



## Mergers: Commission opens in-depth investigation into proposed acquisition of Arm by NVIDIA

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The European Commission has opened an in-depth investigation to assess the proposed acquisition of Arm by NVIDIA under the EU Merger Regulation. The Commission is concerned that the merged entity would have the ability and incentive to restrict access by NVIDIA's rivals to Arm's technology and that the proposed transaction could lead to higher prices, less choice and reduced innovation in the semiconductor industry.

Executive Vice-President Margrethe **Vestager**, responsible for competition policy, said: *"Semiconductors are everywhere in products and devices that we use everyday as well as in infrastructure such as datacentres. Whilst Arm and NVIDIA do not directly compete, Arm's IP is an important input in products competing with those of NVIDIA, for example in datacentres, automotive and in Internet of Things. Our analysis shows that the acquisition of Arm by NVIDIA could lead to restricted or degraded access to Arm's IP, with distortive effects in many markets where semiconductors are used. Our investigation aims to ensure that companies active in Europe continue having effective access to the technology that is necessary to produce state-of-the-art semiconductor products at competitive prices."*

**NVIDIA** develops and supplies processor products for various applications, including in datacentres, Internet of Things ('IoT'), automotive applications and gaming. **Arm** licenses out intellectual property ('IP') for processing units, in particular to semiconductor chipmakers and Systems-on-Chip ('SoC') developers. By acquiring Arm, NVIDIA would gain full control over Arm's technology and licensing business.

### The Commission's preliminary competition concerns

Following its preliminary investigation, the Commission considers that Arm has significant market power on the market for the licensing of Central Processing Unit ('CPU') IP for use in processor products. Therefore, the Commission has concerns that the merged entity would have the ability to restrict or degrade access to Arm's technology by providers of processor products NVIDIA may compete with. The preliminary investigation suggests that the merged entity would also have the economic incentive to engage in such foreclosure strategies which could reduce competition in the market for the supply of processor products across different fields of application:

- **datacentre CPUs;**
- **smart network interconnects ('SmartNICs')** used in datacentres to offload network, storage, and security processing from the CPU to reduce its workload and accelerate its processing;
- semiconductors used for **automotive advanced driver-assistance systems ('ADAS')**, which encompass a broad range of technical features enabling vehicles to assist the driver;
- semiconductors used in **infotainment applications**, which refers to in-vehicle information and entertainment for drivers and passengers and includes various features, such as audio and video playback, automotive navigation systems, USB and Bluetooth connectivity, internet access, and Wi-Fi;
- SoCs equipping **high-performance IoT devices;**
- SoCs used in **gaming consoles;**
- SoCs used in **general-purpose PCs.**

The Commission will now carry out an in-depth investigation into the effects of the transaction to determine whether its initial competition concerns regarding these markets are confirmed.

In addition, the Commission will also further examine:

- Whether the transaction might stifle innovation because Arm licensees might be reluctant to

continue sharing **commercially sensitive information** with the merged entity because they are competing with NVIDIA.

- A potential **refocussing of Arm's R&D spending** on products that are most profitable for NVIDIA downstream, to the detriment of players heavily relying on certain Arm IP in other areas.

During the initial investigation, the Commission has been closely cooperating with competition authorities around the world. The Commission will continue this cooperation also during the in-depth investigation.

The proposed transaction was notified to the Commission on 8 September 2021. On 6 October 2021, NVIDIA submitted commitments to address some of the Commission's preliminary concerns. However, the Commission considered these commitments insufficient to clearly dismiss its serious doubts as to the effect of the transaction. The Commission therefore did not test them with market participants.

The Commission now has 90 working days, until **15 March 2022** to take a decision. The opening of an in-depth inquiry does not prejudice the final result of the investigation.

### **Companies and products**

**NVIDIA**, headquartered in the US, invented the graphics-processing unit ("GPU") in 1999. NVIDIA specialises in markets in which GPU-based visual computing and accelerated computing platforms can provide enhanced throughput for applications. NVIDIA's products cover areas in gaming, professional visualisation, datacentres and automotive. Through its acquisition of Mellanox, approved by the Commission in [December 2019](#) and completed in April 2020, NVIDIA also supplies network interconnect products and solutions.

**Arm**, headquartered in the UK, is owned and controlled by SoftBank Group Corp., a Japanese multinational holding company which owns stakes in many technology, energy and financial companies and runs Vision Fund, the world's largest technology-focused venture capital fund. Arm designs semiconductor and software solutions. It licenses out core architectures and intellectual property for processing units, in particular to semiconductor chipmakers and SoC developers that incorporate the technology into their own chips. Arm's primary business is the design of IP for CPUs for mobile devices, embedded devices, datacentre and automobile applications, among others.

### **Merger control and procedure**

The Commission has the duty to assess mergers and acquisitions involving companies with a turnover above certain thresholds (see Article 1 of the [Merger Regulation](#)) and to prevent concentrations that would significantly impede effective competition in the EEA or any substantial part of it.

The vast majority of notified mergers do not pose competition problems and are cleared after a routine review. From the moment a transaction is notified, the Commission generally has 25 working days to decide whether to grant approval (Phase I) or to start an in-depth investigation (Phase II).

In addition to the current transaction, there are currently six on-going Phase II merger investigations: the [proposed acquisition of Kustomer by Facebook](#), the [proposed acquisition of Grail by Illumina](#), the [proposed merger between Cargotech and Konecranes](#), [the proposed acquisition of Air Europa by IAG](#), the [proposed acquisition of Trimo by Kingspan Group](#) and the [proposed acquisition of DSME by HHIH](#).

More information will be available on the Commission's [competition website](#), in the Commission's [public case register](#) under the case number [M.9987](#).

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