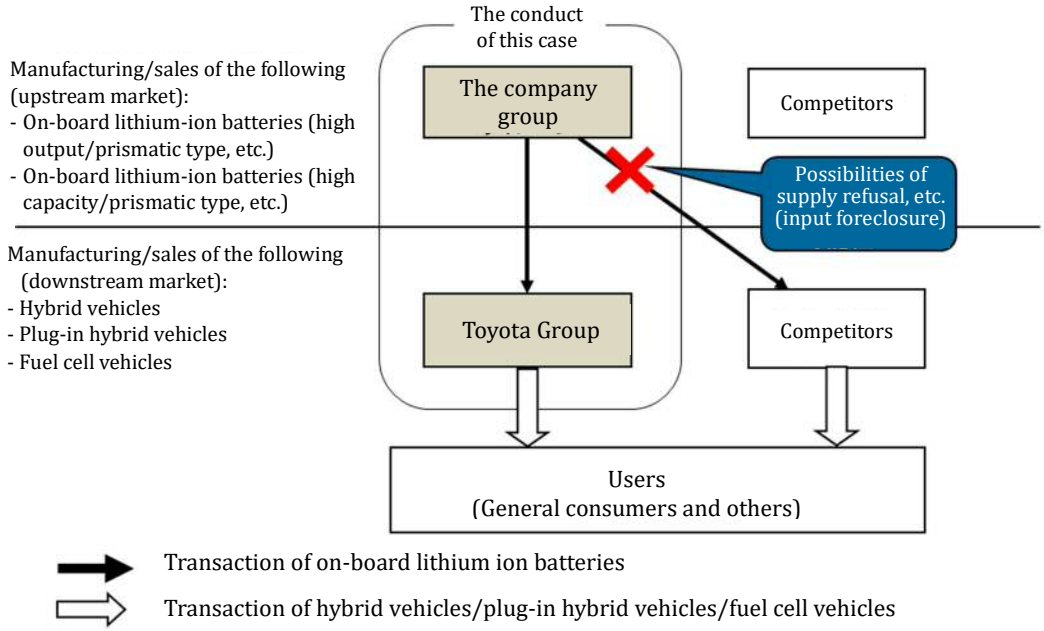
[Market shares of manufacturers of fuel cell vehicles in FY2017]

Rank	Company name	Market share
1	Toyota Group	Approx. 90%
2	Company K	Approx. 10%
Total		100%

2 Supply refusal, etc. of on-board lithium-ion batteries (high output/prismatic type, etc.) or the same batteries (high capacity/prismatic type, etc.)

Here, we examine the possibility that an issue of closure or exclusivity of the market may arise if the company group refuses to supply on-board lithium-ion batteries (high output/prismatic type, etc.) or the same batteries

(high capacity/prismatic type, etc.) to competitors of Toyota Group.



(1) On-board lithium-ion batteries (high output/prismatic type, etc.)

As discussed in 1 (1) A above, the company group holds around 45% of the upstream market. Competitors of the company group in the upstream market do not necessarily have sufficient excess capacity, but all of them, including Company A which has around 45% of the market, plan to expand their production facilities in anticipation of future demand growth. As well, if prices of domestically-manufactured products go up, the amount of imports is expected to grow although it is currently small. Based on the above, should the company group implement supply refusal, etc., automobile manufacturers other than Toyota Group would be able to purchase from these competitors.

Therefore, the JFTC decided that no issues of closure or exclusivity of the market would arise from the company group's supply refusal, etc. of on-board lithium-ion batteries (high output/prismatic type, etc.)

(2) On-board lithium-ion batteries (high capacity/prismatic type, etc.)

Matters to be examined are the same for both downstream market (plug-in hybrid vehicles and fuel cell vehicles), which, therefore, are examined together in the following.

As discussed in 1 (1) B above, the company group holds around 40% of the upstream market. There are influential competitors, Company D and

Company E, in the upstream market. Neither of them necessarily has sufficient excess capacity, but Company E plans to expand its production facilities. In addition, imports account for a large part, around 30%, of the upstream market and enterprises exporting to Japan have sufficient excess capacity. Based on the above, should the company group implement supply refusal, etc., automobile manufacturers other than Toyota Group would be able to purchase from these competitors.

Therefore, the JFTC decided that no issues of closure or exclusivity of the market would arise from the company group's supply refusal, etc. of on-board lithium-ion batteries (high capacity/prismatic type, etc.)

3 Purchase refusal, etc. of on-board lithium-ion batteries (high output/prismatic type, etc.) or the same batteries (high capacity/prismatic type, etc.)

There is a possibility that an issue of closure or exclusivity may arise in the market of manufacturers of on-board lithium-ion batteries (high output/prismatic type, etc.) or manufacturers of the same batteries (high capacity/prismatic type, etc.) if Toyota Group refuses to purchase on-board lithium-ion batteries (high output/prismatic type, etc.) or the same batteries (high capacity/prismatic type, etc.) from competitors of the company group (on-board lithium-ion battery manufacturers).

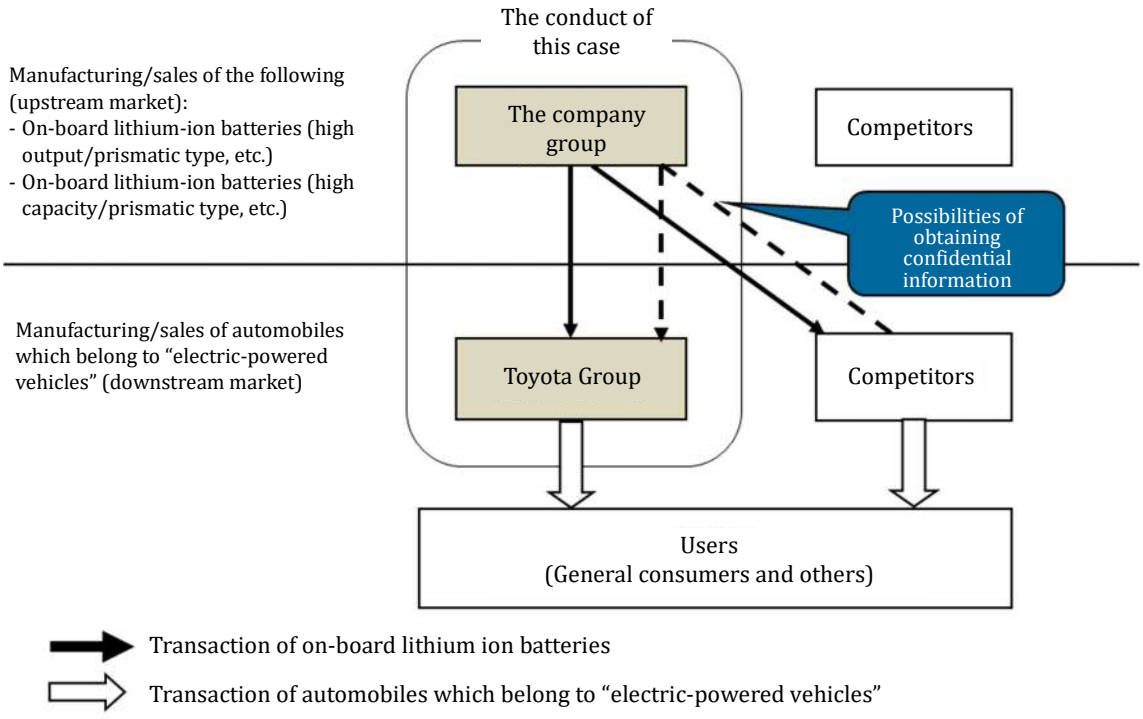
Toyota Group, however, is not able to implement purchase refusal, etc. because it purchases neither on-board lithium-ion batteries (high output/prismatic type, etc.) or the same batteries (high capacity/prismatic type, etc.) from competitors of the company group.

Therefore, the JFTC decided that no issues of closure or exclusivity of the market would arise from Toyota Group's purchase refusal, etc. of on-board lithium-ion batteries (high output/prismatic type, etc.) or the same batteries (high capacity/prismatic type, etc.)

4 The impact on the market from the company group sharing a competitor's confidential information

After the conduct of this case, Toyota Group would be able to obtain competition sensitive information (information concerning business strategies, technology/development, transaction details, etc.; hereinafter referred to as "confidential information") of automobile manufacturers outside of Toyota Group through the joint investment company of this case.

The JFTC informed the company group that if Toyota Group exploited such confidential information, automobile manufactures outside of Toyota Group would be put at a disadvantage in competition of electric-powered vehicles and issues of closure or exclusivity might arise in the current or future market of any of the different types of electric-powered vehicles such as hybrid vehicles, plug-in hybrid vehicles, electric vehicles, or fuel cell vehicles, or in markets defined by the difference in usage of these vehicles. In response, the company group proposed that it would implement a remedial measure discussed in (1) below (hereinafter referred to as "the remedial measure of this case"). Therefore, the JFTC made legal assessment based on the AMA, considering the details of the remedial measure of this case.



(1) Proposal of the remedial measure of this case by the Parties

The Parties proposed to implement the following remedial measure:

A Measures to block the flow of information

The Parties will prohibit any employee of the joint investment company of this case from disclosing/leaking confidential information of automobile manufacturers which the said company obtains in the course of conducting its business activities without the consent of the automobile manufactures concerned to other automobile manufacturers, and

establish and make known to everyone in-house information management rules concerning this matter accordingly. More specifically, the Parties will establish rules that access to servers which store confidential information shall be granted to only those who need it, and that data including confidential information shall be protected with passwords, which are given to only those who need the information.

As well, employees who have access to confidential information are restricted from getting transferred to divisions of Toyota Group which manage planning/development/procurement of vehicles of electric-powered vehicles or development/production engineering of on-board batteries.

The Parties will make sure that neither Toyota concurrent position holders (directors or employees of the joint investment company of this case who also serve as directors or employees of another company belonging to Toyota Group) nor Toyota trainees (employees of a company belonging to Toyota Group who maintain their employment at the said company but are permanently stationed and receive training at the joint investment company of this case) access or use confidential information (Toyota trainees shall never be involved in development/manufacturing/sales of batteries for automobile manufacturers other than Toyota), and that employees of divisions of the joint investment company of this case which connect sales divisions of Panasonic and production development divisions of the joint investment company of this case submit written undertakings that they would follow rules concerning the handling of confidential information and that they understand that they would be subject to disciplinary actions, should they violate any of these rules.

B Informing customers

Toyota and Panasonic shall notify in writing automobile manufacturers which are customers of the business to be transferred from Panasonic to the joint investment company of this case as well as other automobile manufacturers which will newly start doing business with the joint investment company of this case, that the measures to block the flow of information discussed in A above are being taken.

C Report to the JFTC

Upon the establishment of the joint investment company of this case, Toyota shall report to the JFTC that the measures to block the flow of information are being taken.

(2) Assessment of the remedial measure of this case

Toyota Group would not be able to obtain confidential information after the conduct of this case, provided that the company group implements the remedial measure of this case. Should Toyota Group be able to, it would not be able to exploit the said information, so no issues of closure or exclusivity of the downstream market would arise. Therefore, the measures of this case are considered appropriate.

Part V Conclusion

The JFTC concluded that the conduct of this case would not substantially restrain competition in any particular field of trade, provided that the company group implements the remedial measure of this case.[4]

[4] Incidentally, European Commission has decided that the conduct of this case will not be a problem without requiring any particular remedial measure because the conduct of this case is not likely to lead to issues of closure or exclusivity of any particular market.

Case 7 Integration of Hewlett Packard Enterprise Company and Cray Inc.

Part I The Parties

Hewlett Packard Enterprise Company (headquartered in the US) (hereinafter referred to as "HPE") is a company conducting manufacturing and sales of mainly information technology products.

Cray Inc. (headquartered in the US) (hereinafter referred to as "Cray") is a company conducting manufacturing and sales of high performance computing systems (hereinafter referred to as "HPC system(s)"[1]).

Hereinafter, a group of companies which have already built joint relationships with HPE shall be referred to as "HPE Group," and a group of companies which have already built joint relationships with Cray shall be referred to as "Cray Group." HPE Group and Cray Group shall be collectively referred to as "the Parties."

Part II Outline of this case and applicable provision

This case concerns a plan in which a subsidiary newly established by HPE would merge with and into Cray, with the subsidiary as the dissolving company and Cray as the surviving company, and subsequently HPE would acquire all of the voting rights with regard to shares of Cray (hereinafter referred to as "the conduct of this case").

The applicable provisions in this case are Article 10 and Article 15 of the AMA.

The following examines HPC systems and storages for HPC systems, concerning which the Parties are in a competitive relationship and a business relationship.

Part III Particular field of trade

1 Product range

(1) HPC systems

A Substitutability between HPC systems and PCs

Generally known as "supercomputers," HPC systems are products equipped with high arithmetic processing capabilities, able to process enormous quantity of data at high speed. They are often customized according to the usage and their main users were long limited to governmental institutions, research institutions, etc. However, in recent

[1] High Performance Computing

year, the user base has widened to include automobile manufacturers, pharmaceutical companies, etc., which use HPC systems for AI-based computation and big-data analyses as HPC systems have been commoditized and priced less than before.

In the meantime, PCs are general-purpose computer systems for individual users, and the same as HPC systems in that PCs also have arithmetic processing capabilities.

Although both HPC systems and PCs have the same structure, made of storages including hard discs which mainly store data, memories which temporarily record data for computation, and CPUs (central processing units) which perform computation, they are different in that the HPC system realizes high arithmetic processing capabilities by connecting many of these devices. As well, their price ranges totally differ; an HPC system is generally priced at 10 million yen or more whereas a PC is between around tens of thousands yen and hundreds of thousands yen.

Therefore, demand substitutability is not recognized between HPC systems and PCs.

In addition, as HPC-system-composing devices such as CPUs and memories have higher performance than those used for PCs, and a way to hook up these devices must be figured out to achieve high-speed data processing. Accordingly, manufacturing of HPC systems requires extremely advanced techniques compared to that of PCs, and HPC systems also need to be customized to meet requests of users.

Accordingly, supply substitutability is not recognized between HPC systems and PCs, either.

Therefore, the conduct of this case will be examined regarding "HPC systems."

B Substitutability among HPC systems with difference in the degree of versatility and performance

The degree of versatility of HPC systems varies; some have high versatility, applicable for various usages, and others have limited versatility as they are customized for users and specific usages. As well, HPC systems vary in their arithmetic processing capabilities; some show extremely strong performance, and others have moderate capabilities. The prices of HPC systems vary depending on the degree of versatility and performance, and users choose ones with specifications and prices

appropriate for their usages. Therefore, demand substitutability is limited among HPC systems with difference in the degree of versatility and performance.

In this respect, while some HPC system manufactures/sells a variety of products with different degrees of versatility and performance, others specialize in particular product groups that they are good at manufacturing. For instance, Cray Group excels at products with limited versatility, and HPE Group highly versatile products. However, HPC system manufacturers are able to change the degree of versatility and performance of products they supply, by changing the combination of individual devices, such as servers and storages, which make up the HPC system, and if they need to combine devices that they do not usually manufacture themselves, they can still manage by procuring such devices from other companies. In fact, Cray Group, while excelling at products with limited versatility, also manufactures/sells highly versatile products by procuring servers and other devices from other companies. HPE Group also manufactures/sells HPC systems with specifications that it is less familiar with, by changing the degree of versatility and performance of the HPC system.

Therefore, supply substitutability is recognized among HPC systems with difference in the degree of versatility and performance.

C Summary

Based on the above, the JFTC defined a product range as “HPC systems” in this case.

(2) Storages for HPC systems

A storage for the HPC system is a device which makes up the HPC system, and has functions of storing/saving data.

As discussed in (1) A above, HPC systems process enormous quantity of data at high speed by their high arithmetic processing capabilities. To realize this, HPC systems use devices, including servers, storages, networks, and applications, that have greater efficiency and capacities than those used for PCs and other usages, and these devices must be configured in an integrated manner so that they would work together. Therefore, demand substitutability is not recognized between storages for HPC systems and storages for PCs and other usages.

Supplying storages for HPC systems that are required to save enormous quantity of data fast processed by high arithmetic processing capabilities requires advanced techniques and know-how for manufacturing high-performance, high-capacity storages that are different from storages for PCs and other usages, connection between individual storages for HPC systems and with a number of devices, such as servers, for other HPC systems, and customization to meet users' requests. Therefore, supply substitutability is not recognized between storages for HPC systems and storages for PCs and other usages.

Based on the above, the JFTC defined a product range as "storages for HPC systems" in this case.

2 Geographic range

While suppliers have systems and capacities to supply products defined in 1 above worldwide, there is no Japan-specific barriers against supply of these products to Japan and transportation costs and tariffs are also low.

As well, users are able to procure products from suppliers around the world at similar prices.

Accordingly, the JFTC defined the geographic range as "worldwide" in this case.

Part IV Impact of the conduct of this case on competition

As the Parties both manufacture/sell HPC systems, the conduct of this case falls under the definition of horizontal business combinations.

In addition, as Cray Group sells storages for HPC systems to HPC system manufacturers, the conduct of this case also falls under the definition of vertical business combinations in which storages for HPC systems are considered upstream market and HPC systems as downstream market.

1 Horizontal business combination and vertical business combination (downstream market)

The following table shows market shares of manufacturers of HPC systems. As HHI is around 1,500, up around 100, the conduct of this case meets the safe-harbor criteria for horizontal business combinations.

As well, the market share of the Parties is around 20%, the conduct of this case meets the safe-harbor criteria for vertical business combinations.

[Market shares concerning HPC systems in FY2018]

Rank	Company name	Market share
1	Company A	Approx. 25%
2	HPE Group	Approx. 20%
3	Company B	Approx. 10%
4	Company C	Approx. 10%
5	Company D	Approx. 5%
6	Company E	0-5%
7	Cray Group	0-5%
	Others	Approx. 25%
Total		100%
Combined market share/rank: approx. 20%/2nd		

2 Vertical business combination (upstream market)

The following table shows market shares of manufacturers of storages for HPC systems. As the market share of Cray Group is 0-5%, the conduct of this case meets the safe-harbor criteria for vertical business combinations.

[Market shares concerning storages for HPC systems in FY2018]

Rank	Company name	Market share
Unknown	Cray Group	0-5%

Part V Conclusion

The JFTC concluded that the conduct of this case would not substantially restrain competition in any particular field of trade.

Case 8 Acquisition of shares of Nihon Ultmarc Inc. by M3, Inc.

Part I Parties

M3, Inc. (hereinafter referred to as "M3"; the group of enterprises that have already been combined with M3 (excluding Nihon Ultmarc Inc. (hereinafter "Nihon Ultmarc")) hereinafter referred to as "M3 Group") is the company conducting the business of operating and managing the platforms that provide drug information (hereinafter referred to as the "Drug Information Providing Platform Operation Business") (hereinafter an enterprise that conducts such business is referred to as the "Drug Information Providing Platform Operator"). A "Drug Information Providing Platform" refers to the internet-based platform that provides doctors[2] with information and advertising on the proper use of prescription drugs and other relevant topics (hereinafter referred to as "Drug Information").

Nihon Ultmarc is the company conducting the business of providing medical information databases (hereinafter referred to as the "Medical Information Database Provision Business"). A medical information database refers to an organized collection of information (or data) on medical institutions and doctors and other healthcare professionals working at those institutions (as a database).

Hereinafter, M3 Group and Nihon Ultmarc are collectively referred to as the "Parties."

Part II Outline of This Case and Applicable Provision

In this case, M3 planned to acquire all of the voting rights attached to the shares in Nihon Ultmarc (hereinafter referred to as the "the conduct of this case") and fulfilled it. The conduct of this case did not meet the notification criteria, but the Japan Fair Trade Commission (JFTC) had concerns about restraint of competition by the conduct of this case. Therefore, the JFTC conducted the review into the conduct of this case.

The applicable provision is Article 10 of the Antimonopoly Act.

Part III Brief Summary of Results of review

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[2] In most cases, provision of Drug Information is intended for doctors, although some is provided to drug-related healthcare professionals such as pharmacists, in addition to doctors. For this reason, discussions in this document are based on the assumption that recipients of Drug Information are doctors.

The JFTC proceeded with its review by conducting hearings from the competitors of the Parties and other parties concerned with several fields of trade in which the Parties had transactions. As a result, the JFTC concluded that the conduct of this case would not substantially restrain competition based on the premise that remedies proposed to the JFTC by the Parties would be implemented for the Drug Information Providing Platform Operation Business of which users are the pharmaceutical companies/doctors, although the JFTC had once found that it would substantially restrain competition. In the review into the conduct of this case, the JFTC considered, among others, issues with the vertical business combination and the conglomerate business combination in relation to the Medical Information Database Provision Business and the Drug Information Providing Platform Operation Business. Given this, the possible effects on the relevant market are described in detail below.

Part IV Medical Information Database Provision Business

1 Brief description

Nihon Ultmarc conducts the business of providing medical information databases known as "Medical Databases (hereinafter referred to as "MDB") Provision Business." The MDB Provision Business is the business of compiling data on medical institutions and doctors and pharmacists working at those institutions throughout Japan in the form of each master file (master data file) collectively called MDB as a database and providing only enterprises and organizations in the fields of medical care, welfare, public health or other relevant services with such database for value.

Moreover, the MDB Provision Business introduces the mechanism called "shared and open-source maintenance" by members. More specifically, when an enterprise or an organization that is provided the MDB becomes a member[3] and obtains new information on doctors or pharmacists, that member will give a feedback on such information to Nihon Ultmarc, which in turn updates the contents of the MDB, as appropriate. This makes it possible for Nihon Ultmarc to daily keep the MDB up-to-date.

2 Category of the MDB

The MDB are categorized into the databases on medical institutions in

[3] According to Nihon Ultmarc, 247 enterprises including the Drug Information Providing Platform Operators and pharmaceutical companies join this mechanism as the corporate members (as of March 1, 2019).

Japan, databases on doctors and pharmacists in Japan, and other databases. Nihon Ultmarc sets the fees for each of the databases it provides.

3 Critical characteristics of the MDB

Enterprises to which the MDB are provided consist chiefly of the pharmaceutical companies and the Drug Information Providing Platform Operators. The MDB are recognized, in a word, as de facto standard databases among the pharmaceutical companies and the Drug Information Providing Platform Operators. The reason why the MDB are evaluated as such by the pharmaceutical companies and the Drug Information Providing Platform Operators is that the MDB have the following three critical characteristics that other databases do not.

(i) DCF (doctor computer file) code[4] is given;

(ii) It is confirmed that doctors registered with the database have the doctor license; and

(iii) Information is kept up to date thanks to the shared and open-source maintenance mechanism by the members.

Part V Drug Information Providing Platform Operation Business

1 Brief description of the business of M3

(1) M3 operates the portal site for healthcare professionals called "m3.com." Only healthcare professionals such as doctors and pharmacists can be registered with m3.com as its members. m3.com makes various medical information available to the healthcare professionals who are its members, and also provides a forum for exchange of information among those healthcare professionals. Registration with m3.com is free of charge, and its members, once registered, can use the site at no cost. In 2016, out of 319,000 doctors in Japan, at least 280,000 doctors were the members of m3.com. This means that at least approximately 85% of doctors in Japan were the members of m3.com. When a doctor has himself or herself registered with m3.com as a new member, M3 confirms by checking with the MDB or otherwise that he or she is a medical practitioner.

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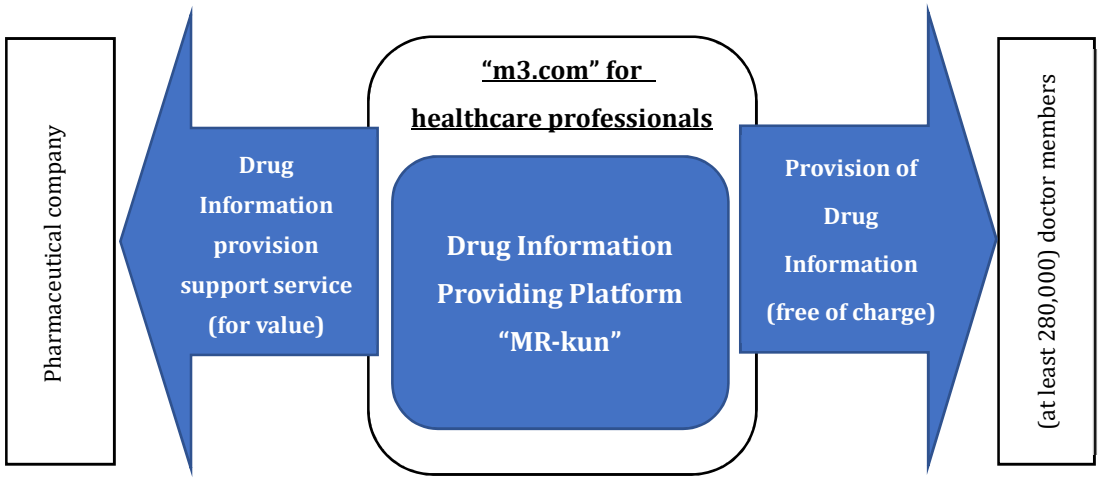
[4] Each of doctors and medical institutions in Japan that are registered with the MDBs is given a unique number called "DCF code." When a pharmaceutical company provides Drug Information only to doctors who meet the certain conditions by utilizing the Drug Information Providing Platform, it will use the DCF Code to give the Drug Information Providing Platform Operators instructions as to doctors to whom the Drug Information should be provided.

(2) M3 also deploys the Drug Information Providing Platform Operation Business known as "MR-kun" as part of its m3.com business. MR-kun is one of the services available on the portal site of m3.com through which MRs[5] of pharmaceutical companies provide doctors who are the members of m3.com with current Drug Information and other information helpful for daily diagnosis free of charge. MR-kun enables MRs to provide and exchange Drug Information on the internet that they previously provided when they physically visited hospitals, and presents an aspect of the services to help pharmaceutical companies to provide doctors with Drug Information. By paying M3 certain fees, a pharmaceutical company can deliver Drug Information directly to doctors who are the m3.com members after targeting the doctors to whom it provides information under the certain conditions in order to accurately reflect the marketing strategy of its individual product, and can provide Drug Information efficiently and effectively.

[Figure 1] Business model of m3.com and MR-kun



In addition, as pharmaceutical companies are prohibited by the

[5] An abbreviation of medical representatives. MRs refer to those whose main duties are to gather and provide information on matters relating to the quality, efficacy and safety of pharmaceuticals and medical devices, and other information necessary for the proper use of pharmaceuticals and medical devices and others by physically visiting healthcare professionals or otherwise, with the aim of contributing to the proper use of drugs.

governmental regulations under the "Act on Securing Quality, Efficacy and Safety of Products Including Pharmaceuticals and Medical Devices" and the "Standard for Adequate Advertisement of Pharmaceutical Products" (September 29, 2017 Notice of Director-General for Pharmaceutical Safety and Environmental Health Bureau, Ministry of Health, Labour and Welfare) (hereinafter collectively referred to as the "PMD Act and others") from advertising prescription drugs and providing information on prescription drugs to non-healthcare professionals, those companies are not permitted to place advertising, etc. of prescription drugs on any website viewable by the general public. In this regard, pharmaceutical companies can use MR-kun to provide Drug Information without violating the above-mentioned governmental regulations, since the m3.com members are the doctors who are registered with the MDB of Nihon Ultmarc or the doctors who are identified as such through M3's independent examination.

2 Drug Information Providing Platform Operators other than M3

Pharmaceutical companies using the Drug Information Providing platforms emphasize the conditions enumerated in (i) through (iii) below as the criteria for selection of a Drug Information Providing Platform Operator:

(i) It provides Drug Information through the use of the internet technology;

(ii) Its members are the doctors registered with the MDB, and it provides the services that are aligned with the MDB; and

(iii) A considerable number of doctors are registered as members.

M3's Drug Information Providing Platform Operation Business (MR-kun) meets the above-mentioned three conditions. In addition to M3, there are a few competitors that meet the above-mentioned three conditions.[6]

Part VI Particular Fields of Trade

1 Definition of particular fields of trade in the case of two-sided market

The Drug Information Providing Platform Operation Business has two different tiers of users: pharmaceutical companies and doctors. For this reason, in defining particular fields of trade, the JFTC defines the service range and geographic range for each of those tiers of users after considering the demand substitutability and supply substitutability for each of those tiers of users.

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[6] Although Nihon Ultmarc conducts the Drug Information Providing Platform Operation Business as well, its sales from that business is extremely insignificant. This is why there is no description of results of review into horizontal business combination.

2 Service range

(1) Drug Information Providing Platform Operation Business

A. Drug Information Providing Platform Operation Business of which users are pharmaceutical companies

(a) Demand substitutability

The Drug Information Providing Platform Operation Business is the business of operating and managing the internet-based platform that provides Drug Information to doctors, and pharmaceutical companies are the users that are provided support services for provision of Drug Information to doctors. For pharmaceutical companies, there is no service like the Drug Information Providing Platform Operation Business.

(b) Supply substitutability

Provision by the Drug Information Providing Platform Operator of Drug Information at the request of a pharmaceutical company is a kind of targeted advertising. More specifically, the Drug Information Providing Platform Operation Business resembles general internet advertising agency business in that those businesses intermediate between an enterprise that wants to place an advertising, etc. of its product and third parties who will be provided the information to realize an effective and efficient provision of information on the internet.

Prescription drugs are subject to the certain advertising regulations under the PMD Act and others and, therefore, it is necessary to restrict the target of the Drug Information Providing Platform Operator providing Drug Information to healthcare professionals. In this regard, the Drug Information Providing Platform Operators have achieved targeted advertising to doctors by providing Drug Information through the use of the MDB. For this reason, when an internet advertising agency or other entity intends to initiate the Drug Information Providing Platform Operation Business, it will need to take new actions, including the use of the MDB, to address the advertising regulations under the PMD Act and others. Thus, it is difficult to initiate the Drug Information Providing Platform Operation Business in a short period without bearing substantial additional costs and risks, and the supply substitutability is not admissible.

(c) Summary

Given the above, the JFTC defined the service range as the "Drug Information Providing Platform Operation Business of which users are pharmaceutical companies."

B. Drug Information Providing Platform Operation Business of which users are doctors

(a) Demand substitutability

The Drug Information Providing Platform Operation Business is the business of operating and managing the internet-based platform that provides Drug Information to doctors, and doctors are the users who are provided Drug Information.

For doctors, there is no service like the Drug Information Providing Platform Operation Business.

(b) Supply substitutability

For the same reason as described in A(b) above, it is difficult for the internet advertising agency or other entity to initiate the Drug Information Providing Platform Operation Business in a short period without bearing substantial additional costs and risks, and the supply substitutability is not admissible.

(c) Summary

Given the above, the JFTC defined the service range as the "Drug Information Providing Platform Operation Business of which users are doctors."

(2) Medical Information Database Provision Business

A. Demand substitutability

For the Drug Information Providing Platform Operators and pharmaceutical companies, there is no service like the Medical Information Database Provision Business.

B. Supply substitutability

There is no business, like the Medical Information Database Provision Business, by which the Medical Information Data Provision Business can be initiated in a short period without bearing substantial additional costs and

risks.

C. Summary

Given the above, the JFTC defined the service range to the "Medical Information Database Provision Business."

(3) Geographic range

A. Drug Information Providing Platform Operation Business of which users are pharmaceutical companies

The Drug Information Providing platforms are utilized by pharmaceutical companies doing business in Japan, and those companies can utilize the Drug Information Providing platforms anywhere throughout Japan. There is no special circumstance where usage fees for the Drug Information Providing platforms largely differ from region to region.

Therefore, the JFTC defined the geographic range as "all regions of Japan."

B. Drug Information Providing Platform Operation Business of which users are doctors

The Drug Information Providing platforms are utilized by doctors in Japan, and those doctors can utilize the Drug Information Providing platforms anywhere throughout Japan. In addition, doctors can utilize the Drug Information Providing platforms free of charge in any region.

Therefore, the JFTC defined the geographic range as "all regions of Japan."

C. Medical Information Database Provision Business

The pharmaceutical companies located in Japan, and the Drug Information Providing Platform Operators located in Japan are provided the medical information databases. There is no special circumstance where fees for the medical information databases largely differ from region to region.

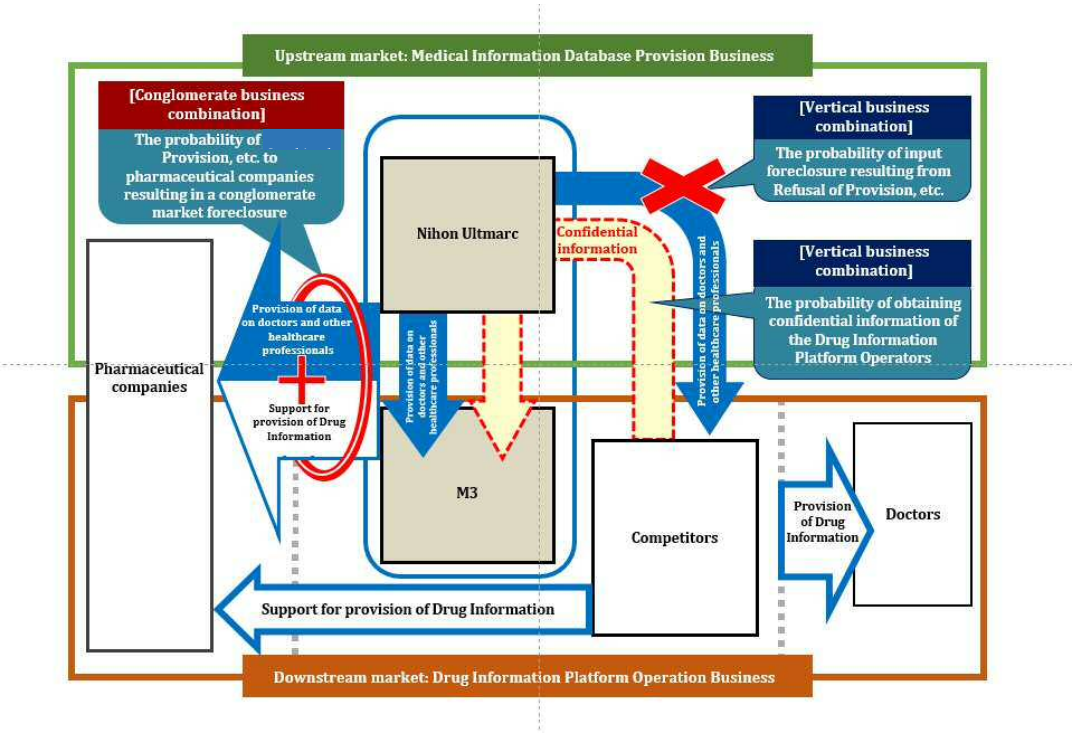
Therefore, the JFTC defined the geographic range as "all regions of Japan."

Part VII Examination on Substantial Restraint on Competition

1 Manner of business combination in relation to the conduct of this case

The conduct of this case chiefly poses the following two issues: (i) vertical business combination (upstream market: Medical Information Database Provision Business; downstream market: Drug Information Providing Platform Operation Business of which users are pharmaceutical companies/doctors); and (ii) conglomerate business combination (Medical Information Database Provision Business; Drug Information Providing Platform Operation Business of which users are pharmaceutical companies/doctors), as examined below.

[Figure 2: Schematic View of the conduct of this case]



2 Closure or exclusivity of the market resulting from vertical business combination (upstream market: Medical Information Database Provision Business; downstream market: Drug Information Providing Platform Operation Business of which users are doctors and pharmaceutical companies)

(1) Positions of the Parties and state of competitors

A. Medical Information Database Provision Business (upstream market)

There is no database having the characteristics as described in Part IV-3 above, other than the MDB, in the Medical Information Database Provision Business.

B. Drug Information Providing Platform Operation Business (downstream market)

(a) Drug Information Providing Platform Operation Business of which users are pharmaceutical companies

The market shares of the Drug Information Providing Platform Operation Business are as shown in the table below, and M3 has a share of approximately 75% (1st rank). By contract, the shares of its competitors is at the most around 10%, which is substantially lower than that of M3.

[Market shares of the Drug Information Providing Platform Operation Business of which users are pharmaceutical companies in 2017 (based on sales)]

Rank	Company	Market share
1	M3	Approx. 75%
2	Company A	Approx. 10%
3	Company B	Approx. 10%
4	Company C	Approx. 5%
5	Others	Approx. 0-5%
Total		100%
Market share (rank): Approx. 75% (1st)		

(b) Drug Information Providing Platform Operation Business of which users are doctors

The Drug Information Providing Platform Operation Business is positioned as the intermediary between doctors and pharmaceutical companies. As described in Part V-2(iii) above, pharmaceutical companies utilizing the Drug Information Providing platforms emphasize, among others, how many doctors are registered as members, as one of the criteria for selecting the Drug Information Providing Platform Operators. For this reason, the Drug Information Providing Platform Operators would compete each other with the aim of gaining as many as possible members who are the doctors, for example, by providing high-quality and useful information. Thus, the multitude of members who are the doctors would operate as one of key indicators of the competition in the relevant market. In fact, M3 has approx. 85% of the total number of doctors as its members, while the membership percentage of other competitors is merely approximately 30 to 50% in total in relation to the total number of

doctors. Thus, M3 has a higher position in the relevant market.

(2) Input Foreclosure

A. Capability to implement input foreclose

The following discusses the probability of any issues with the closure or exclusivity of the market being posed in the Drug Information Providing Platform Operation Business of which users are the pharmaceutical companies/doctors in the downstream market if Nihon Ultmarc conducting the Medical Information Database Provision Business (upstream market) refuses to provide the competitors of the Parties conducting the Drug Information Providing Platform Operation Business (downstream market) with its medical information databases or provides those competitors with its databases on less favorable terms than the terms of provision to the Parties (hereinafter referred to as "Refusal of Provision, etc.").[7]

In the Drug Information Providing Platform Operation Business (downstream market), the non-violation of the PMD Act or others is secured by using Nihon Ultmarc's MDB, and the use of the MDB makes it possible to provide Drug Information to targeted users based on the attributes of individual doctors. As a result, the pharmaceutical companies that are the users of the MDB emphasize alignment of the Drug Information Providing platform with the MDB as one of the criteria for selection of platform providers. In addition, although the Medical Information Database Provision Business is indispensable for the Drug Information Providing Platform Operator to do business, there is no enterprise that can provide a similar level of database as the MDB of Nihon Ultmarc, and there is no enterprise, out of the major Drug Information Providing Platform Operators, that is not provided the MDB by Nihon Ultmarc. For this reason, it is highly likely that Nihon Ultmarc's Refusal of Provision, etc. against any competitor of the Parties conducting the Drug Information Providing Platform Operation Business will result in a decline in the competitiveness of such competitor or an elimination of such competitor from the Drug Information Providing Platform Operation Business, or will make it difficult for newcomers to enter into the Drug Information Providing Platform Business.

Thus, the Parties have the capability to implement input foreclose.

[7] Refusal of Provision, etc. causing an issue with the closure or exclusivity of the market is called "input foreclosure."

B. Incentive to implement input foreclose

As described in subsection A. above, the Parties have the capability to implement input foreclose, and will be able to increase their earnings, in particular, as a result of the decline in competitiveness of any competitor of the Parties conducting the Drug Information Providing Platform Operation Business, elimination of such competitors from the Drug Information Providing Platform Operation Business or otherwise.

Thus, the Parties have an incentive to implement input foreclose.

(3) Effects of the Parties sharing confidential information of their competitors on the market

When the Drug Information Providing Platform Operators that have transactions with Nihon Ultmarc conduct the Drug Information Providing Platform Operation Business by utilizing the MDB, they share commercial confidential information with Nihon Ultmarc. As a result, if M3 obtains any commercial confidential information of any of its competitors through Nihon Ultmarc and uses such information to its advantage, that competitor may suffer a competitive disadvantage.

For instance, when any Drug Information Providing Platform Operator that competes with the Parties initiates new Drug Information Providing Platform Operation Business by utilizing the MDB, it will be required to inform Nihon Ultmarc of the outline of such new business and obtain a license to use the MDB from Nihon Ultmarc. If M3 obtains such information through Nihon Ultmarc and utilizes it to consider any services that will compete against the new business of such competitor, such competitor would suffer a competitive disadvantage.

Although Nihon Ultmarc enters into a non-disclosure agreement with a Drug Information Providing Platform Operator in providing the MDB, Nihon Ultmarc can amend the terms of that agreement to those terms that are advantageous to the Parties, or M3 can have access to confidential information on other Drug Information Providing Platform Operators through any officer or employee who has been dispatched to Nihon Ultmarc on a secondment basis or concurrently serves as an officer or employee of Nihon Ultmarc and utilize such confidential information to make judgment or decision that would affect competition as parts of the services in the Drug Information Providing Platform Operation Business conducted by M3.

Therefore, if the Parties share confidential information of their competitors, it may pose an issue with the closure or exclusivity of the market.

3 Closure or exclusivity of the market resulting from conglomerate business combination (Medical Information Database Provision Business; Drug Information Providing Platform Operation Business of which users are doctors and pharmaceutical companies)

(1) Position of the Parties and state of competitors

The same as described in section 2(1) above.

(2) Conglomerate market foreclosure

A. Capability to implement conglomerate market foreclosure

Users of the MDB Provision Business of Nihon Ultmarc and the Drug Information Providing Platform Operation Business of the Parties are both pharmaceutical companies.

As described in footnote 3 to Part IV-3 above, when a pharmaceutical company provides Drug Information targeting doctors who meet the certain conditions by utilizing the Drug Information Providing Platform, that pharmaceutical company will give the relevant Drug Information Providing Platform Operator instructions as to the doctors to whom the information should be provided by using the DCF Code given to the MDB. As a result, the Parties would permit the pharmaceutical companies to use MDB in connection with provision of their Drug Information Providing platforms, impose a condition of not permitting the use the Drug Information Providing platforms of other companies on those pharmaceutical companies, or discount the amount of prices for provision of the MDB on condition that those pharmaceutical companies will use the Drug Information Providing platforms of the Parties (hereinafter referred to as "Combined Provision, etc.").

The following discusses the probability of any issues with the closure or exclusivity of the market being posed in the Drug Information Providing Platform Operation Business of which users are the pharmaceutical companies/doctors as a result of the Combined Provision, etc. by Nihon Ultmarc conducting the Medical Information Database Provision Business to competitors of the Parties conducting the Drug Information Providing Platform Operation Business.[8]

[8] Combined Provision, etc. posing an issue with the closure and exclusivity of the market is called "conglomerate market foreclosure."

Given that the MDB are used as the de facto standard in the pharmaceutical industry and no enterprise can provide the same level of databases as the MDB of Nihon Ultmarc, pharmaceutical companies would have no choice but to accept Combined Provision of the Parties, if applicable, as the MDB are indispensable to them. For this reason, it is highly likely that the Drug Information Providing Platform Operators that are in competition with the Parties will be eliminated from the market as a result of Combined Provision, etc.

Therefore, the Parties have the capability to implement conglomerate market foreclosure.

B. Incentive to implement conglomerate market foreclosure

As described in subsection A. above, the Parties have the capability to implement conglomerate market foreclosure, and will be able to increase their earnings by eliminating their competitors.

Thus, the Parties have an incentive to implement conglomerate market foreclosure.

4 Entry pressure, etc. in the Drug Information Providing Platform Operation Business

No entry pressure has worked on the Drug Information Providing Platform Operation Business of which users are the pharmaceutical companies/doctors. A pharmaceutical company provides doctors with Drug Information through either of the following manners: (i) "having its MRs provide doctors with Drug Information" or (ii) "providing Drug Information by using the websites operated by itself." However, the pharmaceutical company can only provide Drug Information chiefly on its own products, which are inconvenient to doctors, and it cannot be considered that either of those manners has given competitive pressure on the Drug Information Providing Platform Operators.

5 Legal assessment based on the Antimonopoly Act

As described above, the conduct of this case may be followed by (i) input foreclosure; (ii) sharing of confidential information; and (iii) conglomerate market foreclosure, which may, in turn, lead to the closure and exclusivity of the market in the Drug Information Providing Platform Business of which users are the pharmaceutical companies/doctors. There is no entry pressure, etc. on the

Drug Information Providing Platform Business of which users are the pharmaceutical companies/doctors. Therefore, the conduct of this case would substantially restrain competition in the Drug Information Providing Platform Operation Business of which users are the pharmaceutical companies/doctors.

Part VIII Proposal of Remedies from the Parties

The JFTC presented to the Parties its finding that as described in Part VII-5 above, the conduct of this case would substantially restrain competition in the Drug Information Providing Platform Operation Business of which users are the pharmaceutical companies/doctors, and the Parties proposed the following remedies (hereinafter referred to as "Remedies").

1 Responsive actions for vertical business combination (input foreclosure)

(1) Obligation to continue provision

The Parties will not refuse to provide its competitors (including newcomer enterprises) (hereinafter simply referred to as "Competitors") in the Drug Information Providing Platform Business with its MDB and other databases[9] for an infinite period of time following the date of the conduct of this case.

(2) Prohibition of discriminatory treatment of the prices for provision of MDB and the trade terms other than the prices for such provision

The Parties will not discriminatorily treat any Competitors in terms of prices for, and details, quality and other trade terms of, MDB to be provided to those Competitors for an infinite period of time following the date of the conduct of this case.

2 Responsive actions for vertical business combination (sharing of confidential information)

The Parties will keep officers and employees of Nihon Ultmarc informed that they shall not disclose non-public information on the business operations of Competitors who have used the MDB and other databases to the officers and employees of M3 (excluding those who are dispatched to Nihon Ultmarc by M3

[9] Refers to the MDBs and their identical or similar types of databases for master data files of medical institutions and healthcare professionals; hereinafter the same applies.

on a secondment basis and need to get involved with or access the above-mentioned non-public information) for an infinite period of time following the date of the conduct of this case. The Parties will procure a pledge letter from each of those officers and employees in which he or she agrees and acknowledges that should he or she have breached the above, he or she may be subject to disciplinary measures under the Work Rules and other regulations.

In addition, the Parties will take measures to prohibit their officers and employees who do not need to get involved with or access such non-public information from accessing such non-public information.

And, if an officer or employee who has been dispatched to Nihon Ultmarc by M3 concurrently serves as the officer or employee of M3 and is allowed to get involved with or access the above-mentioned non-public information, the Parties will not have him or her engage in the operations of M3 that he or she may affect competition by utilizing the non-public information.

3 Responsive actions for conglomerate business combination (conglomerate market foreclosure)

The Parties will not condition the use of a variety of their services or the non-use of services of other companies in connection with the provision of their MDB and other databases, discount the prices for the MDB and other databases in connection with the provision of the Parties' other services, or fix details, quality and other terms of provision of their MDB and other databases favorably to themselves in connection with the provision of the Parties' other services, all for an infinite period of time following the date of the conduct of this case.

4 Regular reporting, etc.

The legal groups of the Parties will audit the status of compliance with the Remedies once a year for a period of five years after the conduct of this case. The Parties also will submit a report to the JFTC on a regular basis for a period of five years. Whenever the Parties are requested by the JFTC to submit information, the Parties will respond to such request within an unspecified period of time.

Part IX Assessment of the Remedies

1 Responsive actions for vertical business combination (input foreclosure)

The Parties will have the obligations for an infinite period of time to: (i) continue provision of MDB and other databases to their Competitors; and (ii)

refrain from discriminatory treatment of their Competitors in terms of the prices and other trade terms for their MDB and other databases. Therefore, it can be assessed that the input foreclosure will be eliminated by the Remedies.

2 Responsive actions for vertical business combination (sharing of confidential information)

The Parties will take responsive actions and measures to prohibit officers and employees of M3 from using non-public information of their Competitors for an infinite period of time following the date of the conduct of this case. Therefore, it can be assessed that the Remedies are appropriate from the standpoint of preventing the Parties from gaining an unduly advantageous position by obtaining non-public information of their Competitors or otherwise.

3 Responsive actions for conglomerate business combination (conglomerate market foreclosure)

The Parties will be prohibited from the Combined Provision, etc. for an infinite period of time following the date of the conduct of this case. Therefore, it can be assessed that the conglomerate market foreclosure will be eliminated by the Remedies.

4 Regular reporting, etc.

Noting that the Parties will conduct internal audit and submit regular reports to the JFTC for a period of five years, and will respond to the JFTC's request for submission of information within an unspecified period of time, it can be assessed that those responsive actions are appropriate from the standpoint of securing the effectiveness of the Remedies.

5 Summary

As described above, based on the premise that the Parties will implement the Remedies, it can be assessed that no issue with the closure or exclusivity of the market by reason of the conduct of this case would not be posed. As a result, it can be found that the conduct of this case would not substantially restrain competition in the Drug Information Providing Platform Operation Business of which users are the pharmaceutical companies/doctors.

Part X Conclusion

The JFTC concluded, based on the premise that the Parties will implement

the Remedies, that the conduct of this case would not substantially restrain competition in any particular fields of trade.

Case 9 Acquisition of shares of Cocokara Fine Inc. by Matsumotokiyoshi Holdings Co., Ltd.

Part I The Parties

Matsumotokiyoshi Holdings Co., Ltd. (JCN 2040001040238) (hereinafter referred to as "Matsumotokiyoshi) and Cocokara Fine Inc. (JCN 9010801018108) (hereinafter referred to as "Cococara") are both ultimate parent companies of companies conducting drugstore business. Hereinafter, a group of companies which have already built joint relationships with Matsumotokiyoshi shall be referred to as "Matsumotokiyoshi Group," and a group of companies which have already built joint relationships with Cocokara shall be referred to as "Cocokara Group." As well, Matsumotokiyoshi Group and Cocokara Group shall be collectively referred to as "the company group."

Part II Outline of this case and applicable provision

This case concerns a plan in which Matsumotokiyoshi which has a subsidiary conducting drugstore business would acquire more than 20% of voting rights with regard to shares of Cocokara which also has a subsidiary conducting drugstore business (hereinafter referred to as "the conduct of this case").

The applicable provision in this case is Article 10 of the AMA.

Part III Particular field of trade

1 Service outline

Drugstores are a business category of retail stores which carry OTC drugs and Pharmacist Intervention Required Medicines[1] (hereinafter referred to as "OTC drugs and others") and cosmetics as well as household articles, food and drink among others, and sell these categories of products to consumers.

Other business categories of stores dealing in the same categories of products as drugstores (hereinafter referred to as "other business categories") include various specialty stores, such as dispensing pharmacies and cosmetics stores, as well as supermarkets and discount stores among others. The following table shows categories of products carried by both drugstores and

[1] While both types of drugs can be purchased in drugstores and others without a prescription, OTC drugs shall be purchased based on information provided by pharmacists or registered sales clerks whereas purchase of Pharmacist Intervention Required Medicines requires face-to-face information provision by pharmacists.

stores of other business categories.

Product category	Concrete examples	Stores of other business categories handling
OTC drugs and others	Cold medicines, digestive medicines, etc.	Dispensing pharmacies, supermarkets, discount stores, etc.
Cosmetics	Lipsticks, face lotion, etc.	Cosmetics stores, supermarkets, discount stores, etc.
Household articles	Goods for bathrooms and kitchens, household detergents, etc.	Supermarkets, discount stores, home improvement stores, etc.
Food and drink	Processed food, drink, health food, etc.	The same as above

2 Service range

(1) Substitutability between drugstores and dispensing pharmacies

Drugstores and dispensing pharmacies both carry OTC drugs and others. The latter, however, mainly handles prescription drugs which require prescriptions by doctors whereas the former is not allowed to handle prescription drugs by regulations, instead mainly handling OTC drugs and others as well as various categories of products including cosmetics, household articles and food and drink. Therefore, demand substitutability is limited between drugstores and dispensing pharmacies.

As for the aspect of supply, while drugstores are not allowed to sell prescription drugs, dispensing pharmacies would have difficulties in securing floor space for displaying cosmetics, food and drink, and a variety of other products, as well as know-how concerning display. Therefore, supply substitutability is limited between these two types of stores.

(2) Substitutability between drugstores and retail stores of other business categories

While OTC drugs and others and cosmetics, which are main products of drugstores, are both sold at dispensing pharmacies and cosmetics stores, these specialty stores of other business categories carry other categories of products only in a limited manner. On the other hand, supermarkets, discount stores, etc. handle a variety of product categories, but sell OTC drugs and others and cosmetics only in a limited manner. Based on the

above, consumers shop at either drugstores or stores of other business categories according to their purposes. Therefore, demand substitutability is limited between drugstores and stores of other business categories.

As for the aspect of supply, as handling of OTC drugs and others, the main product category carried by drugstores, requires securing of qualified persons including pharmacists, which is a significant difference from stores of other business categories. Therefore, supply substitutability is limited between drugstores and stores of other business categories.

(3) Substitutability between drugstore business and internet mail order business

A wide variety of product categories including OTC drugs and others sold at drugstores is also sold to consumers through internet mail order. At drugstores, customers can pick up actual products and purchase them on the spot, as well as try some products and ask questions to pharmacists and others face-to-face. Internet mail order, on the other hand, allows purchase without geographic or time restrictions. As seen above, the drugstore and internet mail order have their respective characteristics, which consumers understand and thereby choose either which meets their needs according to products they want to buy. However, OTC drugs, a main category of products of drugstores, are available through internet mail order in a considerably limited manner. Therefore, demand substitutability is limited between drugstores and internet mail order.

Further, while it is necessary not only to secure physical store space but also to acquire some know-how about product display, etc. in order to operate drugstore business, operating internet mail order business requires warehouses to store products and know-how about order handling procedures, etc. Therefore, supply substitutability is limited between them.

(4) Summary

Based on the above, the JFTC defined a service range as “drugstore business” in this case.

3 Geographic range

Competition among enterprises which operate drugstore business is considered to be existed by each store. The trading areas of stores, however, cannot be determined in a single uniform way but rather vary depending on the location conditions (urban areas or suburbs), surrounding facilities, population, traffic volume of adjacent roads, and the store size among others.

Based on the fact that the company group's stores are competing with each other in the suburbs as well as urban areas, the JFTC defined the geographic range in this case as "within a 500m to 2km radius from the store," a range that is assumed as the trading area of the store depending on the location conditions, etc.

Part IV Impact of the conduct of this case on competition

Since both parties of the company group are operating drugstore business, the conduct of this case falls under the definition of horizontal business combinations in drugstore business.

1 Competition in drugstore business

Each drugstore enterprise forms a group (hereinafter referred to as "drugstore group") made of its own stores. These stores engage in competition at locations decided by their drugstore group headquarters, receiving instructions concerning products to be sold, pricing, and the introduction of points cards usable in the same drugstore group, and changing sales prices based on the competition with rival stores nearby.

2 Conditions of competing enterprises

If the geographic range defined in Part III 3 above is applied, there are 295 areas in Japan where drugstores of both Matsumotokiyoshi Group and Cocokara Group operate[2].

As discussed in 1 above, stores of the same drugstore group receive instructions from the drugstore headquarters concerning the merchandise mix and sales prices. Therefore, competition among stores of the same drugstore group is limited and competition among drugstores in the same geographic range is considered to be engaged by drugstore groups. Based on this, in each of the above 295 areas, the conduct of this case would reduce the

[2] The number of areas presented in this paragraph takes into account new stores expected to open at the time of the review.

number of competing drugstore groups by one.

Of the 295 areas, active competition is assumed to continue in areas where the number of drugstore groups would be three or more after the conduct of this case (210 areas) and areas where the number of drugstore groups would decline from three to two but the number of stores of drugstore groups other than the company group (hereinafter referred to as "competing drugstore groups") exceeds the number of stores of the company group (one area).

The remaining 84 areas are either areas where the number of drugstore groups would decline from two to one (33 areas) or areas where the number of drugstore groups would decline from three to two and the number of stores of the company group is the same or more than the number of stores of competing drugstore groups (51 areas). The conduct of this case is considered to have a relatively large impact on competition in product sales prices and others in these areas. Therefore, the JFTC examined whether the conduct of this case would substantially restrain competition in any particular field of trade with regard to these 84 areas (hereinafter referred to as "the 84 areas").

3 Examination of substantial restraint of competition concerning the 84 areas

(1) Competitive pressure from competing drugstore groups

With regard to 31 of the 84 areas, while the number of drugstore groups would decline from three to two, stores of competing drugstore groups are located near stores of either party of the company group. Based on such location conditions, competitive pressure from stores of the said competing drugstore groups is recognized. As well, in these areas, a certain degree of competitive pressure similar to competitive pressure from adjacent markets discussed later in (3) is recognized. Therefore, the impact of the conduct of this case would be limited in the said 31 areas.

(2) The state of competition between stores of the company group in the past

Among the areas remaining after excluding the 31 areas discussed in (1) above from the 84 areas, 34 areas are either areas where the number of drugstore groups would decline from two to one (22 areas) or from three to two (12 areas). In these areas, the degree of competition between stores

of one party of the company group and stores of the other is small based on the location conditions - the closest stations of these stores vary -, so competition among stores of the company group is presumed to have been inactive. As well, in these areas, a certain degree of competitive pressure similar to competitive pressure from adjacent markets discussed later in (3) is recognized. Therefore, the impact of the conduct of this case would be limited in the said 34 areas.

(3) Competitive pressure from adjacent markets

A Competitive pressure from geographically adjacent markets

Consumers who live in the geographic range of a drugstore defined in Part III 3 above may use another drugstore which is located outside of the said geographic range, due to traffic conditions and others. Among the areas remaining after excluding total 65 areas discussed in (1) and (2) above from the 84 areas, 12 areas are either areas where the number of drugstore groups would decline from two to one (five areas) or from three to two (seven areas). In these areas competitive pressure similar to that discussed in (1) or (2) above is not recognized but there are multiple stores of competing drugstore groups operating in adjacent areas, and stores of the company group are engaging in price competition or service competition with these stores of competing drugstore groups located in adjacent areas. Therefore, competitive pressure from adjacent markets is recognized in the said 12 areas. As well, in these areas, a certain degree of competitive pressure similar to competitive pressure from other business categories discussed later in B is recognized. Therefore, the impact of the conduct of this case would be limited in the said 12 areas.

B Competitive pressure from other business categories (supermarkets, etc.)

Some categories of products sold in drugstores are also sold at stores of other business categories, as discussed in Part III 1 above. For this reason, in areas where stores of other business categories are located near drugstores, competition in price and service is recognized concerning these categories of products carried by both of them. Therefore, drugstores are recognized to be under a certain degree of competitive pressure from stores of other business categories.

Among the areas remaining after excluding total 65 areas discussed

in (1) and (2) above from the 84 areas, seven areas are either areas where the number of drugstore groups would decline from two to one (six areas) or from three to two (one area). In these areas competitive pressure similar to that discussed in (1) or (2) above is not recognized but there are stores of other business categories including supermarkets operating. Therefore, in the said seven areas, competitive pressure from each of these stores of other business categories is recognized concerning categories of products carried by both these stores and stores of the company group. As well, in these areas, a certain degree of competitive pressure similar to competitive pressure from geographically adjacent markets discussed in A above is recognized. Therefore, the impact of the conduct of this case would be limited in the said seven areas.

4 Summary

Based on the above, the impact of the conduct of this case would be limited in any of the 84 areas.

Part V Economic analysis

The JFTC conducted economic analysis with a view to mainly evaluating the following:

1) whether or not the company group would stop competing in price, etc. and the gross margin rate of its stores would rise as a result of the conduct of this case which would reduce the number of drugstore groups in geographic ranges where the company group's stores exist; and
2) whether or not stores of other business categories including supermarkets and discount stores are working as competitive pressure against the company group and bringing down the gross margin rate of the company group's stores.

1 Data and representative models

With regard to one party of the company group (hereinafter referred to as "Company A"), the analysis used data of around 700 stores, excluding dispensing pharmacies, such as the income statement by the store, sales data including sales price and cost by the product category, and a list of

competitors by the store including information of store opening/closure[3], among others, between April 2015 and March 2019. (Hereinafter, the analysis using data submitted by Company A shall be referred to as "Company A analysis.")[4] With regard to the other party of the company group (hereinafter referred to as "Company B"), the analysis used data of around 1,000 stores, excluding dispensing pharmacies, such as the income statement by the store and sales data including sales price and cost by the product category of the year 2018, and a list of competitors by the store as of May 2019[5], among others. (Hereinafter, the analysis using data submitted by Company B shall be referred to as "Company B analysis.")[6][7]

As an analysis method, regression analysis was used and the basic model used in the Company A analysis is as follows:[8]

$$\begin{aligned}&\text{Gross margin rate}_{i,t}\\&= \alpha + \beta_1 \times (\text{Number of competing drugstore groups within a 500m radius}_{i,t})\\&\quad + \beta_2 \times (\text{Number of competing drugstore groups within a 500m} - \text{2km radius}_{i,t})\\&\quad + \beta_3 \times (\text{Number of supermarkets within a 500m radius}_{i,t})\\&\quad + \beta_4 \times (\text{Number of discount stores within a 500m radius}_{i,t})\\&\qquad + \gamma \times \text{Year dummy} + \delta \times \text{Month dummy} + \text{Store fixed effects} + \epsilon_{i,t}\end{aligned} \quad (1)$$

"Number of competing drugstore groups within a 500m radius" included

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3 Company A's list of competitors includes stores of competing drugstore groups and other business categories which are located in the trade areas centered around Company A's stores. However, the trade area differs greatly depending on the store, and the list does not include some competing drugstore groups located in the distance or many of stores of other categories located in the trade areas.

4 In the Company A analysis, panel data (data of subject stores as of multiple points in time) was crated only for stores in trade areas for which store opening/closure information was available.

5 Company B's list of competitors includes generally all stores of competing drugstore groups and other business categories located within a uniform range from stores of Company B.

6 In the Company B analysis, cross-section data (data which puts together information concerning multiple stores at one point in time) was created as store opening/closure information in the trading areas of Company B's stores was not available.

7 Note that, concerning Company B, data of different years are used; the list of competitors shows data as of May 2019 while other data including the gross margin rate is from 2018. As it is assumed that there are only very few markets where competition environments of trading areas have dramatically changed during the period of around a year, the gross margin rate of 2018 is considered sufficiently reliable in assessing the impact on competitive environments.

8 Roughly, the same model was used for the Company B analysis as well. However, data used for the Company B analysis is cross-section data of 2018, so year dummy, month dummy or store fixed effects cannot be included. Therefore, as variables controlling store characteristics, natural logarithms of store floor spaces as well as fixed effects of regional classification and store patterns used by Company B were included.

in Equation (1) is the number of competing drugstore groups located within a 500m radius of each store at an applicable point in time (Month, Year).[9] i stands for store, and t month and year when the value was observed. Likewise, "Number of competing drugstore groups within a 500m-2km radius" is the number of competing drugstore groups located within a 500m-2km radius of each store at an applicable point in time (Month, Year); "Number of supermarkets within a 500m radius" and "Number of discount stores within a 500m radius" mean the number of supermarkets and discount stores respectively located within a 500m radius of each store at an applicable point in time (Mont, Year). As well, "Year dummy" is a dummy variable concerning the year when the value was observed, controlling the trend of gross margin rates. "Month dummy" is a dummy variable concerning the month when the value was observed, controlling the seasonality of gross margin rates. "Store fixed effects" is included in order to control the gap of gross margin rates resulting from store-specific circumstances. ϵ is an error term.

2 Analysis results and interpretation

The following is the results of analyses using the model discussed in 1 above:

(1) Competitive pressure from competing drugstore groups located within a 500m radius[10]

First, it was found through both Company A analysis and Company B analysis that the reduction of the number of competing drugstore groups within a 500m radius from a store of the company group resulting from the conduct of this case could lead to an increase in the gross margin rates of the store of the company group in almost all product categories, in other words, an increase in sales prices of products of all categories, even if other competitors were operating in the geographic range concerned. However,

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9 To confirm the robustness of the estimated results, the JFTC also analyzed a model which used a dummy variable in place of the number of competing drugstore groups within a 500m radius and obtained roughly the same result.

10 When estimating, there was a need to address the problem of overfitting resulting from the number of explanatory variables being more than the number of data samples. Therefore, in 2 (1) Competitive pressure from competing drugstore groups located within a 500m radius, the results were presented of the estimation using only limited explanatory variables including "Number of competing drugstore groups within a 500m radius," "Year dummy," "Month dummy," and "Store fixed effects" given in Equation (1).
Incidentally, the results using all the explanatory variables were roughly the same.

the average increment of gross margin rates of all stores through the number of competing drugstore groups becoming one fewer was not large, around 0.4 percentage point in Company A analysis and 0.1 percentage point in Company B analysis.

The above result confirms that the change in the number of competing drugstore groups located in a geographically relatively close range affects the gross margin rate of the company group, which underscores the relevance of the method of narrowing down areas where competition issues may arise by the number of competing drugstore groups. However, the increment of gross margin rates by the decline of the number of competing drugstore groups is not so large, and the conduct of this case would be unlikely to substantially restrain competition provided that other factors including competitive pressure from adjacent markets work sufficiently. This result corroborates the method of qualitative analyses conducted in Part IV above, in which subject areas for examination were narrowed down by the number of competing drugstore groups to identify geographic ranges which would be subject to a large impact from the decline of the number of competing drugstore groups, and then these areas were individually evaluated based also on other local factors.

(2) Competitive pressure from competing drugstore groups located outside of a 500m radius[11]

As a result of the Company A analysis, it was found that the existence of competing drugstore groups located outside of a 500m radius of a store of Company A which had a monopoly on a 500m radius would have an effect of reducing the store's gross margin rate. The result of the Company B analysis, however, did not show that competing drugstore groups located outside of a 500m radius of a store of Company B located in a residential

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11 The analysis was conducted only on stores which had a monopoly on a 500m radius from themselves (stores which had no store of other competing drugstore groups operating within a 500m radius from themselves) because the impact of competing drugstore groups located in the distance may not be able to be confirmed if there are stores of competing drugstore groups operating nearby. For Company A, all the stores which had a monopoly on a 500m radius were analyzed whereas, for Company B, only stores with trading areas larger than a 500m radius were analyzed because information on competing drugstore groups located outside of a 500m radius was not available concerning stores with trading areas of a 500m radius or less. In Company B analysis, the effects of the number of drugstore groups located within a 500m-2km radius of stores were estimated by controlling the effects of "Number of competing drugstore groups within a 500m radius," "Year dummy," "Month dummy," and "Store fixed effects."

area or the suburbs would bring down the store's gross margin rate. The difference in these results are considered to be due to the difference in data used, as discussed in footnote 3 to 6; data used in Company B analysis covers all stores of competing drugstore groups located within a uniform range from each store whereas, in Company A analysis, the area of stores of competing drugstore groups monitored varies depending on the store.

Results of the analysis indicate that the state of competition with competing drugstore groups located relatively close to the store, even if it is set in a residential area or the suburbs and considered to compete in a large geographic range compared to stores in urban areas, should be given greater weight in evaluation and that with regard to competing drugstore groups located in the distance, whether or not they could be competitive pressure should be determined based on the actual conditions. In this respect, the methods concerning the following qualitative analyses conducted in previous paragraphs in Part IV were corroborated: examination conducted based on the actual conditions including location conditions concerning the state of competition among the company group in each geographic range (Part IV 3 (2)), and examination conducted based on the actual conditions concerning stores of competing drugstore groups located in adjacent markets which are somewhat far from stores of the company group in order to evaluate competitive pressure from geographically adjacent markets (Part IV 3 (3) A).

(3) Competitive pressure from other business categories located within a 500m radius[12]

Among other business categories, with regard to supermarkets, results of the Company B analysis, which used data of almost all supermarkets located in trading areas regardless of the state of competition, show that existence of supermarkets in the trading area of a store of Company B could bring down the store's gross margin rates of food and drink, one of the product categories carried by Company B stores, but the same consistent result was not obtained concerning the gross margin rates of the store as a whole or other product categories.

On the other hand, the Company A analysis, which used data of only

12 In this analysis, the effects of the number of supermarkets located within a 500m radius of stores were estimated by controlling the effects of "Number of competing drugstore groups within a 500m radius," "Year dummy," "Month dummy," and "Store fixed effects."

specific supermarkets located in trading areas that are recognized by Company A as competitors, produced results which confirmed the effect of the existence of these specific supermarkets reducing the gross margin rates of most of the product categories carried by Company A stores and of the store as a whole.

These results indicate that supermarkets located within the same geographic range should not be immediately recognized as competitive pressure but evaluated based on the actual conditions. In this respect, the result corroborates the qualitative analysis discussed in Part IV 3 (3) B above, which was conducted based on the actual conditions of the state of competition with each supermarket located in the same geographic range by examining the same product categories as carried by stores of the company group.[13]

3 Summary

The economic analysis also corroborated the qualitative analysis discussed in Part IV to a certain degree.

Part VI Conclusion

The JFTC concluded that the conduct of this case would not substantially restrain competition in any particular field of trade.

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13 In the meantime, the impact of discount stores was also analyzed in this analysis. Whether using data of Company A or Company B, the results did not show that the existence of discount stores in the trading area of a store would uniformly reduce the gross margin rates of the store as a whole or many product categories, which indicates that discount stores in trading areas are unlikely to present competitive pressure against the company group. This is against results assumed from the fact that in general there are many product categories that are carried by both drugstores and discount stores. While it is possible that discount stores affect only sales of drugstores and not their gross margin rates, the review of this case considers the analysis of the impact of discount stores just as reference because different conclusions may be drawn by improving data quality, refining analyses, or using other analysis methods.

Case 10 Acquisition of the aircraft finance business from DZ Bank AG by MUFG Bank, Ltd.

Part I The Parties

MUFG Bank, Ltd. (JCN 5010001008846) (hereinafter referred to as "MUFG Bank") is a company conducting a banking business.
DVB Bank SE (headquartered in Germany; hereinafter referred to as "DVB Bank") and DVB Transport Finance Limited (JCN 9700150000051) (headquartered in the UK; hereinafter referred to as "DVB Transport") are both companies conducting financial business.

Hereinafter, a group of companies which have already built joint relationships with Mitsubishi UFJ Financial Group, Inc. (JCN 4010001073486), the ultimate parent company of MUFG Bank, shall be referred to as "MUFG Group." As well, a group of companies which have already built joint relationships with DZ Bank AG (headquartered in Germany), the ultimate parent company of DVB Bank and DVB Transport, shall be referred to as "DZ Bank Group."

Part II Outline of this case and applicable provision

This case concerns a plan in which MUFG Bank would acquire the aircraft finance business conducted by both DVB Bank and DVB Transport, which belong to DZ Bank Group (hereinafter referred to as "the conduct of this case").

The applicable provision to this case is Article 16 of the AMA.

Part III Particular field of trade

1 Service outline

Aircraft finance business provides a type of business loan to enterprises which need huge capital investment. It lends to users, namely airlines and aircraft leasing companies, funds required for purchase of commercial planes, or refunding of existing loans concerning purchase of commercial planes. Aircraft finance business is mainly conducted by banks, leasing companies, and other financial institutions.

2 Service range

(1) Demand substitutability

Apart from aircraft finance business, there are various types of

business loans to enterprises which need huge capital investment, including those provided to enterprises which need to purchase ships, real estate, infrastructures, etc. (hereinafter referred to as "other finance business"). While users of aircraft finance business, namely airlines and aircraft leasing companies, borrow funds required for purchase of commercial planes and others, users of other finance business each take out loans for different purposes. Therefore, aircraft finance business and other finance business serve different users for different usages.

Therefore, demand substitutability is not recognized between aircraft finance business and other finance business.

(2) Supply substitutability

Conducting aircraft finance business requires highly specialized knowledge concerning demand and supply trends of different types of aircrafts, business trends of airlines, and general trends of global air transportation market, among others. As required specialized know-how varies depending on the product to be purchased by users who borrow funds, and it is not easy for other finance business providers, say, ship finance providers, to quickly acquire specialized know-how required for aircraft finance business, it is not recognized easy to switch from conducting other finance business to aircraft finance business. Therefore, supply substitutability is limited between aircraft finance business and other finance business.

(3) Summary

Based on the above, the JFTC defined a service range as "aircraft finance business."

3 Geographic range

Users of aircraft finance business in general borrow funds from financial institutions which have proposed more favorable terms than others in light of the amount that can be borrowed and the interest rate, and do business with aircraft finance business providers regardless of whether the lenders are in or outside of Japan. As well, aircraft finance business providers do business with users no matter what countries the users are based in.

Accordingly, the JFTC defined the geographic range as "worldwide."

Part IV Impact of the conduct of this case on competition

The following table shows the market shares of aircraft finance business providers. As HHI, after the conduct of this case, increases around 10, the conduct of this case meets the safe-harbor criteria for horizontal business combinations.

[Market shares of aircraft finance business providers in 2017]

Rank	Company name	Market share
-	MUFG Group	0-5%
-	DZ Bank Group	0-5%
-	Others	Approx. 95%
Total		100%

Part V Conclusion

The JFTC concluded that the conduct of this case would not substantially restrain competition in any particular field of trade.