



A Strategic Overview of the Silicon Valley Ecosystem: Towards Effectively “Harnessing” the Ecosystem:

Kenji E. Kushida, Ph.D.

5. Financial systems in Silicon Valley: Venture Capital and Value Added

For Japanese companies interested in accessing Silicon Valley, the system of venture capital needs to be understood. Especially with recent interest in creating Corporate Venture Capital (CVC), in which the corporation puts up the funds rather than venture capitalists gathering funds from investors, the *value-added functions provided by Silicon Valley venture capitalists beyond funding* are critical to note.

5.1. Venture Capital: How it works

The core of Silicon Valley funding centers around venture capital.

How does Silicon Valley venture capital work in its current form? Venture capital is premised on the idea that a portfolio of investments in early stage firms can generate enough capital gains that investors into venture capital funds can realize substantial returns. Since venture capitalists' stakes in companies are in the form of equity, they are far more risk-tolerant than banks making loans. Traditional bank lending does not enjoy capital gains upside, while the loan amount can be at risk. Venture capitalists, on the other hand, can enjoy substantial capital gains. Therefore, traditional bank lending is far more risk averse.¹

Since the large majority of their investments would fail, venture capitalists evolved to demand involvement in their portfolio companies' management. They usually took representation on the firm's board, sometimes becoming chairman. By being active in introducing (or forcing) their human capital networks to startups they have invested in, successful VCs can actively help startups grow (see Box 1).

The most successful “homerun” VC investments tend to be those in which the growth potential is unexpected, and unforeseen by other investors. If the value can be judged correctly,

¹ Kenney, M. and R. Florida (2000). *Venture Capital in Silicon Valley: Fueling New Firm Formation. Understanding Silicon Valley : the anatomy of an entrepreneurial region*. M. Kenney. Stanford, CA, Stanford University Press: 98-123.

then valuations in financial markets could be placed. It is this nature of foreseen the unexpected future from which VCs derive great upside value.²

VC exits come in the form of M&A or Initial Public Offerings (IPOs). They have to dispose their stake in the firm to realize the upside gains of the investment to distribute to their investors.³ Typical VCs take 2 to 3 percent of the total capital invested as a management fee, along with about 20 percent of the capital gains. The rest is returned to investors.

Box 1: Examples of “Hands-on” VC for a startup firm

For example, a Japanese startup at an early stage of development that entered Silicon Valley offering specialized Japanese and Chinese language document search services for law firm during litigation—which can create the need to search through hundreds of thousands of documents, benefitted greatly from VC-introduced personnel. Since its services were marketed towards law firms, it became quickly obvious to the VC that the firm needed to have the top sales manager be somebody who had interpersonal networks into law firms. The VC appointed this type of person, who was far more effective than his predecessor, leading to a rapid increase of sales.

In another example, the founder and president of a successful startup firm was frustrated when the VC forced him to sell his company off to a larger competitor. The startup had been enjoying robust growth, and was projected to catch up to the competitor in a few years if things continued smoothly, and the employees had been motivated around the rallying call of catching up and surpassing the competitor. However, the VC firm’s other investments were not performing as well as they had hoped. In order to deliver sufficient returns to their limited partners (investors), the VC decided to exit this particular startup and get the highest valuation it could. The sale was successful and the founder became wealthy, but when interview a few years later he was still bitter that he was forced to sell his company at what he considered too early due to the VC’s decision about other investment decisions.

What is the size and distribution of VC investments in the US? The following table shows the total amount geographic distribution of VC investments in the US in 2013. The total nominal dollar amount was approximately 23 billion USD. Over half was in California, with 14.8 billion, with Massachusetts and New York, second and third respectively, with 3.1 and 2.9 billion, respectively.

² Ibid.

³ Ibid.

Figure 8. Total US and Top 5 States for VC Investments, 2013

State	# of Companies	# of Deals	Invested (\$Bil)
California	1,362	1,616	14.8
Massachusetts	307	364	3.1
New York	344	403	2.9
Texas	134	154	1.3
Washington	107	126	0.9
Total*	2,254	2,663	23

Source: National Venture Capital Industry Association

Figure 8 breaks down the amounts of venture capital investment by region in 2013. This shows that Silicon Valley, with 12.2 billion USD, comprised most of California’s 14.8 billion. It confirms that Silicon Valley leads the US in VC investments by a large margin. This figure begins after the recovery following the 2007 financial crisis, showing a robust rebound in VC investment.

Figure 9. Venture Capital Investments by Region 2009-2013, (millions USD)

Region	2009	2010	2011	2012	2013
Silicon Valley*	8,263.4	9,436.2	12,037.2	11,237.6	12,225.7
New England	2,603.7	2,577.9	3,344.5	3,391.6	3,307.7
NY Metro	1,748.9	1,872.8	2,862.5	2,366.9	3,194.7
LA/Orange County	1,080.9	1,687.8	2,076.7	2,092.5	1,748.2
DC/Metroplex	684.3	973.9	1,014.0	756.8	1,545.9
Texas	678.2	1,079.4	1,622.4	948.9	1,315.5
Southeast	1,032.00	1,101.2	1,193.4	801.1	1,293.9
Midwest	952.3	1,368.2	1,554.1	1,436.8	1,107.3
Northwest	673.9	728.9	785.4	998.5	1,056.7
San Diego	939.5	881.2	928	1,191.6	767.7

Source: National Venture Capital Industry Association*

* The National Venture Capital Association is somewhat vague in defining Silicon Valley, is “Northern California: Bay Area and coastline” which is quite broad and includes what we define as the broader Silicon Valley region.

Venture capital investments are commonly divided into stages. Today, venture capitalists often specialize in a particular stage. The first round of funding for startups can often come from wealthy investors known as “angels.” The earliest stage of venture capital investments, known as seed funding, are usually to start up and get the company going. Following that are early, stage, expansion, and later stage investments, according to the typology of the National Venture Capital Association. The stages following seed funding, in which preferred stock is offered to VCs are commonly referred to as Series A, B C, and so on. Figure 9 provides a sense of the relative magnitudes of VC investments in each stage.

Figure 10. Venture Capital Investments by Stage (2006-2013)

Stage	2006	2007	2008	2009	2010	2011	2012	2013
Seed	1292	1837	1923	1735	1676	1079	836	966
Early	4770	6087	5889	4941	5914	8927	8315	9896
Expansion	11124	1066	10725	6841	8707	9829	9447	9814
Later	10329	2953	11412	6769	7072	9894	8754	8869
Total	7515	1943	29949	20286	23369	9730	27352	29545

Source: National Venture Capital Industry Association

Seed funding is unsurprisingly the smallest amount, since firms do not need as much in the initial stage. Particularly with the advent of Cloud computing, startup firms no longer need initial investments into datacenters or expensive software tools—computing resources such as processing power, storage, and data networking capabilities are available as pay-as-you-go services. Powerful software tools are also available as services, allowing startup firms to radically reduce software and computing costs (including technical experts just to manage the computer systems) up front.⁴

Early stage funding has been growing steadily along with the rise of startup “accelerators,” formerly commonly known as incubators. The most famous and successful Silicon Valley accelerator is Y Combinator, founded in 2005, with notable successful companies including AirBnB, Dropbox, and online payment firm Script. Y Combinator takes relatively small equity positions while providing early funding, and an intensive mentoring program that gathers promising startups from all over the world to Silicon Valley, providing mentorship, advising, and an environment for entrepreneurs to focus “without distractions.”⁵ The success of Y Combinator helped spark a large number of incubators and accelerators, including some with high visibility such as 500 startups, founded in 2010, which also took batches of growing size (12 as its first, and 34 by 2011), investing in over 500 companies by 2013. As of 2014, Y Combinator receives thousands of applications from around the world, which are then narrowed to about 400 teams, who are flown into Y Combinator and interviewed for 10 minutes each. Out of these, about 100 are chosen.⁶

Expansion and later stage venture capital funding involves larger investments in to a smaller number of firms that succeed into this stage. Major VC firms, including many corporate venture capital firms, are big players in this stage. While the potential growth is limited compared an early stage investment, firms that make it into the later stages are also less likely to fail, providing a different risk-return profile. A typical later stage VC will go to the “demo day”

⁴ Kushida, K. E., J. Murray and J. Zysman (2013). "Clouducopia: Into the Era of Abundance." *CLSA Blue Book January*, Kushida, K. E., J. Murray and J. Zysman (2015). "Cloud Computing: From Scarcity to Abundance." *Journal of Industry, Competition and Trade*.

⁵ Tan, G. (2014). *Making Things People Want*. Stanford University, Stanford US-Asia Technology Management Center.

<https://mvideos.stanford.edu/Graduate#/SeminarDetail/Autumn/2014/EE/402A/5463>

⁶ *ibid*

of accelerators such as Y Combinator, in which firms present their business to potential investors. The later stage VCs then conduct their own analysis and engage in intense internal debates among partners to select a few in which to invest. At some VC firms, the limited partners who invest into the firm will have a seat at the table to have a voice in investment decisions.

Who are the investors in VC firms? Large pension funds and corporations tend to be the main investors. VC firms take the legal form of limited liability companies, and investors are limited partners (LPs).

5.2. Venture Capital: How did it develop?

In order to understand why VC works the way it does, and to derive lessons from it, we must examine how it developed, since the data show that it is a highly geographically concentrated industry. So how did it develop?

Venture capital had grown to a sizable industry by the early 1970s, propelled by significant returns by prominent early VC firms. The model of limited partnerships had become the modus operandi, with investors becoming limited partners in funds managed by VCs. The pioneering venture capital-funded firm was Fairchild Semiconductor, which was founded by a group of eight scientists (many with Stanford backgrounds), who left Shockley Semiconductor, founded by William Shockley who had invented the semiconductor, and which moved to Palo Alto in 1956. (The eight who joined and then left Shockley Semiconductor ended up founding 65 firms total.) When Fairchild was founded in 1957, the founders had relatively little equity shares, contributing to the departure of Robert Noyce and Gordon Moore, who left in 1968 to found Intel. Working closely with enterprising law firm Willson, Sonsini, Goodrich, and Rosati (WSGR), who were specialized on startups, Intel adopted a model that became the model for later startups, giving founders significant equity.⁷ (Decades later, the CEO of WSGR, John Roos, became the US Ambassador to Japan.)

Venture capital grew alongside the US postwar electronics industry, which exhibited characteristics that differed substantially from traditional industries. The industry experienced waves of innovation characterized by Kenney and Florida as follows:

...even as one electronics sector stabilized with a dominant design, a stable set of market participants, and a predictable incremental trajectory, new sectors appeared or the dominant design experienced significant disruptions, often due to the invention of new business models. (Kenney and Florida 2000, p.100)⁸

Precisely because these waves of disruptive innovation began, venture capital started to evolve into its present form, with venture capitalists investing in portfolios with the

⁷ Kenney, M. and R. Florida (2000). *Venture Capital in Silicon Valley: Fueling New Firm Formation. Understanding Silicon Valley : the anatomy of an entrepreneurial region*. M. Kenney. Stanford, CA, Stanford University Press: 98-123.

⁸ Ibid.

understanding that the majority would fail, with just a few rapid growth companies from which they could benefit from capital gains.⁹

The major investors into venture capital became pension funds in the late 1970s. This was driven by the regulatory change. The Employment Retirement Income Security Act (ERISA) was passed in 1974, restricting corporate pension funds from holding certain types of investments considered risky. In 1978, ERISA restrictions were relaxed by the US Labor Department, enabling pension funds to invest in venture capital. This created a massive inflow of funds to venture capital, causing the VC industry to grow rapidly.

⁹ Ibid.