

SVB ANALYTICS RESEARCH SERIES

Volume 4

This report is the fourth in a series of research papers designed to address the value drivers in the unique world of private equity and venture capital. Our studies involve thousands of venture-backed technology and life science companies and data from multiple sources – some of which are survey-based and some from private sources that we know to be extremely reliable. Volumes 3, 4 and 5 all focus on step-up values in the life science, software and hardware industries, respectively.

THE IMPACT OF FUTURE ROUNDS: SOFTWARE AND SERVICES

As we study and develop corporate valuations, we are engaged in an on-going effort to attempt to quantify the dilutive effect of future rounds of financing in venture backed companies. Understanding this future dilution is a critical component of our analysis as we attempt to determine the portion of a company's value that should be ascribed to the common stockholders. We have recently focused on putting some science around understanding the pricing of these future rounds in an effort to reduce the subjectivity in our process. After conducting intense quantitative research we uncovered, by stage, the typical ranges of step-up values for the technology and life science industry sectors. In this volume of our research series, we share the results of this investigation into the software sector.

A WORD ON OUR METHOD

We spent many months analyzing thousands of companies and financing rounds. We sought out groups of companies that behaved similarly with respect to step-ups, and looked for attributes that define those groups. We considered as many influencing attributes as possible including, but not limited to, round size, round close year, time-to-funding, time between rounds, industry sector, industry niche, geography, number of employees, total amount raised to-date and debt among others.

Ultimately, we found that the attribute that best separated low step-ups from high in the software sector was round size.

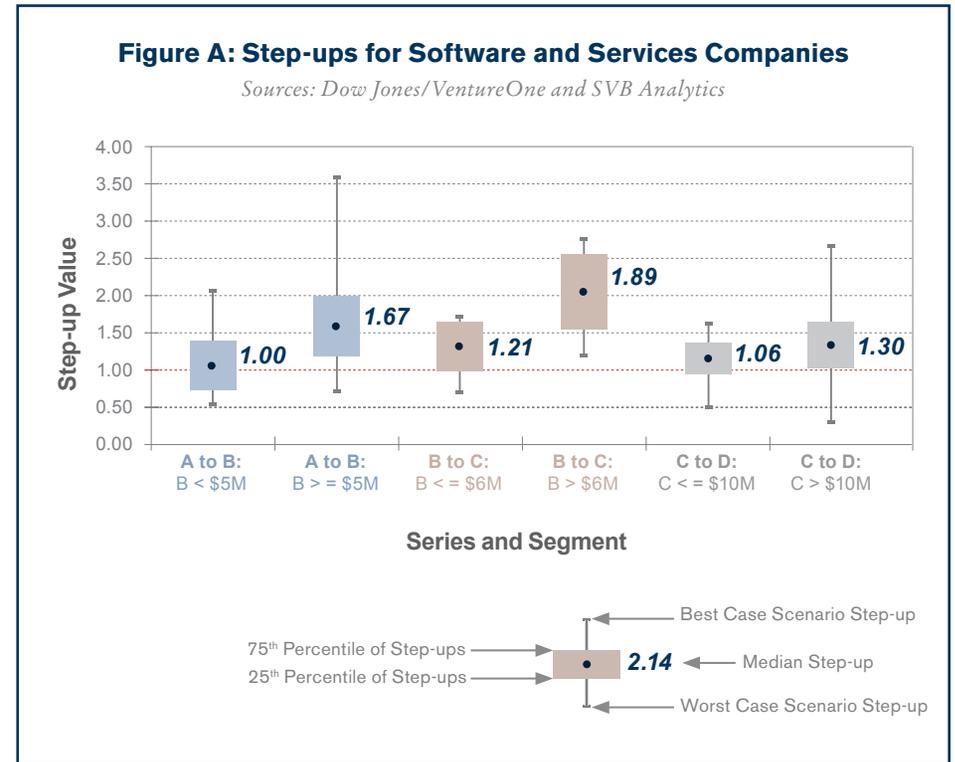
SVB Financial Group

Silicon Valley Bank SVB Capital [SVB Analytics](#) SVB Global SVB Private Client Services

Members of SVB Financial Group

We then put these candidate attributes through rigorous statistical tests to determine if companies harboring them yielded step-ups that behaved differently from the rest of the field with statistical significance. For example, was there a correlation between the length of time between rounds of funding and step-up values? Did companies with rounds close together yield higher/lower step-up values than companies with rounds further apart? Ultimately, we found that the attribute that best separated low step-ups from high in the software sector was round size. For example, companies that raised B rounds that were less than \$5 million had smaller A to B step-ups than companies that raised B rounds greater than \$5 million.

Why is \$5 million the break point? Why not \$2 million or \$10 million? Rather than select these break points ourselves, we let the data and the statistical algorithms reveal which values were the most statistically significant. Specific results will be revealed on a segment-by-segment basis later in this report. Lastly, it is important to note that we restricted our sample to rounds that closed after the technology bubble of 2000 to keep our results recent and relevant. Specifically, when calculating the step-



up value¹ between two rounds, we required the earlier round to have closed after 2000, and later rounds to have closed after 2003. Additionally, for purposes of our analysis we excluded participation and liquidation terms that could improve returns for investors without impacting the step-up in value.

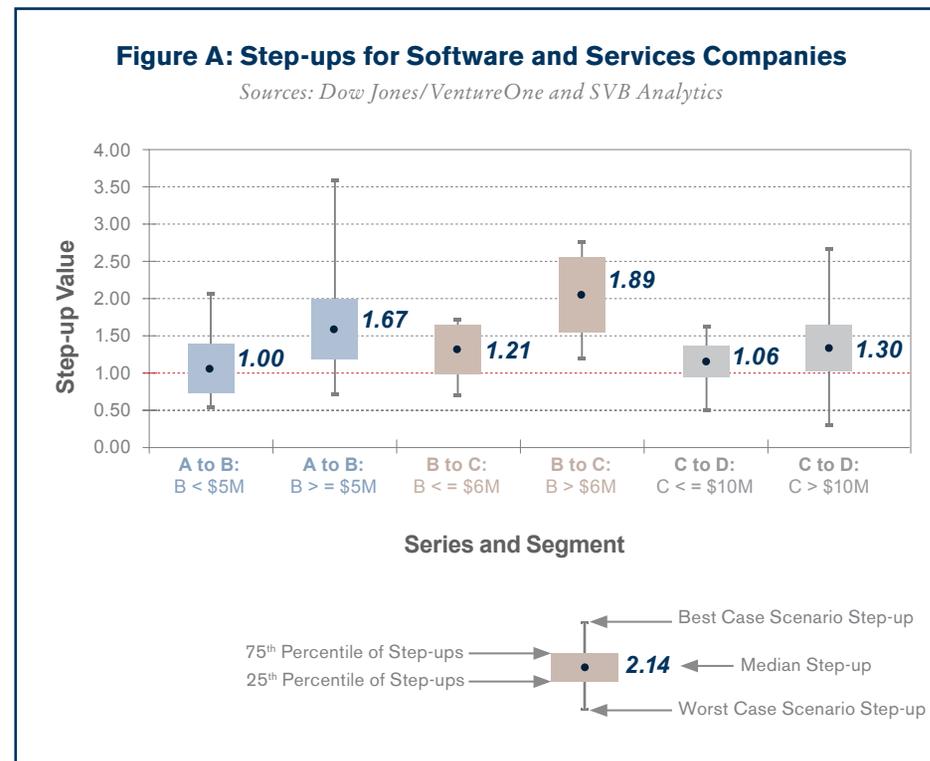
¹ The following formula was used for calculating the step-up value: (Step-up from Round X to Round Y) = (Pre-Money Value at Round Y)/(Post-Money Value at Round X)

Figure A illustrates the range of step-up values for each of these statistically significant segments, for each of the stages. The shaded boxes contain the middle 50 percent of step-up data values, and lines extend from these boxes to these segments' best and worst case scenarios.² The figure is a graphical illustration of the findings revealed throughout this report.

SOFTWARE STEP-UPS: INTERPRETING THE DATA

The software companies in our data sample primarily offer tools and applications, while a minority of the companies offers communication services and commerce/content/media. Companies such as Google and Amazon are good examples of the latter classification.

As we revealed earlier, round size is the key determinant of valuations step-ups. Our analysis identified two distinct groups of companies within the software sector: those with consistently large rounds from stage to stage and those with consistently modest rounds at every life stage. The data also indicated that software companies see fewer inside rounds than life science and



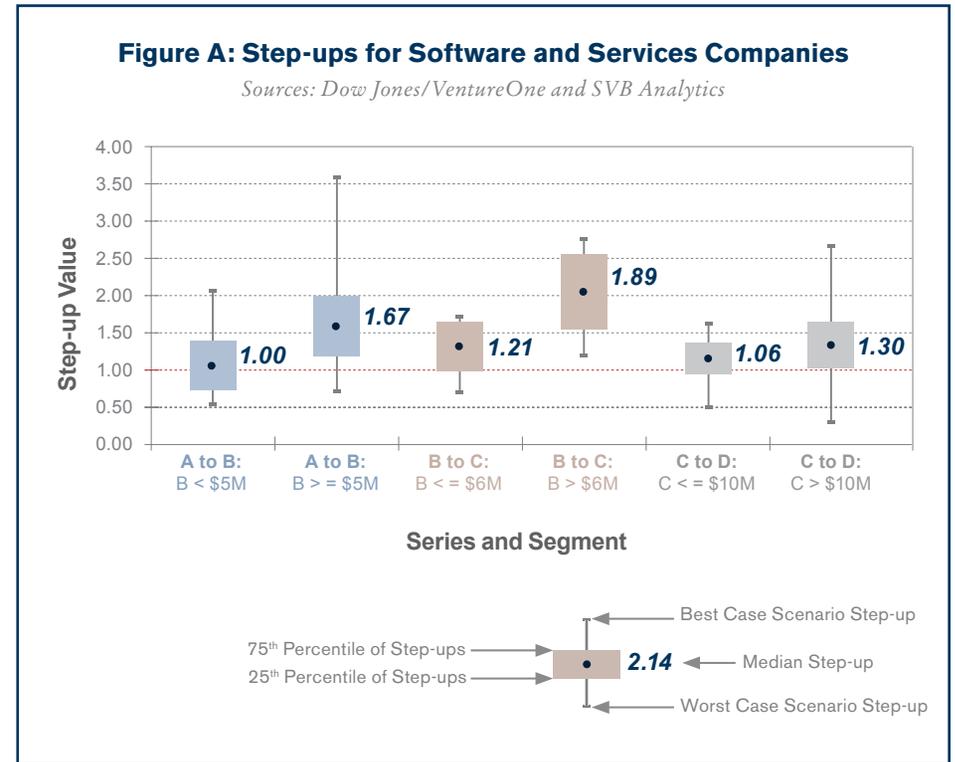
hardware companies, but the level of insider participation in these follow on rounds remains high. Early investors are maintaining their ownership through the funding cycle, while companies are disciplined in securing new investors to provide pricing integrity. Consequently, the size of the round — and by extension

² The best and worst case step-up scenarios were determined after the elimination of outliers. An outlier would be something like Microsoft's recent deal to acquire a 1.6 percent stake in Facebook, valuing the company at a whopping \$15 billion. Imagine the effect of this valuation on the step-up value — not to mention the strike price for 2008 new hires. Such outlier values are purposely excluded from our modeling and are not reflected in these results.

the portion available for the new investor given this high level of insider participation — is of critical importance to the new investor given exit expectations in today’s environment. This, as with many investing trends in the sector, is driven by the exit math.

We are in an environment today where exit valuation expectations have become more muted. Because all investors work backward from this predicted exit in order to price their investment for an appropriate return, these reduced expectations have a profound impact on pricing dynamics and round size. While pricing can be manipulated to enhance returns to some extent, companies across the spectrum are under increasing pressure to raise less money through the investment cycle as total invested capital remains an important factor in driving investment performance.

As our detailed discussion of the data will reveal, pricing behavior is markedly different between the modestly financed companies and the heavily financed companies. Heavily funded companies are backed by well-known, experienced investors that preserve their ownership stake throughout the funding cycle to ensure an adequate return, but also to put a sufficient amount of capital to work to move the needle for the fund. These are large bets commensurate with the size of the fund making them. These



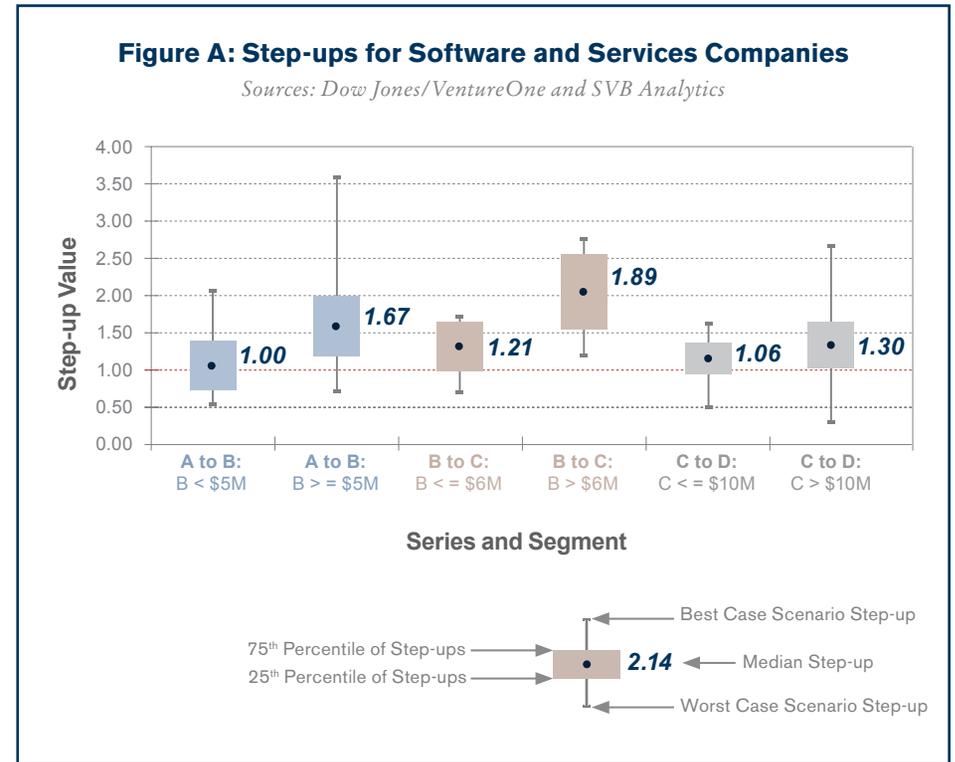
companies seek larger rounds to enable them to attack larger markets or, at a minimum, properly finance their entry into a smaller market and improve their chances for success. The resulting exit potential provides a better environment for good step-ups by round, which is what the data show.

The companies with the consistently smaller rounds are typically

financed by smaller funds. Using the same logic as outlined above, these companies have more modest exit expectations and are likely pursuing smaller exit opportunities. This pressure on the return math makes it hard for an existing or new investor to aggressively price a follow on round. Again, this is borne out in the data as step-ups for this segment are quite modest. In general we found that for early-stage companies it is the size of the later round that is important, and for the later stages it is the size of the previous round. Additionally, once a company progresses to the point of needing a D round, the step-up is notably lower for both segments; whether a modestly or heavily funded company, the impact of the total capital raised on the exit valuation/return dynamic is an anchor at this stage that is challenging to overcome. However, we consistently see higher step-ups coming from companies with larger rounds funded by well-known, large-fund investors, while more modest step-ups come from companies with smaller rounds funded by smaller-fund investors.

SERIES A TO SERIES B STEP-UPS

Low Step-up Segment: Companies with Series B rounds less than \$5 million. This low step-up segment was almost exclusively funded



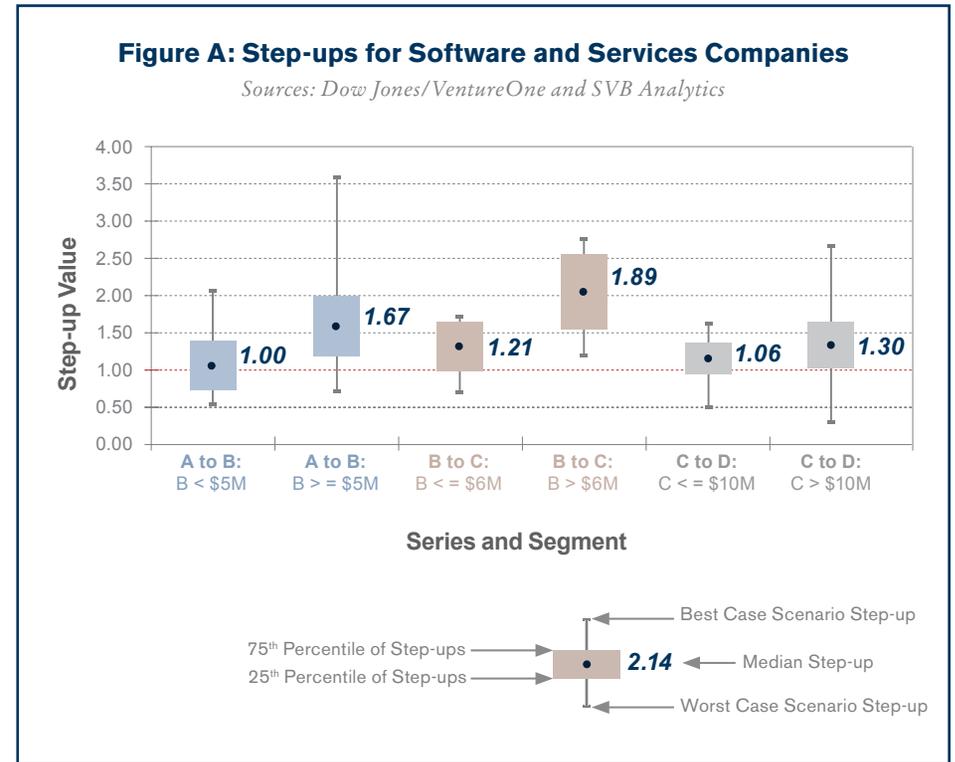
by newer and smaller-fund investors. The shaded box on the far left of Figure A shows a median of 1.00 (a flat round), indicating that at least half of the rounds in this segment were either flat or down rounds. Further investigation revealed that virtually every round in this low step-up segment was an inside round (an aberration for the software sector as new money typically serves as a defensive move against pricing-related lawsuits). Additionally,

two-thirds of these companies had B rounds that were smaller than their A rounds, suggesting that the bulk of companies in this segment either needed top-off rounds or experienced some degree of decreased investor exuberance.

However, almost all of the companies in this low step-up segment that managed to see an increase in value between their Series A and Series B had two things in common: they had very small A rounds (\$0.5 - \$3 million) and, not surprisingly, belonged to the minority group of companies that had B rounds larger than their A rounds. Their step-ups fell mainly from 1.20 to 1.60, suggesting that this is the typical step-up range for companies receiving consistently modest rounds and progressing on plan.

Bottom Line: For a software company that raised a modest Series A, and is raising a Series B that is under \$5 million yet larger than its Series A, the A to B step-up typically falls in the 1.20-1.60 range.

High Step-up Segment: Companies with B rounds greater than \$5 million. Almost every company in this high step-up segment had experienced and well-known investors in every round. Figure A shows a shaded box for this segment that has little overlap with



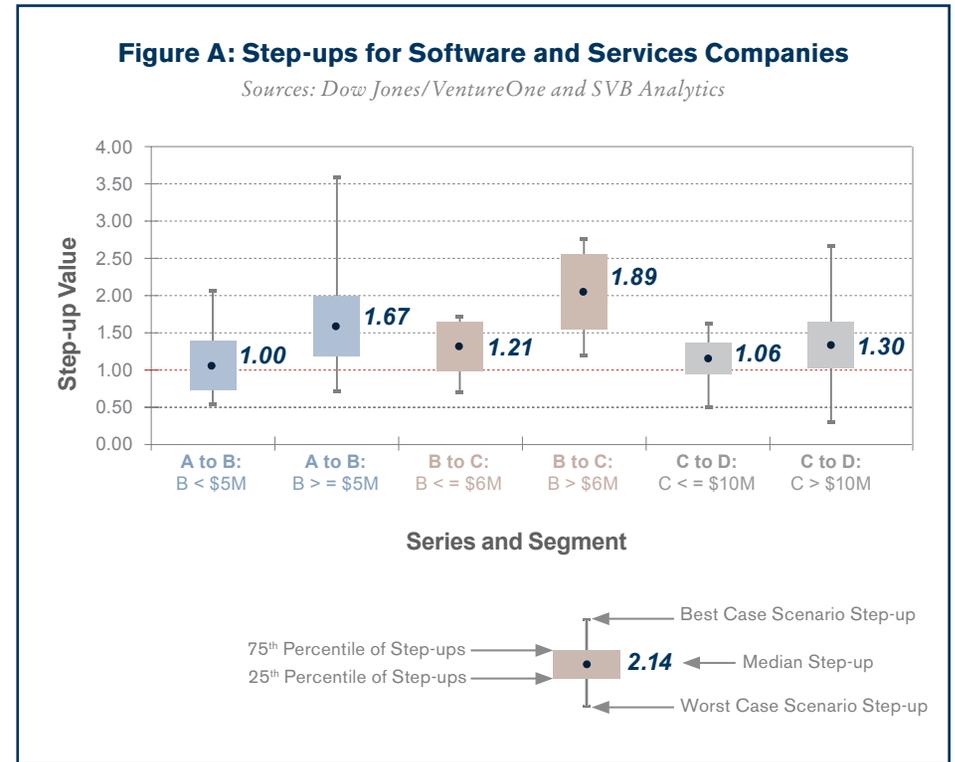
the low step-up segment's shaded box (on the left), illustrating the difference in behavior between the two. Series A to B step-ups fall in a significantly higher range when the B round is more than \$5 million and well-known investors are involved. There are virtually no inside rounds in this group. Series B rounds fell primarily between \$8-13 million. This segment has a high concentration of step-ups in the 1.4 - 2.0 range, suggesting that this

is the typical range of step-ups for software companies receiving new money, raising consistently large rounds and performing to investors' satisfaction.

Bottom Line: For a software company that is meeting milestones and expecting to raise a Series B over \$5 million that will include new investors, the A to B step-up typically falls in the 1.40-2.00 range.

SERIES B TO C STEP-UPS

Low Step-up Segment: Companies with B rounds less than \$6 million. This low step-up segment was again almost exclusively funded by newer and smaller-fund investors. The companies that raised modest B rounds also raised modest C rounds. The Series C financings in this segment ranged mostly from \$2-\$6 million, with a handful in the \$8-\$9 million range. About one-third of the rounds in this group were inside rounds. It is likely the flat and down rounds can be attributed to companies that were either faltering or needed top-off rounds. The remainder of this step-up segment is made up of companies with positive, yet modest, step-ups that fall primarily between 1.20 and 1.50. We see only a handful of companies backed by well-known



investors in this segment. The prevalence of existing investors playing pro-rata combined with the smaller scale of the rounds makes it difficult for a larger, late-stage fund to get in at this stage and get a big enough piece of the company pie to have any meaningful effect on their fund's overall return.

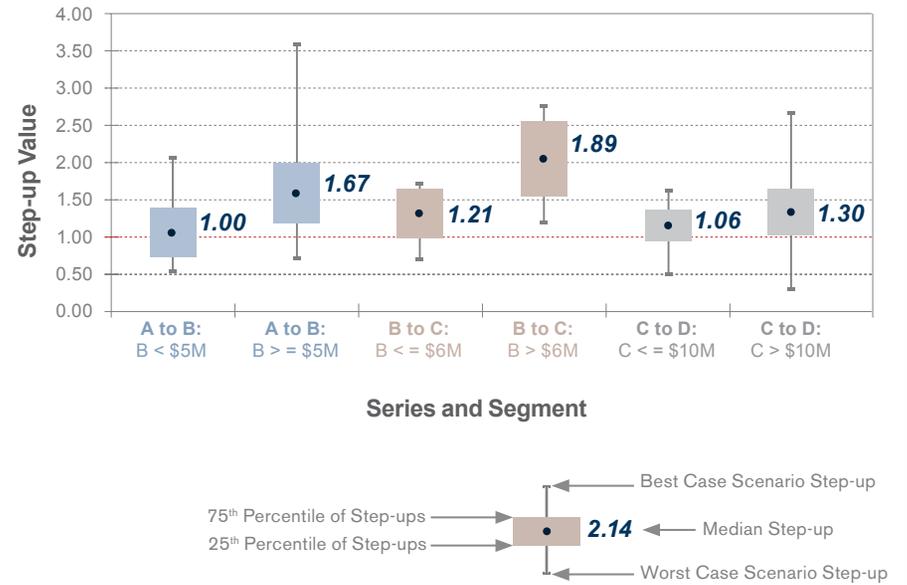
Bottom Line: For a software company that raised a modest Series B (under \$6 million) and is meeting milestones, the B to C step-up typically falls in the 1.20-1.50 range.

High Step-up Segment: Companies with B rounds greater than \$6 million. This high step-up segment is again dominated by companies that have well-known, large-fund investors in every round. Figure A shows a shaded box for this high step-up segment that has *no overlap* with the shaded box from the low step-up segment, again highlighting the considerable difference in valuation behavior between the two segments. Series B to C step-ups fall in a significantly higher range when the B round is more than \$6 million (and hence well-known investors are participating). Companies with large B rounds also had large C rounds ranging primarily from \$10-\$20 million. The median step-up is a notable 89 percent increase in value, and there are almost no inside rounds in the segment.

Bottom Line: For a software company that raised a Series B over \$6 million and is expecting the C round to include new investors, the B to C step-up typically falls in the 1.50-2.50 range.

Figure A: Step-ups for Software and Services Companies

Sources: Dow Jones/VentureOne and SVB Analytics



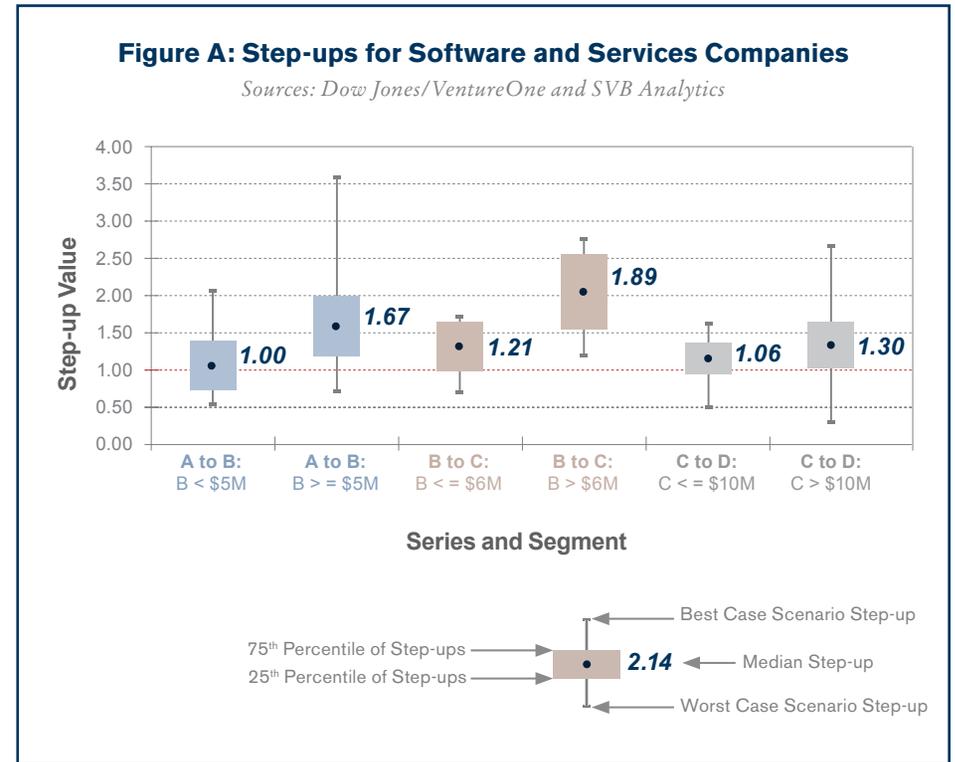
SERIES C TO D STEP-UPS

Low Step-up Segment: Companies with C rounds less than \$10 million. The low step-up segment has a median of only 1.06, indicating that at least half of the financings are essentially flat or down rounds. Closer examination shows the down rounds come from two clusters of companies: those with small C and D rounds

(under \$5 million) as well as smaller-fund investors, and those with C and D rounds in the \$5-\$10 million range and bigger name investors. The handful of companies in the best- and worst-case scenario ranges are backed by larger funds. However, the companies with really big name investors mainly show increases in value from the C to D round. Companies in the low step-up segment that did manage to achieve an increase in value between their C and D rounds had step-ups falling mainly between 1.05-1.40.

Bottom Line: For a software company that raised a modest Series C round and is meeting milestones, the C to D step-up typically falls in the 1.05-1.40 range.

High Step-up Segment: Companies with C rounds greater than \$10 million. Companies in this high step-up segment are almost exclusively those backed by well-known investors. There is a small handful of low down rounds (step-ups under 0.35) and another small handful of flat rounds. These small clusters of flat and down rounds notwithstanding, most of the values in this high step-up segment are concentrated between 1.25 – 1.80, suggesting this is the expected C to D step-up range for software companies receiving new money, raising consistently large rounds and performing to plan. Half of the companies with



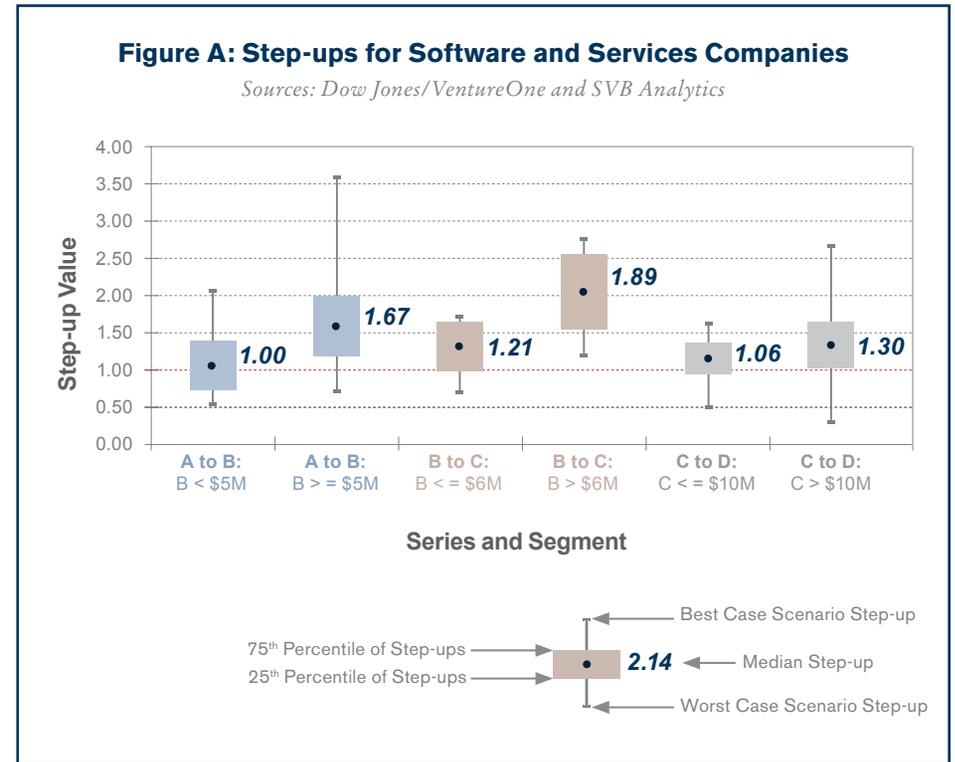
step-ups falling in this 1.25 – 1.80 range have D rounds that look like top-offs and the other half raised D rounds in the \$11-\$30 million range. In the post-bubble technology landscape, late stage investing (as shown in Volumes 1 and 2 of this research series) has become popular. Perhaps high Series D step-ups reflect the abundance of late-stage funds with large amounts of capital to deploy, creating healthy competition in the later rounds.

Bottom Line: For a software company that raised a Series C larger than \$10 million and is performing on plan, the C to D step-up typically falls in the 1.25 – 1.80 range.

WRAP UP

Conversations with our well-known VC clients confirm that the size of the ownership stake is more important to them than the valuation. Armed with the confidence that they have been able to pick winners at a higher rate than other firms, these large, successful firms are comfortable paying a premium for the right to fund the best projects with significant investment commitments. All of this is borne out in our data as we see higher step-ups are virtually exclusive to companies with larger rounds that invariably include well-known, large-fund investors, while more modest step-ups come from companies with modest rounds and smaller-fund investors. These observations have piqued our interest around the question of how ownership stakes acquired at each stage have behaved over time and within the industry sectors. We have begun to explore this question and will share our results in a future edition.

Questions or comments for the author? E-mail Cindy Moore at cmoore3@svb.com.





AUTHOR

CINDY MOORE

Cindy Moore joined SVB Analytics as research director in 2007. She brings more than ten years' experience in mathematical modeling and statistical analysis. Moore has worked for Andersen Consulting (Accenture) and the Federal Reserve Bank, as well as software start-ups in the affinity recommendation, 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 degree in theoretical mathematics from the University of Oregon.

ADVISING SCIENTIST

ROUBEN AMIRBEKIAN, PH.D.

Rouben Amirbekian is a founding scientist for a Silicon Valley start up where he designs and develops scientific models for click-fraud detection. He has worked for Visa International and NCR Corporation's Teradata Solutions, as well as several venture-backed technology start ups. He has innovated techniques in areas including: market-based price optimization, credit valuation analysis, credit fraud detection, bankruptcy risk prediction, and

simulation of financial market conditions. He holds a doctorate in geophysics from the University of California at Berkeley, and later was visiting scholar at the Applied Math Group of the Department of Mathematics at Stanford University.

EDITOR

JIM ANDERSON, CFA

Jim Anderson is president of SVB Analytics. Anderson joined 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 \$15 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.

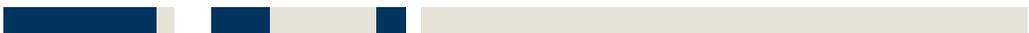
ABOUT SVB ANALYTICS

SVB Analytics is the leading provider of valuation services, corporate equity administration software and FAS123R software for private technology and life-sciences companies. SVB Analytics' offerings include fair market valuations for compliance with IRC409A and FAS123R, capitalization tracking and options accounting. SVB



Analytics is a member of global financial services firm SVB Financial Group, with 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/svbanalytics.



SVB> *Find a way*

SVB Financial Group

SVB ANALYTICS HEADQUARTERS

185 Berry Street, Lobby 1, Suite 3000 San Francisco, California 94107 U.S.A.

PHONE 415.512.4242 svb.com

© 2008 SVB Financial Group. SM Member Federal Reserve. All rights reserved. SVB, SVB> and SVB>Find a way are all service marks of SVB Financial Group. SVB Analytics is a non-bank affiliate of Silicon Valley Bank and a member of SVB Financial Group. Products and services offered by SVB Analytics are not FDIC insured and are not deposits or other obligations of Silicon Valley Bank. Silicon Valley Bank is a member of the FDIC and the Federal Reserve and it is the California bank subsidiary of SVB Financial Group, which is also a member of the Federal Reserve. This report, including without limitation the statistical information herein, is provided for informational purposes only. The material is based in part on information from third-party sources that we believe to be reliable, but which have not been independently verified by us and for this reason we do not represent that the information is accurate or complete. The information should not be viewed as tax, investment, legal or other advice nor is it to be relied on in making an investment or other decision. You should obtain relevant and specific professional advice before making any investment decision. Nothing relating to the material should be construed as a solicitation, offer or recommendation to acquire or dispose of any investment or to engage in any other transaction. Rev. 06-16-08.