

Summaries of Pre-IPO Studies from *Valuing a Business* 5th ed.

Robert W. Baird & Company Studies

Eight studies were conducted under the direction of John D. Emory, first vice president of appraisal services at Robert W. Baird & Company, a regional investment banking firm headquartered in Milwaukee.¹ The studies covered various time periods from 1981 through 2000.

The basic methodology for the eight studies was identical. The population of companies in each study consisted of initial public offerings during the respective period in which Baird & Company either participated or received prospectuses. The prospectuses of these over 2,200 offerings were analyzed to determine the relationship between (1) the price at which the stock was initially offered to the public and (2) the price at which the latest private transaction occurred up to five months prior to the initial public offering.

The mean price discount for the 543 transactions was 46%, and the median price discount was 47%.

¹ John D. Emory, "The Value of Marketability as Illustrated in Initial Public Offerings of Common Stock—January 1980 through June 1981," *Business Valuation News* (September 1985), pp. 21–24, also in *ASA Valuation* (June 1986), pp. 62–66; "The Value of Marketability as Illustrated in Initial Public Offerings of Common Stock, January 1985 through June 1986," *Business Valuation Review* (December 1986), pp. 12–15; "The Value of Marketability as Illustrated in Initial Public Offerings of Common Stock (August 1987–January 1989)," *Business Valuation Review* (June 1989), pp. 55–57; "The Value of Marketability as Illustrated in Initial Public Offerings of Common Stock, February 1989–July 1990," *Business Valuation Review* (December 1990), pp. 114–16; "The Value of Marketability as Illustrated in Initial Public Offerings of Common Stock, August 1990 through January 1992," *Business Valuation Review* (December 1992), pp. 208–12; "The Value of Marketability as Illustrated in Initial Public Offerings of Common Stock, February 1992 through July 1993," *Business Valuation Review* (March 1994), pp. 3–5; "The Value of Marketability as Illustrated in Initial Public Offerings of Common Stock, January 1994 through June 1995," *Business Valuation Review* (December 1995), pp. 155–60; "The Value of Marketability as Illustrated in Initial Public Offerings of Common Stock, November 1995 through April 1997," *Business Valuation Review* (September 1997), pp. 123–31.

Willamette Management Associates Studies

Over the years 1975-2002, Willamette Management Associates (Willamette) conducted a series of studies on the prices of private stock transactions relative to those of subsequent public offerings of stock of the same companies.

Because the private transactions occurred over a period of up to three years prior to the public offering, Willamette made adjustments to reflect differences in market conditions for stocks of the respective industries between the time of each private transaction and the time of each subsequent public offering. Price-to-earnings multiples were adjusted for differences in the industry average price-to-earnings multiple between the time of the private transaction and that of the public offering.

The formula used to derive the discount for the private transaction price from the public offering price was as follows:

$$\frac{P/E_o - P/E_p \left(\frac{IP/E_o}{IP/E_p} \right)}{P/E_o}$$

where:

P/E_o	=	Price per share of the public offering
P/E_p	=	Price per share of the private transaction
IP/E_o	=	Industry price index at time of offering
IP/E_p	=	Industry price index at time of private transaction

Between 1975 and 1997, the Willamette's studies indicated mean discounts that ranged from 28.9% (1991) to 56.8% (1979), and median discounts that ranged from 31.8% (1991) to 73.1% (1984). The average of these 20 years of discounts was 48.5%.²

Valuation Advisors Studies

Studies published using the Valuation Advisors' database break down the number of transactions by length of time that the private transaction occurred prior to the IPO: 1-90 days prior, 91-180 days prior, 181-270 days prior, 271-365 days prior, and 1-2 years prior. The database was begun in 1995 was updated through 2012 and contains over 3,500 transactions. The database is available online via subscription.

² Willamette reports that results from the studies for the years were 1999-2002 were abnormal, most likely due to the market aberrations of the "dot.com" era.