

Calculating an "angel's" ownership entitlement



When the owner of a business solicits and receives an injection of fresh capital from an investor, he must be prepared to pay for it – in part, at least -- with an equity interest in his firm.

In most such financings the investor seeks both an equity and a debt position (in many cases also including warrants) for the funds he provides. While there will be many terms, conditions, and covenants conditioning the transaction, the percentage of equity ownership to be conveyed in exchange for the cash infusion is one of the most important considerations and must be carefully calculated.

A formula-based method (see below) is frequently used to determine the provider's ownership stake in a firm that will result from an equity contribution. (The following example and analysis assumes that any debt component will be decided separately relying on normal credit criteria and will be governed by normal provisions relating to principal advanced, interest rate agreed to, and repayment schedule adopted. Furthermore, contingent equity rights will not be considered.)

FORMULA

$$E = \frac{(1+r)^n \times I}{V}$$

CALCULATION OF AN INVESTOR'S EQUITY ENTITLEMENT

$$E = \frac{(1+r)^n \times I}{V}$$

E = Percent of the equity ownership that the investor will want to obtain at the time of his investment

n = Number of years that the investor wishes to have his funds invested (i.e. the number of years until "cash-out")

r = Rate of return, compounded annually, that the investor desires on his investment

V = Estimated value, in then current dollars, of the company at the end of n years, based on after tax income

I = Amount of money invested

EXAMPLE

$$n = 5 \text{ years}$$

$$r = 45\%$$

$$I = \$200,000$$

$$V = \$3,000,000$$

$$E = \frac{(1+r)^n \times I}{V}$$

$$E = \frac{(1 + .45)^n (200,000)}{3,000,000}$$

$$E = \frac{(6.409734) \times (200,000)}{3,000,000}$$

$$E = \frac{1,280,000}{3,000,000}$$

$$E = 42.6\%$$