

The JFTC Closed its Reviews on Two Proposed M&As in the Hard Disc Drive (HDD) Sector
(Tentative Translation)

I. Parties

1. Acquisition of the shares of Viviti Technologies Ltd. by Western Digital Ireland, Ltd.

(1) Western Digital Ireland, Ltd. (headquartered in the Cayman Islands of the British Overseas Territory; hereinafter referred to as “WDI”) is an entity engaged in the business of controlling subsidiaries (meaning the subsidiaries defined in Article 10, Paragraph 6 of the Act on Prohibition of Private Monopolization and Maintenance of Fair Trade (hereinafter referred to as the “Antimonopoly Act”) that manufacture hard disc drives (hereinafter referred to as “HDDs”).

WDI is a company that belongs to a group of combined companies (meaning the group of combined companies defined in Article 10, Paragraph 2 of the Antimonopoly Act; the same shall apply hereinafter) whose ultimate parent company (meaning the ultimate parent company defined in Article 2-2, Paragraph 3 of the Rules on Applications for Approval, Reporting, Notification, etc. Pursuant to the Provisions of Articles 9 to 16 of the Act on Prohibition of Private Monopolization and Maintenance of Fair Trade; the same shall apply hereinafter) is Western Digital Corporation (headquartered in the United States of America). The subsidiaries of Western Digital Corporation are engaged in the business of manufacturing and selling HDDs (hereinafter, the companies that belong to the said group of combined companies and that are engaged in the business of manufacturing and selling HDDs shall be collectively referred to as “WD”).

(2) Viviti Technologies Ltd. (headquartered in Singapore; formerly known as Hitachi Global Storage Technologies Holdings Ltd.) is an entity engaged in the business of controlling subsidiaries that manufacture and sell HDDs.

The subsidiaries of Viviti Technologies Ltd. are engaged in manufacturing and selling HDDs (hereinafter, the subsidiary companies engaged in manufacturing and selling HDDs shall be collectively referred to as “HGST”).

2. Acquisition of the HDD business of Samsung Electronics Co., Ltd. by Seagate Technology International

(1) Seagate Technology International (headquartered in the Cayman Islands of the British Overseas Territory; hereinafter referred to as “STI”) is an entity engaged in the business of controlling subsidiaries that manufacture and sell HDDs.

STI is a company that belongs to a group of combined companies whose ultimate parent company is Seagate Technology Public Limited Company (headquartered in Ireland). The subsidiaries of Seagate Technology Public Limited Company are engaged in manufacturing and selling HDDs (hereinafter, the companies that belong to the said group of combined companies

and that are engaged in manufacturing and selling HDDs shall be collectively referred to as “STX”).

(2) Samsung Electronics Co., Ltd. (headquartered in Korea) is an entity engaged in the business of manufacturing and selling HDDs.

Samsung Electronics Co., Ltd. is engaged in the business of manufacturing and selling HDDs at the company and its subsidiaries (hereinafter, the companies, namely Samsung Electronics Co., Ltd. and its subsidiaries engaged in the business of manufacturing and selling HDDs shall be collectively referred to as “SEC”).

(Note 1) WD, HGST, STX and SEC are all business groups that include companies engaged in the business of manufacturing and selling HDDs. Hereinafter in this text, when the number of groups is described, expressions of “one company,” “two companies,” etc. shall be used in the same manner as for a company.

II. Outline of the cases and the applicable provision of the Antimonopoly Act laws

1. Acquisition of the shares of Viviti Technologies Ltd. by WDI

WDI planned to acquire all the shares of Viviti Technologies Ltd. (hereinafter referred to as “the Acquisition of Shares”).

The provision applicable to the Acquisition of Shares is Article 10 of the Antimonopoly Act.

2. Acquisition of the HDD business of Samsung Electronics Co., Ltd. by STI

STI planned to acquire the HDD business of Samsung Electronics Co., Ltd. (hereinafter referred to as “the Acquisition of Business”).

The provision applicable to the Acquisition of Business is Article 16 of the Antimonopoly Act.

III. Process of the reviews of the Acquisition of Shares and the Acquisition of Business, and outline of the results of the reviews

1. Process of the reviews

(1) The Acquisition of Shares

After April 2011, WDI voluntarily submitted a written opinion to the JFTC stating that WDI considered that the Acquisition of Shares would not substantially restrain competition, together with materials concerning the Acquisition of Shares. On June 10, 2011, a notification of a proposed plan regarding the Acquisition of Shares was submitted by WDI pursuant to the provisions of Article 10, Paragraph 2 of the Antimonopoly Act. Accordingly, the JFTC received the notification and commenced its primary review. The JFTC proceeded with the primary review in consideration of the materials the JFTC submitted by WDI including the above written opinion and notification. As a result, the JFTC determined that it would require a further detailed review. Accordingly, on July 4, 2011, the JFTC requested that WDI submit

reports, etc., and then commenced its secondary review. On July 5, 2011, the JFTC made a public announcement that it had commenced the secondary review of the Acquisition of Shares together with the Acquisition of Business, and that it would accept written opinions from any third parties.

In the secondary review, the JFTC proceeded with its review of the effects of the Acquisition of Shares on competition in consideration of the reports and other materials submitted by WDI. In addition, the JFTC also considered the results of hearings and questionnaires, etc. conducted with users of HDDs, competitors and others. On August 26, 2011, the JFTC received all the reports, and related materials from WDI.

On October 13, 2011, during the secondary review, the JFTC explained to WDI the points at issue. The points the JFTC explained were that, with respect to the market for 3.5-inch PC/CE HDDs as stated in IV-3(1)A below, the Acquisition of Shares would be likely to substantially restrain competition, and that the Acquisition of Shares would be unlikely to substantially restrain competition in other fields of trade. Thereafter, WDI proposed to take remedies for solving those concerns, and the JFTC held several meetings with WDI on the said remedies proposed by WDI. On November 21, 2011, WDI submitted a change report on the changes, regarding remedies to the JFTC.

(2) The Acquisition of Business

On May 19, 2011, a notification of a proposed plan regarding the Acquisition of Business was submitted by STI pursuant to the provisions of Article 16, Paragraph 2 of the Antimonopoly Act. Accordingly, the JFTC received the notification and commenced its primary review. The JFTC proceeded with the primary review considering materials submitted by STI, including the notification. As a result, the JFTC determined that it would require further detailed review. Accordingly, on June 17, 2011, the JFTC requested that STI submit reports, etc., and then commenced the secondary review. On July 5, 2011, the JFTC made a public announcement that it had commenced the secondary review of the Acquisition of Business together with the review of the Acquisition of Shares, and that it would accept written opinions from any third parties.

In the secondary review, the JFTC proceeded with its review of the effects of the Acquisition of Business on competition in consideration of the reports and other materials submitted by STI. In addition, the JFTC also considered the results of hearings and questionnaires, etc. conducted with users of HDDs and competing companies and others. On October 27, 2011, the JFTC received all the reports and related documents from STI.

On October 28, 2011, during the secondary review, the JFTC explained to STI the points at issue. The points the JFTC explained were that, with respect to the market for 3.5-inch PC/CE HDDs as stated in IV-3(1)A below, the Acquisition of Business would be likely to substantially restrain competition, and that the Acquisition of Business would be unlikely to restrain competition in other fields of trade.

2. Outline of the results of the reviews

(1) The Acquisition of Shares

Given the remedies including the divestiture of the HDD business, etc., which WDI offered to the JFTC, the JFTC judged that the Acquisition of Shares might not be substantially restrained competition in any particular fields of trade.

(2) The Acquisition of Business

Given the remedies, etc. stated in (1) above, the JFTC judged that the Acquisition of Business might not be substantially restrained competition in any particular fields of trade.

The details of the results of the reviews are as stated in IV through VI below.

IV. HDDs

1. Outline of HDDs

(1) HDDs are data storage devices to digitally and magnetically write data to or read data from disks with magnetic surfaces called “media” that rotate at high speeds, by electromagnets called “magnetic heads”.

(2) HDDs are used as data storage, mainly for enterprise servers and storages (meaning high capacity data storage devices; the same shall apply hereinafter), personal computers (hereinafter referred to as “PCs”), consumer electronics devices including DVD recorders, external HDDs for PCs and consumer electronics devices, etc. (refer to V below).

The format for media mounted on HDDs is called form factor, and the most common form factors today are media diameters of 3.5 inches and 2.5 inches. HDDs mounted with 2.5-inch media (hereinafter referred to as “2.5-inch HDDs”) are smaller in size and lighter in weight than HDDs mounted with 3.5-inch media (hereinafter referred to as “3.5-inch HDDs”), although 2.5-inch HDDs have a relatively small storage capacity in general.

The performance of HDDs (meaning data transfer rates, etc.; the same shall apply hereinafter) is determined by the rotational speed of the media (the number of rotations of the media per minute) and interfaces (the system to connect HDDs to other devices) and others.

(3) HDDs used for enterprise servers and storage (hereinafter referred to as “enterprise HDDs”) require high reliability such as lower rates of failure than HDDs used for PCs and consumer electronics devices. Enterprise HDDs can be further divided into two types; high performance HDDs that do not have a large storage capacity (hereinafter, HDDs that require these characteristics shall be referred to as “mission critical HDDs”) and HDDs whose performance is lower compared to mission critical but that have a large storage capacity (hereinafter, HDDs that require these characteristics shall be referred to as “business critical HDDs”; Note 2).

Meanwhile, PCs and consumer electronics devices use basically the same HDDs. HDDs used for external HDDs, as stated in V below, have essentially similar levels of performance and reliability as those used for PCs and consumer electronics devices.

(Note 2) Almost all business critical HDDs are 3.5-inch HDDs.

(4) The prices of enterprise HDDs are higher than those of HDDs used for PCs and consumer electronics devices. Of enterprise HDDs, the prices of mission critical HDDs are higher than those of business critical HDDs.

For the same application, the prices of 2.5-inch HDDs per gigabyte (hereinafter referred to as “GB”) are higher than those of 3.5-inch HDDs.

2. Definition of particular fields of trade

(1) Product range

A. Demand substitutability

Basically the same HDDs are used for PCs and consumer electronics devices, and therefore there is a high degree of demand substitutability between HDDs for PCs and consumer electronics devices.

On the other hand, since enterprise HDDs have higher performance and reliability than HDDs for PCs and consumer electronics devices, and the prices of enterprise HDDs are higher than HDDs for PCs and consumer electronics devices, there is a low degree of demand substitutability between enterprise HDDs and HDDs for PCs and consumer electronics devices.

In addition, among enterprise HDDs, since there are differences in performance and price between business critical HDDs and mission critical HDDs, there is a low degree of demand substitutability between business critical HDDs and mission critical HDDs.

Pertaining to form factors, 2.5-inch HDDs are used mainly for applications when a large storage capacity is not required but small, lightweight HDDs are needed, while 3.5-inch HDDs are used mainly for applications when a large storage capacity are required and there are only a few limitations in terms of space and weight. In addition, the prices of 2.5-inch HDDs per GB are higher than those of 3.5-inch HDDs. Consequently, there is a low degree of demand substitutability between 2.5-inch HDDs and 3.5-inch HDDs.

B. Definition of product range

Based on A above, the following five categories are defined as the product range:

- (i) HDDs for PCs and consumer electronics devices with a form factor of 3.5 inches (hereinafter referred to as “3.5-inch PC/CE HDDs”);
- (ii) HDDs for PCs and consumer electronics devices with a form factor of 2.5 inches (hereinafter referred to as “2.5-inch PC/CE HDDs”);
- (iii) Business critical HDDs with a form factor of 3.5 inches (hereinafter referred to as

- “3.5-inch business critical HDDs”);
- (iv) Mission critical HDDs with a form factor of 3.5 inches; and
 - (v) Mission critical HDDs with a form factor of 2.5 inches (hereinafter referred to as “2.5-inch mission critical HDDs”);

(Note 3) Mission critical HDDs with a form factor of 3.5 inches are not considered since WD and SEC do not manufacture and sell such HDDs, therefore any competitive relationship does not exist with respect to the Acquisition of Shares and the Acquisition of Business.

(2) Geographic range

Manufacturers and sellers of HDDs (hereinafter referred to as “HDD manufacturers”) sell HDDs at substantially the same prices on a global basis, and domestic and international users conduct HDD transactions without any discriminatory treatment between domestic and international HDD manufacturers.

Accordingly, the entire world is defined as the geographic range for each HDD defined under (1)B above.

3. Impact of the Acquisition of Shares and the Acquisition of Business on competition

Since the Acquisition of Shares and the Acquisition of Business (hereinafter collectively referred to as the “the M&As”) are planned to take place at around the same time, the Acquisition of Shares was considered in light of the Acquisition of Business, and the Acquisition of Business was considered in light of the Acquisition of Shares.

(1) Change in market structure due to the M&As

A. The market for 3.5-inch PC/CE HDDs

As a result of the M&As, HHI will be approximately 5,000, the combined market share of WD and HGST will be around 50%, they will rank first in the market, and HHI will increase by around 900, while the combined market share of STX and SEC will be around 50%, they will rank second in the market, and HHI will increase by around 800. Therefore, neither the Acquisition of Shares nor the Acquisition of Business meets the safe harbor standards for horizontal business combinations.

In 2010, the size of the market (global market) for 3.5-inch PC/CE HDDs was approximately 283 million units. In recent years, the demand for 3.5-inch PC/CE HDDs has changed little and is unlikely to increase over the long term.

Market share of 3.5-inch PC/CE HDDs in 2010

Rank	Company name	Market share
1	WD	Approx. 40%
2	STX	Approx. 40%
3	HGST	Approx. 10%
4	SEC	Approx. 10%
(1)	The combination of the parties (WD and HGST)	Approx. 50%
(2)	The combination of the parties (STX and SEC)	Approx. 50%

B. The market for 2.5-inch PC/CE HDDs

As a result of the M&As, HHI will be approximately 3,800, the combined market share of WD and HGST will be around 50%, they will rank first in the market, and HHI will increase by around 1,200, while the combined market share of STX and SEC will be around 30%, they will rank second in the market, and HHI will increase by around 450. Therefore, neither the Acquisition of Shares nor the Acquisition of Business meets the safe harbor standards for horizontal business combinations.

In 2010, the size of the market (global market) for 2.5-inch PC/CE HDDs was approximately 314 million units.

Market share of 2.5-inch PC/CE HDDs in 2010

Rank	Company name	Market share
1	WD	Approx. 25%
2	HGST	Approx. 25%
3	Company A	Approx. 20%
4	STX	Approx. 20%
5	SEC	Approx. 10%
(1)	Combination of the parties (WD and HGST)	Approx. 50%
(2)	Combination of the parties (STX and SEC)	Approx. 30%

C. The market for 3.5-inch business critical HDDs

As a result of the M&As, HHI will be approximately 5,200, the combined market share of WD and HGST will be around 60%, they will rank first in the market, and HHI will increase by around 1,750, while the combined market share of STX and SEC will be around 40%, they will rank second in the market, and HHI will increase by around 50. Therefore, the Acquisition of Shares does not meet the safe harbor standards for horizontal business combinations, while the Acquisition of Business fall under the safe harbor standards for horizontal business combinations, and it was judged that the Acquisition of Business might not substantially restrain competition in a particular field of trade.

In 2010, the size of the market (global market) for 3.5-inch business critical HDDs was approximately 18 million units.

Market share of 3.5-inch business critical HDDs for in 2010

Rank	Company name	Market share
1	STX	Approx. 40%
2	WD	Approx. 35%
3	HGST	Approx. 25%
4	SEC	Less than 5%
(1)	Combination of the parties (WD and HGST)	Approx. 60%
(2)	Combination of the parties (STX and SEC)	Approx. 40%

D The market for 2.5-inch mission critical HDDs

As a result of the Acquisition of Shares, the combined market share of WD and HGST will be around 25%, they will rank second in the market, HHI will be 4,300, and HHI will increase by approximately 100.

Therefore, 2.5-inch mission critical HDDs fall under the safe harbor standards for horizontal business combinations, and it was judged that the Acquisition of Shares might not substantially restrain competition in a particular field of trade. With respect to the Acquisition of Business, 2.5-inch mission critical HDDs were not considered since SEC does not manufacture and sell such HDDs, therefore any competitive relationship does not exist.

In 2010, the size of the market (global market) for 2.5-inch mission critical HDDs was approximately 15 million units.

Market share of 2.5-inch mission critical HDDs in 2010

Rank	Company name	Market share
1	STX	Approx. 60%
2	HGST	Approx. 25%
3	Company A	Approx. 15%
4	WD	Less than 5%
(2)	Combination of the parties (WD and HGST)	Approx. 25%

(2) Perspectives of consideration

The consideration of the market for 3.5-inch PC/CE HDDs, the market for 2.5-inch PC/CE HDDs, and the market for 3.5-inch business critical HDDs was made mainly from the perspectives described in A and B below.

- A. Regarding the market for 3.5-inch PC/CE HDDs where there will be two undertakings, with each having a market share of approximately 50% as a result of the M&As, whether or not competitive pressure, etc. from users will become a factor to prevent WD/HGST (meaning WD after the Acquisition of Shares; the same shall apply hereinafter) and STX/SEC (meaning STX after the Acquisition of Shares; the same shall apply hereinafter) from taking unilateral conduct respectively, or coordinated conduct with their competitors.
- B. Regarding the market for 2.5-inch PC/CE HDDs and the market for 3.5-inch business critical HDDs as a result of M&As, whether or not the existence of competitors other than WD/HGST and STX/SEC and new entrants, and competitive pressure, etc. from users will become factors to prevent WD/HGST and STX/SEC, from taking unilateral conduct respectively, or coordinated conduct with their competitors.

(3) Competitive Situations

- A. The existence of competitors
 - (a) The market for 3.5-inch PC/CE HDDs market

Although WD/HGST and STX/SEC will be strong competitors against each other, there is no other competitor in the market.
 - (b) The market for 2.5-inch PC/CE HDDs

In addition to Company A, with a market share of approximately 20%, which is a strong competitor, WD/HGST and STX/SEC will be strong competitors against each other. There is no other competitor in the market.
 - (c) The market for 3.5-inch business critical HDDs

With respect to the Acquisition of Shares, STX/SEC will be a strong competitor with a market share of approximately 40%. In addition, Company A, which entered the market in 2011, is likely to become a strong competitor after a certain period of time, although its current market share is marginal. This is because Company A has a good track record of manufacturing and selling mission critical HDDs required more advanced technology compared to business critical HDDs, and because considering that most HDD users generally procure HDDs from around three companies, mainly in light of stable procurement and advantages in price negotiations, HDD users are expected to increase procurement from Company A, which is the only HDD manufacturer other than WD/HGST and STX/SEC. There is no other competitor in the market.
- B. Excess capacity of competitors
 - (a) The market for 3.5-inch PC/CE HDDs

Neither WD/HGST nor STX/SEC has sufficient levels of excess supply capacity.

(b) The market for 2.5-inch PC/CE HDDs

Neither WD/HGST nor STX/SEC has sufficient levels of excess capacity, while Company A has a certain level of excess capacity.

(c) The market for 3.5-inch business critical HDDs

Neither WD/HGST nor STX/SEC has sufficient levels of excess capacity, while Company A is likely to have a certain level of excess capacity in the future.

(4) Entry pressure

Entry into the field of manufacture and sales of HDDs will require (i) the acquisition of intellectual property rights concerning HDDs or receipt of a permit for the use thereof, and (ii) substantial funds for the construction of HDDs manufacturing facilities. Therefore, new entry into the field from other fields of trade is extremely difficult.

In addition, there have not recently been any entrants from other fields of trade.

(5) Competitive pressure from related markets

Solid State Drives (hereinafter referred to as “SSDs”) are competing products with HDDs. However, the prices of SSDs per GB are much higher than those of HDDs. Accordingly, it is not recognized that there is competitive pressure from related markets.

(6) Competitive pressure from users

A. Competition among users

There exist great many manufacturers competing in the market for PCs and consumer electronics devices. Even if the prices of HDDs rise, it would be difficult for these manufacturers to shift the increase in the prices of HDDs to the prices of PCs and consumer electronics devices. As just described, there is a vigorous competition in the market for PCs and consumer electronics devices, which is a downstream market of 3.5-inch PC/CE HDDs and 2.5-inch PC/CE HDDs. Accordingly, a certain degree of competitive pressure from users is considered to exist with respect to the said HDDs.

B. Ease of switching suppliers

The products of each HDD manufacturer satisfy more than certain quality standards and are homogeneous within each product category. For this reason, it is acknowledged that switching suppliers is easy in the markets for 3.5-inch PC/CE HDDs, 2.5-inch PC/CE HDDs, and 3.5-inch business critical HDDs.

C. Multiple-source policies of HDD users

HDD users consider it desirable to procure HDDs from roughly three companies for each

use in light of stable procurement, advantages in price negotiations and so forth. In practice, they generally procure HDDs from roughly three companies. It is considered that the impact of the M&As on such procurement behavior of HDD users is described as follows:

(a) 3.5-inch PC/CE HDDs

After the M&As, the number of HDD users' procurement sources will be only two companies, namely WD/HGST and STX/SEC. It is therefore considered that HDD users will have difficulty in switching procurement sources or flexibly changing procurement ratios. Accordingly, it is considered that competitive pressure from users will not be exerted sufficiently.

(b) 2.5-inch PC/CE HDDs and 3.5-inch business critical HDDs

In the market for 2.5-inch PC/CE HDDs and 3.5-inch business critical HDDs, there will exist Company A in addition to WD/HGST and STX/SEC after M&As. Unlike the market for 3.5-inch PC/CE HDDs, therefore, it will be possible for HDD users to switch procurement sources and change ratios to certain degrees. Accordingly, it is considered that there will continue to be competitive pressure from users.

4. Assessment under the Antimonopoly Act

Based on 3(3)-(6) above, under the Antimonopoly Act the market for 3.5-inch PC/CE HDDs, the market for 2.5-inch PC/CE HDDs and the market for 3.5-inch business critical HDDs are assessed as follows:

(1) The market for 3.5-inch PC/CE HDDs

A. The Acquisition of Shares

(a) Substantial restraint of competition by unilateral conduct

- a. As a result of the Acquisition of Shares, WD/HGST would have a larger market share. It would therefore become easier for WD/HGST itself to exert an influence on the market for 3.5-inch PC/CE HDDs by decreasing the volume of supply of the said 3.5-inch HDDs.
- b. The level of excess capacity of STX/SEC as WD/HGST's competitor is not sufficient. Moreover, over the long term the demand for 3.5-inch PC/CE HDDs is unlikely to increase. For these reasons, an incentive for STX/SEC as WD/HGST's competitor to reinforce its production capacity would be small. Consequently, the constraint on the price increase by WD/HGST through restrictions of the volume of supply would not be imposed.
- c. Entry into the market for 3.5-inch PC/CE HDDs requires (i) the acquisition of intellectual property rights concerning HDDs or receipt of a permit for the use thereof, and (ii) substantial funds for the construction of HDD manufacturing facilities.

Moreover, the demand over the long term for 3.5-inch PC/CE HDDs is unlikely to increase. Consequently, it is considered that there is no entry pressure.

- d. The prices of SSDs per GB are much higher than those of HDDs. Accordingly, it is considered unlikely that SSDs would, in a certain period of time, become competing products with 3.5-inch PC/CE HDDs and therefore a factor to prevent WD/HGST from determining prices freely, to a certain extent through restrictions of the volume of supply.
- e. With the Acquisition of Shares, the sources of procurement for HDD users would be limited to WD/HGST and its competitor, STX/SEC. Considering that this would make it difficult to switch the procurement sources or flexibly change the procurement ratios of 3.5-inch PC/CE HDDs, competitive pressure from users would not become sufficient.
- f. Based on the comprehensive consideration of the situations described in a. through e. above, a situation could easily arise in which WD/HGST might solely determine the prices of 3.5-inch PC/CE HDDs freely, to a certain extent through placing restrictions of the volume of supply. It was therefore judged that the Acquisition of Shares would substantially restrain competition in a particular field of trade.

(b) Substantial restraint of competition by coordinated conduct

- a. As a result of the Acquisition of Shares, the only competitor for WD/HGST in the market for 3.5-inch PC/CE HDDs would be STX/SEC, which means that both undertakings would be able to forecast each other's behaviors with high probability, and each will have a market share of approximately 50%, which means that common interests would likely be shared with WD/HGST and its competitor.
- b. With the Acquisition of Shares, there would be no HDD manufacturer other than WD/HGST itself to prevent STX/SEC as its competitor from raising prices through restrictions of the volume of supply. In addition, the excess capacity of WD/HGST is not large. It is therefore considered that there would be a high possibility that WD/HGST would, if STX/SEC as its competitor raises prices through restrictions of the volume of supply of 3.5-inch PC/CE HDDs, also raise the prices of 3.5-inch PC/CE HDDs in coordination with the competitor by such means as imposing restrictions on the volume of supply.
- c. Entry into the market for 3.5-inch PC/CE HDDs will require (i) the acquisition of intellectual property rights concerning HDDs or receipt of a permit for the use thereof, and (ii) substantial funds for the construction of HDD manufacturing facilities. Moreover, over the long term the demand for 3.5-inch PC/CE HDDs is unlikely to increase. Consequently, it is not considered that there is any entry pressure.
- d. The prices of SSDs per GB are much higher than those of HDDs. Accordingly, it is considered unlikely that SSDs would, in a certain period of time, become a competing

products with 3.5-inch PC/CE HDDs and therefore a factor to prevent WD/HGST and STX/SEC as its competitor from determining prices freely, to a certain extent through restrictions of the volume of supply.

- e. With the Acquisition of Shares, the sources of procurement for HDD users would be limited to WD/HGST and its competitor, STX/SEC. Considering that this would make it difficult to switch the procurement sources or flexibly change the procurement ratios of 3.5-inch PC/CE HDDs, substantial competitive pressure from users would not become sufficient.
- f. Based on the comprehensive consideration of the situations described in a. through e. above, a situation could easily arise, as a result of the Acquisition of Shares, in which WD/HGST might, in coordination with its competitor, STX/SEC, determine the prices of 3.5-inch PC/CE HDDs freely, to a certain extent through restrictions of the volume of supply. It was therefore judged that the Acquisition of Shares would substantially restrain competition in a particular field of trade.

B. The Acquisition of Business

(a) Substantial restraint of competition by unilateral conduct

- a. As a result of the Acquisition of Business, STX/SEC would have a larger market share. It would therefore become easier for STX/SEC itself to exert an influence on the market for 3.5-inch PC/CE HDDs by decreasing the volume of supply of the said 3.5-inch HDDs.
- b. The level of excess supply capacity of WD/HGST as its competitor is not sufficient. Moreover, over the long term the demand for 3.5-inch PC/CE HDDs is unlikely to increase. For these reasons, an incentive for WD/HGST as its competitor to reinforce its production capacity would be small. Consequently, the constraint on the price increase by STX/SEC through restrictions of the volume of supply would not be imposed.
- c. Entry into the market for 3.5-inch PC/CE HDDs requires (i) the acquisition of intellectual property rights concerning HDDs or receipt of a permit for the use thereof, and (ii) substantial funds for the construction of HDD manufacturing facilities. Moreover, over the long term the demand for 3.5-inch PC/CE HDDs is unlikely to increase. Consequently, it is considered that there is no entry pressure.
- d. The prices of SSDs per GB are much higher than those of HDDs. Accordingly, it is not considered that SSDs would, in a certain period of time, become competing products with 3.5-inch PC/CE HDDs and therefore a factor to prevent STX/SEC from determining prices freely, to a certain extent through restrictions of the volume of supply.
- e. With the Acquisition of Business, the sources of procurement for HDD users would be limited to STX/SEC and its competitor, WD/HGST. Considering that this would

make it difficult to switch the procurement sources or flexibly change the procurement ratios of 3.5-inch PC/CE HDDs, competitive pressure from users would not become sufficient.

- f. Based on the comprehensive consideration of the situations described in a. through e. above, a situation could easily arise in which STX/SEC might solely determine the prices of 3.5-inch PC/CE HDDs freely, to a certain extent through placing restrictions of the volume of supply. It was therefore judged that the Acquisition of Business might be substantially restrained competition in a particular field of trade.

(b) Substantial restraint of competition by coordinated conduct

- a. As a result of the Acquisition of Business, the only competitor for STX/SEC in the market for 3.5-inch PC/CE HDDs would be WD/HGST, which means that both undertakings would be able to forecast each other's behaviors with high probability, and each will have a market share of approximately 50%, which means that common interests would likely be shared with STX/SEC and its competitor.
- b. With the Acquisition of Business, there would be no HDD manufacturer other than STX/SEC itself to prevent WD/HGST as its competitor from raising prices through restrictions of the volume of supply. In addition, the excess supply capacity of STX/SEC is not large. It is therefore considered that there would be a high possibility that STX/SEC would, if WD/HGST as its competitor raises prices through restrictions of the volume of supply of 3.5-inch PC/CE HDDs, also raise the prices of 3.5-inch PC/CE HDDs in coordination with the competitor by such means as imposing restrictions on the volume of supply.
- c. Entry into the market for 3.5-inch PC/CE HDDs will require (i) the acquisition of intellectual property rights concerning HDDs or receipt of a permit for the use thereof, and (ii) substantial funds for the construction of HDD manufacturing facilities. Moreover, over the long term the demand for 3.5-inch PC/CE HDDs is unlikely to increase. Consequently, it is not considered that there is any entry pressure.
- d. The prices of SSDs per GB are much higher than those of HDDs. Accordingly, it is not considered that SSDs would, in a certain period of time, become a competing products with 3.5-inch PC/CE HDDs and therefore a factor to prevent STX/SEC and WD/HGST as its competitor from determining prices freely, to a certain extent through restrictions of the volume of supply.
- e. With the Acquisition of Business, the sources of procurement for HDD users would be limited to STX/SEC and its competitor, WD/HGST. Considering that this would make it difficult to switch the procurement sources or flexibly change the procurement ratios of 3.5-inch PC/CE HDDs, substantial competitive pressure from users would not become sufficient.
- f. Based on the comprehensive consideration of the situations described in a. through e.

above, a situation could easily arise, as a result of the Acquisition of Business, in which STX/SEC might, in coordination with its competitor, WD/HGST, determine the prices of 3.5-inch PC/CE HDDs freely, to a certain extent through restrictions of the volume of supply. It was therefore judged that the Acquisition of Business would substantially restrain competition in a particular field of trade.

(2) The market for 2.5-inch PC/CE HDDs

A. The Acquisition of Shares

Regarding the market for 2.5-inch PC/CE HDDs, there is no entry pressure or competitive pressure from contiguous markets. However, due to the following factors, it was judged that unilateral conduct by WD/HGST or coordinated conduct with its competitor would not substantially restrain competition in a particular field of trade:

- (a) There are two strong competitors in the market;
- (b) Company A has a certain level of excess capacity; and
- (c) There are a total of three HDD manufacturers in the market. For this reason, HDD users could switch the procurement sources or flexibly change the procurement ratios of 2.5-inch PC/CE HDDs. Accordingly, there is a certain level of competitive pressure from users.

B. The Acquisition of Business

Regarding the market for 2.5-inch PC/CE HDDs, there is no entry pressure or competitive pressure from related markets. However, due to the following factors, it was judged that unilateral conduct by STX/SEC or coordinated conduct with its competitor would not substantially restrain competition in a particular field of trade:

- (a) There are two strong competitors in the market;
- (b) Company A has a certain level of excess capacity; and
- (c) There are a total of three HDD manufacturers in the market, so HDD users could switch the procurement sources or flexibly change the procurement ratios of 2.5-inch PC/CE HDDs. For this reason, there is a certain level of competitive pressure from users.

(3) The market for 3.5-inch business critical HDDs

When the Acquisition of Shares is implemented, there would be no entry pressure or competitive pressure from contiguous markets in the market for 3.5-inch business critical HDDs. However, due to the following factors, it was judged that unilateral conduct by WD/HGST or coordinated conduct with its competitor would not substantially restrain competition in a particular field of trade:

- A. There is one strong competitor. Company A is also likely to become a strong competitor in a certain period of time;
- B. Company A is likely to have a certain level of excess supply capacity; and

C. There are a total of three HDD manufacturers in the market, so HDD users can switch the procurement sources or flexibly change the procurement ratios of 3.5-inch business critical HDDs. For this reason, there is a certain level of competitive pressure from users.

5. Proposal for remedies by WDI

JFTC explained the points at issue, etc. to WDI with respect to 4(1)A, (2)A and (3) above and to STI with respect to 4(1)B and (2)B. WDI then proposed the following remedies (hereinafter referred to as “the Remedies”) for the concerns under the Antimonopoly Act stated in 4(1)A above.

- (i) WDI’s facilities for manufacturing the volume of 3.5-inch PC/CE HDDs corresponding to approximately 10% of its market share in 2010 will be divested in terms of transfer.
- (ii) WDI will make it possible for the transferee to use the intellectual property required for the manufacture and sale of 3.5-inch PC/CE HDDs.
- (iii) Complying with the request of the transferee, WDI will supply HDD components to the transferee at competitive prices for a certain period of time.
- (iv) The transferee will be selected based on criteria, including but not limited to, independence from WD, sufficient financial resources, expertise and incentives to maintain and develop the transferred business. Regarding the actual transferee, WDI will report to the JFTC, upon the conclusion of a transfer agreement with the transferee, by submitting a copy of the transfer agreement.
- (v) The deadline for the closing of the transfer will be no later than 3 months from the date when the copy of the transfer agreement is submitted to the JFTC. If, upon the conclusion of the transfer agreement, a copy thereof is not submitted to the JFTC, the Acquisition of Shares will not be implemented.

6. Assessment of the Remedies

(1) The Acquisition of Shares

Given the Remedies proposed by WDI, as a result of the Acquisition of Shares the combined market share of WD and HGST will be around 40%, they will rank second in the market for 3.5-inch PC/CE HDDs and HHI will be approximately 4,200 increased by around 50. Consequently, the Acquisition of Shares will meet the safe harbor standards for horizontal business combinations.

Regarding the transferee, it is considered that it will become a strong independent competitor in the market for 3.5-inch PC/CE HDDs, if the requirements stated in 5(iv) above are met. Whether or not the actual transferee satisfies the said requirements will be judged by the JFTC following the receipt of a copy of the transfer agreement from WDI.

Even if the transfer of business is implemented after the Acquisition of Shares, the deadline for the closing of the transfer will be no later than 3 months from the date when the copy of the

transfer agreement is submitted to the JFTC. Considering this, the deadline for the implementation of the Remedies is appropriately and clearly determined.

Based on the above and given the Remedies, it was judged that unilateral conduct by WD/HGST or coordinated conduct with its competitor would not substantially restrain competition in a particular field of trade.

(2) The Acquisition of Business

Even given the Remedies, as a result of the Acquisition of Business the combined market share of STX and SEC will still be around 50%, they will rank first in the market for 3.5-inch PC/CE HDDs and HHI will be approximately 4,200 increased by around 800. Consequently, the Acquisition of Business will not meet with the safe harbor standards for horizontal business combinations. However, by the review again as follows, based on a comprehensive consideration of the situations described in A through C below, it was judged that the unilateral conduct by STX/SEC or the coordinated conduct with its competitor as a result of the Acquisition of Business would not substantially restrain competition in a particular field of trade.

- A. As a result of the Acquisition of Business, there are two strong competitors for STX/SEC in the market, namely WD/HGST and the transferee as a result of the Remedies, which means that it is not considered that any of these undertakings would be able to forecast the others' behaviors with a high probability, and there will also be variations in terms of market share (approximately 50% for STX/SEC, approximately 40% for WD/HGST, and approximately 10% for the transferee), which means that common interests is unlikely to be shared with STX/SEC and its competitor.
- B. One of the conditions of the transfer of part of WDI's HDD business is that the transferee, one of STX/SEC's competitors, has the intention and capability to develop the transferred business concerning 3.5-inch PC/CE HDDs. Accordingly, there is likely for the transferee to increase its production capacity.
- C. There are a total of three HDD manufacturers in the market, so HDD users can switch the procurement sources or flexibly change the procurement ratios of 3.5-inch PC/CE HDDs. For this reason, competitive pressure from users will continue.

V. External HDDs

1. Outline of external HDDs

An external HDD is a device that contains an embedded HDD and allows connection to PCs and consumer electronics devices. It is used to reinforce the storage capacity of PCs and consumer electronics devices and make data backups.

There are two types of external HDDs; mainly those that mount 3.5-inch HDDs (hereinafter referred to as "3.5-inch external HDDs") and those that mount 2.5-inch HDDs (hereinafter

referred to as “2.5-inch external HDDs”).

2. Definition of particular fields of trade

(1) Product range

3.5-inch external HDDs and 2.5-inch external HDDs differ from each other in terms of their characteristics, including storage capacity and product size. For this reason, the degree of the demand substitutability is low.

Accordingly, 3.5-inch external HDDs and 2.5-inch external HDDs are defined as the product range of external HDDs respectively.

(2) Geographic range

The major purchasers of external HDDs are electronics retail stores. Domestic electronics retail stores procure almost all external HDDs from domestic manufacturers of external HDDs (meaning enterprises that manufacture and sell external HDDs by procuring HDDs from HDD manufacturers and selling agents, and; the same shall apply hereinafter) based on their brand power (recognition of consumers in general).

Accordingly, all of Japan is defined as the geographical range for each external HDD defined under (1) above.

3. Impact of the M&As on competition

The Acquisition of Shares and the Acquisition of Business are planned to take place at around the same time. For this reason, the Acquisition of Shares was considered in light of the Acquisition of Business, and the Acquisition of Business was considered in light of the Acquisition of Shares.

(1) Horizontal business combinations (changes in market structure due to the M&As)

A. The market for 3.5-inch external HDDs

As a result of the Acquisition of Shares and the Acquisition of Business, the combined market share of WD and HGST will be less than 5% in 2010, and they will rank fourth or lower in the market for 3.5-inch external HDDs. The combined market share of STX and SEC will also be less than 5%, and they will also rank fourth or lower in the market. HHI will be approximately 4,700 and HHI will increase by less than 50 for both business combinations.

Consequently, 3.5-inch external HDDs fall under the safe harbor standards for horizontal business combinations.

Market share for 3.5-inch external HDDs in 2010

Rank	Company name	Market share
Fourth or lower	WD	Less than 5%
Fourth or lower	HGST	Less than 5%
Fourth or lower	STX	Less than 5%
Fourth or lower	SEC	Less than 5%
(Fourth or lower)	Combination of the parties (WD and HGST)	Less than 5%
(Fourth or lower)	Combination of the parties (STX and SEC)	Less than 5%

B. The market for 2.5-inch external HDDs

As a result of the Acquisition of Shares and the Acquisition of Business, the combined market share of WD and HGST will be less than 5% in 2010, and they will rank fourth or lower in the market. The combined market share of STX and SEC will also be less than 5%, and they will also rank fourth or lower in the market. HHI will be approximately 4,100 and HHI will increase by less than 50 for both business combinations.

Consequently, 2.5-inch external HDDs fall under the safe harbor standards for horizontal business combinations.

Market share for 2.5-inch external HDDs in 2010

Rank	Company name	Market share
Fourth or lower	WD	Less than 5%
Fourth or lower	HGST	Less than 5%
Fourth or lower	STX	Less than 5%
Fourth or lower	SEC	Less than 5%
(Fourth or lower)	Combination of the parties (WD and HGST)	Less than 5%
(Fourth or lower)	Combination of the parties (STX and SEC)	Less than 5%

(2) Vertical business combinations

There are vertical relationships between HDDs (3.5-inch PC/CE HDDs and 2.5-inch PC/CE HDDs) as an upstream market, and external HDDs that use HDDs (3.5-inch external HDDs and 2.5-inch external HDDs) as a downstream market.

A. Market share

The market share of HDDs (3.5-inch PC/CE HDDs and 2.5-inch PC/CE HDDs) as the upstream market is as stated in IV-3(1)A and B above. The market share of external HDDs (3.5-inch external HDDs and 2.5-inch external HDDs) as the downstream market is as stated in (1) above.

HDDs in the upstream market do not meet the safe harbor standards for vertical business combinations, while external HDDs in the downstream market fall under the safe harbor standards for vertical business combinations.

Accordingly, the restrictions of the volume of supply of HDDs in the upstream market imposed by WD/HGST and STX/SEC against manufacturers of external HDDs were considered.

B. Closure and exclusivity of the upstream market

WD and STX, which manufacture and sell HDDs, will continue to manufacture and sell HDDs before and after the M&As. It is therefore unlikely that they will take advantage of the M&As and impose restrictions of the volume of supply of HDDs on manufacturers of external HDDs.

As a result of the M&As, the number of HDD manufacturers will decrease. Due to this, there is some concern that it would become easier for WD/HGST and STX/SEC to restrict the supply of HDDs to manufacturers of external HDDs in a coordinated manner. However, manufacturers of external HDDs can purchase HDDs not only from WD/HGST and STX/SEC but also from selling agents, etc. of HDDs. By taking other factors into consideration as well, manufacturers of external HDDs would not have any difficulty in the procurement of HDDs. It is therefore unlikely that WD/HGST and STX/SEC would take such behavior.

4. Assessment under the Antimonopoly Act

(1) Horizontal business combinations

Based on 3(1) above, it was judged that neither the Acquisition of Shares nor the Acquisition of Business would substantially restrain competition in a particular field of trade.

(2) Vertical business combinations

Based on 3(2)B above, it was considered that no concern will arise relating to the closure and exclusivity of the market for HDDs after the M&As. Accordingly, it was judged that neither the Acquisition of Shares nor the Acquisition of Business would substantially restrain competition in a particular field of trade .

VI. HDD components

1. Outline of HDD components

(1) As stated in IV-1(1) above, HDDs are composed of many components, including magnetic heads and media. Of the many HDD components, magnetic heads and media have a major influence on HDDs' data writing and reading speed as well as their storage capacity.

(2) The three companies WD, HGST and STX internally produce almost all magnetic heads and media used in the manufacture of HDDs, while they procure some of these components from a manufacturer who manufactures magnetic heads and sells them to HDD manufacturers (hereinafter referred to as the "Independent magnetic heads manufacturer") and those who manufacture media and sell them to HDD manufacturers (hereinafter referred to as the "Independent media manufacturer"). In many cases, the performance of the HDD components manufactured and sold by Independent magnetic heads manufacturer and Independent media manufacturer (hereinafter collectively referred to as "Independent HDD component manufacturers") is superior to that of HDD components manufactured by HDD manufacturers. The prices of HDD components manufactured by Independent HDD component manufacturers tend to be high, reflecting their higher performance, etc.

There is only one Independent magnetic heads manufacturer in the world. In terms of the ratio of the in-house production of HDD components by WD, HGST and STX, the said ratio is generally higher for magnetic heads than for media.

On the other hand, SEC and Company A do not produce HDD components internally. They procure all the HDD components they use from Independent HDD component manufacturers.

2. Impact of the M&As on competition

As stated in 1 above, of HDD components, the ratio of in-house production is higher for magnetic heads, and there is only one Independent magnetic heads manufacturer in the world. Looking into the M&As, especially the Acquisition of Business, STX produces magnetic heads internally, while SEC procures all the magnetic heads it uses from the Independent magnetic heads manufacturer. For this reason, it is considered that, after the M&As, STX might begin to internally produce the portion of the magnetic heads that SEC has been procuring from the Independent magnetic heads manufacturer, in an attempt to reduce production costs. Consequently, it is considered that the volume of sales for the Independent magnetic heads manufacturer would decrease. Accordingly, the earnings of the Independent magnetic heads manufacturer is likely to decrease, which in turn would make it difficult for the said manufacturer to make sufficient investment in the research and development of magnetic heads. If that is the case, the magnetic heads produced by the Independent magnetic heads manufacturer would become technically backward. In addition, as a result of a decrease in the volume of sales leading to a higher production cost per unit, it is likely that the Independent magnetic heads manufacturer have to increase in price of magnetic heads. Moreover, the competitive power of

Company A, which relies on the Independent magnetic heads manufacturer for the procurement of magnetic heads, would become weak. As a result, in the market for 2.5-inch PC/CE HDDs, etc the constraint on WD/HGST and STX/SEC by Company A is likely to be removed.

3. Assessment under the Antimonopoly Act

In response to the competitive concerns stated in 2 above, STX voluntarily concluded a contract with the Independent magnetic heads manufacturer for the purchase of a certain amount of magnetic heads on a continuous basis for a certain period of time. Based on this contract, it was judged that the Acquisition of Business would not have a significant influence on the business activities of the Independent magnetic heads manufacturer, and that it is sufficiently possible for Company A to maintain its business and remain a strong competitive unit in the market for HDDs.