Testimony of Stephen J. Ubl
President and CEO
Advanced Medical Technology Association (AdvaMed)
Tax Reform and the Manufacturing Sector: Hearing before the House Ways and Means Committee
July 19, 2012

Thank you for the opportunity to submit testimony on behalf of AdvaMed and the medical technology industry. And thank you for holding a hearing on this important topic.

I would particularly like to thank Chairman Camp for his leadership on the issue of tax reform. Tax reform is critical if America is to compete successfully in this globalized economy, and your leadership, Mr. Chairman, has been instrumental on elevating tax reform to the top of the national priority list.

AdvaMed is the world's leading trade association representing manufacturers of medical devices and diagnostics. With a membership consisting of over 1,600 of the world's leading medical technology innovators, AdvaMed member companies produce the medical devices and diagnostic products that are transforming health care through earlier disease detection, less invasive procedures and more effective treatments. AdvaMed members range from the largest to the smallest medical technology innovators and companies, and over 70% of our members are small companies with sales of less than $30 million per year. Our members manufacture approximately 90% of the medical technology sold in the United States and half of that sold worldwide. America is the acknowledged world leader in this knowledge-based, high-value added industry.

Let me make three points at the outset.

The medical technology industry has been a significant contributor to employment and economic growth. Our future potential is great, but that future is threatened by competition from other countries.

The current corporate tax system is a ball and chain dragging down our ability to compete in the world and American markets. Reform is essential.

As far as our industry is concerned, job one for tax reform is repeal of the anti-competitive, job-destroying medical device excise tax scheduled to go into effect January first.

<u>The medical technology industry and its contribution to the U.S. economy</u>

The medical technology industry is an American success story. Our industry directly employs more than 400,000 workers nationwide. Typically, for every worker our industry directly employs, another four workers are employed by businesses supplying components and services to our industry and our employees, so that the total numbers generated by our industry exceed two million.

The jobs our industry provides are good jobs—the kinds of jobs that allow employees to live the American dream. Industry pay levels are 38 percent higher than average pay for all U.S. employment and 22 percent higher than other manufacturing employment. While the number of manufacturing jobs was plummeting across the larger economy, even before the recent economic downturn, employment in our industry was expanding. Between 2005 and 2007, medical technology employment grew 20.4%, adding 73,000 jobs. During the recession, between 2007 and 2008, MedTech employment dropped 1.1 percent, compared to 4.4% for manufacturing as a whole.

Medical technology is also one of the few manufacturing industries that has maintained a favorable balance of trade, with $36 billion in total exports in 2010.

The future opportunities for our industry to grow and to contribute good jobs to the American economy are great. Markets for medical technology will expand dramatically as populations age in countries around the globe. In the U.S. alone, the elderly population will increase by 32 million over the next two decades—a jump of 80%. Worldwide, the elderly population will reach 1.2 billion by 2025—and growth of the elderly in that year will be 3.5 times as fast as the population as a whole.

The exponential growth in middle-class populations in countries like China, India and Brazil demanding world class medical care is another extraordinary opportunity. China's middle class alone is projected to exceed the entire U.S. population by 2015, and India's middle class could reach 600 million by 2025.

Finally, in this century of the life sciences, technological advances fueled by fundamental advances in knowledge of human biology and continued progress in computing, communications, materials science, physics and engineering can be expected to drive creation of new and better medical technology products. The potential for economic gains is as great as those attributable to the advances in the physical sciences in the previous century that fueled the development of the airplane, the computer, and the cell phone.

The Competitive Challenge and the Role of America's Corporate Tax Structure

While the medical technology industry in America is still the clear world leader, its competitive position is slipping, and its leadership is increasingly challenged by other countries adopting targeted policies to support home-grown competitors and attract multinational companies. While the future prospects for the industry are bright, it is increasingly questionable whether that future will be made in America.

A survey of medical technology companies found that most expected to grow employment both inside and outside the U.S., but growth was expected to be much faster in both percentage and absolute terms abroad. A recent study by PricewaterhouseCoopers (PwC) found that the U.S. still leads on five key dimensions of medical technology innovation, but our lead is slipping on every dimension. As they state, "The innovation ecosystem for medical device technology, long centered in the United States, is moving offshore." While the U.S. has maintained a favorable balance of trade, the surplus of exports over imports has been narrowing both in absolute terms and relative to the size of the export-import sector. In 1998, imports and exports together totaled $24.6 billion and the trade surplus was $6.6 billion—more than one-quarter of total trade. By 2010, total trade had almost tripled—to $70 billion, but the trade surplus had shrunk by more than two-thirds—to $2 billion, and the surplus was only 3% of total trade.

America's corporate tax structure is a key factor contributing to the decline of the competitiveness of the American medical technology industry. It was designed for a world in which America was economically unchallenged—not for a one of globalized flows of investment, knowledge and production. It was conceived in a world in which our major competitors had not adapted their tax systems to compete for the high value-added industries that are key to international competition. And while the corporate tax structure is riddled with special preferences tailored to the desires of various economic interests, it lacks the kind of strategic policies necessary to support a truly competitive and healthy economy in a globalized world system.

AdvaMed's Recommendations

There are a number of aspects of the U.S. corporate tax code that make it more difficult for America to retain its world leadership in medical technology and other high value-added manufacturing industries and are a powerful deterrent to expanding employment in the United States rather than abroad.

Mr. Chairman, you have pointed to the fact that corporate taxes in America are the highest in the world—far higher than most of our major trading partners. In effect, the tax system provides a powerful incentive for both U.S. based and foreign-based companies to locate manufacturing research and other activities abroad, whether the goods produced will ultimately be consumed in the United States or in international markets. In this increasingly competitive world, we can no longer afford to handicap products invented and made in America with this kind of dysfunctional corporate tax structure.

The most important tax policy issue facing the medical technology industry today is the imminent imposition, effective January 1, of the medical device excise tax included in the Affordable Care Act. This tax singles out this industry and adds a heavy burden to companies that are already weighed down by the underlying anticompetitive general corporate tax structure. Several studies have projected job losses in the tens of thousands as the result of this tax. Companies are already laying off employees, deferring new hires or cutting back on research and development in anticipation of the tax. Mr. Chairman, to preserve this industry as the world leader and as an engine of economic growth, the most important single step Congress can take is to repeal this tax. For us, this is job one of tax reform. I thank the Committee and the whole House for recently passing bipartisan legislation to accomplish this goal, and I urge the Senate to follow your lead.

Beyond the device tax, there a number of fundamental reforms that would go a long way to improving the competitive position of the medical technology industry in America. First, we support the emerging consensus that the United States needs a corporate tax structure that is simpler and provides lower rates.

Second, for manufacturing industries generally and for knowledge-based, high value added manufacturing industries like ours in particular, the tax structure needs to create a level playing field with competitor nations. Simply lowering the overall rate—while very helpful—would not by itself create anything approaching parity. In the tax reform principles we have adopted, we have presented a number of suggestions as to how to make the tax structure for our industry more competitive, including an “innovation box,” and a more generous and rational research and development tax credit. The President’s proposal for a special lower rate for advanced manufacturing also deserves serious consideration.

A key element of international competitiveness is to adopt a territorial tax system, as have virtually all of our competitor nations. It makes no sense that America should stand alone in rejecting this approach. I commend you, Mr. Chairman, for your leadership on this issue.

Finally, for our industry to thrive—and I think this is true of many other highly innovative, knowledge-based industries—a continual flow of venture capital into small, start-up firms is essential. In our industry, many of the new breakthrough products driving the markets of the future are created by these firms. They are highly dependent on venture capital investment, but venture capital investment has been slowing down in recent years—particularly for the early-stage, highest risk investments that are the seed corn of our future competitiveness.

For a long time, America’s venture capital community was unique in the world and a powerful asset supporting American technological leadership. Today, that has changed. Other countries are developing large pools of venture capital. Indeed, China now has the second largest pool of venture capital in the world, and American venture capital now makes investments worldwide, not just in the United States. Accordingly, we think it is important that reform of the tax code provide additional incentives for investment in innovative, high risk start-up firms in industries like ours.

I thank the Committee for the opportunity to submit these comments for the record. I have attached an AdvaMed white paper that discusses these issues in depth and lays out our principles for tax reform.

AdvaMed's Tax Reform Principles
February 7, 2012

Overview

There is broad bipartisan agreement that comprehensive corporate tax reform is essential to improve America's competitiveness and rebuild our nation's economic future. AdvaMed has developed a set of broad principles for tax reform that, if adopted, will make a significant contribution to maintaining our nation's world leadership in the medical technology industry. In this century of the life sciences, medical technology has an exceptionally bright future as a source of jobs and sustained economic growth. The open question, however, is whether this future will continue to be made in America.

While the principles described in this report were designed by AdvaMed based on the needs of the medical technology industry, we believe they are broadly applicable to all knowledge-based manufacturing industries—a key part of the high value added tradable sector which is essential to America's future as a prosperous country where wages are high and prosperity is broadly shared.[i] Tax policy is certainly not the only factor driving American competitiveness—but it is a key factor.[ii] Because tax reform is maturing as public issue and because we believe that medical technology has an important perspective to add—not only for our industry but more broadly—we feel it is important to participate fully in the tax reform discussions to come. The principles described in this paper provide a broad conceptual base for the active role we expect to play.

The Economic Potential of Medical Technology

The medical technology industry is comprised of companies developing and manufacturing medical devices and diagnostics. These products are diverse, running the gamut from tongue depressors to the most complicated molecular diagnostic tests and cardiac implants. They are an essential part of modern medical practice, and development of new medical technology has been one of the main engines of medical progress.

Small firms are a key part of the medical technology industry. A 2007 study by the U.S. International Trade Commission (USITC) found a total of 7,000 medical technology firms in the U.S.[iii] The U.S. Department of Commerce estimated that 62% of medical technology firms had fewer than 20 employees and only 2% had more than 500.[iv] Even large companies in the medical technology space tend to be smaller than large companies in many other sectors. There are only four pure device and diagnostic companies in the Fortune 500 and none in the Fortune 100. These small firms, often venture capital funded, are particularly critical to the future of U.S. scientific and technology leadership, because they are the source of a disproportionate number of the breakthrough technologies that drive medical practice and industry growth.[v]

Whether created by large or small firms, medical technologies are characterized by a very rapid innovation cycle. The typical medical device is replaced by an improved version every 18-24 months.

To fuel innovation, the medical device industry is highly research intensive. U.S. medical technology firms spend over twice the U.S. average on R&D. High technology medical device companies devote upwards of 20% of revenue to R&D.[vi]

In part because of this rapid innovation cycle, the medical technology industry is highly competitive. A study of medical device prices from 1989 to 2009 found that they increased, on average, only one-fifth as fast as other medical prices and less than one-half as fast as the regular CPI. Because the highly competitive market kept prices low, medical devices and diagnostics accounted for a relatively constant 6% of national health expenditures throughout the 20-year period despite a flood of new products that profoundly changed medical practice.[vii]

The U.S. medical technology industry is a very dynamic part of the U.S. economy and a source of economic growth and good jobs. The future opportunities for growth are immense. The industry employs more than 420,000 people in the U.S. It generates an additional four jobs in suppliers, component manufacturers, and other companies providing services to the industry and its employees, for every direct job—for a total of more than two million jobs nationwide.[viii]
The jobs the medical technology industry provides are good jobs. The average medical technology worker enjoys wages that are almost 40% higher than average pay for the economy as a whole and 22% higher even than the average for manufacturing wages.[ix]

While employment in other manufacturing industries has been declining, the medical technology industry has been expanding. Between 2005 and 2007, medical technology employment grew 20.4%, adding 73,000 jobs.[x] During the recession, between 2007 and 2008, MedTech employment dropped 1.1%, compared to 4.4% for manufacturing as a whole.[xi]

The medical technology industry is also a strong source of exports and is almost alone among manufacturing industries in consistently maintaining a favorable balance of trade. Exports in 2010 totaled $36 billion.[xii]

The future opportunities for industry growth are great. Worldwide markets for medical technology will expand dramatically as populations age in countries around the globe. In the U.S. alone, the elderly population will increase 32 million over the next two decades—a jump of 80%.[xiii] Worldwide, the elderly population will reach 1.2 billion by 2025—and growth of the elderly in that year will be 3.5 times as fast as the population as a whole.[xiv]

The exponential growth in middle-class populations in countries like China, India and Brazil demanding world class medical care is another extraordinary opportunity. China's middle class alone is projected to exceed the entire U.S. population by 2015, and India's middle class could reach 600 million by 2025.

Finally, in this century of the life sciences, technological advances fueled by fundamental advances in knowledge of human biology and continued progress in computing, communications, materials science, physics and engineering can be expected to fuel creation of new and better medical technology products. The potential for economic gains is as great as those attributable to the advances in the physical sciences in the previous century that fueled the development of the airplane, the computer, and the cell phone.[xv]

The Competitive Challenge and the Role of America's Corporate Tax Structure

While the medical technology industry in America is still the clear world leader, its competitive position is slipping and its leadership is increasingly challenged by other countries adopting targeted policies to grow home-grown competitors and attract multinational companies. A survey of medical technology companies found that most expected to grow employment both inside and outside the U.S., but growth was expected to be much faster in both percentage and absolute terms abroad.[xvi] A recent study by PricewaterhouseCoopers (PwC) found that the U.S. still leads on five key dimensions of medical technology innovation, but our lead is slipping on every dimension. As they state, "The innovation ecosystem for medical device technology, long centered in the United States, is moving offshore."[xvii] While the U.S. has maintained a favorable balance of trade, the surplus of exports over imports has been narrowing both in absolute terms and relative to the size of the export-import sector. In 1998, imports and exports together totaled $24.6 billion and the trade surplus was $6.6 billion—more than one-quarter of total trade. By 2010, total trade had almost tripled—to $70 billion, but the trade surplus had shrunk by more than two-thirds—to $2 billion, and the surplus was only 3% of total trade. [xviii]

America's corporate tax structure is a key factor contributing to the decline of the competitiveness of the American medical technology industry. It was designed for a world in which America was economically unchallenged—not for a one of globalized flows of investment, knowledge, and production. It was conceived in a world in which our major competitors had not adapted their tax systems to compete for the high value-added industries that are key to international competition. And while the corporate tax structure is riddled with special preferences tailored to the desires of various economic interests, it lacks the kind of strategic, targeted policies necessary to support a truly competitive and healthy economy in a globalized world system.

There are a number of aspects of the U.S. corporate tax code that make it more difficult for America to retain its world leadership in medical technology and other high value added manufacturing industries and are a powerful deterrent to expanding employment in the United States rather than abroad:

- General corporate tax rates are high and uncompetitive. The statutory tax rate for the U.S. is 56% higher than the non-U.S. OECD average. Indeed, the U.S. now has the second highest tax corporate tax rate among all OECD countries, exceeded only by Japan.[xix] For manufacturing industries in particular, there is a similar wide disparity in effective tax rates. For a typical small or medium sized manufacturing business, the effective tax rate in the U.S. is 25.9%, higher than 31 out of 34 Organization for Economic Cooperation and Development countries and 58% higher than the non-U.S. OECD average of 16.4%.[xx]

- The United States is an outlier among competitor nations in retaining tax system that taxes worldwide income of U.S. corporations rather than adopting a territorial tax system that taxes only income earned from domestic activities.[xxi] Under the U.S. system, income earned abroad by foreign subsidiaries is subject to taxation (offset by taxes paid to the foreign tax authority) but the taxes are deferred unless and until the income earned is brought back to the United States to be invested or paid out in dividends. This system provides a double blow to U.S. competitiveness. First, it encourages profits earned abroad to be invested abroad rather than in the U.S. Second, a U.S. based multinational firm that wants to invest in the U.S. sometimes is forced to borrow money to make the investment—potentially raising the cost of the investment—rather than using profits earned abroad to generate economic activity at home.

- The U.S. has failed to match competitor nations in positive tax incentives to attract knowledge-based, high value manufacturing industries like medical technology. These incentives have the effect of lowering the effective corporate tax rate abroad for such industries far below the (already more competitive) general tax rate.
    - R & D. The U.S. was the first country to establish an R&D tax credit, but 23 countries now offer a generous tax incentives for R & D than we do.[xxii] Our reliance on temporary extensions of the credit means that it does little to stimulate investment, since it cannot be relied on for planning purposes. The credit does not cover building R&D facilities or purchase of equipment for those facilities, even though the decision to locate an R&D facility in a particular country certainly stimulates further R&D investment to make use of the facility.
    - Innovation box. Nine countries, including China, have introduced or plan to introduce a tax benefit referred to as a “patent box” or “innovation box”.[xxiii] Many more are considering establishing one. While the exact features of these programs vary, they essentially provide for a much lower corporate tax rate for activities based on intellectual property.

- Additional tailored incentives. In addition to general tax incentives, other countries provide targeted incentives for projects that offer jobs and economic growth, especially projects in high value-added industries. These incentives include waiving or reducing taxes on the project, providing direct subsidies in the form of below interest loans or grants, or making land and infrastructure available as needed. Emerging growth markets like China, India, and Brazil have been especially aggressive at offering special tax concessions or other incentives for individual projects or groups of projects.

- The medial device excise tax enacted in 2010 and scheduled to go into effect in 2013 puts a special and heavy competitive burden on the medical technology industry. This tax is estimated by the Joint Tax Committee to average approximately $3 billion per year. While the incidence of an excise tax is always difficult to estimate, the high level of price competitiveness in the industry suggests that much of the cost will be borne by manufacturers, and a number have already begun to streamline their operations in order to offset the expected tax burden. In many cases, the operational efficiencies are achieved by reducing the work force. The additional burden of the tax could raise the overall tax burden for this industry by one-third or more—to a level that would surely be one of the highest experienced by any American manufacturing sector and make the American tax rate even more uncompetitive with foreign nations.[xxiv]

- The problems small and start-up companies face in the medical device sector in attracting needed capital are especially acute right now. A recent survey by the National Venture Capital Association found that 40% of respondents had decreased their investment in medical devices over the last three years, while only 22% had increased their investment, and continued declines in investment were projected over the next three years. Perhaps most troubling for the future of the industry, is the decreases were disproportionately concentrated in early-stage start-up companies and that investors are increasingly moving the focus of investment to Europe and Asia.[xxv] Overall, the availability of venture capital in competitor countries is growing dramatically. China now represents the second-largest pool of venture capital, followed by Brazil.[xxvi]

Overall, the much higher effective rates paid by medical technology companies for activities located and taxed in the United States versus activities located and taxed abroad—are a major disincentive to industry job and economic growth in the United States. Data from AdvaMed member companies showed that the average effective tax rate on activities located in the United States was 35 percent compared to 14% for activities located and taxed abroad.[xxvii]

In a recent survey of member companies, respondents were asked “Based on your own company’s experience, does a more favorable tax system or direct subsidies provided by foreign governments play a role in the decision to locate manufacturing activities abroad rather than in the U.S.? Sixty-three percent of the respondents identified these factors as playing a major role and 100% said it played a major role or some role.[xxviii]

AdvaMed's tax reform principles

In response to the need to maintain American leadership in medical technology, AdvaMed has developed a broad set of principles for corporate tax reform. As noted earlier in this paper, while these principles were developed specifically for our industry, we believe they are broadly applicable to knowledge-based manufacturing industries facing international completion.

Our principles state:

The goal of tax reform should be to support job creation, economic growth and competitiveness

To achieve that objective:

- Tax reform should provide a level playing field for medical device companies competing in world markets.
- Tax reform should encourage retention and expansion of jobs in the U.S. by providing tax incentives at comparable to or better than our major competitor nations.
- Tax reform should provide incentives for the investment in research and development, which is key to the growth of the knowledge-based, high value added industries on which America's economic future depends.
- Tax reform should encourage the availability of capital for small and start-up companies that play a vital role in inventing and developing innovative breakthrough products.

Implications of AdvaMed's tax reform principles

AdvaMed intends to engage fully in the tax reform debate and will be advocating both for specific proposals to support these principles and commenting on others that may arise affecting the industry. As a starting point, AdvaMed believes that the following policies should be part of tax reform:

- The medical device excise tax should be repealed. For the reasons noted above, the medical device tax is a serious drag on the industry and adds an additional heavy competitive disadvantage to an industry that is already struggling to retain world leadership.

- The United States should adopt a territorial tax system consistent with tax regime of virtually every other advanced economy. If this is not possible, the current system of deferral of taxes on foreign earnings should be retained. As discussed above, the lack of a territorial tax system inhibits investment and economic growth in the United States.

Absent a territorial system, eliminating or significantly curtailing deferral would raise the effective tax rate of international companies competing in world markets very significantly.

- The combined Federal and State corporate tax rate should be lowered to levels comparable to or lower than competitor nations.

- The R & D tax credit should be made permanent and provide research and development incentives comparable to or better than competitor nations. The U.S. needs to encourage research and development here in America, since R & D is so critical to industry leadership and growth.

- The U.S. should institute an "innovation box" regime that provides a substantially reduced corporate tax rate for profits derived from intellectual property developed in the U.S. or used in manufacturing products in the U.S. Since even a substantially lowered tax rate—to 26%, for example—would still leave a very large differential between the tax on economic activities conducted in the U.S. and those located abroad, targeted tax incentives are needed to create a level playing field for industries in the tradable sector—especially knowledge-based high value industries. If the U.S. is to create a future of economic growth and broad prosperity, it must be able to compete in these industries. An innovation box regime is one mechanism for leveling the playing field for the medical device industry and the much broader group of industries who fall in this category.

---

[i] Michael Spence and Sandrik Hlatshwayo, "the Evolving Structure of the American Economy and the Employment Challenge," Council on Foreign Relations, March, 20ll. For the special importance of manufacturing in driving economic growth, see *The Competitiveness and Innovative Capacity of the United States,* prepared by the U.S. Department of Commerce in consultation with the National Economic Council, January, 2012.

[ii] For AdvaMed's full agenda to maintain America's medical technology industry's preeminent world position, see the reports listed under "AdvaMed's Competitiveness Agenda," at www.advamed.org.

[iii] United States International Trade Commission, "Medical Devices and Equipment: Competitive Conditions Affecting U.S. Trade in Japan and Other Principal Foreign Markets," March, 2007. http://www.usitc.gov/publications/332/pub3909.pdf

[iv] U.S. Department of Commerce, unpublished data, 2002.

[v] Michaela Platzer, *Patient Capital: How Venture Capital Investment Drives Revolutionary Medical Innovation, 2007.* http://www.contentfirst.com/past/Patientcapital/NVCAPatientCapital.pdf

[vi] USITC, "Medical Devices and Equipment: Competitive Conditions Affecting U.S. Trade in Japan and Other Principal Foreign Markets," March, 2007. http://www.usitc.gov/publications/332/pub3909.pdf

[vii] Donahoe, Gerald and King, Guy. "Estimates of Medical Device Spending in the U.S." June, 2011. Available from www.advamed.org under the "Reports" section.

[viii] The Lewin Group, "State Economic Impact of the Medical Technology Industry," June 7, 2010 and February, 2007. http://www.socalbio.org/studies/MTI_Lewin_2010.pdf

[ix] *Ibid*.

[x] *Ibid.*

[xi] *Ibid.*

[xii] ITC data web; The Manufacturing Institute, "The Facts about Modern Manufacturing," 2009, p. 18. http://www.nist.gov/mep/upload/FINAL_NAM_REPORT_PAGES.pdf

[xiii] U.S. Adminstration on Aging, Department of Health and Human Services. http://www.un.org/esa/population/publications/worldageing19502050/

[xiv] Population Division, Department of Economic and Social Affairs, "World Population Aging," 2002, http://www.aoa.gov/aoaroot/aging_statistics/future_growth/future_growth.aspx

[xv] See Dr Lawrence Summers, "America Must Not Surrender Its Lead in the Life Sciences," January 28, 2007. http://www.commerce.gov/sites/default/files/documents/2011/july/competitivenessagendabackgrounder.pdf

[xvi] Internal AdvaMed survey of member companies.

[xvii] PricewaterhouseCoopers, "Medical Technology Innovation Scorecard: The Race for Global Leadership," January, 2011. And see, more generally, the AdvaMed competitiveness studies cited in footnote #2. http://www.pwc.com/es_MX/mx/publicaciones/archivo/201106-medical_technology.pdf

[xviii] U.S. International Trade Commission Dataweb.

[xix] The U.S. rate is 39.2% compared to 24.3% for other OECD countries (figures include subnational corporate income taxes). OECD Tax Database and PWC Worldwide Tax Summaries, at http://www.pwc.com/gx/en/worldwide-tax-summaries/indes.jhtml. Japan recently passed legislation reducing its corporate tax rate. Implementation of the legislation was deferred because of the impact of the tsunami, but when it goes into effect, the U.S. rate will be the highest in the OECD

[xx] World Bank Group and PwC, "Paying Taxes 2011: the Global Picture," November 18, 2010. http://doingbusiness.org/data/exploretopics/paying-taxes. The cited rates are for small manufacturers generally and are not necessarily reflective of the actual rates for medical technology companies, many of whom pay higher effective rates. The general point of very large, noncompetitive disparities between U.S. and foreign effective tax rates apply to all manufacturing industries.

[xxi] PwC analysis. Twenty-six out of 34 OECD countries have a territorial tax system. http://www.pwc.com/en_US/us/washington-national-tax/assets/tax-policy-deficit-driven-world-tax-leg-outlook.pdf

[xxii] OECD Science, Technology and Industry Scoreboard, 2009. http://www.oecd.org/dataoecd/63/32/48712591.pdf

[xxiii] Robert C. Atkinson and Scott Andes, "Patent Boxes: Innovation in Tax Policy and Tax Policy for Innovation," Information Technology and Innovation Foundation, October 2011. http://www.itif.org/files/2011-patent-box.pdf

[xxiv] Unpublished data developed for AdvaMed.

[xxv] National Venture Capital Association, "MedIC vital signs report," October, 2011.

[xxvi] Pricewaterhouse Coopers, op. cit.

[xxvii] Effective tax rates included combined national and subnational corporate income taxes. For the U.S., the average effective Federal tax was 31.5% and the state and local tax was 3.6%. Data came from companies participating in AdvaMed's tax reform working group. While the data was not designed as a random company sample, the companies providing data were representative of multinational medical technology companies, including large, medium size, and small firms. Interestingly, tax rates on U.S. and OUS activities were similar for U.S. and foreign-domiciled companies.

[xxviii] Ibid.