

# SVB ANALYTICS RESEARCH SERIES

Volume 1

## THE ADVENT OF FORMAL VALUATIONS

SVB Analytics was formed to respond to clients' demand for assistance with analytical tasks resulting from new tax regulations and accounting standards. As part of this effort, we built a team to help companies comply with the exigencies of IRC § 409A and FAS123R. To do this effectively, we have been studying the valuation drivers of hundreds of venture-backed technology and life science companies in great detail.

This activity, writing valuation opinions for small emerging growth start-up companies, is essentially new. Not just for us but for our clients, the valuation service providers and the accounting industry. Until recently, other than the occasional estate matter, children's trust or limited partner interest that was for sale, there were few reasons to value private companies in a methodical way.

After some investigation we found that, other than many anecdotal perspectives, the formal statistical basis for understanding the value drivers for these venture-backed companies was quite limited. The only important research was concluded more than seven years ago. Times, as they say, have changed.

Now there are thousands of executives seeking quality advice on what their companies are worth. In order to add to our own understanding and perhaps, to add to the body of knowledge available to our clients, the valuations service providers and the accounting industry, we organized and funded a significant research effort in March 2007. Our studies involve thousands of companies and data from multiple sources—some of which are survey-based and some from private sources which we know to be extremely reliable.

Our ultimate goal is to improve the quality of valuations that our clients receive from us as well as others.

## THE FIRST IN A SERIES

When we began charting this effort we found many questions about what drives value in the unique world of private equity and venture capital. In particular we sought insight that would be scientifically

rigorous yet based in market practices. This report is the first in a series of papers sharing our results, geared to providing insight, and perhaps inspiring other firms to consider similar efforts.

## “PRICE IS WHAT YOU PAY, VALUE IS WHAT YOU GET.”

Where do market practices tell us to look for the value indicators of a private company? Auditors often first look to the value of the previous round, particularly if it occurred during the previous 12 months. Additionally, many of SVB Analytics' clients are actively seeking their next round. Clearly it is appropriate to take this next round into account as a valuation marker as that work involves modeling exit scenarios—exits that cannot be reached without that additional financing. Embedded in the perspective of each participant, in each financing, are detailed and complex expectations about future events. Hence, we thought it prudent to begin our research by analyzing the increases in value between rounds, the step-ups.

Figure 1 shows that after the post-bubble plummet, step-ups are on the rise and looking healthier, with life sciences' step-ups maintaining a steady margin over technology.

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“Price is What You Pay,  
Value is What You Get.”

– Warren Buffet

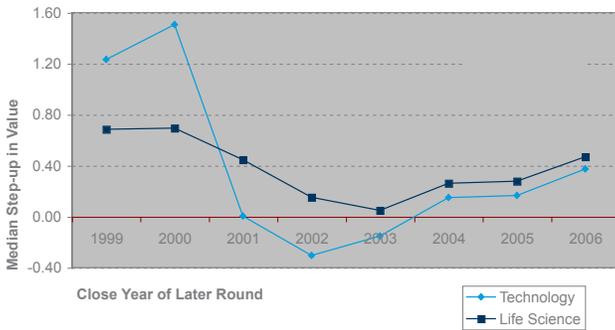
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**Figure 1: Median Step-up Between Rounds by Industry**



Sources: VentureOne and SVB Analytics

Life science companies have key differences in comparison to technology companies. Their value inflection points are fewer and further between than technology companies, as reflected in the timing of their financings, and are generally more significant. For example, a successful Phase II for a new drug does more to lower risk and increase value for future investors than the tape-out of a new semiconductor.

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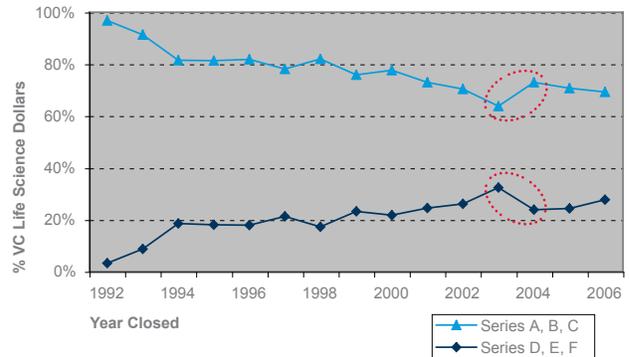
Life sciences has seen the number of A rounds increase 34 percent since 2003, and almost a 50 percent increase in the total A round dollars (compared to technology's 24 percent and 18 percent increases, respectively).

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We see other factors, however, contributing to life science sector values. Figure 2 shows a post-bubble trend of shifting life science investment dollars to later stages (series D, E, F) until 2003-2004, when the trend suddenly breaks and there is a marked increase in earlier stage (series A, B, C) activity.

Further analysis of our data reveals that it was in this same 2004 time frame that venture investments in life sciences came back up to bubble-era levels, approximately \$6 billion. Since then it has continued to rise, hitting \$6.7 billion in 2006.

**Figure 2: Allocation of Venture Investment – Life Sciences**



Sources: VentureOne and SVB Analytics

Conversations with our VC clients echo these findings. VCs are increasing their life science exposure, signing a higher percentage of their life science candidates, and signing those candidates in earlier stages than in the past. Why is this happening? A look at recent headlines lends some insight.

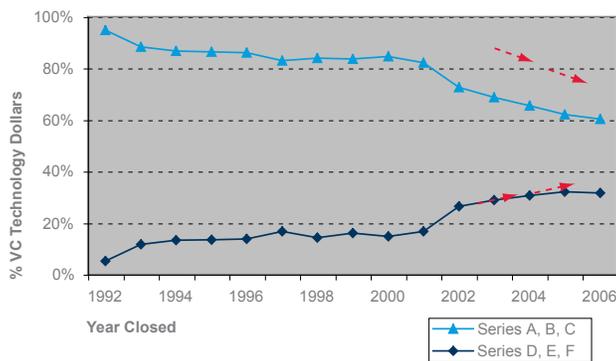
Large pharmaceutical companies have a series of blockbuster drugs coming off patent over the next few years, including the world's top two selling drugs, Pfizer's Lipitor® and Bristol-Myers Squibb's Plavix®. As much as 28 percent of today's large pharma sales could shift to generics between 2010 and 2011, according to pharmaceutical analysts. The recent focus has been to acquire later stage biotech companies as a short-cut in product development and a means to maintain the pipeline. In light of the gaping revenue hole left by products coming off patent, the large pharma pipeline is now being forced to widen and include earlier stage biotech.

It appears that the depletion of quality later stage opportunities resulting from the insatiable appetite of the multi-billion dollar pharma industry and the increasing values of earlier stage companies have changed the investment environment for life science venture funds. They are consistently redeploying to earlier stages. So far the strategy seems to be bearing fruit as our data confirms that these earlier stages yield higher step-ups than the later stages. Whether those higher initial investment returns will compensate for the increased early stage risk is a topic for future analysis.

Oddly, a second factor is driving the demand side of this equation; the American Jobs Creation Act (AJCA) of 2004. This legislation provided U.S. companies with a one-time opportunity to repatriate profits domiciled in their overseas subsidiaries at a greatly reduced tax rate. The restrictions on the U.S. reinvestment of the funds meant the companies most likely to take advantage of the AJCA would be those with substantial research and development budgets. Most of the major drug companies took advantage of this. Pfizer, for example, announced the single largest repatriation of \$37 billion—which works out to approximately an \$11 billion tax savings. It is not a large leap to suggest that this influx of liquidity is ultimately inflating the prices of private biotech shares.

It is worth noting that this move toward earlier stages is not apparent in other sectors. Figure 3 shows how technology investors continue to shift more and more of their investment dollars to later stages. This is particularly clear after the 2000 bubble where we see the percentages of later stage and earlier stage money make sharp moves towards convergence. Reflecting a combination of increased risk aversion after the calamity of the bubble collapse and the dramatically larger funds now being deployed, this shift in investment horizon will no doubt have an effect on future returns. Examining that risk-return trade off will be another interesting topic for future discussion.

**Figure 3: Allocation of Venture Investment – Technology**



Sources: VentureOne and SVB Analytics

## AUTHORS

### JIM ANDERSON, CFA

Jim Anderson is president of SVB Analytics. Anderson joined SVB Silicon Valley Bank in 1999 and has served in a variety of capacities most recently as a founder, president and chief investment officer of SVB Asset Management and founder of SVB Securities. These groups hold total client assets in excess of \$14 billion.

He is the editor of the weekly Investment Strategy Outlook, published by SVB Asset Management and is a frequent speaker on the economy and financial issues affecting the technology and life science sectors.

### CINDY MOORE

Cindy Moore joined SVB Analytics as a research director in 2007. She brings more than ten years' experience in mathematical modeling and statistical and data analysis. Moore has worked for large organizations such as Andersen Consulting and the Federal Reserve Bank, as well as software start-ups in the personalization, price optimization and supply chain collaboration sectors. She holds a bachelor's degree in theoretical mathematics from the University of California at Davis, and a master's in theoretical mathematics from the University of Oregon.

**ABOUT SVB ANALYTICS.** SVB Analytics offers valuation and corporate equity administration services to SVB Financial Group's core constituencies of private, venture capital-backed companies and venture capital firms. SVB Analytics' services offerings include fair market IRC409A/FAS123R valuations and corporate equity tracking and administrative services. SVB Analytics is a member of global financial services firm SVB Financial Group, with SVB Silicon Valley Bank, SVB Capital, SVB Global and SVB Private Client Services, which serve the unique needs of technology, life sciences and private equity firms. More information on the company can be found at [www.svb.com](http://www.svb.com).

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