US Department of Commerce Continues to Expand Export Controls Related to Semiconductors and Other Advanced Technologies

The new measures build on sweeping restrictions that the United States introduced in October 2022.

On October 17, 2023 — just over a year after introducing extensive regulations aimed at restricting parties in China from obtaining and manufacturing advanced semiconductors and certain other advanced technologies — the US Department of Commerce’s Bureau of Industry and Security (BIS) announced the publication of three new rules. According to BIS, these rules “reinforce” the controls introduced last year and are designed to restrict China’s “ability to both purchase and manufacture certain high-end chips critical for military advantage.” The prohibitions in two of the rules — the Advanced Computing Chips interim final rule (Advanced Chips Rule) and the Semiconductor Manufacturing Equipment interim final rule (SME Rule) — will become effective on November 17, 2023. The third rule added 13 Chinese entities to the BIS Entity List and took effect on October 17, 2023.

Together, these new rules amend the Export Administration Regulations (EAR) in significant ways, including by extending previously imposed restrictions regarding advanced semiconductors to 45 countries (including those subject to a US arms embargo). The new rules also subject more semiconductors to enhanced licensing requirements, restrict the export of certain covered items to end users around the world (based on the country in which the recipient, or its ultimate parent company, is headquartered), and clarify (and in some cases, narrow) novel prohibitions imposed last year.

This Client Alert examines the new rules by answering six key questions.

1. Do the new rules capture more semiconductors and related items than the United States previously controlled for export to China?

Yes, the new rules expand the scope of the BIS Interim Final Rule introduced on October 7, 2022 (the October 2022 Rule) to control more computing chips and more semiconductor manufacturing equipment (SME) that are subject to the EAR.

New Controls on Chips

The Advanced Chips Rule builds on two Export Control Classification Numbers (ECCNs) that BIS created in the October 2022 Rule to describe (and control for export to China and Macau) certain items:
ECCN 3A090 (that controls specific high-end chips) and ECCN 4A090 (that controls computers, electronic assemblies, and components containing certain high-performance chips). Under the framework established by the October 2022 Rule, exporters could not send items controlled by these ECCNs to China or Macau without a BIS license.

The Advanced Chips Rule cuts out some of the technicalities in ECCN 3A090, but ultimately expands the scope of ECCN 3A090. The rule does this by adding a new “performance density threshold” designed to “prevent[] the workaround of simply purchasing a larger number of smaller diameter AI chips, which, if combined, would be equally powerful as the restricted chips.” The rule also adds so-called “.z” paragraphs in 3A001, 4A003, 4A004, 4A005, 5A002, 5A004, 5A992, 5D002, and 5D992 to capture chips controlled by these ECCNs that “meet or exceed” the performance parameters of 3A090 and 4A090.

New Controls on SME

The SME Rule makes three notable changes designed to control semiconductor manufacturing equipment and associated technology and software. These changes build on the October 2022 Rule, which established ECCN 3B090 to describe, and control the export of, certain advanced SME, parts, and components to China or Macau.

The SME Rule keeps this license requirement intact but makes a few other changes. First, the SME Rule eliminates ECCN 3B090 and transfers the items previously described under that ECCN to two longstanding ECCNs, 3B001 and 3B002. Second, the SME Rule adds several new types of semiconductor manufacturing equipment to these ECCNs (e.g., equipment designed for isotropic dry etching, wet chemical processing, and other highly technical applications). Third, the SME Rule revises four ECCNs that control software and technology (ECCNs 3D001, 3D002, 3D003, and 3E001) to make harmonizing changes consistent with the additions to 3B001 and 3B002. In the SME Rule, BIS explains that the agency believes that the newly controlled technology and software is, with “limited exceptions,” only used to make advanced chips (i.e., “logic ICs with non-planar transistor architecture or with a “production” ‘technology node’ of 16/14 nanometers or less”).

Somewhat buried in the SME Rule is a response by BIS to a public comment that appears to introduce a broad interpretation of the phrase “is destined for” when that phrase is used to restrict the export of an item with knowledge that it “is destined for” certain end uses (as it is in Section 744.23 of the EAR). According to BIS, a license requirement is triggered by knowledge that an item is destined for a prohibited activity — “either in its original form or as subsequently incorporated into a foreign-made product.” (88 Fed. Reg. 73433, October 25, 2023 (emphasis added)). Although BIS frames this interpretation as longstanding (noting that “BIS officials have provided similar and consistent guidance on these types of upstream transactions that involve ‘knowledge’ that the item ‘is destined for’ a prohibited end use, including in the context of other part 744 end uses”), it appears to create a type of “see-through” rule and could render de minimis principles inapplicable in certain cases.

2. Do the October 2023 rules expand restrictions to destinations beyond China?

Yes, these rules expand the controls introduced in the October 2022 Rule to apply to a much wider list of countries and territories beyond China and Macau.

The SME Rule and the Advanced Chips Rule require licensing for exports, re-exports, or transfers of covered SME and covered items used in or for supercomputers or advanced integrated circuits when destined to Macau and the 23 countries (including China) in Country Group D:5 (i.e., the countries subject to a US arms embargo) (Controlled Areas).1
The Advanced Chips Rule also extends the reach of controls on certain “Advanced Computing Items” (i.e., ECCNs 3A090 and 4A090, and the nine ECCNs identified by the addition of so-called “.z” paragraphs), requiring licensing to all destinations in Country Groups D:1, D:4, and D:5 (excluding destinations also specified in Country Groups A:5 or A:6 — i.e., Cyprus and Israel). As a result, licensing will be required to export, re-export, or transfer (in country) these items to or within 45 destinations (including China).²

In addition, the Advanced Chips Rule imposes an effective worldwide licensing requirement (which will be found at Section 744.23(a)(3)) based on the identity of the end user, requiring licensing to all countries other than those listed in Country Groups D:1, D:4, or D:5 (excluding any destination also listed in Country Group A:5 or A:6) — which are covered by a separate licensing requirement — of Advanced Computing Items (as defined above) when destined to an entity that is headquartered in (or whose ultimate parent company is headquartered in) a Controlled Area (Controlled Subsidiaries). This control requires, in effect, exporters to have a deeper understanding of who is (or who may be indirectly) receiving controlled items. Although the Advanced Chips Rule does not define the terms “headquartered in” or “ultimate parent company,” BIS has requested comments on the definitions of these terms, “including comments on the ability to access information required to assess the status of a foreign party.”

In General: Can the subsidiary of a Chinese company located outside of China obtain Advanced Computing Items subject to the new or expanded licensing requirements?

As a general matter, a subsidiary of a China-headquartered company (or a subsidiary that has as its ultimate parent an entity headquartered in China) would be a Controlled Subsidiary that is not eligible to receive items covered by the licensing requirement, absent prior licensing or a license exception (see below). For example, licensing generally would be required to export ECCN 3A090 items to the subsidiary of a China-headquartered company located in Germany (a Country Group A:5 country).

In General: Can a Chinese company continue to work with cloud service providers located overseas?

For now, the rules do not directly impose new or expanded restrictions on the provision of computing capacity or high-performance computing capabilities to China or elsewhere. That said, BIS indicated in response to a public comment that it is aware that Infrastructure-as-a-Service (IaaS) solutions (including those allowing computing workloads to be offloaded to computers in other states) have the potential to undermine the effectiveness of controls introduced in the October 2022 Rule by permitting “customers to develop or with the intent to develop large dual-use AI foundation models with potential capabilities of concern, such as models exceeding certain thresholds of parameter count, training compute, and/or training data.” In the Advanced Chips Rule, BIS notes that the agency is evaluating how it may approach this issue through a regulatory response, and is soliciting comments from IaaS providers, including on the feasibility of IaaS providers complying with additional regulations in this area.

3. Are there EAR authorizations that allow parties to conduct exports that are otherwise restricted?

Yes, these rules establish a new license exception, Notified Advanced Computing (NAC), and new Temporary General Licenses (TGLs), which permit parties to conduct exports, re-exports, and in-country transfers that are restricted under the new requirements, without obtaining prior licensing. However, there are important exceptions, limitations, and requirements.
License Exception NAC

The Advanced Chips Rule creates new License Exception NAC that authorizes exports, re-exports, and transfers (in-country) of Advanced Computing Items (which include software controlled under the new 5D002.z and 5D992.z) — except for chips designed or marketed for use in a data center that meet the parameters of ECCN 3A090.a — to or within the Controlled Areas.

License Exception NAC also authorizes exports, re-exports, and transfers (in-country) of these items to destinations outside the Controlled Areas, where a license requirement would otherwise apply (under Section 744.23(a)(3)(i)) because the recipient is a Controlled Subsidiary.

To be eligible for License Exception NAC, an export, re-export, or transfer (in-country) of a covered item to or within any location must meet the following criteria:

- Exports and re-exports must be made pursuant to a written purchase order, unless specifically exempted (e.g., commercial samples);
- The export, re-export, or transfer (in-country) cannot be to or for a prohibited end-user or prohibited end use under parts 744 or 746 of the EAR (such as a “military end user,” Entity Listed Party, or “military end use”) — except for parties solely restricted under the new licensing requirement at Section 744.23(a)(3)(i) (discussed above).

In addition, parties using License Exception NAC to export or re-export a covered item to a Controlled Area must submit a prior notification to BIS via SNAP-R at least 25 calendar days before the export or re-export. (A notification is not required to transfer — rather than export or re-export — covered items within a Controlled Area pursuant to this license exception.)

Once an exporter or re-exporter submits a NAC notification, BIS will have 25 days to review it. Applicants may track the status of a pending NAC notification by logging into BIS’s System for Tracking Export License Applications (STELA). According to the Advanced Chips Rule, the STELA system will confirm whether the exporter or re-exporter can use License Exception NAC on (or before) the 25th calendar day following the date of registration.

The Advanced Chips Rule does not identify the criteria BIS will consider in determining whether to allow an exporter or re-exporter to use License Exception NAC. The rule notes that BIS “will provide further information on the notification process in policy guidance.” That said, given that parties must wait for BIS to expressly confirm that the export or re-export can proceed, this pre-notification requirement may function in practice more like a traditional licensing requirement (albeit on an expedited timeframe) than a pure “notice” obligation.

Temporary General Licenses

Entities headquartered in the United States or certain other countries may be eligible to use TGLs under the Advanced Chips Rule and the SME Rule for their subsidiaries in China (and other locations) to obtain certain controlled items that would otherwise require a license from BIS. Exporters meeting the scope of the TGLs are exempt from certain license requirements beginning on November 17, 2023, until December 31, 2025.

Under the Advanced Chips Rule, a recipient meeting the destination and end-use scope below may be eligible to obtain certain controlled items without a license.
• **Destination Scope**: The recipient is located in, but neither the recipient nor its parent is headquartered in, a country in Country Groups D:1, D:4, or D:5 (including China) (not including destinations that are also specified in Country Groups A:5 or A:6).

• **End-Use Scope**:
  
  – The recipient will use the item in integration, assembly (mounting), inspection, testing, quality assurance, or distribution of certain items specified in the TGL;

  – The ultimate end use of the item will take place outside of countries specified in Country Groups D:1, D:4, or D:5 (including China) (again, excluding countries also identified in Country Groups A:5 or A:6); and

  – The ultimate end user of the item is not a Controlled Subsidiary.

If the recipient meets the destination and the end-use scope above, the exporter must assess whether the item is classified as one of the following ECCNs specified under the Advanced Chips Rule TGL.

Similarly, a TGL under the SME Rule allows companies headquartered in the United States and certain other countries, but not “majority-owned” by Chinese companies, to send certain controlled items to their subsidiaries.

• **End-Use Scope**: The recipient is engaged in developing or producing semiconductor manufacturing equipment at the direction of a company headquartered in the United States or a country identified in Country Group A:5 or A:6, that is not majority-owned by an entity headquartered in a country identified in a Controlled Area (including China).

• **Product Scope**: The item is used for the development and production of parts, components, or equipment specified in certain ECCN 3B categories as specified under § 744.23(a)(4) and controlled only for AT (anti-terrorism) reasons. If the product scope and end user scope are met, the exporter should consider if it is eligible to rely on the TGL, considering the other conditions and limitations to the use of this authorization. For example, this TGL is not applicable to the indigenous development or production of items within Controlled Area facilities. It is also not applicable to other prohibited end uses or end users as specified in EAR Sections 744 or 748 (e.g., parties on the Military End User List, Unverified List, or Entity List).

**In General: Can a Chinese subsidiary of a non-Chinese company still obtain restricted items?**

Potentially, provided the subsidiary and the transaction satisfy the conditions of a TGL. For instance, a Chinese subsidiary may be able, depending on its ownership, to receive certain controlled items under a TGL. Effective November 17, 2023, and until December 31, 2025, recipients meeting the destination and end-use scope under the TGLs are eligible to obtain certain controlled items without a license from BIS.

For example, a French parent company (a country identified in Country Group A:5) can send controlled items to its manufacturing facility in China, provided that the item meets the product scope under either the Advanced Chips TGL or the SME TGL, and the other conditions of the relevant TGL are met.
4. How do these rules restrict the activities of “US persons” around the world?

One of the more novel elements introduced by the October 2022 Rule was a prohibition on US persons shipping or servicing — or “facilitating” the shipment or servicing of — certain items not subject to the EAR (i.e., advanced semiconductors or items used in the development or production of those semiconductors). This rule was novel because typically, as a jurisdictional matter, and with certain exceptions, the EAR’s prohibitions and licensing requirements relate to items, by regulating the activities of persons (regardless of location or nationality) that export, re-export, or transfer items subject to the EAR. Although the EAR has long restricted US persons from conducting certain narrow categories of activities (such as designing or producing nuclear weapons, missiles, and chemical or biological weapons for certain foreign countries) the restrictions on US person activities in the October 2022 Rule seemed unusually far-reaching —because they restricted US persons from “facilitating” the covered activities, without defining that term. The term “facilitation” in the context of US economic sanctions has been understood to be quite expansive.

The SME Rule simplifies the US person restrictions that the October 2022 Rule introduced by consolidating nine paragraphs of restricted activities into just three, and more precisely defining the set of activities by US persons that are covered by the prohibition. At the same time, the SME Rule expands this element of the October 2022 Rule by increasing the scope of the covered prohibitions to encompass not only activities of US persons involving items not subject to the EAR that are going to or within China or Macau, but also items that are going to or any Controlled Area.

The updated US person restrictions clarify that a license is required for US persons to (i) authorize the shipment or transfer (in-country) of; (ii) conduct the delivery of; or (iii) service items not subject to the EAR that:

- the US person knows will be used in the development or production of chips at a facility where production of so-called “advanced-node” chips occurs, and the facility is owned by a Controlled Subsidiary;

- meet the parameters of product groups B (test, inspection, and production equipment), C (materials), D (software), or E (technology) of Commerce Control List Category 3 (electronics), and that the US person knows will be used in the development or production of integrated circuits at a facility owned by a Controlled Subsidiary, but the US person does not know if the facility produces advanced-node chips; or

- meet the parameters of certain paragraphs in ECCNs 3B001, 3B002, 3D001, 3D002, or 3E001 and are destined to or within a Controlled Area. (These changes seem intended to harmonize the US person rule with the deletion of 3B090 and the transfer of the items previously controlled under that ECCN to 3B001 and 3B002.)

Notably, the SME Rule amends the EAR to include several exclusions, including those providing that the US person controls do not apply to administrative, clerical, or back-end activities (such as assembling and packaging), and do not apply to natural US persons employed or working on behalf of an entity headquartered in the United States or a country in Country Group A:5 or A:6 (provided that entity is not majority-owned by an entity headquartered in a Controlled Area).

5. Do the rules impact semiconductors and related items that are made in China?

Yes, the Advanced Chips Rule expands the Advanced Computing Foreign Direct Product Rule (FDP Rule) in EAR Section 734.9(h). The October 2022 Rule created the Advanced Computing FDP
Rule, which restricts the unlicensed export from abroad, re-export, or transfer (in-country) of certain foreign-produced items.

The Advanced Computing FDP Rule uses two prongs to determine whether an item is subject to the EAR as a result of this rule: the product scope and the destination or end-use scope.

- The Advanced Chips Rule leaves the first prong of the FDP Rule (the product scope) largely unchanged. The product scope will continue to cover chips and other items specified in certain ECCNs that are (i) the direct product of technology or software that is subject to the EAR specified in one of 19 ECCNs identified in the rule, or (ii) produced by a complete plant or major component of a plant located outside the United States that is itself a direct product of US-origin technology or software specified in the same ECCNs.

- On the other hand, the second prong of the Advanced Computing FDP Rule, which previously covered only China and Macau, will now reach much more broadly. Effective November 17, 2023, it will apply to all destinations in Country Groups D:1, D:4, or D:5 (excluding any countries also listed in A:5 or A:6) or worldwide if the recipient is a Controlled Subsidiary. This expanded destination or end-use scope will now also cover technology that is developed by a Controlled Subsidiary that is for the production of a mask or an integrated circuit wafer or die.

Separately, under the third rule that BIS issued alongside the Advanced Chips Rule and SME Rule, BIS added 13 entities to its Entity List, and each of these parties are subject to a so-called “Footnote 4” designation. This means that a license is required to send to these 13 entities items that are the direct product of, or that were produced in a plant that is a direct product of, certain ECCNs listed in a separate FDP Rule, the-called “Entity List FDP rule” found at EAR Section 734.9(e)(2).

6. Did BIS issue guidance to assist exporters conduct “know your customer” diligence?

Yes. In response to public comments about the October 2022 Rule, BIS added five new “red flags” to the Supplement no. 3 to Part 732 list of red flags intended to provide additional compliance guidance to assist exporters, re-exporters, and transferors. These new red flags, which, according to BIS, “have applicability for the types of transactions involving items” from the October 2022 Rule, are:

- **Red flag 15**: Prior to the October 2022 Rule, a customer’s website or other marketing materials indicated that the company had advertised its capability for “developing” or “producing” “advanced-node integrated circuits.”

  The SME Rule introduces to Section 772.1 of the EAR a new defined term, “advanced-node integrated circuit,” to simplify the regulatory text in various sections of the EAR. The EAR will define this term as “includ[ing] integrated circuits that meet any of the following criteria:

  1. Logic integrated circuits using a non-planar transistor architecture or with a “production” ‘technology node’ of 16/14 nanometers or less;

  2. NOT AND (NAND) memory integrated circuits with 128 layers or more; or

  3. Dynamic random-access memory (DRAM) integrated circuits using a “production” ‘technology node’ of 18 nanometer half-pitch or less.”

  Other terms in quotes in the new red flags are separately defined in Part 772 of the EAR.
• **Red flag 16**: Similar scenario to red flag 15, but the customer’s website or marketing materials indicated that the company had advertised its capability for the “development” or “production” of “advanced-node integrated circuits.”

• **Red flag 17**: A customer is “known” to “develop” or “produce” items for companies located in a Controlled Area that are involved with supercomputers.

• **Red flag 18**: A customer has indicated intent to “develop” or “produce” supercomputers or integrated circuits in a Controlled Area in the future that would otherwise be restricted under § 744.23(a)(1)(i) or (a)(2)(ii) (“supercomputer” and semiconductor manufacturing end-use restrictions).

• **Red flag 19**: The exporter has “knowledge” that it is or seeks to be producing at a facility where “production” of “advanced node ICs” occur, for a company headquartered in a Controlled Area, an integrated circuit, or a computer, “electronic assembly,” or “component” that will incorporate (A) more than 50 billion transistors and (B) high-bandwidth memory (HBM).

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Endnotes

1 Country Group D:5 countries are Afghanistan, Belarus, Burma, Cambodia, Central African Republic, China, Congo, Cuba, Cyprus, Eritrea, Haiti, Iran, Iraq, North Korea, Lebanon, Libya, Russia, Somalia, South Sudan, Syria, Venezuela, and Zimbabwe.

2 In addition to the Country Group D:5 countries: Armenia, Azerbaijan, Bahrain, Egypt, Georgia, Israel, Jordan, Kazakhstan, Kuwait, Kyrgyzstan, Laos, Moldova, Mongolia, Oman, Pakistan, Qatar, Saudi Arabia, Tajikistan, Turkmenistan, UAE, Uzbekistan, Vietnam, and Yemen.

3 These ECCNs are 3D001, 3D991, 3E001, 3E002, 3E003, 3E991, 4D001, 4D990, 4D993, 4D994, 4E001, 4E992, 4E993, 5D001, 5D002, 5D991, 5E001, 5E991, or 5E002.