

**RIGHT-SIZING THE  
U.S. VENTURE CAPITAL INDUSTRY**

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## INTRODUCTION

The U.S. venture capital industry is at an inflection point. It has had many successes over the last three decades, and is prominent worldwide for its role in financially catalyzing notable, high-growth companies. More recently, however, venture capital returns have stagnated and declined, with the industry having seen little recovery since its go-go days of the late 1990s.

There is a growing and important debate about where the venture industry goes from here. No one is seriously arguing that the venture capital industry will cease being crucial in driving the growth of important companies in information technology, clean technology, and biotech, all of which are risky and, to a greater or lesser degree, capital-intensive. But there is ample reason to believe that the venture industry, at least in the United States, will be differently sized and structured in the future.

This change will not come easily. Many venture industry participants are comfortable with their industry's size, structure, and compensation model, which is tied to assets under management and can be highly remunerative. At the same time, the industry has become conflated with entrepreneurship in the popular imagination as well as in policy circles, with the result being a widespread and incorrect belief that venture capital is a necessary and sufficient condition in driving growth entrepreneurship. The result is strong resistance to change, as well as much support for the venture industry in its current form.

This short paper considers one aspect of the future of the venture capital industry, its size. How big should it be in terms of the aggregate underlying financial commitment to venture partnerships? Does it need to be larger to better equip entrepreneurs to solve the important problems we as a society face? Should it be smaller to take more risks, drive higher returns, and thus keep investors satisfied? How should we think about the role of venture capital in the future?

## ROLE OF VENTURE CAPITAL

There is no denying the importance of the venture capital industry. Despite being relatively young, having only reached its modern form in the last thirty years, this business of investing risk capital in growth companies has had many major successes. Some of the best known and most successful growth companies and brands in the world are venture-backed, including Apple, Google, Genentech, Home Depot, Microsoft, Starbucks, Cisco, and many others. The National Venture Capital Association, the industry's main lobbyist, claims a study it sponsored shows that venture-backed companies from 1970–2005 accounted for 10 million jobs and \$2.1 trillion in revenues by 2005, as well as representing 17 percent of U.S. gross domestic product (GDP).

These are impressive numbers. But noting that venture capital played a role in the early days of these storied companies is not the same as saying the venture industry deserves full credit for these companies any more than does, say, Pacific Gas & Electric, which provides electrical power to Bay Area homes and businesses. Merely being the provider of a service to a company is separate from having demonstrated that the company could not have obtained that service elsewhere. There are many providers of risk capital, ranging from banks to angels, and a smaller venture industry (or a larger one) might well have had as much success, or more, at funding the same companies.

Of course, we cannot conduct a randomized experiment to disentangle venture capital from the resulting companies and their eventual success or failure. We do know some things, however. For example, we know that only a tiny percentage (less than 1 percent) of the estimated 600,000 new employer businesses created in the United States every year obtain venture capital financing<sup>1</sup>. That figure has not changed materially in recent years, and likely never will. Most of the companies created in the United States in any given year are sole proprietorships and service companies, less capital-intensive companies that almost never seek or obtain venture financing.

Growth companies typically require more capital than sole proprietorships and service companies, and thus are the main focus of the venture capital industry. Such companies, however, represent only a subset of startups. Even among that latter group of companies, however, venture capital's presence is far from widespread. We recently studied the prevalence of venture capital financing among companies on the Inc. 500 list of the fastest-growing private companies in the United States. Looking across ten years of that list—roughly 900 unique companies from 1997–2007—we found that approximately 16 percent of the companies had venture capital backing. In other words, even among the fastest-growing and most successful companies in the U.S., less than one-in-five

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<sup>1</sup> See Kauffman Firm Survey ([http://www.kauffman.org/uploadedFiles/kfs\\_08.pdf](http://www.kauffman.org/uploadedFiles/kfs_08.pdf)); PWC MoneyTree (<http://www.pwcmoneytree.com>).

companies had venture investors. Such companies almost certainly could have venture investors, if they wanted them, so the absence of venture capital should generally be read as a sign that these growth companies saw no need to take external capital from venture capitalists, whatever the merits of such capital might be.

This should not take away from venture capital's role in financing growth companies. External capital is sometimes required by some private companies in their early stages, and it is good that there is a class of professional investors with enough financial resources to provide that assistance when it is needed. However, venture capital and entrepreneurship are separate phenomena, even among growth companies, and conflating the two, let alone implying that the former causes the latter, is untrue and unhelpful.

## **VENTURE CAPITAL INDUSTRY PERFORMANCE**

Where does the venture industry go from here? There are many opportunities for entrepreneurs ahead of us, and thus, potentially, for venture capitalists. The specific areas are wide, ranging across disease treatment and drug delivery, to clean technology, to mobile technologies. All of these areas will undoubtedly produce large and successful companies in the coming years, some of which will almost certainly be backed by venture capitalists.

To fund entrepreneurs on a wide scale and indirectly do societal good, the venture industry must be viable—it must offer its investors competitive returns. At present, it is increasingly uncertain whether the U.S. venture industry can and will do that. Calculating venture industry returns is a complex process given the illiquidity of the investments, the lengthy duration of the funds, selection biases, and so on<sup>2</sup>. Nevertheless, other adjustments should be made to venture performance for its illiquidity and long hold times: With funds lasting ten years and more, venture investors typically require much higher performance than in public markets to compensate for the illiquidity of the investment, the hefty performance fees, and the absence of a secondary market.

The following table, Figure 1, shows venture industry performance over one-, five-, and ten-year periods as compared to various public market indices over the same periods. Public market comparisons for venture are fraught with difficulties, as venture capital is illiquid and cannot be priced on a regular basis. Nevertheless, the five- and ten-year periods are the most appropriate ones for comparison given the lengthy duration of a typical venture fund. While many compare venture performance to the S&P 500, which is an index of large-capitalization publicly traded stocks, the small-cap Russell 2000 Index is a better

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<sup>2</sup> For example, see Phalippou, L. & Gottschalg, O. The Performance of Private Equity Funds. *Review of Financial Studies* 22 (2008), 1747-1776

benchmark. The venture industry leads the Russell 2000 on a five-year and ten-year investing horizon in annualized returns, while lagging slightly on ten-year total returns.

**Figure 1**  
**Venture Capital Performance**

Name	1-year		5-year		10-year	
	Total	Annualized	Total	Annualized	Total	Annualized
NASDAQ	-41%	-41%	-21%	-4.7%	-28%	-3.2%
S&P 500	-38%	-38%	-19%	-4.1%	-27%	-3.0%
Russell 2000	-35%	-35%	-10%	-2.2%	18%	1.7%
Venture capital*	-21%		6%		16%	

\* Pooled, end-to-end return over period.  
Source: National Venture Capital Association /Thomson Reuters, author calculations

This ten-year period includes the dot-com episode, which materially inflates the venture industry’s trailing performance. (The combined value of venture-backed public offerings in 1999 and 2000 was more than the aggregate value in all other years between 1994 and 2008 inclusive.) According to Cambridge Associates data, the nine-year venture capital performance is negative, which means that ten-year venture performance will turn negative at the end of this year when the bubble venture exits of 1999 are excluded. Combine the preceding with an appropriate illiquidity discount, and the venture industry’s current returns are challenging—and, more importantly, the comparisons to more liquid asset classes are set to become considerably worse.

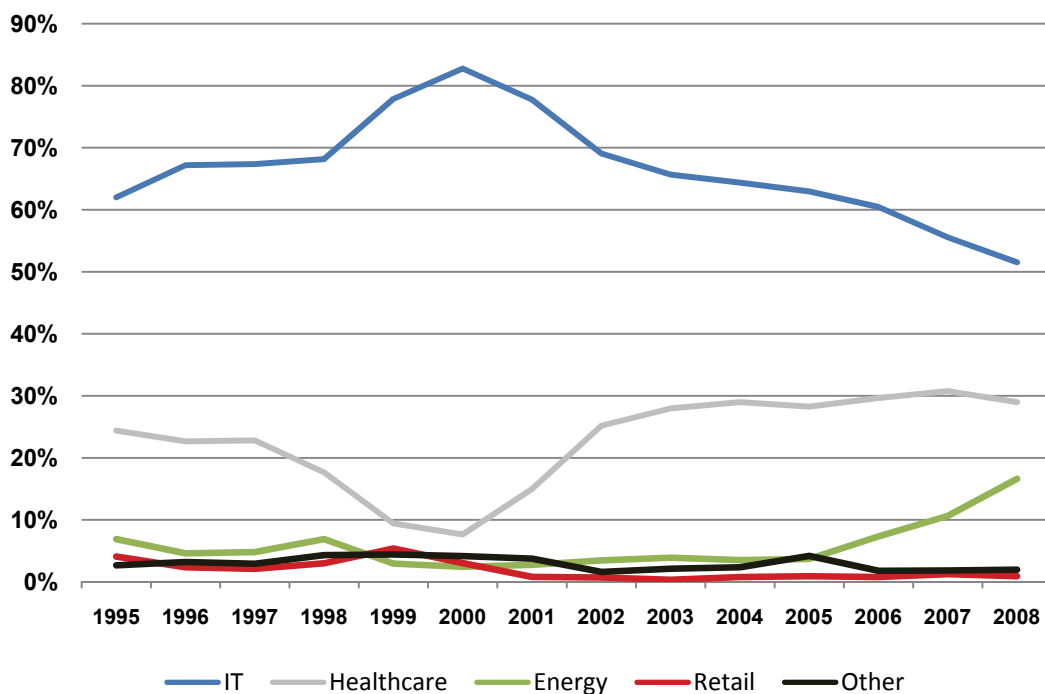
Venture capital’s performance deterioration is a relatively recent phenomenon. In 2003, the five-year trailing performance of the venture industry was more than 20 percent<sup>3</sup>, and it had never been negative back to 1990. That changed, however, in 2004, as the dot-com collapse caused five-year venture capital performance to dip below zero, touching -2.4 percent and -6.7 percent in 2004 and 2005 respectively. Performance has been slightly on either side of the zero line ever since.

Why the change? There are at least three possible reasons, all interrelated. There could be too much capital allocated to venture, the effect being higher valuations and lower exit multiples. The second explanation might be shrinking exit markets, with, for example, the decline in IPOs preventing venture investors from earning the same returns as they have historically. Finally, it is possible that the venture business itself might be structurally flawed, with the core markets that made it successful—information technology and telecommunications—now mature and delivering sub-standard returns, while new venture-ready markets have not emerged.

<sup>3</sup> National Venture Capital Association Yearbook, 2008 edition.

To turn to the last hypothesized cause of poor returns first, there should be little question that information technology is a much-matured sector from what it was two decades ago. While the Internet has provided many investment possibilities, including some resounding success for venture capitalists, like Google, the sector has changed. The computer and enterprise software and networking markets are long past the peak of innovation in terms of being places for profitably investing significant early-stage money. At the same time, most information technology entrepreneurs say today that it costs a fraction of what it did a decade ago to start a company. (Much of the technology is open source, and the cost of networking connection and bandwidth has plummeted, as has the cost of marketing and distribution over the Internet.) Despite costs falling by half or more, technology-related venture capital investing still accounted for more than half of all investments (by dollar value) in the United States in 2008. Were the sector to decline to a level commensurate with shrinking capital requirements and opportunities, we would already see a healthier and smaller venture capital sector.

**Figure 2**  
**Venture Capital Investing, by Sector: 1995–2008**



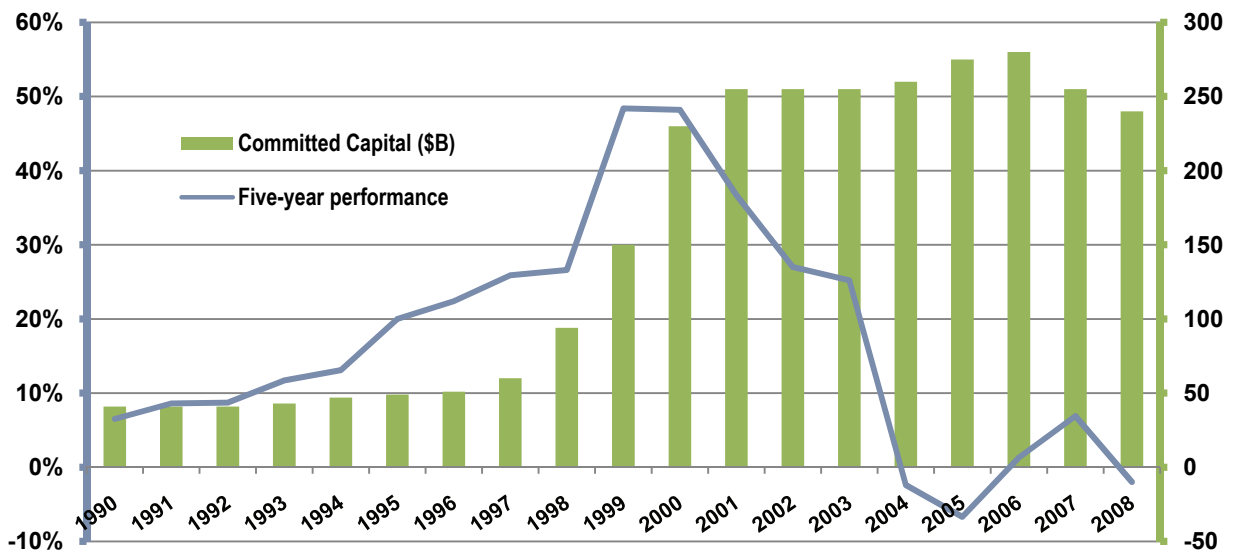
Source: PricewaterhouseCoopers/National Venture Capital Association Moneytree™ Report. Data: Thomson Reuters.

Some have argued that the cause of poor returns, post-Sarbanes-Oxley, is that the IPO window never reopened for early-stage companies, largely eliminating the primary source of profitable exits for venture investors. There is no question that the number of venture-backed IPOs has declined, with the average per year from 2004–2008 (thirty-three) a little more than half of the pre-bubble number

(fifty)<sup>4</sup>, but, with the exception of 2008, it did not decline to levels completely out of line with what we saw before the dot-com period. Companies did successfully come public over the last decade, including in technology, but what has changed is that the market has become less accepting of young, money-losing companies than it briefly was in the late 1990s. There is no reason to expect that to change, just as there is no reason to believe that if a profitable technology company with material revenues filed to go public it wouldn't receive a positive reception. It is a mistake to say that the problem is the exit market—it would be more correct to say there is a problem with what venture investors once were able to bring to market, but no longer can.

With its core investing area maturing and becoming less capital intensive, and with exit markets less willing to take on young and unprofitable companies, it becomes clear that the real question for venture is one of capital. It needs to adjust for the shrinking size of the opportunities in markets that offer venture-ready characteristics. The following two figures show the relationship between venture capital commitments and returns. Figure 3 shows how the rapid expansion in venture capital commitments between 1998 and 2001 helped presage the asset class's decline, and was almost certainly causal, as has already been discussed. A five-fold increase in venture capital commitments by limited partners led to a collapse in performance from which the sector has never recovered.

**Figure 3**  
**Venture Capital Performance vs Committed Capital: 1990–2008**



Source: National Venture Capital Association Yearbook 2009.

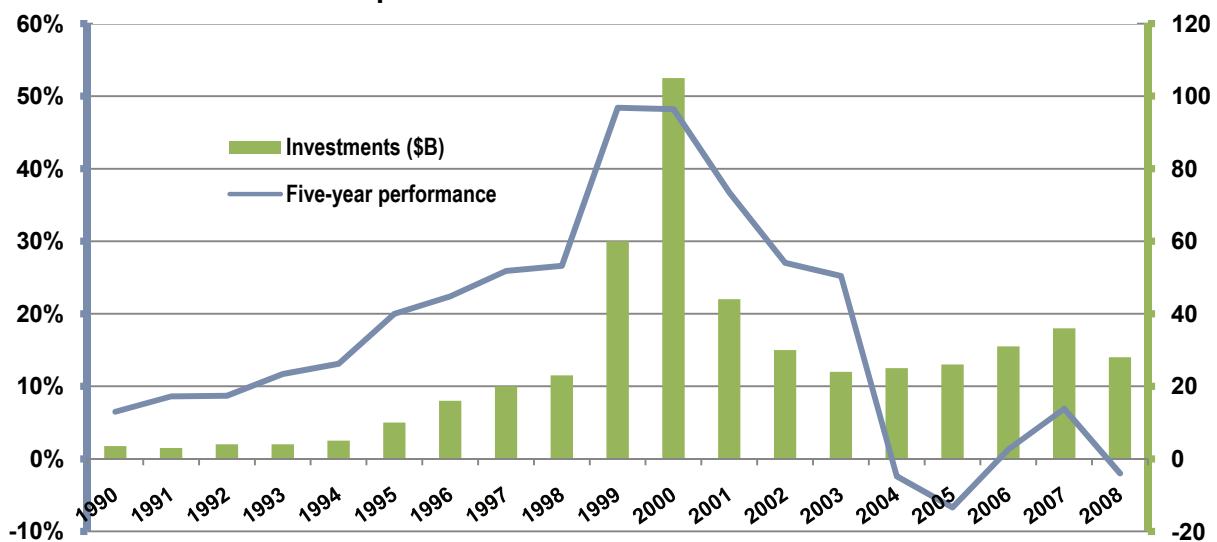
The situation is similar if you consider the pace at which venture capitalists continue to invest, despite poor recent returns. As Figure 4 shows, venture

<sup>4</sup> Thomson Reuters data.



capitalists are investing at a pace commensurate with what we saw in 1998-1999, on the order of \$30 billion a year, much higher than relative “normalcy” i.e., the \$5 billion-\$10 billion a year pace that we saw pre-bubble in 1995 and earlier. While some might argue that opportunities for venture investing have expanded, with large capital requirements in clean technology and biotechnology, thus justifying the additional capital, the data shows that the expansion in venture has not coincided with improved returns. A more credible case can be made for inertia playing a large role in current venture capital allocations, with too many venture partnerships continuing to invest in information technology because they always have, not because they credibly anticipate improved returns.

**Figure 4**  
**Venture Capital Performance vs Investments: 1990–2008**



Source: National Venture Capital Association Yearbook 2009.

## RIGHT-SIZING VENTURE CAPITAL

Given the opportunities it faces and the returns it has generated, we should expect limited partners to shrink their allocation to the asset class in the coming years. This will help resuscitate the sector by lowering valuations and improving overall exit multiples. But how much smaller should we expect the sector to become in terms of capital committed and investing pace?

We have already touched on at least two ways of approaching this question. If we are to return to a level on par with what we saw when the sector last generated competitive returns, we should expect it to fall by half to a \$12 billion per year investing pace from its current \$25 billion (and higher) rate. This would imply committed venture capital assets under management falling by half as well, to perhaps \$100 billion or lower.

Another way of approaching right-sizing venture capital is normalizing investing pace against the size of the U.S. economy. As a percentage of GDP for most of the 1980s, investing was under 0.1 percent of GDP, falling as low as 0.04 percent by 1991, before rising above 0.1 percent in 1995. The pace of venture investing subsequently climbed to its all-time maximum of 1.1 percent of U.S. GDP by 2000. The measure fell in the post-boom period to 0.16 percent, and has since increased slightly to 0.19 percent, still putting it considerably above the levels of 1980s, and on par with what we saw in the late 1990s. Again, this implies we should see the pace of investing shrink further, perhaps by as much as half from current levels, if the sector is to again produce competitive returns.

## **CONCLUSIONS**

Whether it realizes it or wants to, the venture industry has to change. There is immense interest in its capacity to catalyze economic change in a rapidly restructuring economy, and limited partners continue to make commitments to the asset class. At the same time, politicians have expressed interest in supporting the sector, driving to make investments in strategic technologies, especially in clean technology. But venture capital returns have deteriorated immensely, predating the current economic downturn and traceable to the rapid expansion in venture capital assets under management in the United States in the late 1990s, a figure that has fallen less speedily than one would expect, in part because of the long duration of funds and the general illiquidity of venture capital investments.

It seems inevitable that venture capital must shrink considerably. While there is no question that venture capital can facilitate some forms of high-growth entrepreneurial firms, its poor returns make the asset class uncompetitive and at risk of very large declines in capital commitments as investors flee this underperforming asset. While any estimate is subject to much uncertainty, it seems reasonable—based on returns, GDP, and exits—to expect the pace of investing to shrink by half in the coming years. We should also expect a continuing sharp decline in the amount of money invested in information technology, a maturing sector with declining capital requirements in its remaining innovative segments. Capital will continue to grow in other areas, including clean technology, but the sector must shrink its way back to health if venture capital is to provide competitive returns and secure its own future as a credible asset class and economic force.