



## MEDIA RELEASE

21 July 2021

### **CCCS Clears Proposed Acquisition by SK Hynix Inc. of Intel Corporation's NAND and SSD Business**

1. The Competition and Consumer Commission of Singapore ("**CCCS**") has cleared the proposed acquisition by SK Hynix Inc. ("**SK Hynix**") of Intel Corporation's ("**Intel**") (collectively, the "**Parties**") NAND and Solid State Drive ("**SSD**") business (the "**Target Business**") (the "**Proposed Transaction**").
2. Following its assessment, CCCS has concluded that the Proposed Transaction, if carried into effect, will not infringe the section 54 prohibition of the Competition Act (Cap. 50B) (the "**Act**").

### **Background**

3. CCCS accepted a joint application from the Parties on 15 April 2021 for a decision on whether the Proposed Transaction would infringe section 54 of the Act, which prohibits mergers that have resulted, or may be expected to result, in a substantial lessening of competition within any market in Singapore.
4. SK Hynix is active in (i) memory semiconductors, such as NAND flash memory and Dynamic Random Access Memory ("**DRAM**") and (ii) storage solutions such as SSDs. SK Hynix has one registered entity in Singapore, SK Hynix Asia Pte. Ltd., which conducts marketing and sales activities and supports multinational enterprise customers in Southeast and Southwest Asia. It does not have manufacturing plants in Singapore.
5. The Target Business (which is currently part of Intel) is active in NAND flash memory, and SSDs that utilise NAND flash memory technology. The Target Business does not have a dedicated field sales office or factory within Singapore.

## **CCCS's Assessment**

6. As part of its assessment, CCCS conducted a public consultation from 16 April 2021 to 30 April 2021, and contacted 18 key stakeholders including competitors and customers for their views.

## **Relevant Markets Affected by the Proposed Transaction**

7. CCCS considered that the relevant markets for its assessment of the Proposed Transaction are the global supply of:
  - a) NAND flash memory;
  - b) Enterprise SSDs; and
  - c) Client SSDs.

(collectively, the “**Relevant Markets**”)

## **Competition Assessment for the Relevant Markets**

8. CCCS noted that respondents to the public consultation indicated that they have no competition concerns, were neutral about the Proposed Transaction, or even considered that the Proposed Transaction could be pro-competitive.
9. CCCS also found that:
  - a) There is a high degree of competition in the Relevant Markets and the Parties are not each other's closest competitors. The Parties will also continue to face competitive constraints from several other strong suppliers;
  - b) Barriers to entry for NAND flash memory are significant for greenfield entrants, while barriers to expansion for existing suppliers of NAND flash memory are relatively lower. Barriers to entry for SSDs are lower than for NAND flash memory, and existing suppliers of SSDs appear to be able to increase supply fairly easily. Furthermore, there does not appear to be any significant barriers for existing suppliers of NAND flash memory or SSDs to supply to customers in Singapore;

- c) Some large customers of NAND flash memory and SSDs may have the ability to enter the market and self-supply, which suggests that such customers have countervailing buyer power;
  - d) It is not difficult for customers to switch to pre-qualified suppliers as customers typically multi-source and qualify multiple suppliers for NAND flash memory and SSDs; and
  - e) The merged entity is unlikely to have the ability to foreclose suppliers of NAND flash memory and DRAM upstream, or to foreclose suppliers of SSDs downstream, in view of its combined market shares in these markets and the competitive constraints from other competitors in these markets.
10. Further information on the notification and CCCS's Grounds of Decision will be made available in due course on [CCCS's Public Register](#) at [www.cccs.gov.sg](http://www.cccs.gov.sg).

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## **About the Competition & Consumer Commission of Singapore (CCCS)**

The Competition and Consumer Commission of Singapore (“**CCCS**”) is a statutory board of the Ministry of Trade and Industry. CCCS administers and enforces the Competition Act (Cap. 50B) which empowers CCCS to investigate and adjudicate anti-competitive activities, issue directions to stop and/or prevent anti-competitive activities and impose financial penalties. CCCS is also the administering agency of the Consumer Protection (Fair Trading) Act (Cap. 52A) or CPFTA which protects consumers against unfair trade practices in Singapore. Our mission is to make markets work well to create opportunities and choices for business and consumers in Singapore.

For more information, please visit [www.cccs.gov.sg](http://www.cccs.gov.sg).

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