Comments of the
Semiconductor Industry Association

On

The Interim Final Rule Entitled
"Additional Export Controls: Certain Advanced Computing and Semiconductor Manufacturing Items; Supercomputer and Semiconductor End Use; Entity List Modification"

87 Fed. Reg. 62186 (Oct. 13, 2022)
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The Semiconductor Industry Association (SIA) submits these comments in response to the request from the Bureau of Industry and Security ("BIS") in the above-captioned rule. The Interim Final Rule amended the Export Administration Regulations (EAR) to limit the development and production in China of (i) specific types of semiconductors, (ii) semiconductor production equipment, (iii) items related to advanced computing, and (iv) supercomputers. The amendments implement these objectives through a series of novel and complex unilateral (i.e., U.S.-only) controls on (i) exports from the United States, (ii) activities of U.S. corporations and U.S. persons, (iii) exports of unlisted items for specific end uses, and (iv) shipments from outside the United States of non-U.S.-origin items produced with specific types of U.S. technology, software, or equipment.

Part I contains some introductory and background comments about SIA and semiconductors. Part II contains general comments about the rule and related requests for BIS to consider. Part III contains comments, questions, and requests about specific provisions in the new rule for BIS to consider.

Part I -- Introduction and Background

The Semiconductor Industry Association (SIA) has been the voice of the U.S. semiconductor industry for over 40 years. SIA member companies represent more than 99% of the U.S. semiconductor industry by revenue and are engaged in the research, design, and manufacture of semiconductors. The U.S. is the global leader in the semiconductor industry, and continued U.S. leadership in semiconductor technology drives economic strength, national security, and global competitiveness. More

information about SIA and the semiconductor industry is available at www.semiconductors.org.

Semiconductors are complex products critical to the functioning of everyday consumer electronics, communications, and computing devices in the automotive, industrial, financial, medical, retail, and all other sectors of the economy. They are also critical components for future technologies, such as artificial intelligence, quantum computing, and 5G/6G telecommunications. Few industries, if any, have a supply chain and development ecosystem as complex, geographically widespread, and interdependent as the semiconductor industry. A joint report by the Boston Consulting Group (BCG) and SIA found that more than 120 countries were involved as an exporter or importer of semiconductor products. Semiconductors are the world's fourth-most-traded product, trailing only crude oil, refined oil, and automobiles. The United States is the world leader in this global market, with U.S. firms accounting for nearly half of all semiconductor device and equipment sales and an even higher percentage of critical design tools.

In fact, U.S. exports of semiconductors totaled $62 billion in 2021, ranking fourth highest among U.S. exports. Overseas markets, which account for more than 80% of U.S. semiconductor sales, play a crucial role in this capital-intensive industry. The U.S. semiconductor industry is second to only the U.S. pharmaceuticals and biotechnology industry in terms of the rate of R&D spending as a percent of sales. Therefore, access to global markets is needed to fund very large R&D investments that consistently maintain US technology ahead of global competitors, a phenomenon that a BCG report termed the "virtuous innovation cycle." The China market along with many others, is critical for the success of U.S. semiconductor firms across the industry ecosystem. China is the single largest market, accounting for 36% of U.S. chip revenue in 2021. It is also currently the largest market for the sale of semiconductor manufacturing equipment.

Maintaining a strong U.S. semiconductor research, design, manufacturing, and supplier base is a national security issue. As stated in both the House and Senate versions of the 2021 National Defense Authorization Act: *"The leadership of the United States in semiconductor technology and innovation is critical to the economic growth and national security of the United States."*[1] Given how important the economic vitality of the U.S.

[1] H.R. 6395 § 1824(b) and S. 4049 § 1098 (b). Similarly, the Department of Defense's "Microelectronics Innovation for National Security and Economic Competitiveness" strategy underscores the importance of U.S leadership in semiconductor technology to U.S. national security. *See* https://www.acq.osd.mil/se/initiatives/init_micro.html. As stated in a report by the President's Council of Advisors on Science and Technology: "Cutting-edge semiconductor technology is also critical to defense systems and U.S. military strength, and the pervasiveness of semiconductors makes their integrity important to mitigating cybersecurity risk." "Report to the President: Ensuring Long-Term U.S. Leadership in Semiconductors" (Jan. 2017), available at https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/PCAST/pcast_ensuring_long-term_us_leadership_in_semiconductors.pdf.

semiconductor industry is to national security, as a general matter, it is critical to ensure that U.S. export controls are narrowly tailored and designed to achieve specific national security objectives and implemented in a multilateral manner, without undermining innovation and the technology base in the United States. It is important, therefore, that government and industry work together to ensure that U.S. policies are crafted in a manner to both enhance our national security as well as continue to allow the semiconductor industry in the U.S. to grow and innovate.

SIA and its member companies fully understand that targeted exports controls are necessary to safeguard national security. To that end, SIA has long been a partner of the U.S. Government in providing support and feedback regarding reforms and modernization of export control policy, particularly with respect to semiconductors. SIA appreciates the opportunity to provide its comments, questions, and requests.

Part II -- General Comments

Comment II.A: We ask that BIS factor into the structure of this and future rules the unnecessarily harmful impacts of regulatory complexity, uncertainty, and burden.

When BIS is considering edits to the Interim Final Rule, new rules, and public outreach about the EAR, it should, to the greatest extent possible, factor in the economic impacts on U.S. and allied country companies because of regulatory complexity and uncertainty. We understand that the export control rules are inherently complex. We also understand that export controls must constantly evolve to adapt to new national security and foreign policy issues. The Interim Final Rule, however, contains among the most novel and complex EAR provisions ever published. The level of industry uncertainty about which new controls on otherwise commercial items might or might not be imposed in the future is also at an all-time high. Complexity often leads to further uncertainty and can be harmful to legitimate and beneficial trade. The combination of uncertainly driven by complexity leads foreign companies to often design out or avoid U.S.-origin or U.S. company branded content to “de-risk” (i.e., over-control to avoid possible enforcement actions), reduce compliance costs, and reduce potential harm to their supply chains – even when these items are not subject to either item or end-use based controls. In many cases, the psychological impact of these rules, which leads to the designing-out of U.S. components, software, technology, and services, may far exceed the direct regulatory impact.

To illustrate the new level of complexity contained in these rules, there are now nine (9) different types of foreign direct product rules in EAR section 734.9 in addition to the multiple *de minimis* rules and guidance in sections 734.3, 734.4, and the relevant supplement. These are the rules that govern when foreign-made commodities, software, and technology outside the United States are subject to the extraterritorial jurisdiction of the EAR. The new and complex EAR provisions can only be fully understood by a relatively small group of experienced export control compliance

professionals who, at the same time, also fully understand the complexity of semiconductor supply-chains and technology. Many small and medium enterprises, or even large foreign multinationals, not highly versed in these details will either not know if they are following the rule, or out of an abundance of caution, "over-comply" by restricting legitimate exports and trade not otherwise subject to these rules.

Once understood, they also require an extraordinary amount of due diligence and fact gathering to know if the rules apply to their transaction or activity. For example, to determine whether a foreign-made commercial item is subject to the EAR, most of the foreign direct product rules require one to determine if a foreign-made commercial item was produced, even in part, by foreign equipment that was the direct product of specific types of generally uncontrolled U.S.-origin technology. This is particularly difficult with respect to equipment that was created overseas or exported from the U.S. years ago without the need for any authorizations or related notice about whether it was produced from covered technology. In addition, the new rules introduce significantly increased requirements for end-user due diligence that place a significant burden on the private sector.

As a result of this complexity and burden, many foreign companies often choose to design out or avoid U.S.-branded technology, software, components, and equipment to avoid the risk of "tainting" their foreign-made items. That is, even for foreign companies that are not affected by the rules if the rules are applied precisely and with a full understanding of the facts, their concerns about having shipments and supply chains interrupted by current or future U.S. controls that they cannot fully understand result in understandable business decisions to avoid U.S.-branded content -- i.e., that which is exported from the U.S. and sold by a U.S. company. This over-control is unintended and harmful to the U.S. industrial base, particularly where there is availability of competitive non-U.S. technology, software, components, and equipment.

In addition, many well-intentioned companies' may under-control foreign-made items because they cannot understand the novel U.S.-only rules. Simpler rules are easier to comply with. Thus, simplicity will advance BIS's objectives.

For firms to conduct the work necessary to ensure compliance, there will likely be an increase in compliance-related costs and associated burdens. All the items affected by the new rules are, by definition, widely available commercial items. Most, if not all, the items now subject to control have been for sale in the China market for years. The number of specific components, other commodities, software, and technology affected by the new rules is literally in the tens of millions. Each one of these items requires some sort of marking, analysis, or other handling to ensure compliance. In some instances, the compliance costs are greater than the profit from the sales of otherwise legitimate items, which then discourages otherwise legal sales.

We also ask that the Administration make its plans for future export controls more transparent and predictable. The timelines involved in the semiconductor industry are

long and the global supply chains are complex. The impact of regulatory uncertainty forces some companies to find new suppliers, technology partners, and even customers. To make stable business, development, and production plans, companies must factor in what the regulatory and other environments are going to be several years out. We know that the Administration is still studying the issues and that facts evolve, but we nonetheless ask for significantly more detail as to the medium- and long-term control plans, or even general policy objectives, for the sake of rational business planning purposes.

Comment II.B: We understand and commend the Administration for making serious attempts before and after the release of the October 7 rules to make these rules multilateral and plurilateral. BIS should continue to do everything possible to convince the allies and partners in the relevant producer nations to impose their own "is informed" person-based end use controls like those that are now applicable to U.S. persons in sections 744.6l(2), 744.23(a)(2)(iii), and (a)(2)(iv). If BIS cannot succeed at getting the allies and partners to agree to substantively similar controls, BIS should adopt a temporary licensing policy that would authorize the provision of such services and exports by U.S. persons for civil applications and if not otherwise prohibited by the EAR and readily available from non-U.S. providers, in both quantity and quality, as substitutes.

TIe Interim Final RIIe is a u"ilat'ral rule. We understand BIS's statements in the rule's preamble regarding the urgent need to impose the controls when it did. We also understand that BIS and its partner agencies have made, and are making, significant attempts to bring allied partners on board. However, unless the types of controls at issue are soon imposed by our close allies over their exporters that have capabilities in the areas covered by the rule, the rule will become both ineffective and counterproductive.

Companies not subject to the same controls are able to now, or eventually will be able to, export to China from their countries most of the types of items and services that cannot be shipped from the United States or provided by U.S. companies. Also, Chinese indigenous capabilities will also certainly advance over time and be able to substitute some of the newly controlled items. We understand that the foreign direct product rules (which were only applied to high-performance chips, Entity List, and supercomputing parts of the rule) close this gap somewhat. The foreign direct product rules are, however, only effective so long as foreign companies continue to use U.S.-origin technology, software, or equipment. Without the use of U.S.-origin or derived content, the foreign direct product rules have no effect. Thus, unilateral foreign direct product rules create a market incentive to, over time, design out the U.S.-origin technology, software, and equipment that jurisdictionally taint foreign-made products. We realize the timelines vary for different types of technology, software, and equipment. Some can be replaced overnight. Others will take many years, if not longer to replace. Nonetheless, the rule will gradually become less effective over time in stopping the types of exports and services the Interim Final Rule is designed to stop. The U.S.

Government should closely monitor the ongoing effectiveness of these unilateral rules.

Companies not affected by the rule will be able to make the sales to earn the income that U.S. and other affected companies will not be able, harming the U.S. domestic industrial base. As noted above, the advancement of the semiconductor industry in the U.S. and allied countries depends upon the income from exports to fund massive amounts of research and development efforts. Companies not affected by U.S. export controls are, by definition, able to get the income from international sales that those affected by them are not. The companies not affected by U.S. export controls are thus able to use that income for research and development to out-compete those companies affected by the unilateral controls. They are also delivering to the restricted country or end-user the exact technology the U.S. has intended to restrict, undermining the national security objectives the U.S. government set out to achieve.

In many cases, the allies have existing authority to impose such controls[2] because, beginning in the early 1990's as part of the Enhanced Proliferation Control Initiative (EPCI), the U.S. and its allies began creating and imposing "catch-all" end use controls on activities by their citizens if they knew or were informed that the activities would be in support of the development or production of weapons of mass destruction in countries of concern, even when all the underlying items involved are otherwise uncontrolled.[3]

Our request is made not just on the basis for the need to get plurilateral harmonization on controls for the sake of effectiveness, it is also a statutory requirement. Specifically, Congress codified BIS's authority to impose end use controls in section 4812(a) of the Export Control Reform Act of 2018 (ECRA), by stating that, in order to carry out the policies of ECRA, "the President shall control- (1) the export, reexport, and in-country transfer of items subject to the jurisdiction of the United States, whether by United States persons or by foreign persons; and (2) the activities of United States persons, wherever located, relating to specific- (A) nuclear explosive devices; (B) missiles; (C) chemical or biological weapons; (D) whole plants for chemical weapons precursors; (E) foreign maritime nuclear projects; and (F) foreign military intelligence services."[4] **The**

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[2] Specifically, the Dutch government has implemented in its export control laws such catch-all and "is informed" authorities in Articles 2(1) and 3(1) of its Strategic Services Act (*Wet Strategische diensten*). The Japanese government has implemented similar catch-all and "is informed" authorities in its export control laws and regulations through a combination of provisions, namely those in Article 25 (1) and (3) of the Foreign Exchange and Foreign Trade Act ("FEFTA"); Article 9(2)(vi) and (vii) of the *Ministerial Order on Invisible Trade Connected with Visible Trade* (MITI Order No. 8 of 1998, as amended); METI Notice Regarding Technology Transfers that Require a License Under FEFTA Article 25(1) and Foreign Exchange Order 17(2) at 2; Article 4(1)(iv)(b) of the *Export Trade Control Order* (Cabinet Order No. 378 of 1949, as amended) for the export of goods; and Article 9(2)(vii)(b) of the *Ministerial Order on Invisible Trade Connected with Visible Trade* (MITI Order No. 8 of 1998, as amended).

[3] The U.S. State Department has summarized these "catch-all" controls on its website at: https://2009-2017.state.gov/strategictrade/practices/c43179.htm

[4] 50 U.S.C. § 4812(a).

next ECRA section, section 4812(b)(3), requires the President, when exercising such end use authorities, to "seek to secure the cooperation of other governments and multilateral organizations to impose control systems that are consistent, to the extent possible, with the controls imposed under subsection (a)." In addition, ECRA requires that any controls imposed under section 4812, which include end use controls, "must be evaluated on an ongoing basis . . . to avoid negatively affecting [U.S.] leadership in the science, technology, engineering, and manufacturing sectors, including foundational technology that is essential to innovation."[5] Congress recognized that "export controls applied unilaterally to items widely available from foreign sources generally are less effective in preventing end-users from acquiring those items."[6]

Therefore, BIS should do everything possible to make the end use controls in section 744.23(a)(2)(v) plurilateral so that the controls are both effective and not counter-productive. If the U.S. Government is not successful in convincing allies to adopt similar controls including for 3B090, BIS and the other export control agencies should announce and abide by a policy that would authorize licenses for the export, reexport, or transfer of items subject to the EAR when there are comparable, substitute items that are available from outside the United States that are not subject to the EAR (assuming that the end use would be for civil applications and that no General Prohibitions are involved).

Comment II.C. BIS should return to regular order by publishing significant new rules as proposed rules first.

BIS published the Interim Final Rule without establishing any formal process by which industry could review and provide policy-, technical-, and supply chain-related comments and corrections that would advance the national security objectives of the rule without unintended consequences. We appreciate that BIS likely sought some limited input from its technical advisory committees (TACs) before publishing the rule. Our understanding, however, is that it was done under a highly irregular and compressed timeframe, limiting its effectiveness. In some cases, such input could be sufficient if the TAC were to be given more time to review and provide feedback on such rules. The Interim Final Rule and other future rules involving semiconductors and related items will, however, involve technological and supply chain issues that are far more complex than the advisory committees can handle. Indeed, until recent years, it had been the long-standing government practice to obtain technical and other inputs from both the public and the advisory committees before publishing rules (other than those implementing new controls agreed to with the multilateral regimes) given that there is much about commercial supply chains, technologies, and economics that the U.S. Government did not fully understand. The U.S. Government's export control agencies would then choose to accept or reject any comment based on their national

[5] 50 U.S.C. § 4811(3).

[6] 50 U.S.C. § 4811(4).

security judgements, but at least they had the benefit from subject matter experts in the affected industries to know what the impacts would be or if there were errors in the drafting or economic assumptions.

Although BIS stated that the Interim Final Rule was not being published under the authority of ECRA's emerging and foundational provisions in section 4817 requiring a formal notice and comment period, these rules did involve the imposition of new China-specific controls outside the classical multilateral regime process on semiconductors and related items involving China, that were intended to be controlled under the ECRA provisions. Indeed, during the hearings leading up to the creation of ECRA (specifically section 4817), the imposition of China-specific controls on semiconductor-related items was generally the first example provided for why a specific provision on emerging and foundational technologies should be created. Moreover, when BIS announced in 2018 the types of emerging technologies that it was studying for controls under section 4817, it identified "AI chipsets" and "microprocessor technology, such as (i) Systems-on-Chip (SoC); or (ii) Stacked Memory on Chip."[7] When BIS announced in 2020 the types of foundational technologies it was studying for controls under section 4817, it referred to "semiconductor manufacturing equipment and associated software tools."[8]

Again, we appreciate BIS's giving industry a chance to comment on the rule after it is published, but many of the unintended consequences and unnecessary shocks to the system could have been addressed (especially for foreign producers), and the rule thus made more effective, had BIS sought input and data before the rule was published rather than after. In addition, we suggest that BIS consider implementing such rules in the future with a delayed implementation period to allow for industry to study the rules and implement effective compliance programs. This approach would have significantly avoided the unintended confusion that this new complex rule created.

Comment II.D: BIS should publish an affirmative list of "semiconductor fabrication facilities" that engage in covered "development" or "production" of NAND, logic, or DRAM integrated circuits.

Most companies that ship ordinary commercial items, including those within the scope of the Group 3B, 3C, 3D, or 3E ECCNs, have no way of knowing, or even easily finding out the answer to the question of whether they would be for use in a covered fabrication facility. It is also possible that some companies will conclude that the new controls require exporters, re-exporters, and transferrers of such items to find out the answer to this question for each shipment or for group transactions. For companies that supply components or materials, there may be many layers of purchasing between themselves and any covered fabrication facility engaged in "development" or "production" of NAND, logic, or DRAM integrated circuits.

[7] 83 Fed. Reg. 58201, 58202 (Nov. 19, 2018).

[8] 85 Fed. Reg. 52934 (Aug. 27, 2020).

In addition, even if certain parts of the regulations require the exporter, re-exporter, and transferrer to have "knowledge," sections 744.6 and 744.23 have some restrictions and obligations that apply regardless of whether there is knowledge of a facility's engaging in the "development" or "production" of covered NAND, logic, or DRAM integrated circuits. SIA believes that untold hours of due diligence efforts by companies could be eliminated if BIS would simply identify the covered entities. In addition, the due diligence conclusions reached by one exporter may be different for another, even for the same Chinese end-user, leading to an un-level playing field.

In response to similar requests from industry with respect to the knowledge-based licensing requirements in the military end user/use rules in section 744.21, BIS created a non-exclusive list of military end users, which is now in Supplement No. 7 to Part 744. We ask for a similar list here -- and an exclusive list if possible. We realize that the list would need to evolve over time as fabrication facilities begin or end covered development or production. Nonetheless, a process by which BIS identifies such facilities in a new supplement to Part 744 would greatly enhance the objectives of the Interim Final Rule and massively reduce the compliance burden and cost.

In addition, there is little guidance to companies as to the level of assurance from a customer that is necessary to provide confidence that materials are used appropriately. We ask that BIS provide further clarity on the use of "End Use Declarations" or other methods that would be valid to instill confidence on the part of the customer regarding compliance with the export control rules. In other words, we ask that BIS expand and update its Know Your Customer ("Red Flag") guidance to include specific examples of common fact patterns at issue in the Interim Final Rule. The Know Your Customer guidance uses examples of more traditionally controlled activities, such as the shipment of items from the United States where there might be knowledge of a diversion to an inappropriate end use, end user, or destination.

Comment II.E. BIS should formally ask for industry comments relevant to BIS's preparation of its required annual report to Congress.

ECRA section 4824 requires BIS to submit to Congress by the end of the year a report on the implementation of ECRA during the previous year. Subsection 2 requires that the annual report include a description of "the impact of [all that year's] controls on the scientific and technological leadership of the United States." We believe that it is important for BIS to get formal industry input on this specific topic so that its report to Congress is accurate and complete. In addition, ECRA section 4811(1) states that the United States should "use export controls only after full consideration of the impact on the economy of the United States . . .." Similarly, ECRA section 4811(3) states that the impact of the implementation of new controls on U.S. leadership and competitiveness "must be evaluated on an ongoing basis and applied in imposing controls…to avoid negatively affecting such leadership."

As these and any other new rules now contain a significant economic element involving otherwise widely available commercial items, BIS should increase its resources to gather data about the purely economic impacts of these and other new controls. This will require a considerable number of formal efforts working with industry to gather such data on a systematic basis. The U.S. Government does not have such data. The SIA and other industry associations can compile and anonymize data and information from members so that Congress has accurate information. We appreciate that there is probably not enough time to get complete data on the impact of the Interim Final Rule for the 2022 report (if not filed by the time this comment is received), but it should try -- and certainly again for 2023.

Comment II.F. If required by Congress or other parties to publicly release licensing data surrounding this new rule, BIS should strive to provide the most complete data possible, while still protecting confidential business information.

In 2020, following a Congressional action, BIS released data surrounding the licensing policy for exports to Huawei and SMIC. The data provided did not include licenses that were still pending review (many of which were later denied) or licenses that had received an "intent to deny" The data also did not consider restrictive conditions that were imposed on licenses that were approved or the percentages of applications that were "returned without action" and never re-filed. The time period was also not representative of the licenses issued in earlier years. As a result, the public was given a skewed understanding of licenses granted and denied for exports to these entities.

With this rule, to maximize public understanding of the license policy, in any disclosure of licensing statistics, BIS should provide the most amount of information it can, while still protecting confidential business information. If Congress does not ask for a complete set of information, BIS should nonetheless publish what it can consistent with ECRA to avoid any public confusion on the significance of the data. These data should include statistics on (i) licenses that are still pending review, (ii) those receiving an "intent to deny" response, (iii) "returns without action, and (iv) the issuance of licenses with restrictive conditions. The data on approvals and denials should also be connected to what the licensing policy is for such items and when those licensing policies were created. As described in more detail throughout the EAR, the policy for some items is presumptive approval. Others are presumptive denial. There are other policies that are more complicated. While the production of all such data will not provide the full picture as to the effectiveness of the rule (given that many companies will choose to not submit license applications at all given the almost certainty of denial), we believe these steps would provide a more holistic picture, which will enhance the quality of industry commentary on the rules.

Comment II.G. BIS should issue a temporary general license regarding newly controlled exports to the four multinational semiconductor fabs and announce a long-term plan for controls associated with them.

Media reports indicate that BIS issued novel, general one-year licenses that effectively maintain the status quo on exports to the four multinational owned and operated fabs in China. Although appreciated, a one-year process creates significant uncertainty about what the rules for exports to such fabs might be next year. The semiconductor industry, particularly the fabs but also their suppliers, generally plan years ahead. Not knowing whether there will be an authorization next year for trade with the four fabs creates unintended impacts and discourages otherwise legitimate trade. Also, the method of issuing private letters to fabs that authorize exports to the fabs is unusual and creates uncertainty for shippers about what is and is not authorized to the four companies. Accordingly, to eliminate this uncertainty we ask BIS to issue a public temporary general license associated with multinational owned fabs and that the license have an effective date for at least two years. In the meantime, we ask BIS to announce a long-term policy plan for exports to these facilities to enable better compliance and long-term business planning associated with trade involving these facilities.

Comment II.H We ask BIS to state whether it is BIS policy that the technology thresholds in the Interim Final Rule will remain static or change over time.

We know that the National Security Advisor has stated recently that the U.S. Government would no longer maintain a "sliding scale" approach "that said we need to stay only a couple of generations ahead. Given the foundational nature of certain technologies, such as advanced logic and memory chips, we must maintain as large a lead as possible."[9] The National Security Advisor, of course, speaks for the United States with respect to U.S. national security policy. BIS leadership has also made similar remarks.[10] We nonetheless ask for BIS to respond to this question because the "sliding scale" policy is nowhere referred to in the Interim Final Rule, the EAR, the mandates of one of the four multilateral regimes, or any other policy document.

Many of the semiconductors referred to in the Interim Final Rule either are now or are soon to be available worldwide and used in literally tens of millions of wholly consumer commercial products. Especially for the controls on advanced computing, i.e., advanced semiconductors specified in ECCN 3A090 and the definition of a "supercomputer," the rule sets specific static performance thresholds. While today they might only impact a sliver of the commercial market, as computing and semiconductor technology advances, more and more commercial devices such as laptops, cellphones, and even cars may exceed the performance characteristics outlined in the rules.

Over the decades, commercial items that were once strictly controlled, such as consumer encryption, global positioning system software, and now-basic semiconductors, eventually became de-controlled because they became uncontrollable.

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[9] https://www.whitehouse.gov/briefing-room/speeches-remarks/2022/09/16/remarks-by-national-security-advisor-jake-sullivan-at-the-special-competitive-studies-project-global-emerging-technologies-summit/

[10] https://www.cnas.org/publications/transcript/a-conversation-with-under-secretary-of-commerce-alan-f-estevez

U.S. and allied governments would instead rely on "catch-all" end use controls and end user controls related to the development or production of WMD or military applications. We are, of course, aware of the civil-military fusion policy concerns that are the policy basis for much of the Interim Final Rule. Nonetheless, some types of items affected by the new controls are certain to become so widely available soon that they will be uncontrolled short of the imposition of multilateral economic sanctions and embargoes. For the sake of long-term business planning and the preparation of additional comments to BIS regarding the impact of the rule, we ask BIS to address the question.

Comment II.I BIS should publish, or at least make available for TAC review, the policy justifications for current Category 3 and 4 controls.

BIS is increasingly asking industry for input on significant new controls related to semiconductors and associated technology in Category 3 and Category 4. Important to assessing the need for new controls is also evaluating the effectiveness of existing controls. In order to provide effective feedback and assessment, it would be helpful to understand the specific policy rationale for new and existing control classifications. Most of the controls in place today have highly specific and detailed technical parameters. Thus, it is not possible to infer the reason the control exists at those levels just from reading the entry which is rarely disclosed. We understand that the government in many cases maintains historical documents outlining the rationale for each control, but has not made such information public. We are not asking for classified information, of course.

Our understanding, however, is that most, if not all, the regime-based controls have justification documents associated their submission and acceptance by the relevant regime. We ask that BIS, at least, share such documents or a redacted summary of them with a select subcommittee of the technical advisory committees (TACs) for review and comment. The members of the TACS each have the authority to see such justification documents. Indeed, it is part of their responsibilities as TAC members to regularly review and comment on such documents. In this way, the TAC members could prepare a properly redacted report of why each Category 3 and Category 4 control exists that would facilitate industry suggestions for amendments to the Categories -- both under legacy policy bases for export controls as well as the bases for the new controls in Interim Final Rule.

PART III – Comments on Specific Provisions of the Interim Final Rule

We thank BIS for already issuing a FAQ document to address immediate and initial industry feedback regarding certain aspects of the rule. For example, we welcome and appreciate the BIS FAQ statement that subsequent steps at facilities, such as assembly, test, and packaging facilities, that do not alter the technology levels are not covered. We encourage BIS to specify this and other statements in a final rule, and to explicitly exclude other back-end processes, such as wafer probe and testing, that do not enhance technology levels.

The following are questions and comments about the application of specific provisions in the new rules. SIA asks that BIS address the issues in FAQs or through amendments to the EAR. The answers will help ensure compliance and rule changes will help ensure that BIS's national security objectives are satisfied without unintended impacts, and that there is a level-playing field when it comes to compliance and enforcement.

Comment III.A: Is a mask shop in a separate building from a facility that fabricates semiconductors nonetheless a "semiconductor fabrication facility?"

We ask this question because masks that are used in producing semiconductors at covered facilities are often created in separate buildings from the actual fabrication facility. The fabrication of a photomask could in some cases be considered the beginning of the process to fabricate semiconductors. However, not all companies fabricate photomasks on their own, and may rely on "merchant" photomask producers. We understand that the regulations include both the "development" and "production" processes, and that "development" includes design activities. However, in the new rule, the word "fabrication" modifies "facility." This is confusing because it appears that a facility that only "develops" integrated circuits but does not "fabricate" them is not within the scope of the new rules.

Comment III.B.a: Does section 744.23(a)(1)(iii) of the EAR, in connection with section 744.23(a)(2)(iii), apply to exports to China of U.S.-origin technology, software, and commodities to companies that are not "fabrication facilities" (e.g., design houses) if the foreign-origin items created with the use of such exports are only later used to develop or produce semiconductors at covered facilities?

We ask because section 744.23(a)(2)(iii) only applies to the development or production "**at** a semiconductor fabrication 'facility'" located in China. If the items exported to China are not for use "at" a semiconductor fabrication facility, then how is it covered by section 744.23(a)(2)(iii)?

Comment III.B.b: If the export of an item to a third party is for use in developing or producing a whole new foreign-made item that will only later to be used in the development or production of ICs at a covered facility, how far back up the supply chain does the licensing obligation extend?

That is, if someone exports an item to produce a foreign-made item to be used to produce another foreign-made item that will later be used at a covered fabrication facility, is the original export caught by the new licensing obligations if there is knowledge that this supply chain will ultimately result in the creation of an item used to produce integrated circuits at a covered fabrication facility? Also, what about transfer outside the United States of items subject to the EAR to produce foreign-made items when only a small percentage of the foreign-made items will be for use at a covered

fabrication facility? Does BIS take the position that 100% of all such transfers require a license by the foreign parties even when only an unknown small percentage will be used in the production of items that will ultimately be destined to covered fabrication facilities? Given the complexity of the supply chains involved, this requirement imposes licensing obligations on thousands of foreign suppliers and vendors of commodity components that are sold widely for a wide variety of applications. All it takes is one company's certification that some percentage of a final product is destined to a covered fabrication facility to impose licensing requirements all the way back through a complex supply chain.

Comment III.B.c: Do the answers to these questions regarding the scope and reach of section 744.23(a)(2)(iii) apply equally to application of the controls over the shipment from outside the United States of foreign-origin items not subject to the EAR under the requirements of sections 744.6(c)(2)(i) and (c)(2)(ii)?

Comment III.C: Could BIS confirm that a U.S. person's shipment to China from outside the United States of foreign-origin items not subject to the EAR for use in developing or producing items described in a Group 3B ECCN are not subject to EAR licensing requirements?

We ask because section 744.23(a)(1)(v), when read with 744.23(a)(2)(v), prohibits the unlicensed export, reexport, and transfer of items subject to the EAR if there is knowledge they will be for the development or production of commodities described in Group 3B ECCNs. Although the prohibitions in section 744.23(a) and section 744.6(c)(2) generally align, section 744.6(c)(2) does not have a parallel provision to that in section 744.23(a)(2)(v). (This question assumes that there are no Footnote 1 or Footnote 4 entities, or other section 734.9 issues, involved in the transaction.) The difference in scope indicates that a U.S. person's shipment of items not subject to the EAR for use in producing Group 3B items in China is not covered by the new rules.

Comment III.D. Did BIS intend to include the development or production in China of masks, reticles, and mask substrates within the scope of section 744.23(a)(2)(v)?

This section imposes licensing requirements on the export of items in the Group 3B ECCNs, including ECCNs 3B001 and 3B991. The policy purpose of the rule appears to be focused on limiting the development and production in China of semiconductor production equipment, such as etch, deposition, inspection, and lithography tools. ECCNs 3B001.g, 3B001.h, 3B001.j, and 3B991.b.2, however, refer to various types of masks, reticles, and mask substrate blanks. While they are essential in the fabrication of semiconductors, these are not production "equipment" in the traditional sense of the word as they are developed in a process that immediately precedes the front-end fabrication process. If BIS did not intend to affect exports for use in producing masks, reticles, or mask substrates, we ask that BIS amend the provision to exclude them from its scope.

Comment III.E: Is expediting of a part or component shipment with a supplier or vendor, by a US person, within the scope of the controls in sections 744.6 or 744.23 if there is a knowledge that such a part of component will be exported, re-exported, or transferred to a covered fabrication facility?

Comment III.F: What are the standards that would allow for the presumptive denial licensing policies for 3A090.a and 4A090.a to be overcome?

That is, does BIS envision issuing licenses if the end use can be clearly documented and confirmed as purely civilian, such as for healthcare, gaming, or e-commerce-related applications? (The question assumes that no proscribed persons or General Prohibitions are at issue in a transaction.)

Comment III.G: Is a foreign-made item not otherwise subject to the EAR nonetheless subject to the EAR under the Entity List FDP rule (§ 734.9(e)(2)) if (i) it is shipped by an unlisted entity to another unlisted entity for incorporation into a commodity when (ii) the shipper knows all other components for the commodity had been shipped by a Footnote 4 entity, but (iii) the foreign-made item will not be incorporated into, or used to produce or develop, any commodity produced, purchased or ordered by a listed entity?

In other words, is a Footnote 4 entity a "party" to such a transaction under section 734.9(e)(2)(ii)(B) if it is merely shipping other items to an unlisted third party for incorporation into a product the third party will produce and distribute without the involvement of the Footnote 4 entity? (The question assumes full knowledge of the supply chain by all parties involved, no other General Prohibitions being applicable, and that the Footnote 4 entity is not a purchaser, intermediate consignee, ultimate consignee, or end user of the foreign-made items at issue.)

Comment III.H.a: Does the answer to Comment III.I change if a Footnote 4 entity is a shareholder in the third-party assembler/seller?

Comment III.H.b: If a Footnote 4 entity profits from a transaction by and among unlisted entities, but has no other role or involvement, is it a "party" to the transaction under section 734.9(e)(2)(ii)(B)?

This could happen if an unlisted affiliate to a Footnote 4 entity is involved in a transaction. The question assumes knowledge of the profit by all parties, no other General Prohibitions being implicated, and that no shipments are occurring for the incorporation into or use in the development or production of any commodity produced, purchased, or ordered by a listed entity.

Comment III.H.c: We understand that the phrase "e.g., as a 'purchaser,' 'intermediate consignee,' 'ultimate consignee,' or 'end-user,'" as used in section

734.9(e)(2)(ii)(B), signals that the list of referenced parties is not exhaustive. However, the use of "e.g." creates significant compliance uncertainty. Will BIS consider providing guidance as to what other activities may constitute a Footnote 4 entity's being a "party" to the transaction for purposes of the Entity List FDP rule?

Comment III.I: Did BIS intend that the licensing requirements in section 744.23(a)(1)(v) apply when the Group 3B item to be developed or produced in China was for the benefit of a U.S. company or for use outside of China?

It appears to us that the section was created to prevent semiconductor production equipment and related items from being produced in China that would compete with U.S. semiconductor production equipment companies. If this is so, the section appears to have an inadvertent impact in controlling exports that would be of benefit to the U.S. companies or not for use in China. If this impact is inadvertent, would BIS consider amending the section so that the licensing requirements do not apply to exports, reexports, or transfers of benefit to U.S. companies or, if with respect to items, to the production or development of items to be used outside of China?

Comment III.J: For an item that is now captured by 4A090, is technology controlled under ECCN 4E001 because it is required for the development or production of 4A090 items controlled for NS reasons as well as RS and AT reasons? By comparison, technology controlled under ECCN 3E001 required for the development or production of 3A090 items is controlled for RS and AT reasons, but not NS reasons. (The reason for control box in 4E001 states that NS Column 1 applies to the entire entry. There is not such a reason for control note in 3E001.)

Comment III.K: Can BIS confirm whether the following activities are covered "facilitation" or "support" activities within the scope of EAR section 744.6(c)?

a. Provision of back-office services that help the business to function, such as IT services, financial services, or Human Resources support?

b. Order intake and processing?

c. Invoicing and cash or receivables collection activities?

d. Legal advice and counseling on the requirements of the EAR or other compliance obligations?

e. Trade compliance clearance of licensed shipments or other authorized activities with Chinese semiconductor customers, including entity list parties?

f. Providing administrative and limited servicing support for shipments to Entity List parties authorized by BIS licenses?

g. Tax-related activities?

h. Referring any matters opportunities to non-U.S. persons?

i. Management oversight by U.S. persons located in China or abroad?

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Thank you for the opportunity to comment on the Interim Final Rule. If you have any additional questions or would like to discuss these comments further, please contact SIA via jgoodrich@semiconductors.org or 202-446-1703.

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