Emerging from the deep recession of the past few years has been a more difficult, slower process than could have been expected. U.S. unemployment is still high, businesses and consumers are still overleveraged, home sales are slow, consumers are hesitant, and most people are experiencing reduced expectations about their financial future.

With China and the developing world now attaining higher growth rates than the United States and Europe, it is well to ask what will restore America’s competitive advantage. How will we regain growth rates that can sustain our standard of living, bring back jobs, and move our economy positively into the future?

We should certainly become more self-sufficient and more efficient in the use of energy and other resources. But the United States will not retain or regain its competitive advantage simply by becoming inwardly focused, or developing more sustainable industries. To retain our edge, we must maintain our leadership in creating products and services the world wants to buy.

The United States is still the world’s premier knowledge-based economy. That is, the growth in our economy is based importantly on innovations in science and technology and the resulting products that make work more efficient and society healthier and safer, including digital technologies, more sophisticated transportation systems, more productive agriculture and medical developments to treat debilitating diseases. Our ability to create breakthrough products that can be scaled up and sold in large numbers, in the United States and abroad, is the key to our prosperity.

There is a formula for making a knowledge-based economy work. It includes superb higher education, especially major research universities. It includes an environment where innovation is encouraged and rewarded, both through financial rewards and respect – think Steve Jobs and Apple Computer; Andy Grove, Gordon Moore and Intel; Bill Gates and Microsoft; Michael DeBakey and heart surgeries, Carl Djerassi and birth control. It includes access to capital, and the willingness of investors to take risks on new ventures. It requires corporate and management structures and incentives that foster bringing products to market and marketing them in ways that facilitate their adoption for widespread use. And it requires a government structure that protects the consumer, the environment and other important values, while still fostering innovation and business development.

As we move through this recovery, there are some important dos and don’ts that will improve the chances for the United States to retain its competitive advantage as a leader in innovation. As we watch the public higher education system, particularly in California, struggle, we must be clear that adequately funding higher education is one of the key drivers of our prosperity. That is not to say that we can’t cut waste and improve the efficiency of our higher education systems, but their quality and ability to produce the best and the brightest graduates is at the core of our economic strength.

We also must not diminish the incentives for angel investors, venture capitalists and other funders to take risks to fund research and the start-up of new commercial ventures. The recent financial system reform was very much needed, to tighten oversight of institutions that took imprudent gambles on sub-prime mortgages and in other such areas. But early stage investors in new technologies and products take the risks they do because the potential rewards render the chances they are taking worthwhile.

As part of the financial reform efforts now underway, Congress has considered increasing taxes that private equity managers and early stage investors pay on their “carried interest” when they cash out their investments. This would reduce a crucial incentive investors receive for their long-shot investments. While excesses in compensation and in the financial system need to be addressed, such an approach could make investors more cautious and less willing to back the entrepreneur who will probably fall flat, but might just develop a breakthrough process or technology.

While we work to redress the destructive excesses of the past few years, let’s remember not to throw out the good along with the bad. Ensuring the availability of seed capital that funds a new American electric car industry is not the same as rolling the dice to finance ownership of over-priced homes for individuals without the financial stability to afford them. Let’s try to preserve what is good about the American willingness to take risks and pursue new ideas, while eliminating the imprudent schemes and scams.

The social and economic factors that create competitiveness are a complex ecosystem. If we undermine any of these elements – education, access to capital, incentives for innovation, and a government framework that maintains a healthy society while fostering economic development – we may destroy the system. And that would be a tragedy, because the American capability to create game-changing new products is the one strength most likely to carry us through to a new era of prosperity.

Carrying Costs

Dr. Gloria C. Duffy

President and C.E.O.