

Benchmarking the Returns to Venture

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Over the last decade venture investing has grown from a tantalizing sideshow to a serious and institutionalized function of US capital markets. Flows into venture capital funds were about \$3 billion in 1990, but \$103 billion in 2000. Total venture-type private equity is now roughly \$300 billion in the US, and venture funds are a major force in launching companies into the public markets. Of the companies going public over the last five years, two-thirds had backing from venture funds. Venture capital is no longer experimental or exploratory, but a permanent feature of the US financial landscape. Venture is here to stay.

Despite venture's established position in the financial firmament, reliable information on its return and risk is hard to come by. For traded securities, quantitative performance evaluation is straight-forward and universal. Standard indices such as the S&P500 and the Wilshire5000 are used as benchmarks for return, risk, and risk-adjusted return. For non-traded holdings, such as venture, the best available equivalent has been averages of fund returns, by quarter or by vintage years, calculated from whatever partial results some funds were willing to share.

The Sand Hill Index® was created to make possible for venture capital the same kind of quantitative performance analysis investors have been using for their traded portfolios for 35 years. This Index can be used for venture capital the same way market-wide indices are used for traded securities. Because it enables calculation of the mean and variance of venture returns, as well as their covariance with returns on other assets, the Index can be used for asset allocation analysis. A second use is portfolio performance evaluation. By comparing portfolio returns to Index returns, investors can get a better measure of the performance of particular holdings in comparison to all venture capital. The third use is unique to venture: The Index can be used to update company and portfolio values to obtain more timely estimates of value, and even to predict the returns that GPs will be reporting over the next year.



The Challenges of Building the Index

The Sand Hill Index is built from company-level pricing data, not fund-level return data. We believe that only the company approach allows creation of a broad, timely, value-weighted, and unbiased index of value that is analogous to traded-market indices such as the S&P500. The companies included are those that are a) privately held, b) organized as C corporations, and c) have sold securities to outside investors. There are at present roughly 17,000 companies represented in the Sand Hill Index over the period 1987-present, and a total of roughly 65,000 valuation events (private rounds of funding, acquisitions, IPOs, and shutdowns). About 7,000 of these companies are still private and operating.

Building an index from company-level data faces two major challenges. First, events that reveal market values do not occur continuously for private companies as they do for traded stocks, but instead occur episodically, when a company raises new money, goes public, is acquired, or goes out of business. Second, reporting of valuation by companies that complete deals is voluntary. Companies that raise money clamor for publicity when they do, but only sometimes do they share the valuation implied by the terms of their deal. Those who do share valuations are not a random sample, but an upward biased sample. Good news is shared more often than bad.

Sand Hill Econometrics has developed tools to solve both of these problems. Intermittent pricing is handled by an interpolation method similar to the one used in repeat-sales analysis. The repeat-sales technique has been enthusiastically adopted in other settings facing similar intermittent pricing challenges, notably housing and durable goods. The bias problem is addressed with statistical techniques that compare a special subset of unbiased data (from customer portfolios) with the biased data from public sources.

What We Have Learned from the Index

The Sand Hill Index results suggest that the returns are lower and the risk is higher for venture capital than was suggested by other benchmarks compiled from voluntarily shared fund return data. About 50 percent of the portfolio companies from each vintage year ultimately fail. The average return over the period 1989-2004 is about 20 percent *gross of expenses and carried interest*. For a typical fund with expenses of 2 percent per year and carried interest of 20 percent (amortized over the typical ten-year life of a fund), total expenses would be 4 percent per year, for a return net of expenses and carry of 16 percent per year. The annual standard deviation of return is about 45 percent (vs. 18 percent for the stock market), and the beta for venture capital, measured against the Wilshire5000, is 2.0. Investors who use an upward-biased benchmark will find that their performance looks poor even if it is truly just average. Investors who rely on measures of risk from the biased benchmarks will end up assuming more risk than they planned for.



Uses of the Index

1. Asset allocation analysis – Investors can get a better idea of what returns and risk to expect from venture capital by using metrics from a benchmark built from all venture companies instead of an upwards-biased set of partially stale fund results.

2. Portfolio risk measurement and performance evaluation – Investors can measure the risk of their portfolios relative to broad market indices and relative to just venture capital. Given risk, they can evaluate the performance on a risk-adjusted basis. Without the Sand Hill Index and the approach to risk measurement developed by Sand Hill Econometrics, investors have just guessed at how risky their venture holdings really were. Now they can measure risk directly and obtain a risk metric for venture that is the equivalent of the risk metrics they use for traded portfolios. Given a solid risk measure, the evaluation of performance is straightforward.

3. Marking to market – General Partners report venture values to their Limited Partners on the basis of each portfolio company's price at its last round of funding, whether the deal that set this price was a month ago or a year ago or more. The reported valuations thus include some values that are current, some slightly stale, and some very stale. The Sand Hill Index, which is constructed to be all-current, can be used to bring the values reported by the GPs to current values. Sand Hill also provides the standard errors for these market values. In addition, because the Sand Hill Index incorporates price information not yet reflected in reported GP values, the Index can be used to predict the returns GPs will be reporting over the next 6 to 12 months.



ECONOMETRICS

Other Useful Venture Metrics from Sand Hill Econometrics

For investors with particular sector interests, Sand Hill Econometrics constructs industry sub-indices for the following industries:

- Information technology
- Health
- Retail
- Other sectors

Volatility Forecasts

In addition, venture returns, like stock market returns, exhibit changing volatilities over time. These volatilities are as predictable for venture as they are for the stock market. Sand Hill Econometrics provides volatility forecasts (out two years) for venture capital to financial market regulators. Risk managers in the private sector may find these useful also.