



December 14, 2018

Lisa Barton  
Secretary to the Commission  
United States International Trade Commission  
500 E Street, SW, Room 112A  
Washington, DC 20436

**Re: Submission of the Semiconductor Industry Association on “United States-Mexico-Canada Agreement (USMCA): Likely Impact on the U.S. Economy and on Specific Industry Sectors” Investigation No. TPA-105-003**

The Semiconductor Industry Association, representing leading U.S. companies engaged in the design and manufacture of semiconductors, appreciates the opportunity to provide comment on the impact of the U.S.-Mexico-Canada Agreement (USMCA) on the U.S. semiconductor industry.

Semiconductors are the fundamental enabling technology of modern electronics that has transformed virtually all aspects of our economy, ranging from information technology, telecommunications, health care, transportation, energy, and national defense. The U.S. semiconductor industry is the global leader in industry market share and competitiveness, a position facilitated by two decades of increasing openness and access to global markets. With over 80 percent of U.S. semiconductor companies' sales to customers overseas, free and open trade has been critical to the success of our industry and sustains the 1.25 million U.S. jobs directly and indirectly supported by the semiconductor industry.

SIA has actively supported the U.S. government's effort to modernize NAFTA and pursue other free trade agreements that establish new and higher-standard norms and disciplines for international trade in the digital age. In our submission on negotiating objectives for a modernized NAFTA, SIA noted a number of protectionist

policies and unfair practices around the world that threaten the global digital economy and U.S. competitiveness. These unfair practices include non-commercial government support, forced transfer of critical technology or sensitive IP, discriminatory regulations and domestic standards, onerous licensing and certification regimes, trade secrets, forced disclosure of encryption algorithms or forced use of national encryption algorithms, and localization policies. SIA notes that the new U.S.-Mexico-Canada Agreement contains strong, positive provisions in a number of priority areas for our industry, including in the chapters on Digital Trade, Sectoral Annexes (ICT), Technical Barriers to Trade, E-Commerce, Tariffs, State-Owned Enterprises, and Intellectual Property. We highlight the importance of these provisions to our industry below and encourage the U.S. government to pursue similar trade disciplines in future agreements.

## **New Rules on Commercial Cryptography**

The USMCA contains a provision in the Sectoral Annexes chapter that generally prohibits restrictions on the import, use, and sale of commercial cryptographic goods – the first such requirement to be included in a U.S. trade agreement.<sup>1</sup> Specifically, the USMCA prohibits parties from imposing discriminatory restrictions on commercial products with encryption, such as requirements to turn over proprietary information as condition of market access, to partner with a domestic entity, or to use a particular technology or standard.

Semiconductor-enabled encryption is now used in nearly all commonly used and globally traded ICT products to provide security and protect data. Government restrictions on the use, import, or sale of commercial products with encryption (i.e. import bans, technology mandates, or requirements to transfer or provide access to proprietary information) undermine security and could threaten the large trade flows of semiconductors and other ICT products that contain encryption in some form (i.e. computers, smartphones, telecom equipment, IoT devices, video games, etc.) on the scale of hundreds of billions of dollars.

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<sup>1</sup> The 11-member Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) is the first trade agreement to incorporate encryption disciplines.

USMCA parties, including the United States, do not restrict or regulate commercial cryptographic goods, in recognition that such restrictions cause more harm than benefit given their widespread use. However, other major U.S. trading partners are rapidly adopting broad and discriminatory regulation of commercial encryption to support indigenous innovation efforts, including measures that directly or indirectly favor specific technologies, block companies from using the strongest available security technologies in the marketplace, or force disclosure of sensitive information. The USMCA provision on commercial cryptographic goods is an extremely important step in establishing global trade norms related to encryption, thus mitigating against the adoption of restrictive policies in third countries. Similar provisions should be pursued in all future U.S. trade agreements to ensure that rules governing the use and trade of commercial encryption products do not unfairly impede the trade of semiconductors and the ICT products that depend on them.

### **New State-Owned Enterprise (SOE) Disciplines**

SOE activity guided or aided by government influence, rather than by commercial considerations, can cause harmful market and investment distortions. While SOE's are not major consumers of semiconductors in Mexico or Canada, they are important players in other markets. In some non-USMCA markets, foreign state-owned "national champions" are being encouraged to invest in rapidly expanding domestic IC design capabilities and manufacturing capacity, enabled by massive government subsidies in the form of "investment funds." To date, one country has raised more than \$21 billion for a national level IC Fund, with more than \$80 billion raised by local government funds.

As noted by the World Semiconductor Council, an industry body representing the global semiconductor business community, "market-distorting subsidies and other types of non-market-based support by governments and government-related entities will have a significant disruptive impact on the development of the semiconductor industry. Such practices can lead to excess capacity that is not commercially justified, create unfair competitive conditions,

hinder innovation, and undermine the efficiency of global value chains.”<sup>2</sup> The risk is further exacerbated by the lack of meaningful market-based disciplines on investments in new capacity and by the lack of transparency on relevant subsidy programs to allow other regions to understand their likely effects on trade and investment.

The new SOE chapter in the USMCA incorporates several important disciplines aimed at ensuring SOEs and regulatory authorities compete fairly and transparently based on market considerations. Key provisions in the USMCA include:

- A. Clear definition of SOE and “public body” based on an objective control standard:** Most foreign government subsidies for semiconductors of relevant concern are being provided by state-owned banks or government-guided investment funds that may not possess or exercise “government authority,” or perform a “government function,” but are directly or indirectly controlled by the government through majority or minority ownership interests. Defining SOEs and public bodies on an objective “control” or “power to control” standard, such as that included in the USCMA, is an important clarification for applying and enforcing the chapter’s investment disciplines. It will prevent SOEs, acting on behalf of governments, to take actions that discriminate against foreign investors and then evade challenge by asserting they are not covered by the disciplines of the agreement.
  
- B. Strong transparency requirements for provisions of equity capital or non-commercial assistance to SOEs:** There has been a significant increase in government assistance to the semiconductor industry in recent years, with some major governments seeking to develop an entirely self-sufficient semiconductor industry enabled by government backed “investment funds.” These government support programs and

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<sup>2</sup> Joint Statement of the World Semiconductor Council, May 24, 2018.  
<http://www.semiconductorcouncil.org/wp-content/uploads/2018/05/22nd-WSC-Joint-Statement-San-Diego-CA-FINAL-1.pdf>

infusions of equity capital are largely not notified to the WTO and the small fraction that are notified lack key details to sufficiently inform other WTO Members of their operation and likely trade effects. To introduce greater transparency into government support in the semiconductor sector, including the provision of equity capital, in November 2017, the Government and Authorities Meeting on Semiconductors (GAMS)<sup>3</sup> established a set of “Regional Support Guidelines and Best Practices.” SIA is pleased to note that the USMCA reflects several of the transparency provisions outlined in these Guidelines and Best Practices, including:

- 1) Requirement that parties shall promptly provide, in writing, information regarding any policy or program that provides for the provision of either non-commercial assistance or *equity capital* to its state-owned enterprises, upon written request of another party.
- 2) Information provided pursuant to a request shall be sufficiently specific to enable the requesting party to understand the operation of the policy or program and evaluate its effects or potential effects on trade and investment. Such information includes: form of assistance; names of the government agencies or entities providing the assistance or equity capital; names of the SOEs that have received or are eligible to receive assistance; legal basis and policy objective of the policy or program providing for assistance or equity infusion; the total amount of the assistance; for provision of equity capital, the amount invested, number/description of shares received, and any assessment details with respect to the underlying investment decision; and duration or any other time limits of the policy or program.

Such transparency is vital for developing market-based responses by industry and governments to changing market conditions and for minimizing the risks of harmful trade distortions and accompanying pressures for unilateral actions. SIA notes and supports the discussion of

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<sup>3</sup> The Government and Authorities Meeting on Semiconductors (GAMS) is an annual government-to-government and government-to-industry dialogue comprised of the governments and authorities of China, Chinese Taipei, the European Union, Korea, Japan and the United States.

similar transparency provisions in the context of U.S.-EU-Japan trilateral work to strengthen WTO subsidies disciplines and encourages the U.S. government to prioritize these disciplines in future trade agreements.<sup>4</sup>

### **C. Prohibition of certain forms of non-commercial assistance**

The nature of semiconductor products and production process – high capital costs, extremely short product life-cycles, high price sensitivity – makes the semiconductor industry particularly vulnerable to the subversion of market forces caused by non-commercial assistance, such as subsidies. Non-commercial assistance in our sector can have lasting implications by subverting market signals to unviable companies to either exit the market or to reduce capacity, thus preventing a rebalancing of supply and demand and fostering global excess capacity, injurious dumping, and price declines, or lead to government-directed, non-market-based capacity expansions. This causes prices to be depressed and prevents viable producers from being able to invest in next-generation product development and equipment. SIA welcomes USMCA provisions on non-commercial assistance (NCA) intended to level the playing field for private entities and avoid harmful trade distortions. This includes the prohibition of certain forms of non-commercial assistance, including 1) loans or guarantees to an uncreditworthy SOE; 2) non-commercial assistance to an SOE that is insolvent or on brink of insolvency without a credible restructuring plan; and 3) debt-equity conversions that would be inconsistent with usual private investment practice. SIA also welcomes the commitment from USMCA parties to not cause adverse effects or injury to another party's domestic industry by providing non-commercial assistance to an SOE.

While the NCA provisions in the USMCA are an important first step in strengthening global trade rules related to subsidies and government assistance in the private sector, we encourage the U.S. government to

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<sup>4</sup> EU-Japan-US Scoping Paper, 31 May 2018

continue to seek stronger rules in future agreements. The most trade-distorting forms of domestic assistance in the semiconductor industry are production subsidies with the goal of import substitution, particularly those that create or maintain market-distorting excess capacity. Certain governments have sought to craft these harmful assistance programs in a way that may avoid WTO scrutiny under the current SCM agreement, including through equity infusions, loans, and grants. These assistance programs are sometimes referred to as “indigenization” or “nationalization” (which is a code word for prohibited import substitution) or global dominance efforts (which is a code word for boosting export volumes in international markets). In future negotiations, we encourage the Administration to include criteria for situations in which non-commercial assistance *threatens* to cause serious adverse effects or injury, so that action can be taken before a U.S. industry is seriously harmed.

### **Stronger Trade Secret Protections**

Trade secrets represent core business assets for semiconductor companies. In our industry, trade secrets include manufacturing know-how, chemical formulations, chip designs, and other proprietary information. Yet despite their tremendous importance, trade secrets remain extremely vulnerable, especially in jurisdictions with weak laws and/or enforcement practices. Particularly concerning is the misappropriation of trade secrets enabled or encouraged as result of government industrial policy. Some governments have established specific technology development goals, backed by massive subsidies. There have been numerous publicly reported instances in which individuals employed by state-owned firms and or their partners/affiliates have chosen to steal or misappropriate intellectual property, including trade secrets, from their previous employer as a short-cut to achieving industry development goals and compete in the global marketplace.<sup>5</sup>

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<sup>5</sup> Authorities Bust Group Stealing Win Semiconductors Trade Secrets. Focus Taiwan, November 6, 2015

Another concern is the implementation by some governments of overbroad certification systems and other regulatory schemes that require the unnecessary disclosure of trade secrets and other IP as a condition of market access. The risk that the required sensitive information will leak to domestic competitors is compounded by the reality that many governments have inadequate safeguards to protect such information, and some of those same governments desire increased technology transfer from developed to developing markets.

SIA very much welcomes the strong trade secret protections included in the USMCA. Key provisions that benefit our industry include:

- (1) The application of robust criminal prosecution and penalties for trade secret theft, including penalties for government officials who wrongfully disclose trade secrets
- (2) Stronger confidentiality safeguards for trade secrets during litigation proceedings
- (3) Enhanced remedies for trade secret theft, including compensatory damages
- (4) Ban on excessive or discriminatory licensing conditions that dilute the value of trade secrets
- (5) Ban on the forced disclosure of source code, or an algorithm embedded in that source code, as a condition or market access.

SIA takes note of the recent actions by the Department of Justice and the Department of Commerce to address the misappropriation of trade secrets in the semiconductor industry,<sup>6</sup> and we call on the Administration to maintain a strong focus on protecting trade secrets in future trade agreements.

## **New Digital Trade Rules**

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[https://www.eetimes.com/document.asp?doc\\_id=1331144](https://www.eetimes.com/document.asp?doc_id=1331144), Samsung Electronics Executives Pass on Core Technology. SBS News, September 22, 2016: <http://v.media.daum.net/v/20160922211514100> (Korean).

<sup>6</sup> DOJ has announced a new initiative to combat IP theft from China, see <https://www.justice.gov/opa/speech/file/1107256/download>, and Commerce has recently taken action against one Chinese state-owned semiconductor company for using misappropriated technology in the development of its own products. See 83 Fed. Reg. 54,519 (Oct. 30, 2018).

Governments are increasingly using “forced localization” tactics to advantage domestic companies and/or force foreign investors to use domestic technology, transfer their own technology, localize data storage and processing, or build expensive infrastructure in a region as a condition of market access. These rules raise costs, distort markets, reduce global interoperability, and increase the risk of unauthorized disclosure or theft of IP. SIA applauds the strong digital trade provisions incorporated in the USMCA to counter these measures, including the bans on local content requirements (the requirement to purchase or use local technology in products and services), requirements to transfer source code or algorithms, and technology/infrastructure localization requirements.

### **Tariffs and Customs Duties**

SIA applauds the commitment by parties to not impose customs duties or fees on trade in digital products transmitted electronically, such as apps, music and e-books. This makes duty-free treatment for electronic transmissions and digital goods permanent amongst the U.S., Mexico, and Canada on what otherwise is a rolling two-year moratorium renewed (so far) at each WTO ministerial meeting. Noting efforts by some governments to let the WTO moratorium expire and establish duty/tariff mechanisms on data flows, this is an important provision that should be prioritized in all future U.S. trade agreements.

We are, however, disappointed that the USMCA does not contain a provision that commits all parties to joining the Information Technology Agreement (ITA) and its expansion. Canada and the U.S. are signatories to this important agreement, signed in 1998 and expanded in 2015, which eliminates tariffs on many technology products like computers, smartphones, cell phones and semiconductors. However, Mexico is not a signatory to the original ITA or its expansion. To date, 82 WTO members are ITA signatories, while 53 members have signed on to ITA expansion, including many central and Latin American countries like Costa Rica, Guatemala, El Salvador, Colombia, Honduras, Nicaragua, and Panama. Mexico’s failure to join the ITA makes Mexico an outlier in the region and a major free-rider on the tariff-free treatment provided on an MFN basis by the other ITA signatories. It also means that Mexico can still impose tariffs on

advanced semiconductors that were not classified as semiconductors when NAFTA was first negotiated.

Broadening global participation in the ITA and ITA expansion is important for lowering consumer prices and the costs of trade for semiconductors and ICT products, and we encourage the U.S. government to prioritize elimination of duties on ICT and digital goods in future agreements.

### **Counterfeit Goods Enforcement**

Earlier this year the USTR, in the 2018 Special 301 Report, downgraded Canada to the Priority Watch List because of its failure to resolve key longstanding deficiencies in protection and enforcement of IP. One of the deficiencies identified in the report is the fact that Canada does not provide customs officials with the ability to inspect, detain, seize, and destroy in-transit counterfeit and pirated goods entering Canada destined for the United States. SIA is thus pleased that the USMCA will require Canada to provide that the Canada Border Services Agency (CBSA) may initiate border measures ex officio against suspected counterfeit trademark goods to help prevent counterfeit goods from entering our highly integrated supply chains.<sup>7</sup>

Counterfeits are a recognized problem in the semiconductor industry. Because semiconductors are an essential component in downstream electronic products, the harms from counterfeit semiconductors are disproportionately higher than most other counterfeit products, even where the monetary value of the semiconductor itself may be lower than other types of counterfeits. For example, a \$.50 counterfeit semiconductor can cause a \$500 computer to fail. Additionally, since semiconductors are used in many applications with health and safety implications, the consequences of a counterfeit semiconductor can be costly and dangerous for consumers. There are actual examples of counterfeit semiconductors found in, or destined for, an Automated External Defibrillator

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<sup>7</sup> USMCA, Article 20.J.6: Special Requirements related to Border Measures; Section 5: “Each Party shall provide that its competent authorities may initiate border measures ex officio against suspected counterfeit trademark goods or pirated copyright goods under customs control<sup>96</sup> that are: (a) imported; (b) destined for export; (c) in transit;<sup>97</sup> and (d) admitted into or exiting from a free trade zone or a bonded warehouse.”

(AED), a braking system for high-speed trains in Europe, automotive braking systems and automotive airbag deployment systems, a power supply system used for airport landing lights and automated medication applications, including intravenous (IV) drip machines.<sup>8</sup> The consequences of using a counterfeit semiconductor that can result in product malfunction are obvious.

The infiltration of counterfeit semiconductors into national security systems is also a concern. In 2011, the Senate Armed Services Committee (“SASC”) investigation into counterfeit electronic parts in the defense supply chain found extensive infiltration of counterfeit semiconductors in critical defense systems including in mission computers for the Missile Defense Agency’s THAAD missile, military aircraft including SH-60B, AH-64, and CH-46 helicopters, C-17, C-130J, and C-27J military transport planes, and the P-8A Poseidon, a military plane with antisubmarine and anti-surface warfare capabilities.<sup>9</sup> As Lt. Gen. Patrick J. O’Reilly, Director, Missile Defense Agency, testified at a 2011 SASC hearing, “We do not want a \$12 million missile defense interceptor’s reliability compromised by a \$2 counterfeit part.”<sup>10</sup>

Canada’s commitment to provide ex officio powers to its Customs agency against suspected counterfeits is welcome but not meaningful unless Canada is willing to aggressively use its discretionary powers. The SIA thus encourages the USITC study to recommend that the U.S. government continue to press Canada to vigorously pursue counterfeit semiconductors. SIA also recommends that USCBP conduct a month-long joint operation with Canada focused on counterfeit semiconductors.<sup>11</sup> Indeed, the USMCA anticipates parties exchanging information

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<sup>8</sup> World Semiconductor Council AntiCounterfeiting White Paper, p. 5, <https://www.semiconductors.org/wp-content/uploads/2018/01/SIA-Anti-Counterfeiting-Whitepaper.pdf>

<sup>9</sup> Senate Armed Services Committee, *Inquiry Into Counterfeit Electronic Parts In The Department of Defense Supply Chain* at i. (May 21, 2012) (“SASC Report”). at 9.

<sup>10</sup> *Investigation into Counterfeit Electronic Parts in the Department of Defense Supply Chain: Hearing Before the S. Comm. on Armed Services*, 112th Cong. 39 (Nov. 8, 2011), available at <http://armedservices.senate.gov/statemnt/2011/11%20November/OReilly%2011-08-11.pdf>.

<sup>11</sup> This recommendation aligns with SIA’s comments to the U.S. Intellectual Property Enforcement Coordinator recommending that it’s Joint Strategic Plan on Intellectual Property Enforcement include a stepped-up focus by U.S. Customs and Border Protection (USCBP) to stop semiconductor counterfeiting. Semiconductor Industry Association, Submission to the U.S. Intellectual Property Enforcement Coordinator regarding the Development of the Joint Strategic Plan on Intellectual Property Enforcement, September 13, 2018 <https://www.regulations.gov/document?D=OMB-2018-0009-0024>

on transshipments to help identify suspect goods at the ultimate destination.<sup>12</sup> As precedence, a joint operation with European Union Customs over a three-week period in November/December 2007 seized over 360,000 counterfeit integrated circuits and computer network components bearing more than 40 different trademarks. During a follow-up Joint Customs Operation of EU Customs supported by U.S Customs and Border Protection, EUROPOL, and OLAF (European Anti-Fraud Office) in 2016, more than one million counterfeit integrated circuits were seized within a two-week period.<sup>13</sup>

## Conclusion

The USMCA contains many positive elements, that if successfully ratified, will preserve and strengthen the digital economy, to the immense benefit of U.S. companies and its global partners. We are pleased that the USMCA preserves the many positive elements of the original NAFTA, while integrating new and higher-standard disciplines that will shape the future of the global trading system. Overall, we believe the USMCA would promote free trade, reaffirm America's global technology and trade leadership, and ensure that more products made in America – including tech products like semiconductors – can be shipped to customers around the world. SIA supports congressional approval of the USMCA and looks forward to working with Congress and the Administration as the process moves forward toward expeditious Congressional approval of implementing legislation for this vital agreement.

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<sup>12</sup> USMCA, Article 20.J.6 Section 6

<sup>13</sup> SIA White Paper, "Winning the Battle Against Counterfeit Semiconductor Products" at p. 8, available at <https://www.semiconductors.org/wp-content/uploads/2018/01/SIA-Anti-Counterfeiting-Whitepaper.pdf>.

