

***Case No COMP/M.5483 -
TOSHIBA/ FUJITSU
HDD BUSINESS***

Only the English text is available and authentic.

**REGULATION (EC) No 139/2004
MERGER PROCEDURE**

Article 6(1)(b) NON-OPPOSITION
Date: 11/05/2009

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COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 11.05.2009

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PUBLIC VERSION

MERGER PROCEDURE
ARTICLE 6(1)(b) DECISION

To the notifying party:

Dear Sir/Madam,

**Subject: Case No COMP/M.5483 - Toshiba/ Fujitsu HDD Business
Notification of 31 March 2009 pursuant to Article 4 of Council Regulation
No 139/2004¹**

1. On 31 March 2009, the Commission received a notification of a proposed concentration pursuant to Article 4 of Council Regulation (EC) No 139/2004 ("the Merger Regulation") by which the undertaking Toshiba Corporation ("Toshiba", Japan) acquires within the meaning of Article 3(1)(b) of the Merger Regulation control over substantially all of the hard disk drive business ("Fujitsu HDD Business") of Fujitsu Limited ("Fujitsu", Japan), excluding Fujitsu's HDD media, head and component development and production operations.

I. THE PARTIES

2. Toshiba, a Tokyo headquartered multinational corporation, manufactures and markets a diverse range of high technology electronic and electrical products, including hard disk drive ("HDD") products, notably various types of Mobile HDDs and various electronic products that use these HDDs. Toshiba is also a producer of NAND flash memory chips and Solid State Drives ("SSD").

¹ OJ L 24, 29.1.2004 p. 1.

3. Fujitsu HDD Business comprises worldwide assets and subsidiaries of Fujitsu in the production, design, sales and research and development of HDDs, notably 2.5" Mobile and 2.5" and 3.5" Enterprise HDDs.

II. CONCENTRATION

4. Pursuant to a Memorandum of Understanding signed on 17 February 2009, Toshiba acquires substantially all the HDD business of Fujitsu. The proposed transaction will involve both: (i) an acquisition of all or substantially all of the shares of two wholly-owned Fujitsu subsidiaries engaged in the manufacturing of HDDs (the "Target Entities"); and (ii) an acquisition of assets from certain Fujitsu entities that own and operate assets related to the Fujitsu HDD Business including the production, engineering, research and development, sales and other material operations, as well as related personnel, agreements, inventories, and intellectual property (the "Target Assets").
5. The Target Entities together with the Target Assets that are located in Japan will be transferred by Fujitsu into a new company established for the purpose of the transaction, in which Toshiba will immediately acquire at least 80% of the shares. The remaining 20% will also be acquired by Toshiba after a transition period. The transfer modalities for the remainder of the Target Assets are still under negotiation. In any event, the proposed transaction will allow Toshiba to acquire sole control of all of the Target Entities and Target Assets.
6. Thus, the transaction constitutes a concentration within the meaning of Article 3(1)(b) of the Merger Regulation.

III. COMMUNITY DIMENSION

7. The undertakings concerned have a combined aggregate worldwide turnover for the year 2008 of more than EUR 5 000 million² (Toshiba: EUR [...] million, Fujitsu HDD Business: EUR [...] million). Each of the undertakings has a Community-wide turnover for the year 2008 in excess of EUR 250 million (Toshiba: EUR [...] million, Fujitsu HDD Business: EUR [...] million). The undertakings concerned do not achieve more than two thirds of their Community-wide turnover within one and the same Member State.
8. The notified operation therefore has a Community dimension within the meaning of Article 1(2) of the Merger Regulation.

IV. COMPETITIVE ASSESSMENT

A. The Relevant Product Market

9. HDDs are data storage systems that can be used in a variety of applications such as storage area networks and other business storage systems, desktop and laptop computers and a range of consumer electronics applications including digital video recorders, camcorders, gaming devices, MP3 players, car navigation systems and mobile phones.

² Turnover calculated in accordance with article 5(1) of the Merger Regulation and the Commission Consolidated Jurisdictional Notice of 10 July 2007.

10. HDDs are customarily categorized by reference to their end use, in particular (i) Enterprise or Server HDDs (used in servers and enterprise storage systems), (ii) Desktop HDDs (used for example in PCs and home electronics devices), and (iii) Mobile HDDs (used for example in laptop PCs and portable electronic devices). A further differentiation of HDDs is possible according to their technical characteristics, such as their size (e.g. 3.5", 2.5", 1.8" form factors), rotational speed (seek time), storage capacity and the type of interface.
11. The notifying party submits that there is a single market for all HDDs as the boundaries between traditional HDD product segments based on technical characteristics or end use applications are blurred. According to the notifying party, there is a significant degree of demand-side substitutability (different types of HDDs can be used for a same end-use application) and supply-side substitutability (as a single type of HDD can have multiple end use applications, and HDD suppliers make different types of HDDs and can easily shift or expand production between the different types of HDDs). However, the notifying party submits that the exact relevant product market can be left open as the proposed transaction will not have a material impact on competition under any plausible market definition.
12. The Commission in its previous decisions involving HDDs³ has considered the sub-categories according to end use (Mobile, Desktop, Enterprise) and also others (e.g. according to form factor or interface). However, the Commission ultimately left the market definition open.
13. The present market investigation did not bring conclusive results concerning the exact scope of the relevant product market.
14. A considerable number of respondents indicated that demand-side substitutability between Mobile and Desktop HDDs indeed existed and a more relevant differentiation would be according to the technical characteristics, most importantly according to the form factor of the HDDs and the interface applied as these limit demand-side substitutability most (although some substitutability between form factors was also reported, e.g. between 1.8" and 2.5", or between 2.5" and 3.5"). Other characteristics beyond form factor and interface, such as the rotation speed and capacity, were also mentioned as not easily interchangeable, as these are often determined by the end product requirements.
15. Alternatively, some respondents to the market investigation also suggested to consider all HDDs as the relevant product market as HDD suppliers are able to shift production between the different types of HDDs and varying technical characteristics within short time frames (immediately or within days) and without significant additional investment. HDD suppliers, depending on their production model, can have an 'in-built' flexibility in the manufacturing lines in order to increase this response capacity.
16. Many respondents found the distinction Mobile, Desktop and Enterprise most appropriate to define the relevant markets as most technical characteristics are still dependent on the end-use categories.

³ COMP/M.4100 Seagate/Maxtor, COMP/M.2199 Quantum HDD/Maxtor, COMP/M.2821 Hitachi/IBM Harddisk Business

17. For the purposes of this decision, the exact definition of the relevant product market for HDDs can be left open as the proposed transaction does not raise competition concerns under any of the alternative product market definitions.
18. The market investigation also addressed the impact of current technological developments in data storage, notably of Solid State Drives ("SSD") and other flash based memories on the market definition. SSDs are equally data storage devices, which have improved technical characteristics (using NAND flash memory chips that have no moving parts and are thus less fragile, of smaller size, more reliable, silent, have much better seek times and consume less energy, etc.). However, SSDs come at a higher price.
19. SSDs have started replacing HDDs in some product categories; most often in consumer electronic devices with small form factors and small storage capacity needs (e.g. mobile phones, music players). Some laptop types (high-end laptops and small netbooks) already use SSD instead of HDD and replacement has been favoured in servers where performance is key due to the SSDs' capacity to rapidly process large volumes of data.
20. However, this substitution is in its infancy (except for very small form factors such as 0.85" and 1" where HDDs are hardly used any more) and restricted to some end uses. The main reason for this is the significantly higher price (price/gigabyte) of SSDs compared to HDDs: respondents reported a price difference in the magnitude of 4-6 times to even 20 times depending on the type of SSD. In addition, the cost of the SSD does not decrease with increasing capacities (as additional NAND flash memory chips are needed). HDDs have therefore an even greater price advantage as the capacity increases and SSDs have been seen as most economical for small capacities.
21. The price of SSDs has been falling rapidly in recent years, which is expected to continue in line with the significant price decrease of flash memory chips, which are the main inputs of an SSD representing around [the vast majority] of its cost. The price premium of SSDs compared to HDDs is expected to erode but not to disappear within the coming 2-3 years. It is expected to remain at around 2-3 times the price of HDDs.
22. It follows from the above, that for the time being, SSDs do not belong to the same product market as HDDs or Mobile HDDs but rather represent a neighbouring market.

B. The Relevant Geographic Market

23. The notifying party submits that the market for HDDs has a worldwide scope due to the global character of manufacturing, assembly, sales and clients of HDD products while transport costs are minimal.
24. The Commission's previous decisions⁴ have largely supported this view. While the Commission found the HDD markets to be at least EEA-wide, the exact definition of the relevant geographic market was left open.

⁴ COMP/M.4100 Seagate/Maxtor, COMP/M.2199 Quantum HDD/Maxtor, COMP/M.2821 Hitachi/IBM Harddisk Business.

25. The market investigation overwhelmingly indicated that the HDD market, including all possible types of HDDs, is worldwide in scope. In support of this, respondents pointed out in particular that HDD purchasing was centralised for production facilities throughout the world and prices were negotiated worldwide, resulting in worldwide homogenous price levels; and that transport costs compared to the value of the HDDs were low. While some local presence of a HDD supplier was always preferred by customers in order to receive technical support, the HDD supply market is characterised by a few large suppliers that are all able to fulfil this requirement worldwide.
26. The Commission therefore takes the view that the market for HDDs, including all types of HDDs, is worldwide in scope.

C. Competitive Assessment

Horizontal assessment

27. The parties' activities overlap in the manufacturing of Mobile HDDs, more particularly in the manufacturing of 2.5" Mobile HDDs. Under any alternative product market definitions (all HDDs, Mobile HDDs or 2.5" Mobile HDDs), the transaction leads to a horizontally affected market. As regards the other sub-categories, neither of the parties is active in Desktop HDDs and only Fujitsu manufactures Enterprise HDDs, thus no horizontal overlap arises there.
28. Considering a relevant product market that includes all types of HDDs, Toshiba had a worldwide market share of [5-10]% and Fujitsu HDD Business of [5-10]% in 2008⁵ (combined market share of [10-20]%). The transaction would make the combined entity the third/fourth largest on the HDD market on par with Hitachi ([10-20]%), behind Seagate ([30-40]%) and Western Digital ([20-30]%).
29. Narrowing the relevant market to Mobile HDDs, Toshiba will become number one with a combined worldwide market share of [30-40]% (Toshiba [10-20]%, Fujitsu HDD Business [10-20]%) as a result of the transaction, leaving Western Digital and Hitachi (both [20-30]% each) and Seagate ([10-20]%) behind.
30. A similar competitive picture is revealed when further narrowing the market to the 2.5" sub-segment of Mobile HDDs where the Toshiba-Fujitsu HDD Business combined market share is [30-40]%. Respondents to the market investigation identified this sub-segment as the one where Toshiba and Fujitsu compete most closely. It was also indicated that this sub-segment is likely to be one of the fastest growing HDD segments in the future while many other types even see decline in demand.

⁵ All market shares in this decision are market shares by revenue figures and are based on 2008 Q1-Q3. Market shares for 2007 are similar: Toshiba: [5-10]%, Fujitsu HDD Business: [5-10]%. It should be noted that market shares are based on industry publications and do not exclude captive use of HDDs, which are [10-20]% and [10-20]% of total HDDs produced for Toshiba and Fujitsu HDD Business respectively for the most recent fiscal year. Western Digital and Seagate do not have any captive use. Together these four companies represent close to [70-80]% of the market. Therefore, the merchant market shares of Toshiba and Fujitsu HDD Business are likely to be similar to the market shares presented in industry publications, even taking into account some degree of vertical integration in case of Hitachi and Samsung.

31. The notifying party alleges that the HDD market, while relatively concentrated, is characterised by strong competition and extremely volatile market shares as competing manufacturers can easily add production capacity and expand production also into other sub-categories of HDDs. Technological progress is described as relatively fast causing short product life cycles. The notifying party also points to large countervailing buyer power from concentrated OEM manufacturers and to rapidly and continuously declining prices on the market.
32. The market investigation broadly confirmed all of the above arguments. In particular, both competitor and customer respondents to the market investigation generally confirmed that the HDD market was highly competitive. Post-merger Toshiba would continue to face significant competitors such as Seagate, Western Digital, Hitachi and Samsung.
33. In addition, the notifying party argues that the combined market share would likely be lower than the simple addition of Toshiba's and Fujitsu HDD Business' market shares due to the multi-sourcing strategy of customers.⁶ The market investigation confirmed the existence of this effect, and competitors also reported of sufficient free capacities to immediately respond to such an increase in demand.
34. New entry into the HDD market from companies currently not producing any HDDs was seen as improbable due to strong competition, decreasing prices and margins and strong intellectual property rights. However, HDD competitors indicated that it was possible to shift production from one type of HDD to another within delays between 6-12 months on average and requiring between 2 and 40 million USD investment depending on the technical characteristic to be altered.
35. Many of the respondents mentioned that the transaction could have a pro-competitive effect: Toshiba's know-how in NAND flash memory chips and SSDs combined with Fujitsu's Enterprise HDD capability can result in improved product offerings in Enterprise SSDs.
36. It can be concluded that the proposed transaction does not raise any competition concerns as a result of non-coordinated horizontal effects.
37. In light of the relatively high concentration levels in the industry, the Commission also assessed whether the proposed transaction could raise any competition concerns due to coordinated effects. However, according to the notifying party the industry shows patterns of rapid innovation and bidding markets, so that HDD suppliers would be unlikely to be able to agree on terms of coordination. Furthermore, the concentration level amongst purchasers of HDD appears high and purchasers often place large-volume orders, which would provide an incentive to make any coordination unsustainable. The market investigation supported the view that co-ordination would indeed be difficult to reach and sustain. Negotiations with OEMs happen bilaterally with all suppliers simultaneously and often in several rounds, rendering the contractual conditions non-transparent.

⁶ Some customers that purchase from both companies will have to add a new supplier to keep the number of competing suppliers constant. The notifying party submits data showing this effect (so called 'Conner Effect') after several previous mergers (COMP/M.4100 Seagate/Maxtor, COMP/M.2821 Hitachi/IBM Harddisk Business and COMP/M.2799 Quantum/Maxtor).

38. In light of the above, the proposed transaction does not give rise to any competition concerns resulting from the combination of Toshiba's and Fujitsu's HDD businesses.

Vertical assessment

39. There are a number of vertical relationships. First, Toshiba produces laptops and other consumer electronic products that use Mobile HDDs as inputs. Secondly, the proposed transaction creates a new vertical link through Toshiba entering the Enterprise HDD segment as well, as Toshiba is a producer of servers that use these HDDs.
40. As regards Mobile HDDs, the transaction gives rise to a vertically affected market only when considering the worldwide market for Mobile HDDs as the relevant product market (post-transaction market share of [30-40]%).
41. The combined entity is unlikely to have the ability and incentive to foreclose competing producers of laptops and other consumer electronic products from access to Mobile HDDs as inputs, given that it does not appear to possess market power in a possible relevant upstream market for Mobile HDDs.
42. The proposed transaction will also not give rise to any risk of customer foreclosure for Mobile HDDs. Firstly, such foreclosure concerns would not be merger specific as Toshiba could already have sourced HDDs exclusively in-house before the proposed transaction. Secondly, Toshiba does not represent a significant part of the demand for Mobile HDDs. Toshiba's share of the worldwide laptop market was only 10.1% in 2007 while the largest 5 laptop producers (which do not include Toshiba) accounted for 71% of the demand for Mobile HDDs. Toshiba is not among the largest suppliers as regards office automation products⁷, car audio-video or navigation systems either and only has a [5-10]% share in the worldwide market for the sale of mobile phones.
43. As regards the vertical link between Enterprise HDDs and servers, the proposed transaction does not lead to a vertically affected market, since neither on the Enterprise HDD market nor on the server market would Toshiba's market shares exceed 25%.
44. In light of the above, the proposed transaction does not give rise to any competition concerns as a result of the vertical relationships.

Conglomerate effects

45. Toshiba is active in the production of SSDs, which constitute a neighbouring market to HDDs. Customers of SSDs and HDDs are mostly the same companies purchasing these products for similar end uses. Therefore, there is a potential conglomerate relationship between the markets for SSDs and HDDs.
46. In order for the proposed transaction to raise competition concerns due to conglomerate effects, the combined entity needs to achieve a significant degree of market power in one of the concerned markets as a result of the transaction.
47. As regards SSDs, Toshiba's worldwide market share is currently very low and significantly below 25%⁸. Furthermore, the market investigation showed that the SSD

⁷ Case COMP/M.5334 Ricoh/IKON.

⁸ SSD production has started in 2008 and Toshiba estimated its worldwide market share is around [0-5]%.

market is currently characterised by dynamic competition with a large number market players and numerous new entrants. Consequently, Toshiba does not have any market power on the SSD market(s).

48. As regards HDDs, Toshiba's post-merger worldwide market share will remain below 25% whether considering a market for all HDDs or a market for Enterprise HDDs. Therefore, the transaction does not give rise to affected markets due to the conglomerate relationships with all HDDs and Enterprise HDDs.
49. Assuming the narrowest market of Mobile HDDs and 2.5" Mobile HDDs, Toshiba's post-merger worldwide market share ([30-40]% and [30-40]% respectively) would result in an affected market. However, the market investigation showed that, while Toshiba will become the leading HDD supplier worldwide for Mobile HDDs and more particularly 2.5" Mobile HDDs, it cannot be regarded as having any significant degree of market power for the reasons set out above. Post-merger, Toshiba will continue to face four competitors, namely Western Digital, Seagate, Hitachi and Samsung. The market investigation also confirmed that customers of HDDs and SSDs do not rely on one single supplier but multi-source. Customers of Mobile HDDs will continue to have sufficient alternative suppliers.
50. In light of the above, the proposed transaction does not give rise to any competition concerns as a result of conglomerate effects.

V. CONCLUSION

51. For the above reasons, the Commission has decided not to oppose the notified operation and to declare it compatible with the common market and with the EEA Agreement. This decision is adopted in application of Article 6(1)(b) of Council Regulation (EC) No 139/2004.

For the Commission
(signed)
Neelie KROES
Member of the Commission