April 14, 2015

Submission of the Semiconductor Industry Association
Business Income Tax Working Group
Committee on Finance
United States Senate

The **Semiconductor Industry Association** ("SIA") appreciates the opportunity to provide the Business Income Tax Working Group with comments regarding our priorities for comprehensive tax reform. We commend the chairs of the Working Group, other Senators and staff for your ongoing efforts to improve our tax system. SIA supports efforts to lower the U.S. corporate rate and move toward a territorial international system, and enhance U.S. incentives for research and development.

Background on the U.S. Semiconductor Industry

America's semiconductor industry is critical to U.S. economic growth. Semiconductors are the fundamental enabling technology for the modern economy and an essential component of our nation's defense and homeland security, information technology, global finance, transportation, and health care. Our industry has over half of its wafer fabrication capacity located in the U.S., and more than 80% of its sales are outside the United States. Semiconductors have been the United States' number two manufactured export from 2008 through 2012.

Our industry directly employs nearly 250,000 Americans, at an average salary of $121,000 – almost 2.5 times higher than the U.S. average. In 2014, U.S. semiconductor companies generated $173 billion in sales, and the industry supports more than 1 million additional American jobs. In 2013, the industry invested $33 billion into research and development – 19 percent of sales and the highest share of revenue of any U.S. industry.

Semiconductor companies generally fall into one of three business models. One consists of companies that own and operate their own manufacturing facilities, called "fabs", which are located in the U.S. and other countries. These companies invest in operations that perform research and development (R&D) related to product design and manufacturing processes, as well as manufacturing and marketing. Their wafer fabrication facilities are in many cases multi-billion dollar investments representing the most advanced and most costly manufacturing operations in the world.

The second business model includes "fabless" semiconductor companies. They engage in product-related R&D, design and marketing. They contract foundries to manufacture wafers and perform assembly/test. This business model began appearing about 25 years

ago, when companies capable of manufacturing semiconductor devices from customer designs began to emerge. The evolution of this business model brought on a new era for the industry. Previously, a company could not have access to manufacturing capacity without investing a substantial amount of capital in wafer fabrication and assembly/test facilities. This was a significant barrier to entry into the semiconductor business. However, the evolution of the fabless business model allowed small start-up companies with the ability to develop and market creative new products to have access to manufacturing capacity.

The third business model is employed by foundries. Customers bring them designs and they manufacture the semiconductors. They do not develop and sell their own products in the marketplace. Foundries engage in R&D related to manufacturing. In some instances they also help customers with product designs. The foundry business model began with foreign companies headquartered in Asia, and these companies have grown significantly. Today, they are both foreign and U.S. companies; however, they conduct most of their manufacturing services outside the United States.

U.S. semiconductor companies have seen the global market for their devices grow significantly over the past several decades. Consequently, the industry has had a presence in foreign countries for many years in the form of controlled foreign corporations ("CFCs") which are the entities through which U.S. chip companies participate in markets and operate abroad. The industry has in particular experienced a high growth rate in markets and operations in Asia. This is not surprising given the high growth rates of Asian economies. Operations include marketing, R&D, manufacturing (which involves wafer fabrication, assembly of wafers into finished semiconductor devices and testing of the devices) and management of vendors that perform manufacturing services under contract (foundries).

We would like to draw the working group's attention to the fact that the tax policies of other countries present two tiers of competition for the U.S. semiconductor industry. The first tier is the competitive pressure we face along with other U.S. industries because many foreign countries have more attractive tax systems. The U.S. currently has the highest corporate tax rate in the Organization for Economic Cooperation and Development (OECD). In addition to lower rates, most other OECD countries have a territorial tax system, which means that when their companies invest in subsidiary operations in another country, the tax imposed by that other country on the earnings from the investment will generally be the final tax imposed. Home country tax generally does not apply when the earnings are repatriated. Finally, the U.S. research tax credit has fallen far behind the incentives for research offered by other countries and is currently expired. These features of other tax systems – lower rates, a territorial system and strong research incentives – are imbedded in the tax laws of other countries and are available to any taxpayer with transactions that qualify.

Additionally, a second tier of competitive pressures for our industry come from special incentives that are given selectively by governments to taxpayers that bring to the country strategic investments. In our case, governments offer incentives for locating wafer fabrication, assembly/test or R&D. These incentives include full or partial "tax holidays" and other benefits such as loans and reduced utility costs. Countries target the semiconductor industry because they understand that semiconductor manufacturing and R&D operations have a significant positive "spillover" effect on their economies in the form of employment in high tech jobs and the development of an engineering and technology infrastructure. Over time, a package of these incentives usually results in a substantial cost advantage for an operation, compared to a similar operation without such incentives.

SIA Principles for Tax Reform

In light of the competitive pressures that result from the relative weaknesses of the U.S. tax system, SIA believes that the objective of tax reform should be improving the ability of U.S. companies to compete effectively against foreign peers in the global marketplace.

Gregory Lang, President and CEO of PMC-Sierra, Inc., testified on behalf of SIA before the Finance Committee on July 27, 2011. In his testimony, Mr. Lang stated that SIA's objective for tax reform was a competitive U.S. tax system resting on three key elements, and these remain SIA's top tax reform priorities:

- A significantly lower and competitive corporate tax rate of 25% or less;
- A competitive territorial tax system; and
- Incentives for research and innovation including a permanent and enhanced R&D tax credit and an innovation box, which would be competitive with similar incentives in other countries.

SIA believes that these three reforms will make the U.S. economy and U.S. semiconductor companies more competitive in the global marketplace. In light of the significant changes needed in these areas, we believe that any and all revenue, including transition revenue, derived from changes to the tax code must be reinvested into corporate tax reform to encourage U.S. investment in manufacturing and innovation.

A lower, internationally competitive tax rate, strong incentives for U.S. research and development (R&D), creation of an innovation box, and preservation of the current-law net operating loss (NOL) deduction are policies within the purview of the Business Income Tax Working Group that would have a significant impact on the U.S. semiconductor industry.

Lower, Internationally Competitive Tax Rate

The U.S. currently has the highest corporate tax rate in the OECD and most OECD nations employ a territorial system. In order for the U.S. to maintain its global leadership in high-tech manufacturing, we must move to an OECD-competitive corporate rate of 25% or less.

While a focus on the OECD average tax rate is useful, it's important to note that U.S. semiconductor companies do not generally compete with companies headquartered in those countries. Our top international competitors are outside of the OECD and their average tax rate is significantly lower. This creates strong competitive advantages for foreign semiconductor companies and we support efforts to address these critical areas.

Exhibit I below is a simple example of the potential effect from different tax rates. It compares the net profit (i.e., profit after tax) from an investment that earns a hypothetical $1,000 profit before tax in the U.S., which is subject to a 35% tax rate, to similar profit streams in countries where the rates are 25% (OECD average rate), 12.5 percent (e.g., the corporate rate in Ireland) and zero (e.g., a tax holiday in Singapore). It shows, for example, that a tax holiday can (by virtue of the tax differential) produce 54 percent more profit than U.S. operations.

Exhibit I – An Example of International Tax Treatment

Earnings	U.S.35% Tax Rate	Country With 25% Tax Rate	Country With 12.5% Tax Rate	Country With Tax Holiday
Profit before tax	$1000	$1000	$1000	$1000
Tax	350	250	125	0
Profit after tax	650	750	875	1000
% of foreign profit increase over US profit	-0-	15%	35%	54%

The economic consequences of this after-tax income differential result in our competitors having more funds for investment, more for R&D, and more of a profit cushion so they can drop prices when competing against U.S. semiconductor manufacturers. Importantly, if cash flow from our overseas operations is more valuable in their hands than in ours simply because of tax differences, it is likely that, over time, they will seek to acquire our operations, or more U.S. economic activity will migrate offshore. With higher after-tax profit margins, cost of capital is reduced creating financing, offshore hiring, and capital

investment advantages. Corporate tax reform must attempt to level the multinational competitive landscape for U.S. companies and reinstate the U.S. as an attractive investment location by reducing the U.S. corporate tax rate. SIA believes a 25% maximum rate on corporate income is a significant improvement to the U.S. tax code and an essential step to make the U.S. tax system more competitive.

Incentives for U.S. Research and Development (R&D)

Creation of robust incentives for research and innovation that are competitive with incentives in other countries is another SIA priority. In 2013, the semiconductor industry invested $33 billion into research and development – 19 percent of total revenue and the highest share of revenue of any U.S. industry.

On January 1, 2015, the federal credit for research and experimentation (R&D credit) expired for the seventeenth time since its enactment, and again the U.S. has no federal tax incentive in place for corporate R&D. SIA believes that making the credit permanent, renewing the research credit retroactively to January 1, 2015, and increasing the rate of the alternative simplified research credit (ASC) from 14 percent to 20 percent are all needed to make U.S. policy related to R&D internationally competitive. H.R. 880, the American Research and Competitiveness Act of 2015, would realize these goals and SIA urges Congress to pass this legislation immediately.

Alternatively, several recent proposals regarding research tax incentives would harm the U.S. semiconductor industry and deter future research investment in the U.S. Computer software is a key element in semiconductor design and manufacturing, and SIA opposes proposals to remove computer software from credit eligibility. No other country specifically denies credit eligibility for all software costs. Similarly, disallowing the credit for the cost of supplies would also reduce the positive effect of the credit for U.S. semiconductor manufacturers since equipment, raw materials, and other instruments are used in semiconductor manufacturing research. Finally, proposals to limit the ability of companies to deduct the costs of U.S.-based research activities will act as a disincentive to research investment, and companies should not be required to capitalize these costs.

The U.S. R&D tax credit is primarily a jobs credit; 70 percent of credit dollars are used to pay salaries of U.S.-based researchers. A recent study by Ernst & Young estimated that the credit and its proposed enhancement would increase research employment in the U.S. by 140,000 jobs in the short term, and 300,000 jobs in the long term. When the credit was first enacted in 1981, the U.S. was the world's leader in research incentives. However, as the credit has lapsed many times and other nations have begun to offer tax credits up to 40% of research expenses and super deductions up to 200% of expenses, the U.S. has currently fallen to last place in research incentives among industrialized nations with the credit expired.

Creation of an Innovation Box

SIA believes the creation of an innovation box would significantly improve the competitiveness of the U.S. tax system by providing an incentive for companies to develop intellectual property (IP) and other intangible assets in the U.S. and retain ownership of those assets by domestic entities. Innovation boxes generally work by providing tax benefits, most notably a lower tax rate, to income associated with IP and intangible assets that have been developed within the jurisdiction. The Finance Committee has received testimony on the benefits of innovation boxes from Dr. Laura D'Andrea Tyson, and their increasing use in other jurisdictions, especially in the European Union, from Pam Olson. In these jurisdictions, innovation boxes result in tax rates on income associated with intangibles that is 30 to 80 percent lower than the standard corporate rate.

U.S. leadership in the global semiconductor industry has been based on innovating faster and smarter than global competitors, and maintaining U.S. leadership in this industry is dependent on continuing that advantage. This technological leadership comes in the form of intellectual property that is highly mobile and can be easily transferred to entities in other jurisdictions. Over time, U.S. semiconductor companies will face mounting pressure to shift R&D operations, and the high-paying jobs in those operations, to jurisdictions with lower, more competitive tax rates on the income derived from those assets. With no federal credit for research in the U.S. and the availability of generous incentives for research abroad, along with much lower tax rates on income from products developed by such R&D activity, current U.S. tax policy is woefully inadequate to make the U.S. a competitive location to develop new products and maintain ownership of the IP behind them.

Preservation of the NOL deduction

Semiconductor manufacturing is extremely capital-intensive, as new facilities can cost billions of dollars. Historically, the semiconductor industry has also been very cyclical due to long lead times to bring new production online as well as fluctuations in the information technology and electronics markets, since semiconductors are generally sold as components to be incorporated into these final products. The large capital costs and cyclical history of the industry make the deduction for net operating losses (NOLs) an important tax provision to help semiconductor companies smooth peaks and valleys in earnings and profit cycles.

Limiting the deduction for NOLs would harm the semiconductor industry by forcing companies to carry forward NOLs to future tax years, in effect increasing taxes in the current year. This could also discourage investment in new plant and equipment as companies would enjoy limited ability to recover losses accrued in down cycles during times of profitability.

Title Transfer Passage for Inventory Property

As noted earlier, the U.S. semiconductor industry is heavily export-oriented. Because of the industry's capital intensity and product cycles, a tremendous amount of research and development accompanies the manufacturing function. Sourcing income generated from U.S. exports as foreign source income helps to mitigate the tax cost of operating in the U.S. and multiple foreign countries. Repeal of the foreign source income rule would place upward pressure on the after-tax cost of performing manufacturing and related research activity functions in the U.S. The foreign source income rule helps to mitigate the noncompetitive U.S. corporate rate in a WTO-compliant manner.

U.S. government policies that discourage these domestic activities risk impeding very desirable attributes and drivers in the U.S. economy. The elimination or scaling back of the foreign source income rule will have a negative tax impact on U.S. semiconductor companies that export U.S. manufactured product, and for many companies, this could result in added disincentive to manufacture in the U.S.

Conclusion

A strong U.S. semiconductor industry plays an important role in the American economy. Our member companies engage in a wide range of government policy issues all over the world, including tax policy. We would be pleased to assist the Working Group as it continues its efforts to improve our tax system.