DO IPOS MAKE GOOD GUIDELINES?

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Some Valuators have looked to Initial Public Offerings to establish the value of private software companies. This is an enticing, but in our view, totally unsatisfactory approach. For a project in early 1998, a well-known valuation firm prepared a Study of 38 software IPOs in 1997. Based on statistical analysis, they concluded that software IPOs were priced at 8.4 times past revenues and that at December 31, 1997, a private software company was worth that multiple. While the correlation was strong, no causal relationship was demonstrated and the conclusion did not agree with my experience, as an investment banker, in the pricing of IPOs.

The period chosen was the whole of 1997, during which the stock market, as measured by the Standard & Poor's 500, increased 31%. During such a period of high "investor enthusiasm", one would expect revenue multiples of IPOs to rise, but this effect was not apparent as shown by the medians, which were:

1997	**Companies**	**Price/Revenue**
First Quarter	9	9.8X
Second Quarter	11	6.8X
Third Quarter	9	89.9X
Fourth Quarter	9	8.5X
Year	38	8.7X

This rather crude comparison suggests that the behaviour of the small software IPO market, as represented by the Study sample, differs from that of the traditional stock market. This should not be unexpected as investors purchase such IPOs in the expectation of very rapid growth in revenue and are willing to accept continued losses due to the expensing of R & D and high market entry costs.

Of the 38 companies used in the Study sample, only 19 (50%) had profits at the time of their IPO. In at least one case, Bea Systems, the loss amounted to 345% of revenue, and for eight of them exceeded 40% of revenue.

In valuing a business, even a software company, one must pay attention to the factors set out in Rev. Rul 59-60; the Study only took into account only three of them: (1) the nature of the business; (6) the existence of intangible value; and (8) the selling prices of comparable securities. It is hard to say whether the author felt that the others did not contribute to the value of a software company, or, whether he felt that they had no weight in his approach.

In our review of the Study, due to the rapid rise in stock markets during the year, we felt that only transactions in the second half were applicable to a December 31, 1997, valuation. As the private software company to which the conclusions of the Study are being applied had revenues of $12 million, we believe that the sample should be limited to companies with revenues between $6 and $19 million (approximately 50% above and below those of the subject).

These two adjustments reduced the sample to the following nine firms which completed their IPO between July and December 1997; the order in the table is that used in the Study, by date of filing with SEC.

Name	**IPO Date**
Omtool	08-Aug-97
Probusiness Services	19-Sep-97
Omega Research	30-Sep-97
TSI International Software	01-Jul-97
FlexInternational Software	12-Dec-97
UBICS	30-Oct-97
Made2Manage Systems	18-Dec-97
Information Advantage Software	17-Dec-97
Tier Technologies	17-Dec-97

My experience is that the stock market prices shares of technology companies on their future prospects. This is true for both initial public offerings and mature enterprises. The punishment given this year to shares of such companies that have failed to meet analysts' expectations supports this view. In particular, rapid growth is expected from small companies that are being brought to the market. It is extremely likely that for most of the Study's sample, the IPO pricing was not based on the historical Financial Statements, in the Prospectus, but rather on the Underwriter's expectations of the results for the next few years.

For most IPOs, at the time of offering, a "green sheet" is circulated within the investment community; while this is used to sell the issue, copies are not normally given to customers or the information included in standard databases. The green sheet gives the key attributes of the issue and, in most cases includes forecasts for revenues and profits or losses covering not only the current fiscal year but also the next one.

For the nine companies in the reduced sample, CVS recalculated the Price/Revenue Ratios using 1997 Revenues and the weighted number of shares outstanding for the year.

Omtool is a manufacturer and distributor of fax software (65%), hardware (21%) and services (14%). According to a press release in EDGAR Online, revenues in 1997 increased 131% to

$19,368,000 from the 1996 figure of $8,401,000 used by the Study. Revenues amounted to $1.67 per share for a P/R multiple of 5.4X on the $9.00 IPO price, rather than the 12.3X quoted by the Study.

ProBusiness is a provider of employee administrative services for large firms; it offers payroll processing, tax filing, benefits administration and human resources Software. In the year to June 1997, revenues grew 97.6% to $27.4 million from the $13,863,000 for the year to June 1996 used by the Study. In the six months to December 1997, revenues increased 92% to $19,552,000. For the 12 months to December 31, 1997, revenues were $36.75 million or $3.79 per share. The Price/Revenue Ratio on the IPO price of $11.00 was 2.9X, compared with the 8.9X quoted by the Study.

Omega Research is a leading supplier of real time investment analysis software to individual investors. Its principal product "TRADESTATION", which provides a majority of revenues, has been sold to institutional investors by Dow Jones markets since January 1996. Revenues in 1997 grew by 64% to $29,226,000 from the $17,820,000 in 1996 used by the Study. Revenues were $1.40 a share, giving a P/R ratio of 7.9X on the $11.00 IPO price, compared with the 13.6X quoted by the Study.

TSI International is a supplier of software and related services that enable organizations to integrate business applications both internally and with external partners. Revenues in 1997 grew 40% to $26,670,000 from the 1996 figure of $19,004,000 used by the Study. Revenue per share was $4.50, giving a P/R ratio of 2.0X on the $9.00 IPO price, compared with the 4.3X quoted by the Study.

FlexInternational designs, develops markets & supports the Flexi family of financial and accounting software, designed for users with sophisticated requirements. For 1997, revenues grew 157% to $21,624,000 from the 1996 figure of $8,340,000 used by the Study. Revenue per share $1.57, giving a P/R ratio of 7.1X on the $11.00 IPO price compared with 21.6X quoted by the Study.

UBICS is a supplier of information technology professional services to large-mid sized organizations. It is a subsidiary of the $1.5 billion multinational conglomerate, The UB Group based in Bangalore, India, which employees over 65,000 people in more than 40 countries. Its activities include: pharmaceutical products, engineering, brewing & distilling, petro chemicals and information technology. For 1997, revenues grew 127% to $20,549,000 from the 1996 figure of $9,072,000 used by the Study. Revenue per share was $3.90, giving a P/R ratio of 2.6X on the $10.00 IPO price compared with 7.1X quoted by the Study.

Made2Manage Systems makes software that helps small and medium sized manufacturers with sales analysis, order entry, delivery cycle responsiveness, quality assurance, accounts receivables, and financial reporting. In 1997, sales grew 72% to $16,167,000 from the 1996 figure of $9,379,000 used by the Study. Revenue per share was $6.63, giving a P/R ratio of 1.1X on the $7.50 IPO price, compared with 3.4X quoted by the Study.

Information Advantage produces online analytical processing software that helps organizations distribute information by allowing many users to access and analyze large amounts of data. In the year ended January 31, 1998, revenues grew by 118% to $25,590,000 from the January 1997 figure of $11,746,000 used by the Study. Revenue per share was $2.14, giving a P/R ratio of 2.8X on the $6.00 IPO price, compared with 7.6X quoted by the Study.

Tier Technologies helps companies "keep pace with the computer age" by providing information technology, consulting, application development and software engineering services. For the fiscal year ended September 30, 1997, revenue grew by 39.0% to $22.5 million from $16,200,000 the previous year; the Study used $11,790,000, an unsupported figure revenue. For the 12 months to December 31, 1997, revenue was $27,250,000, or $4.44 a share; this gives a P/R ratio of 1.9X on the $8.50 IPO price, compared with 5.6X quoted by the Study.

Our results are summarized in the table below which sets out for each company the growth in Revenues during 1997 and the Price/Revenue ratio calculated by CVS, as well as those quoted by the Study.

The sample has been arranged by declining rate of growth to show a slight relationship with the CVS P/R ratio.

		P/R Ratio	
Name	**Sales Growth**	**CVS**	**Study**
FlexInternational	157%	7.1X	21.6X
Omtool	131	5.4	12.3
UBICS	127	2.6	7.1
Information Advantage	118	2.8	7.6
ProBusiness	92	2.9	8.9
Made2Manage Systems	72	1.1	3.4
Omega Research	64	7.9	13.6
TSI International	40	2.0	4.3
Tier Technologies	38	1.9	5.6
Mean	n/a	3.9	9.4
Median	92	2.8	7.6

These numbers should be compared with the median P/R ratios for selected SIC codes listed in Ibbotson's Cost of Capital Quarterly 1997 Year Book, and those for acquisitions in 1997 from Mergerstat.

		Ibbotson		Mergerstat
	SIC Code	**1997**	**5-yr Avg**	**1997**
Programming Services	7371	1.45	0.91	2.63
Packaged Software	7372	6.79	5.29	3.02
Integrated Design	7373	2.09	1.51	1.64
Processing Services	7374	3.38	3.20	na

Unfortunately, we were not able to get enough information about the various software products offered by each of the sample companies to establish where they were in the development cycle. Considering the rapid growth achieved by most of them, it seems likely that they were "crossing the Chasm". In addition to the lack of information about product life cycles, there was limited material on the dependence of the sample companies on one or two key managers. In general, however, technology IPOs are risky.

According to Red Herring magazine, April 1998, of "245 [technology] IPOs in 1996, 110 are now trading below their offering price; of 1997's 168 IPOs, 55 have declined in value. On average, 1996's IPOs gained 27 percent between their offering and this February, and 1997's IPOs gained 32 percent--well below the gain of the S&P 500 for both years."