Testimony before the House Committee on Foreign Affairs
South and Central Asia Subcommittee

Hearing on "Export Control Loopholes: Chipmaking Tools and Their Subcomponents"

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Chairman Huizenga, Ranking Member Kamlager-Dove, and other members of the subcommittee, thank you for asking me to testify. I am happy to help the subcommittee with its oversight role however I can. I have appeared before the Committee and its subcommittees several times over the years,[1] particularly during my time as the Assistant Secretary of Commerce for Export Administration from 2010 to 2017. This is the Assistant Secretary position that is responsible for, among other things, administering export control licensing and policy at the Bureau of Industry and Security (BIS). Although I am now a partner in the international trade group at the Akin law firm, the views I express today are my own. I am not advocating for or against any potential changes to legislation or regulation on behalf of another.

One of the reasons I was invited to testify today is because I am a compliance attorney who provides legal advice and counsel to US and allied country companies, including those that produce and export semiconductor manufacturing equipment, on how to comply with the Export Administration Regulations (EAR).[2] As a result of years of weedy application of the rules to thousands of different complex fact patterns, I am an expert in the US export control rules that apply to the semiconductor and related industries. I also understand well the export control rules of allied countries. As evidenced by the attached highly condensed (but still lengthy) summaries I prepared, the export control rules pertaining to semiconductor manufacturing equipment are complicated. Moreover, behind each of the elements in the summaries (which have hyperlinks to the source regulations) are still further rules, definitions, FAQs, and complicated technology distinctions that must be understood to determine on a case-by-case basis when a BIS license would and would not be required to export, reexport, or transfer any particular end-item, spare part, software, technology, or service.

I. "Loopholes"

To the title of this hearing, the question is where in these rules are there "loopholes." In this context, a true "loophole" is an ambiguity or an inadvertent omission in the EAR that allows an activity to occur without a license that was not intended. In export control policy discussions,

[1] My previous testimony before an HFAC subcommittee was about BIS oversight. My previous testimony about export controls and U.S.-China issues was before the USCC. Both may be relevant to this subcommittee's efforts.

[2] I do not work for companies in or from China, Russia, or other countries of concern. I do not work for sanctioned or proscribed parties. I am not a lobbyist. I also do not do any work that would require registration under the Foreign Agents Registration Act.

the word "loophole" is also commonly (albeit incorrectly) used to refer to an activity that the US Government did not intend for an amendment to the EAR to prohibit but that the speaker believes should be prohibited. To know whether the correct or informal definition of "loophole" applies to any topic, one must first determine what the intent was or is of the US Government in creating the rule being discussed. As with any law or regulation, the EAR exist to solve a problem. Specifically, they regulate the export, reexport, and transfer outside the United States and from the United States of commodities, software, and technology "subject to the jurisdiction of the United States" and US person services to various end-users, end-uses, and destinations to accomplish a national security or a foreign policy objective.

To know whether there are "loopholes" by either definition, one must first determine what the national security or foreign policy objective of the control is or should be. Then, one can work backwards to create rules to accomplish the objective. I cannot emphasize enough again this basic point – before discussing what or how something should be controlled, a government must first decide and state publicly what the objective of the control is. Then, once the government decides what the objective is (beyond general statements about protecting national security), it should consider whether the control would be both effective and not counterproductive. "Effective," in this context, means that the control will prohibit the item type from whatever source going to the destination, end use, or end user of concern. "Counterproductive," in this context, refers to rules that are not effective in achieving the objective and ultimately reduce our national security by undercutting US technology leadership by creating an unlevel regulatory playing field for US industry relative to their foreign competitors.[3] For example, if a rule is unilateral, a control is often counterproductive because foreign buyers can and do eventually shift to purchasing substitute items from outside the United States that are not subject to any foreign country's export controls and that are outside the reach of US extraterritorial jurisdiction. How quickly this does or could occur depends upon the item at issue.

Since the end of the Cold War, the "classical," as I call it, national security objective for the US and its allies was to identify and regulate together under a multilateral regime system (i) weapons of mass destruction (i.e., nuclear, chemical/biological and missile-related items) and their delivery systems; (ii) conventional military items (and, later, items of importance to terrorists); and (iii) the bespoke and dual-use commodities, software, and technology that have some identifiable relationship to the development, production, or use of such items. Beginning in October 2022, the Biden Administration added to the national security objective the use of novel, mostly unilateral, partially extraterritorial list-based, end-use, end-user, and US person controls to stop or delay the indigenous production in China of (i) advanced node semiconductors (logic, NAND, and DRAM at specific technology nodes); (ii) semiconductor

[3] I realize that there are export controls that should be imposed regardless of whether they are effective or counterproductive. For example, there are some types of items and activities that the United States should prohibit to project American values, such as those that can be used to commit human rights abuses (e.g., instruments of torture), that are inherently lethal (e.g., firearms), or that are bespoke for weapons of mass destruction or conventional weapons (e.g., bombs). Given the title of this hearing, this policy issue does not appear to be relevant to the requested discussion of semiconductor manufacturing equipment controls.

manufacturing equipment; (iii) advanced computing items important to AI applications; and (iv) supercomputers. In essence, the Biden Administration determined that the advancement of indigenous capabilities to develop and produce such items in China or by Chinese companies is a per se national security threat. The Trump Administration has not amended these rules or announced a replacement for the AI Diffusion rule it has suspended. It also has not announced what its national security objectives regarding China, semiconductor manufacturing equipment, or most other items will be. This statement is not a criticism. Most administrations take their first year or so to develop their longer-term export control strategies and principles. Thus, one question for this subcommittee to ask, in its oversight role, is what is or will be the Trump Administration's export control policy and objectives.

The Biden Administration was successful in working with the governments of the two other countries that have companies that produce significant quantities of semiconductor manufacturing equipment (i.e., Japan and the Netherlands), as well as South Korea, to agree to impose their own "plurilateral" (or "trilateral") controls on specific types of chokepoint semiconductor manufacturing equipment. As evidenced by Exhibit 1, which is a highly generalized summary and chronology of the unilateral and plurilateral controls relevant to semiconductor manufacturing equipment and China, there are still, however, many "loopholes" that cause many of the controls to be ineffective and counterproductive because there is material foreign availability of substitute equipment, components, and services that are not subject to any export controls by another country's government or by extraterritorial US controls. Another way of seeing the same gaps or "loopholes" through the lens of the controls as they exist today is in Exhibit 2, which is a summary comparison of the US, Japanese, and Dutch export controls involving semiconductor manufacturing equipment and related activities. The Select Committee on the Strategic Competition between the United States and the Chinese Communist Party described well these "gaps" in its "Key Finding 1" at pages 12-15 of its October 2025 report.

Another "loophole," in both sense of the word, is the absence of allied country controls specifically on "chokepoint" components for the production in China or by Chinese companies of semiconductor manufacturing equipment – i.e., components that are mostly produced outside of China (e.g., electrostatic chucks) necessary for the development or production of such equipment. Without such chokepoint component controls, Chinese semiconductor manufacturing equipment companies are growing rapidly. The Trump Administration's AI Action plan (on page 21) makes the same point and recommends closing this gap in controls. I agree.

This all leads to the question of how this unlevel playing field – or the "gaps" or the "loopholes," in second sense of the word – can be closed. Each option has its strengths and weaknesses. The first option is to work with the key producer nations, such as Japan and the Netherlands, to get them to impose in their own controls the same types of list-based, end-use, and end-user controls the US has imposed on its items and companies. The appeal would be to common security interests of the countries in having the same controls. As I described on page 12 of earlier testimony, this is a difficult effort even in the best of times because allies still primarily see the role and purpose of export controls through the lens of the "classical" purpose for

controls. In other words, allies generally do not see the national security objective of regulating most items or any activities associated with producing integrated circuits unless there is more of a direct link to weapons of mass destruction, military end uses, or military end users.

A second option would be through the use of "sticks," such as imposition of sanctions against specific allied countries or companies until and unless they adopt the same controls. A third option would be to get the foreign country to adopt US unilateral controls as part of a larger trade deal, such as the recent one with Malaysia. A problem with such controls is that if a country does not believe it to be in its interests, implementation and enforcement are, as a practical matter, weak. A fourth option would be through the use of more "carrots" with allies, such as those I summarize on pages 19-24 of previous testimony. Another option to close gaps is to expand US extraterritorial jurisdiction over foreign-produced items outside the US through the amendment of the EAR's de minimis and Foreign Direct Product rules, which are described in EAR sections 734.3(a)(3) and 734.9. For some types of equipment, these rules can be effective because their production depends upon US components, US technology, US software, or US production equipment. For other types of equipment, the Foreign Direct Product rules quickly lose their effectiveness if foreign companies can design out from their development and production covered US components, technology, software, and equipment. In addition, the Export Control Reform Act (ECRA) only gives BIS the authority to regulate foreign-produced items outside the United States if the items are "subject to the jurisdiction of the United States," which limits the reach of US law when the connection to a US nexus is slight or missing. ECRA § 4801(1). Another option, in the meantime, to reduce the negative impact of counterproductive or ineffective controls would be to align the US controls or US licensing policies to those of competitor nations when there was clear foreign availability of substitute items when requiring or denying a license would have no impact on China's ability to receive the type of items at issue from a non-US company. I look forward to discussing the pro's and con's of each of these options as you like.

II. BIS Oversight

Another reason I was invited today is because I have managed BIS's export control licensing and policy function. HFAC is responsible on the House side for oversight of BIS and export control policy. I am a huge supporter of BIS and want to help it and its mission however I can. Thus, I thought listing out the following types of questions relevant to today's issues that I routinely received from HFAC would be of use to your oversight efforts. These are not hawkish, dovish, or political topics. They are just the basic owlish elements of running BIS's export control function as required by ECRA and the EAR. As a reminder, as reflected in ECRA and the EAR, BIS is not and should not be the only agency making export control policy or licensing decisions. Rather, BIS's job is, as the technocratic ECRA and EAR expert, to administer a system to implement (i) the broad policy vision from the White House regarding what US national security and foreign policy objectives are, consistent with ECRA; and (ii) the input and consensus from the export control and related policy and technology experts in the departments of Defense, State, Energy, Justice, and other relevant agencies, depending upon the issue. See ECRA §§ 4814(c) and 4814(b)(3).

1. Beyond general statements, what is the administration's export control policy vision?

On January 20, 2025, President Trump issued the America First Trade Policy Executive Order, which states that "the Secretary of State and Secretary of Commerce shall assess and make recommendations regarding how to maintain, obtain, and enhance our Nation's technological edge and how to identify and eliminate loopholes in existing export controls -- especially those that enable the transfer of strategic goods, software, services, and technology to countries to strategic rivals and their proxies." This hearing is consistent with this reasonable objective and will be useful in developing solutions to close loopholes, by either definition of the term. For the subcommittee's benefit, the following is a summary of the major non-enforcement-related and public export control policy decisions of the administration:

- In May, BIS announced that it would suspend the Biden Administration's AI diffusion rule that would have imposed worldwide licensing requirements on advanced computing and related items.

- In May and June, BIS imposed restrictions on exports on a range of commodities which were then relaxed in July as part of the ongoing trade negotiations with China.

- In September, BIS revoked the Validated End User authorizations for four fabs in China headquartered in Taiwan and South Korea to be replaced by individual licenses. In September, BIS also relaxed export controls against Syria. In addition, in September, BIS rescinded the Biden Administration's licensing policies regarding the export of firearms and related ammunition.

- Also in September, BIS expanded the scope of the Entity List, Military End User List, and Specially Designated Nationals controls to apply to entities that are 50% or more owned, directly or indirectly, by the listed entities. In November, BIS suspended the implementation of these rules for reasons the White House described on November 1, 2025 regarding a deal reached with China on economic and trade issues.

Again, to be clear, in making this point and in listing out these 2025 actions, I am not praising or criticizing the administration. I am only stating that, for there to be successful export control policy and to be able to identify true or informal "loopholes," there must be a vision of what the national security and foreign policy objectives should be. Career staff and political officials also need to know this answer to know which types of regulatory revisions to develop and propose, and how to proactively assess impact and monitor compliance. Industry should know the general answer so that it can plan accordingly for the future. As BIS states on its website as a "guiding principle," policy and regulatory "uncertainty, and the delay it engenders, constitute a needless transaction cost on US companies and citizens, hampering their ability to compete effectively." In addition, without a clear export control vision, allies will not be able to know if there are common interests enabling cooperation to enhance the effectiveness of controls.

2. What is the status of the efforts to harmonize controls with the governments of Japan, the Netherlands, and other producer nations of semiconductor manufacturing equipment and related items and activities?

As noted earlier, I realize this is an incredibility difficult assignment. Nonetheless, it would be useful for this subcommittee and the affected industries to know what the plans are and the extent which they involve appeals to common interests, the use of carrots, or the use of sticks. My naively optimistic view is that, with enough time, effort, analysis, and evidence, we can and should convince the key allies to think more broadly about export controls – and that there mutually beneficial ways to address supply chain retaliation issues associated with rare earths. The common security issues are considerably broader than those that existed at the end of the Cold War. I have written about this issue often over the years and think it is critical to keep trying because all other options are worse. The structure that has evolved in recent years in which such plurilateral controls could be implemented is the "Wassenaar Minus One" approach, which would be consistent with Trump Administration policies and world views, I believe. Working within such an approach and the other ad hoc plurilateral regimes (e.g., AUKUS, the trilateral controls, and the plurilateral controls against Russia) that have evolved in recent years would be in America's interests because our alliances make us stronger.

3. What is the status of BIS's staffing and resources?

BIS is responsible for administering a system that cuts across a wide variety of technologies. These include the traditional areas specific to nuclear items, chemical-biological items, missile-related items, and conventional weapons. They also include the force multiplying emerging technologies such as those related to integrated circuits, AI-related applications, quantum computers, and biotechnology. Thus, a wide variety of seasoned professionals are needed at BIS to develop and implement policy in all these areas, and to ask the right questions of industry and the other agencies to help develop policy. With the increasing global diffusion of advanced technology, it is critical that BIS have the personnel and analytical resources to monitor the impact of controls and make adjustments as warranted to ensure the controls achieve their policy objectives. In addition, the Export Enforcement officials depend upon those in Export Administration to do the licensing and other determinations to support their efforts.

During the past two years, the Executive Branch, Congress, think tanks, and other organizations have discussed the importance of BIS and ensuring that it has the resources it needs to carry out its critical national security mission. This discussion continues across the political spectrum. Proponents of increased resources for BIS have pointed to the need for attracting additional talent who understand the complex critical and emerging technologies that have national security concerns; hiring more domestic and overseas staff to monitor exports; sourcing more analytical tools to help BIS monitor shipments, vet foreign entities, and track complex supply chains; and replacing an outdated I.T. system handling license applications and other requests to better safeguard the information and allow for more robust data analysis.

4. What is the status of BIS support for the four primary multilateral regimes upon which the EAR is built?

The EAR's Commerce Control List ("CCL") of controlled items is mostly a collection of what was agreed to over the decades at the Nuclear Suppliers Group, the Australia Group, the Missile Technology Control Regime, and the Wassenaar Arrangement. These lists of items need constant pruning and updating with subject matter experts from BIS, the other agencies, industry, and the allies so that they stay relevant and current. Although the Wassenaar Arrangement has largely collapsed given Russia's membership and the arrangement's requirement for consensus decision-making, the "Wassenaar Minus One" structure developed during the previous administration is a model for developing consensus and plurilateral controls over emerging technologies warranting control by a smaller group of allies. In addition, ECRA section 4811(5) states that "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." In addition, a BIS "guiding principle is that "international cooperation is critical to BIS's activities." Cooperation should include what technologies to control, what licensing policy to apply, and regular information sharing on licensing and compliance issues. The four multilateral regimes also foster best practices guidance and engage in outreach to other countries to help develop their export control systems consist with principles of the regimes.

5. What are the data regarding BIS's education and outreach mission?

A core mission of BIS is education and outreach. Exporter understanding of the regulations enhances compliance and reduces unnecessary burden, specifically for small and medium-sized enterprises. See ECRA § 4816(c). The BIS website listing its education and outreach seminars states that events are "coming soon." In addition, interaction between government experts and industry is of benefit to government staff drafting new controls to enhance EAR compliance and understanding. Issuing Frequently Asked Questions on new rules, responding to public comments on rules, and participating in third-party outreach events are also important ways to facilitate compliance and receive industry input. BIS and other agency staff regularly meeting with the BIS Technical Advisory Committees are also critical to developing quality regulations.

6. How is BIS implementing foundational ECRA and EAR requirements with deadlines?

Section 750.2(a) requires that classification requests be completed within 14 days. Section 750.2(b) requires that advisory opinion requests be completed within 30 days. Section 750.4(c) requires that BIS process within 9 days license applications, which includes either returning the application because it is incomplete or referring it out to the departments of Defense, Energy, and State for their review and consideration. Section 750.4(d)(2) requires the other export control agencies to respond to BIS within 10 days of the need for additional information and 30 days with a recommendation to either approve or deny a license. Section 750.4(a)(1) requires that all license applications, including interagency appeals and escalations, be resolved within

90 days. Section 756.2 allows for appeals of administrative actions, such as denials of export license applications. Although there is no deadline for decisions on such appeals, indefinite review creates further uncertainty for industry. To be clear, no administration has fully lived up to all these deadlines. Nonetheless, they are regulatory deadlines that can be a checklist of issues for standard BIS oversight under any administration.

In addition, a question the subcommittee should determine is whether BIS has satisfied the requirement in ECRA §§ 4817(d) and (e) to report every 180 days to the Committee on Foreign Investment in the United States and the relevant Congressional committees the efforts to identify and control emerging and foundational technologies essential to national security that are not otherwise controlled and follow-up if BIS has not done so. There are other questions, of course, generated by ECRA requirements. For example, as required by ECRA § 4817(f)(3)(A), is the Emerging Technology and Research Advisory Committee meeting at least every 120 days? As required by ECRA § 4815(e), is BIS submitting the appropriate congressional committees a report on its end-use checks overseas? As required by ECRA § 4811(3), is BIS evaluating "on an ongoing basis" the impact of EAR controls on maintaining US "leadership in the science, technology, engineering, and manufacturing sectors, including foundational technology that is essential to innovation?" What is the status of BIS efforts required by ECRA § 4817(a) to "lead a regular, ongoing interagency process to identify emerging and foundational technologies that are essential the national security of the United States" that are not otherwise controlled? This section has other requirements for the process of doing this, including being informed by information provided by technical advisory committees. This process also requires BIS to "take into account -- (i) the development of emerging and foundational technologies in foreign countries; (ii) the effect export controls imposed pursuant to this section may have on the development of such technologies in the United States; and (iii) the effectiveness of export controls imposed pursuant to this section on limiting the proliferation of emerging and foundational technologies to foreign countries." Section 4817(a)(2)(C) requires that this process "include a notice and comment period."

7. How does BIS measure effectiveness of its controls?

To ensure controls are effective, BIS should regularly assess whether controls are effectively achieving their objectives. This means monitoring on as near a real-time basis as possible trade flows from the US and third countries, a capability even more important with the growth of extraterritorial controls. BIS should be able to regularly brief its oversight committees of its assessments.

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Thank you for asking me to testify. I am happy to help in any way I can the subcommittee's oversight mission. Export controls and a well-funded BIS and related agencies are critical to accomplishing our national security and foreign policy objectives. I am happy to answer today or later any questions you have on the topic. Remember though that I have a 3-minute, 30-minute, 3-hour, and a 3-day version of each answer.