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The PE-fication of Venture

Perspectives From a 21-year-old Fund Manager

When I first considered venture investing as a career, I made a list of reasons why it would be a terrible decision in retrospect. I read everything I could find, from the first book ever published on venture to the lecture transcripts taught by the first venture capitalist. The top reason on my list was the observation that venture returns have continuously declined in its history. To understand why, let me first tell you the story of venture capital.

Venture capital was inaugurated in 1946 when the first venture capitalist, General Georges Doriot, founded the first venture capital firm, American Research and Development Corporation (ARDC). Georges "The General" Doriot was the Director of Military Planning for the Quartermaster General of the United States Army during WWII. He made significant contributions by facilitating technology transfer from the American industrial base into the military, managing industrial manufacturing to ensure steady procurement of military supplies, and designing innovative military products such as tank crew boots that fit in narrow spaces and the K-ration. At Harvard, the General taught the legendary HBS course, "Manufacturing". His students, known as the "Doriot men", went on to found a generation of venture capital firms - Arthur Rock (Rock & Davis), Tom Perkins (Kleiner Perkins), Bill Elfers (Greylock), Bill Draper III (Sutter Hill), among others.

In 1957, ARDC scored its first and only big win, buying 70% of Digital Equipment Corporation (DEC) for $70,000. DEC was the first breakout minicomputer company, and Doriot's investment pioneered the "power law" business model of venture capital. ARDC ultimately returned 500x with over 100% IRR when DEC went public in 1966. While Doriot sealed the term sheet with DEC, the legendary Traitorous Eight defected from Shockley Semiconductors to found Fairchild Semiconductors with the help of Arthur Rock. Rock introduced the group of scientists to Sherman Fairchild, who invested $1.5M in a deal that gave Fairchild Camera an option to buy Fairchild Semiconductors for $3M, in which case Hayden Stone - Rock's parent firm - would receive 20%, and the eight founders 10% each. In 1968, Bob Noyce and Gordon Moore, two leaders of the Fairchild mafia, founded Intel and raised $2.5M from a group led by Rock. Rock's $300,000 personal investment was valued at some $25M by 1975, returning over 80x in seven years.

In 1972, another pair of Fairchild men, Tom Perkins and Eugene Kleiner, founded Kleiner Perkins with the backing of the Hillman family. That same year, Don Valentine, the one-time Fairchild marketing head, founded Sequoia Capital under the Capital Group. Sequoia and Kleiner Perkins' first funds were both $7M, and both returned over 50% IRR over their

then-standard six-year fund lives. The Employee Retirement Income Security Act (ERISA) of 1974 allowed pension fund managers to allocate to high-risk investments. Early proof points of success, ERISA, Reaganomics, and the reduction of capital gains tax in the late 1970s created the perfect storm for the first bull run of venture capital in the 1980s. By 1983, pension funds alone were investing more than $1B annually in venture capital. David Swensen's appointment as Yale's CIO in 1985 further expanded the capital appetite for venture capital as more universities adopted the "Swensen model" which emphasized alternative investments.

By the 1990s, venture capital was already a mature industry. Benchmark's spinout from Merril Pickard and the ensuing dot-com madness masked an important structural change: the repeal of the Glass-Steagall Act in 1999. Glass-Steagall was a post-Great-Depression bill that separated commercial banks from investment banks. Its repeal in 1999, the result of a lobbying effort led by legendary banker Sandy Weill, took that firewall away. This led to a wave of rapid consolidation in the banking industry that eventually made some of them "too big to fail". On Sand Hill Road, victims of this coup were the "Four Horseman" - a cluster of boutique investment banks who were schmoozed up with the venture capitalists and willing to take their risky portfolio companies public at microcapitalizations. The horsemen were quickly absorbed by larger banks who didn't have the same risk appetite to take Valley startups public, taking away a crucial exit mechanism for the venture industry. When the music finally stopped in 2000, few venture capitalists internalized the profound structural change that had taken place.

The venture capital drought that followed in the 2000s saw the founding of Founders Fund and Andreessen Horowitz, as well as the high-powered Sequoia Growth practice. In a way, the proliferation of venture growth - landmarked by Yuri Milner's 2009 investment in Facebook - was a handing-off-the-baton moment for the venture industry. Whereas Bill Elfers founded Greylock in 1965 as the first "venture growth" fund investing in Series A's, the inflow of upstream and global capital in the ZIRP-fueled globalization-driven world of the 2010s seriously blurred the lines between venture capital and growth equity. These growth investors filled the financing gap that was left by the Four Horseman, and the venture industry moved on to the next megacycle as if nothing changed.

So that brings us to the venture capital industry of today. Looking back, venture capital used to be an industry where top funds routinely returned >50% IRR, six-year fund durations were the norm, startups frequently IPO'd in less than four years, and investors often expected to own half of the company for only a few million bucks with no dilution from follow-on rounds. The venture capital industry of today sees top decile funds hope for >20% IRR, fund durations start at 10 years, successful startups stay private for sometimes over 20 years, and investors spend hundreds of millions of dollars to own no more than 20% of a company. It's clear that venture returns have diminished, but why?

Let's take a closer examination of the IRR equation. The internal rate of returns is a function of three variables: the buy-in cost, the holding duration, and the exit price. We saw that the buy-in cost has increased dramatically over the decades as a result of more institutional capital, less default ownership, and more dilution from follow-on rounds. If you're a believer of the "Great

Man Theory" of venture capital - the belief that the universe of high-quality venture investments is bottlenecked by the number of high-quality entrepreneurs - then we should expect more money to chase a lesser amount of more backable founders. Since talent is less liquid than capital, the buy-in cost should continue to increase. We saw that the holding duration has increased as a result of changes in the capital structure, and we should expect this trend to continue with the proliferation of secondaries funds and continuation vehicles. We saw a logarithmic increase in exit prices from hundreds of millions in the 1980s (Apple) to billions in the 1990s (Netscape), tens of billions in the 2000s (Google), and hundreds of billions in the 2010s (Facebook). Mathematically, linear growths in buy-in cost and holding duration coupled with logarithmic growth in exit price leads to shrinking IRR.

This was the top reason on my "why not to pursue venture" list, and it scared the crap out of me. There's a saying in venture capital: legendary venture investors typically make their career-defining investments after the first decade, so everything before that point should be treated as preparation for the one deal that matters. Simple extrapolation from the venture returns trend in the past five decades shows that by the time I'm primed for my career investment, even the top decile investors will be lucky to put up high teens IRR. So I set out to ask industry veterans about my concern.

After speaking with legendary firm builders like Marc Andreessen, Josh Kushner, and Josh Wolfe, I was convinced that everyone recognized the problem. I was also left with the impression that nobody had a satisfactory solution yet - the best remediation I heard was that venture capital has become so large and diverse that it's unfair to treat it as one asset class. Instead, one should categorize the top-tier franchise firms as a separate group, let's call it "premium venture", from the long tail of small and medium-cap "regular venture" funds. The argument is that venture capital is a "feast or famine" business that will lead to a "megas and minnows" industry structure, where post-inflection firms see the best deal flow, can raise infinite capital, and demand consistent brand premiums when competing for rounds. Small boutique emerging funds, like my own, will be fine as we live off of crumbs of local alpha. Mid-market firms that are three or four funds in with a few hundred million AUM are stuck between a rock and a hard place - they're too big to survive on small pockets of alpha but too small to compete with premium venture franchises.

This finding did not alleviate my concern. In fact, it had the effect of lighting a fire under my ass and was one of the reasons I chose to raise my first fund right out of school. Even though I agree with the bifurcation trend of the venture capital industry, I found the argument surprisingly defeatist in an industry of optimism. I was looking for "here's why the pie is growing", and I found "the pie is indeed shrinking, but here's why we'll eat more of it". I set out to build my own solution.

During my study of the venture industry's history, I was stumped by this seemingly great paradox: technology has grown from less than 5% of global GDP thirty years ago to more than 20% today, but venture capital returns have diminished in that same span. How is it that an asset class performs worse while the underlying asset rapidly appreciates?

The answer is alpha leakage. We, as the venture capital industry, have dramatically failed to capture the value that we helped create. Once you come to terms with this, the examples become visible everywhere: In the 1990s, quantitative hedge funds like Renaissance Technologies and Citadel Securities used nascent technologies like high-powered computers and machine learning to print billions; In the 2000s, Tiger cubs like Lone Pine, Viking, and Coatue captured 99% of the technology industry's upside by buying Amazon, Google, Facebook, and other tech stocks; In the 2010s, private equity asset managers made monster infrastructure bets on cell towers, fiber optic networks, and data center financings based on emerging technology trends. If venture capitalists are the best at underwriting the future of technology, then we've done a terrible job at capitalizing our skillset.

What is the skillset of the venture capitalist at the end of the day? This is not a straightforward question to answer. Upon first glance, it seems that a venture capitalist combines network, analysis, and intuition to underwrite the likelihood of success at a stage where every startup is statistically doomed to fail. Peel back the layers, and I would argue that the venture capital skillset is really the ability to gain insights into the future by being far out on the capital risk curve. As a fund manager, my LPs pay me to live a little bit in the future and take asymmetric risks to bring some variation of that future forward. This skillset was plenty useful in a world where technology - our corner of the future as venture investors - was less than 5% of the world's productive economy. When that figure became 20%, the value of our skillset should've also appreciated drastically. However, we stopped innovating while we funded innovation and our revenue model remained constant: startup equity financing. In the next thirty years, we can see a realistic path to a world where technology becomes over 50% of global GDP - $60T of the $110T global GDP today consists of labor that at least some of which will be replaced, and extrapolating technology's growth rate in the last thirty years gives me confidence in that prediction. What is the role of the venture capitalist in this technology-centric future?

To answer this question, I sought inspiration in the history of other asset classes. In my study of the private equity industry, I saw the rapid new product expansion in the 1990s by firms like Blackstone eventually lead to the proliferation of private equity into every financial market in the 2010s. In my study of the hedge fund industry, I saw the computerization of Wall Street in the 1990s eventually lead to the consolidation of multi-trader shops that emphasized the star trader into multi-manager platforms that emphasized the trading system. In my own short career in the venture capital industry so far, I saw almost every major firm register to become RIAs, Sequoia's reset of their Global Equities strategy, the debut of General Catalyst's debt and buyout funds, Andreessen Horowitz's wealth management service expanding private equity, and the rise of hybrid venture hedge funds in crypto. What used to be clear boundary lines between asset classes are now blurred: PE in HF, HF in VC, VC in PE, not to mention credit, real estate, indices - and all of this has happened in the last 25 years.

To me, these secular tailwinds all point in one direction for the future of asset management: a few mega platforms at war with each other to conquer every financial services market, each dominating a major category as their home base. The next 25 years will see wet cement turn

into dry cement: Blackstone as the central asset management platform for real estate and infrastructure, KKR as the central asset management platform for retail brands and credit, BlackRock as the central asset management platform for ETFs and wealth management, Citadel as the central asset management platform for quantitative arbitrage and market making. When all is said and done, there will be one or a few central asset management platforms built on the innovation economy. This player will have strong understanding of technology and the future.

If we venture capitalists are the best at underwriting the future of technology, then as technology becomes more important in the world, we should be able to monetize our skillset in more ways than startup equity financing. The core function of the venture capital industry should be to identify, structure, and invest in assets correlated to technology trends. We currently take our venture insights for granted, but if we had a method to turn venture insights into venture alpha, then we should be the best-positioned financiers to build the asset management platform of the innovation economy. We can identify emerging technology tailwinds before others and monetize by selling our insights through tech consulting; we can use those same insights to better structure financial instruments like indices and debt for retail and institutional clients; we can prove our superior information advantage by developing investment strategies across all assets affected by technology, from leveraged buy-and-build rollups to thematic macro trading to alternative currencies. Not to mention venture wealth management, tech investment banking, large-scale project financing, and the list goes on.

The future of venture capital can learn a lot from its past, both in structure and in spirit. ARDC went public in the 1940s; Sequoia traded public equities in the 1970s; Accel built a mid-market technology buyout fund with KKR in the 2000s. In the last cycle, the venture industry grew too comfortable from the euphoria of a historical bull run that we have gotten too complacent to innovate. We think surprisingly small in an industry where thinking big is rewarded. If venture capital does not evolve, it will perish. If venture capital seizes the moment, then the PE-fication of venture does not only have a Blackstone-shaped opportunity staring us in the face, but we have a shot to be the financiers who bring the future to the present in a techno-centric world. It may very well be that the venture capital industry, with its humble origins as boutique financiers of risky ideas, evolves to become the central asset management platform for the future. I intend to compete for a slice of this humongous pie.