ITI Promoting Innovation Worldwide

ITI Response to U.S. Department of Commerce Bureau of Industry and Security Interim Final Rule: Export Controls on "Certain Advanced Computing and Semiconductor Manufacturing Items" and End Uses

About ITI

The Information Technology Industry Council (ITI) is a global trade association representing 80 of the world's leading information and communications technology (ICT) companies. ITI's membership comprises global innovators from all corners of the technology sector, including hardware, software, digital services, semiconductors, network equipment, and platforms, as well as "technology-enabled" companies that rely on ICT to evolve their businesses. ITI engages policymakers around the world to promote innovation, security and sustained economic opportunity.

Introduction

ITI appreciates the opportunity to comment on the U.S. Department of Commerce Bureau of Industry and Security (BIS) Interim Final Rule (IFR) regarding export controls on *"certain advanced computing and semiconductor manufacturing items"* and end uses. ITI respects governments' responsibility to protect national security, and we take seriously U.S. government concerns that advanced technologies may be used to support the Chinese military and weapons development.

The BIS rule demonstrates a significant U.S. policy shift, as articulated by National Security Advisor Jake Sullivan that the previous U.S. "'sliding scale' approach...to stay only a couple of generations ahead...is not the strategic environment we are in today." Yet, the United States will struggle to maintain "as large a lead as possible" if the government pursues a unilateral approach that alienates allies and trading partners and restricts companies from selling consumer technologies worldwide.

U.S. semiconductor companies earn over 80 percent of their revenue from sales to foreign markets, and semiconductors are America's fourth largest export.[1] **Both U.S. and non-U.S. headquartered companies' ability to participate in the global economy enables them to reinvest earnings into research and development and in economies of their choosing, including the United States.**

ITI encourages BIS and the Administration to ensure export controls policy changes align with the statement of policy (section 1752) in the Export Control Reform Act of 2018, including the following core principles:

- *Export controls should be coordinated with the multilateral export control regimes. Export controls that are multilateral are most effective, and should be tailored to focus on those core technologies and other items that are capable of being used to pose a serious national security threat to the United States and its allies.*
- *Application of unilateral export controls should be limited for purposes of protecting specific United States national security and foreign policy interests.*

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- *Export controls should "maintain the leadership of the United States in science, engineering, technology research and development, manufacturing, and foundational technology that is essential to innovation.*

Given the complexity of the IFR and the global supply chain, we strongly encourage BIS to conduct in-depth consultations with industry experts – both in semiconductor companies and broader industry that incorporate semiconductors – in advance of releasing a final rule. Industry is attempting to assess impacts, compliance requirements, and respond to market demands concurrently – all during a time of global economic uncertainty and significant supply chain activity. The scope and complexity of this rule make the near-immediate effective date unworkable. **We urge BIS to allow appropriate time (minimum of 90 days) for industry to assess and implement such complex rules in the future.**

The Importance of Multilateral Controls and Assessment of Evolving Technologies

The unilateral approach of the IFR is a primary concern for ITI and our member companies. Despite public assurances from senior U.S. officials that allied nations will follow suit, ITI has significant concerns regarding the status of such negotiations and the potential for a true multilateral approach. Unilateral controls limit the ability of companies to participate in the global marketplace and in turn disrupt the virtuous cycle of private-sector R&D investments made possible by revenues from sales of U.S. products to a diverse customer base in overseas markets.

A thorough, timely, and ongoing evaluation of foreign availability and capability must also inform consideration of new or amended regimes. In cases where technology of comparable quality, quantity, and cost is available outside the U.S., controls will be ineffective in preventing end users of concern from acquiring the controlled technology and will weaken U.S. global competitiveness. Imposing additional export restrictions on items with foreign availability could not only limit U.S. consumer and enterprise electronics companies from accessing China's market, but also multinational customers in third countries may decide not to purchase U.S. technology they can use in, for example, Europe, but not in China or Russia. That gap will then be filled by companies that are not subject to U.S. control. **ITI encourages BIS and the Administration to work with industry to revise unilateral controls should multilateral controls not be adopted in a timely manner.**

ITI is also concerned by Administration statements indicating that chips controls will remain in place, even after the technology has advanced by several generations. This is a clear departure from long-standing export controls policy, which seeks to protect only the most advanced technology that is not yet widely available. **The application of stagnant U.S. export controls means that as companies develop comparable technology not controlled by U.S. export controls or multilateral controls, U.S.-origin technology will be cut out from the global supply chain.** Further, competitors will be incentivized to accelerate development of such technologies, and other countries will see limited incentive in adopting U.S. controls that will disrupt a clear competitive advantage. **ITI strongly encourages BIS to make clear the process by which technologies will be evaluated for foreign availability and capability and removed from export controls as comparable technologies become available in other markets.**

Finally, aggressive, unilateral controls will likely cause allies and non-U.S. customers to question the overall reliability of U.S. suppliers. When partners and customers doubt the reliability of the U.S. and U.S. suppliers, they move their business to foreign suppliers, which not only harms U.S. companies but also affects the U.S.'s position as a global leader.

Consideration of Economic Objectives and U.S. Leadership in Strategic Technologies

In public statements following release of the rule, BIS senior officials emphasized that the rule was based on "U.S. national security and foreign policy interests, not economic considerations." Industry agrees with and supports the government's responsibility to protect national security. **We urge the U.S. government to carry out that duty in accordance with BIS's equally important mission to advance "economic objectives" and promote "U.S. leadership in strategic technologies." Efforts to foster economic security and innovation, aimed at developing next-generation technologies, will undoubtedly contribute to achieving U.S. national security objectives. Conversely, assessing national security without consideration for impacts on the economy or innovation – which can only be done through robust consultation with industry experts – risks imperiling both economic and national security objectives.** In the last several years, U.S. policy has shifted to recognize the interdependence of national security and economic security. A technology-focused rule based in the notion that national security and foreign policy trump economic security and competitiveness risks undermining important U.S. national security objectives in the short and long term.

While industry in no way views national security concerns as secondary to economic competitiveness or profit, the significant economic impact on companies bears noting. Companies affected by the BIS IFR have publicly stated that they expect to lose $400 million to $2.5 billion in 2023 sales as a consequence of the new controls.[2] These numbers are significant, as they represent lost market share as well as money that could otherwise be leveraged towards research and development, further diversifying supply chains, increasing production in the U.S., and creating U.S.-based jobs.

Ability to Meet Stated IFR Objectives

ITI understands and respects the national security imperatives of the United States government, and our member companies encourage the U.S. government to consult with industry experts to ascertain whether policies and regulations involving advanced technology would meet the government's stated objective.

In addition to the aforementioned concerns, research indicates that China's military systems primarily rely on older and less sophisticated chips made in China, on which U.S. export controls will have limited effect. Should China require more advanced chips for AI-driven systems, they will likely be able to develop and produce them – at significant cost and on a slower timeline.[3] Still, since China would not need to mass produce such technologies, the Chinese government will likely assess that it is worthwhile to absorb the high costs of developing the technology. As commercial use of AI-related technology increases, U.S. export controls will likely have a greater impact on inhibiting China's plans to rollout civilian applications of advanced chips, such as autonomous vehicles.[4]

Restrictions on U.S. Persons

ITI is also concerned with the breadth of the rule's restrictions on U.S. persons' activities [EAR § 744.6(c)(2)], including at semiconductor fabrication facilities and branches of certain multinational companies in China that are headquartered in the U.S., South Korea, Taiwan, and other countries. The application of such restrictions to various "shipping, transmitting, or transferring (in-country) of any item not subject to the EAR to development on a chip at a proscribed level" is extremely broad. This will disrupt multinational companies' development and production and impede activities that are otherwise consistent with the EAR. While BIS has long restricted non-controlled technologies

where the end use or end user is military in nature, the extension to U.S. persons' (as broadly defined in the rule) activities where the individual does not know the end use or end user captures a significant number of industry personnel whose responsibilities would not otherwise include end use/user issues. It is difficult to conclude that such a control would measurably protect U.S. national security; however, work stoppages, potential job loss, or reassignment for those who fit the "U.S. persons" definition seem to be likely outcomes. It further appears that U.S. persons' "support" would even extend to personnel who do not work in a fab but perform other job functions while working in buildings co-located with the fab.

While ITI understands that BIS granted one-year authorizations related to U.S. person restrictions, the semiconductor industry relies on long-term planning. **We encourage BIS to review the reach of these elements of the rule and respectfully request that BIS issue a general license to allow U.S. persons to continue to provide support to multinational companies in China so that otherwise non-controlled semiconductor production work is not impaired.**

Definitional Issues and Requests for Clarification

ITI has identified several definitions of terms in the IFR that would benefit from greater clarification.

Supercomputer. Note 2 of the Supercomputer Definition in 15 C.F.R. § 722.1 states that a "supercomputer" typically has "thousands of closely coupled compute cores connected in parallel with networking technology…." It is not clear what is meant by "closely coupled compute cores." **Please clarify whether "closely coupled compute cores" refers to a system in which all hardware and software components are linked together and dependent on one another.**

Facilitating. 15 C.F.R §§ 744.6(c)(2)(ii), (v) and (viii) introduce three controls related to "facilitating" the "shipment, transmission, or transfer (in-country)" of certain items specified in those provisions. **Please clarify the breadth of the activity covered by "facilitating."** For instance, providing general freight, telecommunications, IT or banking services should be excluded from the definition of "facilitating", especially when considering that 15 CFR § 744.6(c)(2)(viii) does not contain a knowledge requirement and entities providing such general services would have no reason to know whether their services are being used for the transactions covered by 15 CFR §§ 744.6(c)(2)(ii), (v), and (viii).

Support. 15 C.F.R § 744.6(c)(2) states that a license is required "for the following activities, which could involve 'support' for the weapons of mass destruction-related end uses set forth in" 15 C.F.R § 744.6(b). It is unclear whether the reference to "support" in 15 C.F.R § 744.6(c)(2) incorporates all of the definitions of "support" under 15 C.F.R § 744.6(b)(6) in the activities that are prohibited under 15 C.F.R § 744.6(c)(2).

Other Compliance Considerations

End-use controls require time and resources to implement. Exporters may need to hire additional skilled personnel to conduct adequate investigations and ensure compliance. **Near-immediate effective dates of controls such as those issued in the rule cause companies to rush to comply, sometimes resulting in disparate implementation among stakeholders. In order to provide industry with appropriate guidance, we encourage BIS to conduct end-use investigations and place entities that present a risk to national security on the appropriate restricted end-user list (e.g. Entity List).**

Additionally, U.S. and other multinational firms with substantial investments in China require greater certainty around general business activities that have not been deemed a national security risk. For example, many U.S. and multinational firms have received a one-year authorization for exempt activities. One-year authorizations are welcome, however still inject long-term uncertainty for firms operating in the market. **ITI would suggest that renewal requests for authorization be longer and more predictable.**

Unintended Consequences and Broader Global Implications

In addition to ramifications for national security and economic competitiveness, **the U.S. government should also consider the impact on potential public benefits derived from advanced technologies developed through cross-border cooperation, especially in the realm of global health and environmental issues.** Numerous collaborations across borders – via opensource platforms that leverage advanced compute power – have already yielded significant breakthroughs. For example, German vaccine developer BioNTech's collaboration with UK AI opensource provider InstaDeep developed an early warning system that accurately predicted all 16 high-risk Covid variants more than six weeks earlier than the World Health Organization designated them. In 2022, Lithuanian medical imaging company Oxipit rolled out a vision-based AI diagnostic system that accurately scans chest x-rays for abnormalities, reducing the human workload where radiologists are in short supply by 36.4 percent. And UK-based DeepMind successfully trained machine learning algorithms to engineer enzymes capable of breaking down non-biodegradable plastics in one week's time. These are just a few examples of the advances made possible through cross-border collaboration and opensource platforms – **opportunities from which U.S. companies, persons, and technologies will be excluded if U.S. export controls do not reflect foreign availability of comparable technology, or do not account for the full array of potential consequences.**

Conclusion

ITI appreciates the opportunity to comment on the BIS IFR. **Given the complexity of this rule change and that of the semiconductor global supply chain and supply chains that incorporate semiconductors, it is imperative that industry and the U.S. government work together to refine the scope of the rule, minimize any unintended and adverse consequences, and ensure that export controls are updated to reflect changing technology and foreign availability.** As the technology advances and companies work across borders to develop products and services that may lead to benefits that transform global health and prosperity, it is also important that the U.S. government work across numerous industries to continuously assess the costs and benefits of modifications to U.S. export controls.