**Scene setter**

- You will meet [redacted] ASML, a unique and world-leading provider of lithography machines. Manufacturers of chips at leading-edge nodes (TSMC, Samsung, Intel) rely on specific lithography machines produced by ASML for their technology development.


- [redacted] is likely to share [redacted] views on the developments in the semiconductor industry and discuss the recently approved initiatives launched by the Commission, including the Chips Act and the new IPCEI on Microelectronics and Communication Technologies and the relevant role of ASML.

- [redacted] is likely to share [redacted] views on the impact of The Netherlands enforcing the export controls restrictions to China on advanced microchips production machines, entered into force on 1 September 2023.

**Key messages**

- ASML has signed an agreement with IMEC for a research...
collaboration on sub-nanometer level manufacturing, offering its most advanced High-NA lithography machine. Enquire about the role of ASML in supporting the pilot line in IMEC, its role in the IPCEI and the role of such partnership in relation to EU and non-EU clients.

- ASML is already banned from selling its most advanced EUV lithography machines to China. Explore the impact of the additional restriction introduced by the Netherlands which will force ASML to apply for a licence also for selling its less advanced deep ultraviolet (DUV) machines.

- Explore ASML’s view on the potential impact, for ASML and EU industry, of the new US executive order calling for establishing further outbound investment restrictions on semiconductor technologies, including equipment, on the basis of national security threats.

- Explore ASML’s views on strategic choices the EU should apply to balance between the promotion of free trade, the competitiveness of its industries, and the need of trade defences for security means.

- Explore ASML’s views on international collaboration with partners countries, e.g. USA, Japan, South Korea, and India.

- The IPCEI on Microelectronics and Communication Technologies started and the European Chips Act will entered into force in a few days. Explore the support by ASML to EU ambitions in progressing towards leading-edge manufacturing technologies.

**Defensives**

*Analysts have questioned the EU’s ambitions on manufacturing advanced chips due to lack of demand in Europe. Your view?*
Before investing in manufacturing capacities for advanced chips, it needs to be clear that there will be demand. An EU foundry would predominantly serve European customers, and there are few semiconductor companies in the EU designing chips on 7nm or 5nm nodes today.

Overall, we consider that Europe does not have a choice but to establish an advanced ‘fab’ in its territory if it is to ensure its technological sovereignty for the years to come. In parallel, Europe should also strengthen its capabilities in semiconductor design. We need to prepare for the possibility to manufacture the most advanced chips in Europe. A local foundry brings several spill-over benefits, not only in terms of local economy and employment, but particularly in terms of innovation, in view of the required level of interaction with suppliers and partners. It allows not only security of supply, but also a supply of secure, trusted chips that we need to have trust in our systems and infrastructures and protect them from cyberattacks.

Even if it were confirmed that today’s European demand would not be enough to justify a fab in the EU, that may well be the case in 5-10 years. For example, semiconductor production for automotive is expected to grow considerably in the next few years, and Europe has strong capabilities both in automotive electronics and in car manufacturing overall.

Furthermore, there are a number of nascent applications with strong European players that do not yet have the need for advanced nodes today but may have this need in the near future. Europe has strengths in automotive, industrial automation, and communication networks. The key processors for these sectors will strongly influence the sectors’ products and systems, and therefore, it is key for European companies to control this market.

Finally, while today most of the design activities are concentrated in the US, with the right incentives and especially for markets that are more prone to customisation, we could envisage to persuade foreign design companies to expand activities in Europe.
There is a risk that investments in advanced fabrication capacity supported by European taxpayers would mostly benefit US and Asian companies. Your view?

- We will not support building production capacity in leading-edge nodes if it will only serve customers outside Europe. Current European demand in 5-7 nm nodes may be limited, but this will change in future. Our initiatives are meant to not only invest in production capacity but also in increasing Europe's design capabilities, and thereby in European demand. The two go together.

- In automotive, for instance, Chinese-owned Volvo announced a cooperation with NVIDIA. On the other hand, Volkswagen announced that it plans its own chip development. Obviously, the second example increases Europe's design capabilities.

Background

EU Chips Act – State of play:

On 25 July 2023 the European Council adopted the European Chips Act which the Commission proposed on 8 February 2022. The signatures are scheduled for the 13 September in Strasbourg, the regulation will enter into force three days later.

Recent shortages of semiconductors have highlighted Europe’s dependency on a limited number of suppliers outside of the EU, in particular Taiwan and South-East Asia for manufacturing of chips, and the United States for their design. To respond to critical dependencies, the European Chips Act will strengthen manufacturing activities in the Union, stimulate the European design ecosystem, and support scale-up and innovation across the whole value chain. Through the EU Chips Act, the European Union aims to reach its target to double its current global market share to 20% in 2030.

The European Chips Act will also reinforce Europe’s technological leadership, by investing in strategic pilot lines, by facilitating the transfer of knowledge from the lab to the fab, bridging the gap between research and innovation and production, and promoting the adoption of innovative technologies by European businesses.

More investments have been announced by leading semiconductor companies and are in the process of coming true. They have reached a total amount of at least EUR 90 billion since we proposed the European Chips Act in February last year; for instance, EUR 12 billion for a semiconductor packaging and test facility in Poland, EUR 30 billion for two first-of-a-kind...
fabs in Magdeburg, Germany, or investments in Dublin (Intel) and Crolles (GlobalFoundries and STMicroelectronics for EUR 6 billion).

On 8 June 2023, the Commission approved the second IPCEI on microelectronics and communication technologies. The Member States will provide up to EUR 8.1 billion in public funding, which is expected to unlock additional EUR 13.7 billion in private investments. As part of this IPCEI, 56 companies, including small and medium-sized enterprises (SMEs) and start-ups, will undertake 68 projects.

**US Export Restrictions related to semiconductors**

In October 2022 the US government introduced measures to restrict amongst other the export of

- cutting edge semiconductor chips such as processor chips with node size smaller than 14 nm or DRAM memory components with node size of 18 nm and below
- semiconductor equipment to produce these chips
- IT tools to design these chips

A prominent example of semiconductor equipment which fulfils the criteria are i-DUV (immersive deep ultraviolet lithography) machines of NL-based producer ASML. Prior to the introduction of the ban only the more advanced EUV (extreme ultraviolet) tools were excluded from excluded. ASML is affected as EU company because it integrates US-produced components.

More recently in August 2023, the US government announced in an executive order that it will prohibit some new U.S. investment in China in sensitive technologies. The order authorizes the U.S. Treasury secretary to prohibit or restrict U.S. investments in Chinese entities in three sectors: semiconductors and microelectronics, quantum information technologies and certain artificial intelligence systems.

The order is aimed at preventing US capital and expertise from helping China develop technologies that could support its military modernization and undermine U.S. national security. The measure targets private equity, venture capital, joint ventures and greenfield investments.

The Chinese government is "gravely concerned" about the order according to the press releases and reserves the right to take measures. According to the Chinese Commerce Ministry the order affects normal operation and decision-making of enterprises, and undermines the international economic and trade order.

**EU-US TTC- WG3 on building resilient semiconductors supply chain**

The 4th EU-US Trade and Technology Council ministerial meeting was held in Sweden at the end of May 2023 with the announcement of the implementation of two mechanisms, namely the Early Warning mechanism to address and mitigate semiconductor supply chain disruptions and the subsidy transparency mechanism. Heading towards the 5th ministerial meeting, the EU and US intend to jointly support cooperation in research, particularly on alternatives to PFAS, which are critical for semiconductor manufacturing. Additionally, we
will continue the implementation of the two mechanisms.

About ASML
ASML was founded in 1984 and specializes in the development and manufacturing of photolithography systems. Currently it is the largest supplier of photolithography systems, primarily for the semiconductor industry, and the sole supplier of extreme ultraviolet lithography photolithography machines in the world. Nearly all integrated circuits are fabricated using photolithography. In 2022, ASML reported EUR 21.2 billion revenues and EUR 6.40 billion net income. ASML employs around 40,000 people, spread across offices in more than 60 locations in 16 countries.

Contact: {CNECT A3},