



EUROPEAN COMMISSION
DG Competition

***Case M.8109 - FIH
MOBILE / FEATURE
PHONE BUSINESS OF
MICROSOFT MOBILE***

Only the English text is available and authentic.

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

Article 6(1)(b) NON-OPPOSITION
Date: 22/09/2016

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EUROPEAN COMMISSION

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In the published version of this decision, some information has been omitted pursuant to Article 17(2) of Council Regulation (EC) No 139/2004 concerning non-disclosure of business secrets and other confidential information. The omissions are shown thus [...]. Where possible the information omitted has been replaced by ranges of figures or a general description.

PUBLIC VERSION

MERGER PROCEDURE

To the Notifying Party:

Dear Sir/Madam,

Subject: Case M.8109 - FIH MOBILE / FEATURE PHONE BUSINESS OF MICROSOFT MOBILE
Commission decision pursuant to Article 6(1)(b) of Council Regulation No 139/2004¹ and Article 57 of the Agreement on the European Economic Area²

- (1) On 19 August 2016, the European Commission received notification of a proposed concentration ("the Transaction") pursuant to Article 4 of the Merger Regulation by which FIH Mobile Limited ("FIH", Cayman Islands), intends to purchase from Microsoft Mobile Oy ("Microsoft MO", Finland) and from a number of entities affiliated with Microsoft MO (together with Microsoft MO, "the Seller"): (1) 100% of the contributed charter capital of Microsoft Mobile (Vietnam) Limited Liability Company ("MMV", Vietnam); and (2) certain other assets (together, the "Target") that are utilised in the conduct of the feature phone business currently operated by Microsoft (the "Feature Phone Business").³ FIH is designated hereinafter as the "Notifying Party". FIH and the Target are hereinafter designated together as the "Parties".

¹ OJ L 24, 29.1.2004, p. 1 (the 'Merger Regulation'). With effect from 1 December 2009, the Treaty on the Functioning of the European Union ('TFEU') has introduced certain changes, such as the replacement of 'Community' by 'Union' and 'common market' by 'internal market'. The terminology of the TFEU will be used throughout this decision.

² OJ L 1, 3.1.1994, p. 3 (the 'EEA Agreement').

³ Publication in the Official Journal of the European Union No C 313, 27.08.2016, p. 25.

1. THE PARTIES

- (2) The **Target** is composed by MMV, a subsidiary of Microsoft MO, and certain other assets. The Target therefore includes mobile manufacturing assets in Vietnam, information technology assets in Finland, distribution assets and sales and customer care networks in various countries and a research and development ("R&D") team and equipment in China, all of them utilised in the provision of electronic manufacturing services ("EMS") in relation to feature phones. MMV is a subsidiary of Microsoft MO and the manufacturer of the phones for the Feature Phone Business. Microsoft **MO** is a subsidiary of Microsoft Corporation ("Microsoft", United States of America), which is primarily involved in the design, development and supply of computer software, certain hardware devices and related services.
- (3) **FIH** is a subsidiary of Hon Hai Precision Industry Co., Ltd., trading as Foxconn ("Hon Hai", Taiwan). Hon Hai is a provider of third-party EMS to original equipment manufacturers ("OEMs") of electronic products such as computers, mobile phones, video game consoles and televisions. Hon Hai has operations across the Americas, Asia and Europe. Hon Hai, after the acquisition of Sharp, is also an OEM and sells consumer electronics products such as mobile phones, tablets, refrigerators, cooking appliances, TV sets, etc.⁴

2. THE OPERATION AND THE CONCENTRATION

- (4) On 18 May 2016, FIH and Microsoft MO signed a Stock and Asset Purchase Agreement ("SAPA"), along with HMD global Oy ("HMD"). In accordance with the terms of the SAPA, FIH (or its designated subsidiaries) will acquire the Target from the Seller.
- (5) By way of separate arrangement, HMD will acquire the intellectual property rights relating to the OEM element of Microsoft's Feature Phone Business. These IP rights will therefore not pass to Hon Hai and HMD will not own any interest in the Target or otherwise exercise influence over the Target.
- (6) Therefore, this Transaction relates to the EMS element of the Feature Phone Business that Microsoft currently operates. Post-Transaction, it is envisaged that HMD will engage FIH to manufacture feature phones and tablets on its behalf, and that FIH will utilise MMV to do so.
- (7) The Transaction leads to the acquisition of sole control by FIH of the Target and therefore constitutes a concentration within the meaning of Article 3(1)(b) of the Merger Regulation.

3. EU DIMENSION

- (8) The undertakings concerned have a combined aggregate worldwide turnover of more than EUR 5 000 million (Hon Hai: EUR 127 190 million; Target: EUR

⁴ According to the Notifying Party, the Hon Hai / Sharp transaction closed on 12 August 2016. The Hon Hai / Sharp acquisition was approved by the Commission on 20 June 2016 (M.8023).

[...].⁵ Each of them has an EU-wide turnover in excess of EUR 250 million (Hon Hai: EUR [...]; Target: EUR [...]), but they do not achieve more than two thirds of their aggregate EU-wide turnover within one and the same Member State. The Transaction therefore has an EU dimension.

4. RELEVANT MARKETS

- (9) The Transaction combines Hon Hai, mostly a provider of EMS, with the Target (also active in the provision of EMS). The Parties' activities therefore overlap horizontally in the provision of EMS.
- (10) There is also a vertical relationship between the Target and the activities of Hon Hai both at upstream level and at downstream level. Downstream Hon Hai acts as an OEM. Upstream Hon Hai acts as a manufacturer of display panels and camera modules.

4.1. Electronic manufacturing services

- (11) OEMs produce electronic devices such as computers, mobile phones, video game consoles and televisions. EMS can consist of the many products and services that an OEM requires to produce its end products, such as component selection and procurement, prototyping, production, assembly, testing, failure analysis, logistics and distribution.
- (12) EMS can be undertaken in-house or obtained from third-party EMS providers. Some OEMs also perform EMS for other OEMs. According to the Notifying Party, 70% of EMS is not outsourced to a third-party but undertaken in-house by the respective OEMs.

4.1.1. Relevant product market

- (13) In previous decisions, the Commission contemplated a possible segmentation of EMS according to the final product for which these services are provided (e.g. computers, mobile phones, video game consoles and televisions). The Commission also considered whether EMS provided by OEMs in-house should be included in the relevant product market. However, the Commission ultimately left these issues open.⁶
- (14) The Notifying Party submits that the EMS production chain is largely identical irrespective of the final product being produced and that EMS consist of generic production lines that are able to easily shift equipment, processes and staff. Therefore, the Notifying Party submits that it would be inappropriate to segment EMS further, either by type of EMS or by the products being manufactured by the EMS provider.
- (15) Concerning EMS conducted by OEMs for their own products (i.e. in-house EMS), the Notifying Party claims that OEMs can easily outsource EMS and bring them back in-house at low cost and on short notice. Therefore, the Notifying Party

⁵ Turnover calculated in accordance with Article 5 of the Merger Regulation.

⁶ M.5765 – *Foxconn/Dell (Products) Poland* (2010); M.8023 *Hon Hai Precision / Sharp* (2016).

argues that OEM's in-house EMS should be included in the relevant product market.

- (16) The market investigation was inconclusive as regards a further segmentation of EMS. Some respondents (customers and one competitor) explained that most EMS providers manufacture a wide range of products for different customers interchangeably.⁷ On the other hand, in the words of one competitor "*A number of these markets (e.g. medical, automotive and aerospace) require specialized regulatory compliance. Each of these markets also has specific requirements in terms of capability*".⁸ Some respondents (customers and one competitor) considered that the same equipment and production lines could be used to manufacture different products although they indicated that some equipment may not be interchangeable.⁹
- (17) According to the market investigation, cost, efficiency, flexibility and quality are among the most important characteristics that lead OEMs to decide to use third-party EMS.¹⁰ In relation to the competitive constraint exerted by EMS provided by OEM's in-house and by EMS provided by other OEMs, the responses from the market investigation were mixed. For example, some respondents (competitors and one customer) submitted that OEMs as a third-party EMS provider could exert a competitive constraint provided they offer a competitive advantage in terms of cost or quality, while another respondent (a customer) did not believe that OEMs could exert such a constraint.¹¹ Likewise, one competitor considered that OEMs could bring EMS back in-house, while others (one customer and one competitor) submitted that it would not be an option as OEMs would lack in-house equipment or expertise.¹²
- (18) In any event, the Commission considers that, for the purposes of the present case, the exact definition of the product market for EMS can be left open, since no serious doubts as to the compatibility of the Transaction with the internal market arise under any plausible alternative product market definition.

4.1.2. *Relevant geographic market*

- (19) In relation to the geographic market definition for EMS, the Notifying Party submits that the relevant geographic market is worldwide.
- (20) In past decisions, the Commission has considered whether the geographic market for EMS is EEA-wide or worldwide, but ultimately left this question open.

⁷ Responses to market investigation, question 14.

⁸ Responses to market investigation, question 14.

⁹ Responses to market investigation, questions 11 and 15.

¹⁰ Responses to market investigation, question 4.

¹¹ Responses to market investigation, questions 8 and 9.

¹² Responses to market investigation, question 5.

- (21) A majority of respondents to the market investigation considered the market for EMS services to be worldwide.¹³ More specifically, respondents that are suppliers of EMS submitted that they typically provide these services worldwide and respondents that procure EMS (OEMs) responded that they obtain EMS worldwide.¹⁴
- (22) For the purposes of the present decision, the Commission considers that it is not necessary to conclude on the exact geographic market definition as no serious doubts as to the compatibility of the Transaction with the internal market arise under any plausible alternative geographic market definition of EMS.

4.2. Display panels

- (23) Display panels are comprised of screens capable of displaying graphical output of TV devices, mobile phones, PCs, laptops, notebooks, public displays, and so forth and include several display panel technologies, such as liquid crystal display (LCD), plasma, organic light-emitting diode (OLED) and others. Display panels may come in different sizes. There are a number of competing technologies as companies are trying to improve the quality of display panels in terms of contrast, brightness as well as thickness. For example, thin-film transistor (TFT) technology improves image quality while requiring less electricity to operate than other display panel technologies. In addition, different types of silicon can be used for different display panel technologies, such as a-Si (amorphous silicon), poly-Si (polycrystalline silicon), LPTS (low-temperature poly-Si), high-temperature poly-Si, and so forth. Most recently, companies have started to sell so-called OLED display panels.

4.2.1. Product market definition

- (24) The Commission has examined the display panel markets in a number of past decisions. While the Commission has ultimately left open the relevant product market definition for display panels, it has contemplated segmentations according to the size of the display panel, the technology used to produce the display panels, and the end-use application in which display panels are used.¹⁵
- (25) In relation to size, the Commission has considered in the past possible segmentation of small- and medium sized display panels (up to 10 or 11 inches) and large display panels. Small- and medium-sized are used inter alia for cameras, mobile phones and game consoles, while large display panels are used for computer monitors and TVs.¹⁶

¹³ Responses to market investigation, question 23.

¹⁴ Responses to market investigation, questions 21 and 22.

¹⁵ M.6603 – *Hon Hai / Sharp / Sharp Display Products*, decision of 22 June 2012, paragraphs 16-21; M.3459 – *Seiko Epson / Sanyo / Sanyo Epson Imaging Devices JV*, decision of 22 September 2004, paragraphs 7-11; M.3693 – *TPV / Philips (Monitors)*, decision of 5 August 2005, paragraphs 6-15; M.5414 – *Samsung SDI / Samsung Electronics / SMD*, decision of 23 January 2009, paragraphs 10-24; M.5589 – *Sony / Seiko Epson*, decision of 22 September 2009, paragraphs 9-22; M.5762 – *Innolux / Chi Mei / TPO*, decision of 25 February 2010, paragraphs 9-20.

¹⁶ M.5762 – *Innolux / Chi Mei / TPO*, decision of 25 February 2010, paragraphs 12 and 15.

- (26) This distinction between small- and medium sized display panels and large display panels was considered as necessary and sufficient by the majority of respondents to the market investigation recently conducted by the Commission in case M.8023 *Hon Hai Precision/ Sharp*.¹⁷ The results of the market investigation conducted for the case at hand were however inconclusive on this point.¹⁸
- (27) In any event, the Commission considers that for the purposes of the present case, the exact definition of the product market for display panels can be left open, since no serious doubts as to the compatibility of the Transaction with the internal market arise under any plausible alternative product market definition.

4.2.2. *Geographic market definition*

- (28) In past decisions, the Commission considered that the geographic scope of the market for display panels is worldwide, based on low transportation costs, homogeneous prices, and the large volumes of display panel products traded globally across borders.¹⁹
- (29) For the purposes of the present decision, the Commission considers that it is not necessary to conclude on the exact geographic market definition (EEA-wide or worldwide) as no serious doubts as to the compatibility of the Transaction with the internal market arise under any plausible alternative geographic market definition for display panels.

4.3. **Camera modules**

- (30) Camera modules are small digital camera units which typically include an image sensor, a lens and other components. Camera modules are typically built into mobile phones, PCs and gaming devices.

4.3.1. *Product market definition*

- (31) During the market investigation recently conducted by the Commission in case M.8023 *Hon Hai Precision/ Sharp*, some respondents expressed the view that not all camera modules are interchangeable, as different characteristics are needed depending on the final product (e.g., camera modules for smartphones may need to be smaller or thinner). However, others submitted that the basic functions and specifications are similar across applications and the material and the manufacturing equipment required is also broadly similar.²⁰ The market investigation conducted for the purpose of the case at hand did not allow drawing any conclusions on this point.²¹

¹⁷ M.8023 – *Hon Hai Precision/ Sharp*, decision of 20 June 2016, paragraph 25.

¹⁸ Responses to the market investigation, question 24.

¹⁹ M.5414 – *Samsung SDI / Samsung Electronics / SMD*, decision of 23 January 2009, paragraph 27; M.5589 – *Sony / Seiko Epson*, decision of 22 September 2009, paragraphs 23-25; COMP/M.5762 – *Innolux / Chi Mei / TPO*, decision of 25 February 2010, paragraph 21.

²⁰ M.8023 – *Hon Hai Precision/ Sharp*, decision of 20 June 2016, paragraph 32.

²¹ Responses to the market investigation, question 26.

- (32) In any event, the Commission considers that for the purposes of the present case, the exact definition of the product market for camera modules can be left open, since no serious doubts as to the compatibility of the Transaction with the internal market arise under any plausible alternative product market definition.

4.3.2. *Geographic market definition*

- (33) The Commission considers that the worldwide presence of manufacturers of camera modules suggests that the geographic scope of the market could be global, or at least EEA-wide.
- (34) For the purposes of the present decision, the Commission considers that it is not necessary to conclude on the exact geographic market definition as no serious doubts as to the compatibility of the Transaction with the internal market arise under any plausible alternative geographic market definition for camera modules.

4.4. **Mobile phones**

4.4.1. *Product market definition*

- (35) In its decision in *Microsoft/ Nokia*, the Commission concluded that basic phones and feature phones on the one hand and smart mobile devices (smartphones and tablets) on the other hand belonged to separate product markets.²²
- (36) For the purposes of the present case, this question can be left open, as the Transaction does not raise competitive concerns under any alternative product market definition considered.

4.4.2. *Geographic market definition*

- (37) In previous decisions,²³ the Commission considered that the market for mobile phones was at least EEA-wide and could be worldwide.
- (38) For the purposes of the present case, the Commission considers that the question whether the exact scope of the mobile phones market is EEA-wide or worldwide can be left open, as the Transaction does not raise competition concerns under any plausible alternative geographic market definition.

5. **COMPETITIVE ASSESSMENT**

5.1. **Horizontal assessment**

- (39) The business activities of the Parties overlap in the provision of EMS. As further explained below, the Commission considers that the Transaction does not raise horizontal concerns in any of the potential markets for EMS irrespective of the product and geographic market definition.

²² M.7047 - *Microsoft/ Nokia*, decision of 4 December 2013, paragraph 18.

²³ M.6381 *Google / Motorola Mobility*, Commission decision of 13 February 2012, paragraphs 43 to 47; and M.4942 *Nokia / Navteq*, Commission decision of 2 July 2008, paragraph 140.

- (40) According to the Notifying Party, in case in-house EMS are not regarded as part of the market for EMS, they act as strong competitive constraints for third-party providers of EMS, as has been recognised in previous cases.²⁴ In any event, the Commission considers that whether or not in-house EMS are regarded as part of the product market for EMS does not affect the outcome of the assessment regarding the horizontal effects of the Transaction.
- (41) Assuming a product market definition that comprises all EMS including in-house EMS, the Parties' combined share is approximately [5-10]% on a worldwide basis and approximately [10-20]% in the EEA in 2015 (see **Table 1**).
- (42) These figures change if in-house EMS are not regarded as part of the overall market for EMS. In such case, the market share of Hon Hai would amount to [20-30]% for 2015 worldwide and to [30-40]% in the EEA market in 2015.

Table 1: Hon Hai's and the Target's market share on potential overall markets for EMS

Market	Year	Hon Hai (including Sharp)	Target	Combined
EMS - Worldwide	2015	[5-10]%	[0-5]%	[5-10]%
	2014	[5-10]%	[0-5]%	[10-20]%
	2013	[5-10]%	[0-5]%	[10-20]%
EMS - EEA-wide	2015	[10-20]%	[0-5]%	[10-20]%
	2014	[10-20]%	[0-5]%	[10-20]%
	2013	[10-20]%	[0-5]%	[10-20]%
EMS w/o in-house - Worldwide	2015	[20-30]%	0%	[20-30]%
	2014	[20-30]%	0%	[20-30]%
	2013	[20-30]%	0%	[20-30]%
EMS w/o in-house - EEA-wide	2015	[30-40]%	0%	[30-40]%
	2014	[40-50]%	0%	[40-50]%
	2013	[50-60]%	0%	[50-60]%

²⁴ Form CO, paragraph 153. Case No COMP/M.2358 - *Flextronics/Ericsson* (2001); Case No COMP/M.2968 - *Jabil/Philips* (Contract Manufacturing Services Intl.) (2002); Case No COMP/M.3583 - *Flextronics/Nortel* (2004); and Case No COMP/M.2629 - *Flextronics/Xerox* (2001).

- (43) In relation to those plausible product markets which only include third-party provision of EMS, the Commission notes that, as submitted by the Notifying Party, the current (pre-Transaction) market share of the Target would be 0% as it currently only provides in-house EMS. Given that post-Transaction, the Target's sales will no longer be captive (as explained in paragraph (45) below), the Notifying Party has added the revenues resulting from the Target's current total in-house sales²⁵ to a hypothetical market where these services are provided as a third-party.²⁶ This calculation adds the Target's EMS capacity to both the total estimated market size (as this would bring additional EMS capacity into the market) and to the combined capacity post-Transaction. Under this assumption, whereby Hon Hai's market shares pre-Transaction already take into account the additional EMS capacity that the Target will bring to the third-party market, the increment brought by the Transaction under such market definitions would be only [0-5]% worldwide and [0-5]% EEA-wide for 2015.
- (44) It is important to note that the Transaction, while increasing Hon Hai's market share in third-party EMS markets, will not result in the loss of a competitive constraint as the Target was not active on this market. The increase in market share of the merged entity post-Transaction on the market for third-party provision of EMS is entirely due to capacity which was previously used only in-house.
- (45) The Parties submit that the Target's EMS capacity will continue to be used for the production of EMS services to HMD, the company acquiring Microsoft's upstream IP rights for feature phones.²⁷ The Notifying Party further submits that, in the medium to long term, this capacity could be used for providing EMS services to third parties. Therefore, in the Commission's view, the overlaps brought about by the Transaction need to be considered in light of the circumstances that that capacity was not previously on the market and could eventually be used for serving other EMS customers in the near future.
- (46) The following paragraphs provide an analysis of the combined market shares post-Transaction in any potential narrower product markets, and show that the market shares or the increments brought by the Transaction are limited.
- (47) On potential markets for EMS in the communication sector, the combined shares of the Parties would amount to [10-20]% worldwide and [10-20]% EEA-wide in 2015 (see **Table 2**). Excluding in-house EMS, Hon Hai's market share is of [40-50]% worldwide and [40-50]% EEA-wide and, for the same reasons set out in paragraph (43)-(45), the market share of the Target is 0%. Moreover, even combining the capacity previously used by the Target for in-house EMS with Hon Hai's market share, the increment brought by the Transaction under such market definitions would be only of [0-5]% worldwide and [0-5]% EEA-wide for 2015.

²⁵ In particular by adding the value of the Target's in-house sales to both the combined market share and the total market size for third-party production. The amounts used were EUR [...] for global EMS markets (which corresponds to the target's revenues per annum) and EUR [...] for EEA-wide markets.

²⁶ Form CO, paragraph 162.

²⁷ Form CO, paragraph 35 and 205.

Table 2: Hon Hai's and the Target's market share on potential markets for Communication EMS

market	year	Hon Hai (including Sharp)	Target	Combined
EMS Comm. - Worldwide	2015	[10-20]%	[0-5]%	[10-20]%
	2014	[10-20]%	[0-5]%	[10-20]%
	2013	[10-20]%	[0-5]%	[10-20]%
EMS Comm. - EEA-wide	2015	[10-20]%	[0-5]%	[10-20]%
	2014	[10-20]%	[0-5]%	[10-20]%
	2013	[10-20]%	[0-5]%	[10-20]%
EMS Comm. w/o in- house - Worldwide	2015	[40-50]%	0%	[40-50]%
	2014	[30-40]%	0%	[30-40]%
	2013	[30-40]%	0%	[30-40]%
EMS Comm. w/o in- house - EEA-wide	2015	[40-50]%	0%	[40-50]%
	2014	[30-40]%	0%	[30-40]%
	2013	[30-40]%	0%	[30-40]%

- (48) On sub-segments for EMS for specific communications products, the Parties' activities overlap in EMS for cellular handsets. The Parties' combined market share would amount to [20-30]% worldwide and [20-30]% EEA-wide (see **Table 3**). Excluding in-house EMS, the market share of Hon Hai is of [70-80]% worldwide and [70-80]% EEA-wide and, as explained in paragraphs (43)-(45), the market share of the Target would be 0%. Adding the capacity previously used by the Target for in-house EMS on the basis of the methodology explained in paragraph (43), the combined market shares of the Parties would be [70-80]% ([70-80]% pre-Transaction if this capacity is considered as third-party EMS) worldwide and [70-80]% EEA-wide in 2015 ([70-80]% pre-Transaction). Under this assumption, the Transaction would involve an increment in market share for EMS for cellular handsets of [0-5]% worldwide and [0-5]% in the EEA.

Table 3: Hon Hai's and the Target's market share on potential markets for the cellular handsets sub-segment of Communication EMS

market	year	Hon Hai (including Sharp)	Target	Combined
EMS cell. handsets - Worldwide	2015	[20-30]%	[0-5]%	[20-30]%
	2014	[20-30]%	[0-5]%	[20-30]%
	2013	[20-30]%	[0-5]%	[20-30]%
EMS cell. handsets - EEA-wide	2015	[20-30]%	[0-5]%	[20-30]%
	2014	[30-40]%	[0-5]%	[30-40]%
	2013	[30-40]%	[0-5]%	[40-50]%
EMS cell. handsets w/o in-house - Worldwide	2015	[70-80]%	0%	[70-80]%
	2014	[70-80]%	0%	[70-80]%
	2013	[60-70]%	0%	[60-70]%
EMS cell. handsets w/o in-house - EEA-wide	2015	[70-80]%	0%	[70-80]%
	2014	[70-80]%	0%	[70-80]%
	2013	[60-70]%	0%	[60-70]%

- (49) Finally, on the narrower sub-segment of EMS for feature phones the Parties' combined share would amount to [5-10]% worldwide and [5-10]% EEA-wide (see **Table 4**). Excluding in-house EMS, the combined market share of the Parties would be [10-20]% worldwide and [10-20]% EEA-wide, taking into account the capacity previously used by the Target for in-house EMS, with an increment associated to the Transaction of [0-5]% (both in the EEA and worldwide), as Hon Hai did not engage in EMS for feature phones prior to the Transaction.

Table 4: Hon Hai's and the Target's market share on potential markets for the feature phones sub-segment of Communication EMS

market	year	Hon Hai (including Sharp)	Target	Combined
EMS feature phones - Worldwide	2015	[0-5]%	[5-10]%	[5-10]%
	2014	[0-5]%	[10-20]%	[20-30]%
	2013	[0-5]%	[20-30]%	[20-30]%
EMS feature phones - EEA-wide	2015	[0-5]%	[5-10]%	[5-10]%
	2014	[0-5]%	[10-20]%	[10-20]%
	2013	[0-5]%	[20-30]%	[20-30]%
EMS feature phones w/o in-house - Worldwide	2015	[0-5]%	0%	[0-5]%
	2014	[0-5]%	0%	[0-5]%
	2013	[0-5]%	0%	[0-5]%
EMS feature phones w/o in-house - EEA-wide	2015	[0-5]%	0%	[0-5]%
	2014	[0-5]%	0%	[0-5]%
	2013	[0-5]%	0%	[0-5]%

- (50) Moreover, according to the Parties, there are more than 100 companies providing third-party EMS, including: Pegatron; Flextronics; Wistron; Jabil Circuit; Sanmina; New Kinpo; Celestica; Benchmark Electronics; Shenzhen Kaifa Technology Co.; Universal Scientific Industrial Co.; Plexus; Venture; Zollner; SIIX; PKC Group; Taiwan Surface Mount Tech.; and UMC Electronics.²⁸ The Parties estimate that, based on the NVR Report,²⁹ the largest competitors in the worldwide third-party EMS market are: Pegatron ([5-10]% market share), Flextronics ([5-10]%), Wistron ([0-5]%), Jabil Circuit ([0-5]%) and Quanta Computer ([0-5]%).
- (51) The Commission also notes EMS markets are highly competitive and that post-Transaction the merged entity will continue to face competition from many other EMS providers. According to the Parties, there are more than 100 companies providing third-party EMS, including: Pegatron; Flextronics; Wistron; Jabil Circuit; Sanmina; New Kinpo; Celestica; Benchmark Electronics; Shenzhen Kaifa

²⁸ Form CO paragraph 13 alinea c)

²⁹ Form CO, Annex 5, "The Worldwide Electronics Manufacturing Services Market – 2015 Edition, New Venture Research Corp".

Technology Co.; Universal Scientific Industrial Co.; Plexus; Venture; Zollner; SIIX; PKC Group; Taiwan Surface Mount Tech.; and UMC Electronics.³⁰

- (52) A majority of respondents to the market investigation indicated that the EMS industry is highly competitive worldwide with the existence of numerous EMS providers.³¹ In addition, a majority of respondents to the market investigation perceived that OEM customers have a strong bargaining position vis-à-vis EMS providers.³² These opinions are in line with the results of the market investigation conducted in *Hon Hai / Sharp*, where a number of respondents were of the opinion that OEMs, in general, enjoy a degree of buyer power.³³ In relation to the existence of overcapacity in the EMS industry, the market investigation did not provide conclusive responses. Nevertheless, a majority of respondents to the market investigation in *Hon Hai / Sharp* considered that there is significant overcapacity in the EMS industry.³⁴
- (53) Based on the above, the Commission considers that the overall EMS market is highly competitive and that post-Transaction the merged entity will continue to face competition from many other EMS providers.
- (54) In the narrower EMS markets excluding in-house production, such as third-party EMS for cellular handsets or third-party EMS for communication products, the increments added by the Target are small. In relation to the potential market for EMS for cellular handsets, where the Parties' combined market share is significant, the Commission notes that Hon Hai is active in EMS for smartphones, while the Target is active in EMS for feature phones. Therefore, this indicates that the Parties are not close competitors in the potential market for EMS for cellular handsets.
- (55) Moreover, as stated in paragraphs (44)-(45), in these narrower markets the Transaction will not amount to any existing third-party EMS capacity on the market being taken over by a competitor, as the Target's production was captive.
- (56) Finally, in relation to the product market definition for EMS services, discussed in paragraphs (13)-(17), the Commission notes that the markets where the merged entity's market shares would be more significant correspond to some of the narrower segments, such as third-party EMS for communication services or third-party EMS for cellular handsets, where in-house EMS provision is not included. While the exact product market definition has been left open by the Commission, the information collected reveals that there is a competitive threat coming from the possibility for third-party OEMs to provide EMS for other OEMs.³⁵ The fact that third-party OEMs could provide EMS for other OEMs suggests that entry into markets without in-house production would be possible and that new competitors could enter these EMS markets or segments where the merged entity has higher

³⁰ Form CO, paragraph 13 alinea c)

³¹ Responses to the market investigation, question 30.

³² Responses to the market investigation, question 29.

³³ M.8023 – *Hon Hai Precision/ Sharp*, decision of 20 June 2016, paragraphs 50 and 51.

³⁴ M.8023 – *Hon Hai Precision/ Sharp*, decision of 20 June 2016, paragraphs 52.

³⁵ Responses to the market investigation, questions 8 and 9.

market shares, which would discipline the behaviour of the players already active in those markets, such as the merged entity. Moreover, the Transaction is in itself an example of capacity previously used in-house being freed up for the third-party EMS markets, confirming the possibility of entry coming from in-house EMS.

- (57) The Commission therefore considers that these market features (no loss of an existing competitor, likely overcapacity in the EMS market, existence of several competitors also in the narrower segments, possible buyer power from OEM customers and the competitive threat coming from integrated EMS providers to start providing EMS services for third-party OEMs) would counterbalance any potential competition concerns raised by the small increment caused by the Transaction.
- (58) Based on the above and the available evidence, the Commission concludes that the Transaction would not raise serious doubts as to its compatibility with the internal market due to the horizontal overlaps of the Parties' activities on any plausible markets for EMS.

5.2. Vertical assessment

- (59) The information submitted by the Parties indicates that there are three pairs of potential vertically affected markets if some of the narrower product market definitions for EMS are applied:³⁶ (i) Hon Hai's presence in the upstream market for the provision of display panels and in EMS markets downstream; (ii) Hon Hai's presence in the upstream market for the supply of camera modules and in EMS markets downstream, and (iii) Hon Hai's downstream activities as an OEM, such as mobile phone or TV set manufacturing (essentially resulting from Hon Hai's recent acquisition of Sharp) and in EMS markets upstream. The Commission will analyse these three pairs of markets in turn.

5.2.1. Display panels

- (60) Hon Hai is a vertically integrated undertaking. It is active upstream in the production of display panels, through its subsidiary Sharp, and downstream in the provision of EMS. The Transaction will combine the activities of Hon Hai and the Target in downstream EMS markets.
- (61) It should therefore be assessed whether the Transaction could reinforce the ability and incentive of the merged entity to either foreclose other providers of EMS to use Sharp's display panels (input foreclosure) or foreclose display panels produced by manufacturers other than Sharp from being used in the EMS by the Target (customer foreclosure).
- (62) The vertical integration of Hon Hai has recently been assessed by the Commission in its *Hon Hai Precision/ Sharp* decision.³⁷ The Commission concluded that that

³⁶ Vertically affected markets arise for the following market definitions for EMS services (which result in the merged entity having more than 30% of those markets and an overlap in EMS): third-party EMS in the EEA, third-party EMS – Communications worldwide, third-party EMS – Communications in the EEA, third-party EMS – cellular handsets worldwide and third-party EMS – cellular handsets in the EEA.

³⁷ M.8023 – *Hon Hai Precision/ Sharp*, decision of 20 June 2016.

transaction, i.e. the acquisition of sole control over Sharp by Hon Hai, did not raise concerns of input or customer foreclosure.³⁸

- (63) As regards input foreclosure, the Commission considered that the merged entity would not have the ability or the incentive to foreclose downstream competitors of the EMS business of Hon Hai from access to display panels produced by Sharp.³⁹ In that regard, the Commission noted first that, as Sharp had limited market shares and market power in all potential upstream markets for the production of display panels, the combined Hon Hai / Sharp entity would not have the ability to pursue a successful foreclosure strategy.⁴⁰ Second, the Commission noted that the choice of the display panels to be included in a particular device was generally made by the OEMs and not by the EMS.⁴¹
- (64) As regards customer foreclosure, the Commission considered that the combined Hon Hai / Sharp entity would not have the ability or the incentive to foreclose its competitors for the production of display panels from accessing the downstream EMS markets. In that regard, the Commission noted first that, as recalled above in paragraph (63), the choice of the display panels to be included in a particular device was generally made by the OEMs and not by the EMS.⁴² Second, the Commission noted that, if the combined Hon Hai / Sharp entity tried to foreclose the access to the EMS market for mobile phones, its competitors for the production of display panels could likely sell their display panels to other customers for different end-products.⁴³ They would therefore still have access to a sufficient customer base to sell their production.
- (65) These considerations also apply for the assessment of the Transaction and the market investigation has not revealed any indications to the contrary. Moreover, the Commission considers that the combination of Hon Hai's and the Target's EMS activities are unlikely to increase the ability or incentive of the merged entity to engage in customer or input foreclosure. First, as explained in Section 5.1 above, the Transaction will not significantly increase Hon Hai's market share in the provision of EMS. Second, the Target is a small customer of display panels, unlikely to give to the merged entity the ability or incentive to engage into a foreclosure strategy. According to the Parties' estimates, the Target's purchases of display panels represent less than [0-5]% of the worldwide production of display panels.
- (66) Based on the above and the available evidence, the Commission concludes that the Transaction would not raise serious doubts as to its compatibility with the internal market due to input or customer foreclosure of competitors in relation to display panels.

³⁸ M.8023 – *Hon Hai Precision/ Sharp*, decision of 20 June 2016, paragraphs 70 and 75.

³⁹ M.8023 – *Hon Hai Precision/ Sharp*, decision of 20 June 2016, paragraph 70.

⁴⁰ M.8023 – *Hon Hai Precision/ Sharp*, decision of 20 June 2016, paragraph 66.

⁴¹ M.8023 – *Hon Hai Precision/ Sharp*, decision of 20 June 2016, paragraph 67.

⁴² M.8023 – *Hon Hai Precision/ Sharp*, decision of 20 June 2016, paragraph 73.

⁴³ M.8023 – *Hon Hai Precision/ Sharp*, decision of 20 June 2016, paragraph 74.

5.2.2. Camera modules

- (67) The Transaction would combine Hon Hai's activities on the upstream market for the production of camera modules and the downstream activities of the Target in the provision of EMS for feature phones.
- (68) The vertical integration of Hon Hai with regard to the upstream production of camera modules and the downstream provision of EMS has recently been assessed by the Commission in its *Hon Hai Precision/ Sharp* decision. The Commission concluded that that transaction, i.e. the acquisition of sole control over Sharp by Hon Hai, did not raise concerns of input or customer foreclosure.
- (69) As regards input foreclosure, the Commission concluded that the combined Hon Hai / Sharp entity would not have the ability or the incentive to foreclose downstream competitors of the EMS business of Hon Hai from access to camera modules produced by Sharp. The Commission noted first that the camera modules produced by Sharp did not appear to be a must have product and that a large share of the camera modules market was served by its competitors.⁴⁴ Second, the Commission noted that, as for display panels, the choice of the camera module to be included in a particular device is generally made by the OEMs, not by the EMS providers.⁴⁵
- (70) As regards customer foreclosure, the Commission concluded that the combined Hon Hai / Sharp entity would not have the ability or the incentive to foreclose its competitors for the production of camera modules from accessing the downstream EMS markets. The Commission noted first that the choice of the camera modules to be included in a particular device is done by the OEMs, not by the EMS.⁴⁶ Second, the Commission noted that even if the combined Hon Hai / Sharp entity engaged in customer foreclosure, a sufficient customer base would remain available to competing producers of camera modules.⁴⁷ Third, the Commission noted the combined Hon Hai / Sharp entity would need to significantly increase its capacity in order to engage into customer foreclosure, as Hon Hai already used the majority of Sharp's camera modules.⁴⁸
- (71) These considerations also apply for the assessment of the Transaction. Moreover, the Commission considers that the combination of Hon Hai's and the Target's EMS activities are unlikely to increase the ability or the incentive of Hon Hai to engage into input or customer foreclosure. First, as explained above in section 5.1, the Transaction will not significantly increase Hon Hai's market share in the provision of EMS. Second the Target is a small customer of camera modules, unlikely to give to the merged entity the ability or incentive to engage into a foreclosure strategy. According to the Parties' estimates, the Target's purchases of camera modules represent less than [0-5]% of the worldwide production of camera modules. Third,

⁴⁴ M.8023 – *Hon Hai Precision/ Sharp*, decision of 20 June 2016, paragraph 80.

⁴⁵ M.8023 – *Hon Hai Precision/ Sharp*, decision of 20 June 2016, paragraph 81.

⁴⁶ M.8023 – *Hon Hai Precision/ Sharp*, decision of 20 June 2016, paragraph 87.

⁴⁷ M.8023 – *Hon Hai Precision/ Sharp*, decision of 20 June 2016, paragraph 88.

⁴⁸ M.8023 – *Hon Hai Precision/ Sharp*, decision of 20 June 2016, paragraph 90

the Target already purchases the majority of the camera modules it uses in its products from Hon Hai ([60-70]%).

- (72) Based on the above and the available evidence, the Commission concludes that the Transaction would not raise serious doubts as to its compatibility with the internal market due to input or customer foreclosure of competitors in relation to camera modules.

5.2.3. *Downstream OEM mobile phone markets*⁴⁹

- (73) The Transaction would combine the activities of Hon Hai's subsidiary Sharp on the downstream market for the production of mobile phones and the Target's activities as an EMS provider.

- (74) The Commission considers however that this vertical relationship is unlikely to give the merged entity the ability or the incentive to either foreclose other OEMs from accessing the Target's EMS (input foreclosure) or to foreclose other providers from providing EMS to Sharp (customer foreclosure).

- (75) In that regard, the Commission notes first that Sharp does not have market power in the downstream mobile phones markets. According to the Parties' best estimates, Sharp has market shares of less than [0-5]% both worldwide and EEA-wide. Second, the Commission notes that, as explained above in section 5.1, the Transaction will not significantly increase the market share of Hon Hai on upstream EMS markets. Third, the Commission notes that, according to the Notifying Party, at least for a number of years following the Transaction, the Target's EMS capacity will not be available to Sharp. As explained above in paragraph (6), post-Transaction the capacity of the Target will initially be used to manufacture feature phones for HMD.

- (76) The Commission therefore considers that the merged entity will not enjoy a sufficient degree of market power on the upstream EMS markets or on the downstream OEM markets in order to engage into a successful input or customer strategy.

- (77) Based on the above and the available evidence, the Commission concludes that the Transaction would not raise serious doubts as to its compatibility with the internal market due to input or customer foreclosure of competitors in relation to EMS markets and the downstream market for the production of mobile phones.

⁴⁹ Hon Hai is also active as an OEM in the production of TV sets, refrigerators, cooking appliances, etc. Given however that the EMS capacity of the Target is only used for the production of feature phones, the Commission considers that these markets are unlikely to be impacted by the Transaction. For example, according to public sources, Hon Hai's (through Sharp) market share in the worldwide production of TV sets would be below [5]% in 2015 (see Sharp's annual report, <http://products.umc-slovakia.sk/press-releases/strategic-alliance-sharp-umc/> and <http://www.futuresource-consulting.com/2015-07-Worldwide-TV-7954.html>). In relation to the EEA, Sharp sold its TV manufacturing and sales operations in the EEA in 2014 (<http://products.umc-slovakia.sk/press-releases/strategic-alliance-sharp-umc/>).

6. CONCLUSION

- (78) For the above reasons, the European Commission has decided not to oppose the Transaction and to declare it compatible with the internal market and with the EEA Agreement. This decision is adopted in application of Article 6(1)(b) of the Merger Regulation and Article 57 of the EEA Agreement.

For the Commission

(signed)

Margrethe VESTAGER

Member of the Commission