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# Valuation Assuming Future Dilution

January 2003

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This article is about assessing the dilutionary impact on shareholders arising from future capital raisings.

## Main Points in this article:

- 1 By issuing new shares, earlier investors may face dilution if they do not participate in the latest capital raising.**
- 2 Staged capital raisings allow the founders and management to retain more of the company value.**
- 3 Staged capital raisings provide earlier investors with the option to participate in the follow on funding.**
- 4 Discount rates reflect the risk profile for the stage of the investment.**
- 5 At the time of their investment, investors may need a higher shareholding to offset the dilutionary impact of future capital raisings.**

By spreading your capital raisings over several rounds, rather than one single upfront raising, it preserves your ownership value.

The timing of capital raisings will generally correspond with the various stages of the company's development.

The issue of shares to external investors to fund these stages of development will help to create, build and retain value in your company.

Shares will also need to be issued to other parties: to lock in and motivate key employees, to shareholders of potential acquisition targets, and to any key specialist service providers.

With these new share issues, the earlier share investors may face dilution of their interests if they do not participate in the future rounds.

Several factors need to be considered: the future value of the company, the number of new shares to be issued, and the estimated ownership percentage each shareholder will eventually retain.

## Valuing your Business

The valuation of any business generally reflects two components: the value attributed to earnings generated from current activities, and the value attributed to earnings from future activities.

Earnings can be projected for the next five years, but beyond that,

some future value or "terminal value" needs to be determined for the business. See the articles **Preparing Financial Projections** and **Valuing your Business** for further information.

The terminal value can be determined by applying a price/earnings ratio to the net earnings of the company. If a price/earnings ratio of 10 is used, along with a net profit figure of \$5 million (expected in 5 years), the terminal value is \$50 million i.e. 10 times \$5 million. This number would then be discounted back to today's dollars.

## Ownership Percentage

Once the year 5 valuation has been determined, the ownership split between owners and management, and the investors needs to be determined.

It is not unusual for the founders and management to end up with between 10% and 30% of the company at some future point in time after starting out initially with 100%.

This may seem a broad range but it depends on the capital requirements, the timing of the capital raisings and the value that the founders and management bring to the company.

The value of the intellectual capital will depend on the uniqueness of the underlying technology or products.

If we say the split in 5 years time is 20% founders and management and 80% to the investors, we can work out the value of the investor's contribution in today's terms.

For example, if the following assumptions are made: 5 year investment period, a 40% discount rate and a terminal value of \$50 million, the value of the investors share is \$7.4 million.

This is determined as follows:

$$\frac{80\% * \$50 \text{ million}}{(1.4)^5}$$

$$= \$7.4 \text{ million}$$

The above calculation assumes no further capital raisings, and that the assumptions (especially earnings) prove to be correct. If more capital is required, this 80% ownership figure may be diluted.

Staged capital raisings can be dilutionary, but they can also provide the investors with an option to provide follow on funding. Investors do not need to commit all their capital upfront, and may value the option of abandoning future investment, if things don't go according to plan.

### Dilution Impact

If three rounds of capital are raised, instead of one, the impact of dilution and the value of the founders and management shares can be considered.

If capital requirements are as follows: \$4 million upfront, \$2.4 million in year 2, and \$1 million in year 3. Some assumptions also need to be made in respect of discount rates. Assume 40%, 30% and 25% respectively. The terminal value is still assumed to be \$50 million in year 5.

Different discount rates have been used to reflect the change in the risk profile of the company for its stage

of development. For example, a start up company is perceived to be riskier than a late expansion company. A higher discount rate will be applied to the start up company.

VC Managers will generally apply a range of discount rates, from 40% through to 80% depending on the stage of the company. Although these rates might seem high, they take into account the uncertainty of future earnings streams and the likelihood of poor investment performance.

Based on these numbers and assumptions, the change in percentage share ownership can be calculated:

#### First Round:

$$\frac{(1.4)^5 * \$4.0 \text{ million}}{\$50 \text{ million}}$$

$$= 43\%$$

#### Second Round:

$$\frac{(1.3)^4 * \$2.4 \text{ million}}{\$50 \text{ million}}$$

$$= 14\%$$

#### Third Round:

$$\frac{(1.25)^3 * \$1.0 \text{ million}}{\$50 \text{ million}}$$

$$= 4\%$$

The percentage shareholding issued, based on three capital raisings, adds to 61%.

Raising all the capital upfront requires an 80% allocation to investors, whereas raising capital in stages only requires a 61% allocation. The difference in dollar terms, at \$9.5 million (19% of \$50 million) is very significant. It represents the value retained by the founders and management.

Apart from raising capital on a staged basis, it is also just as important to raise the capital at increasing share prices.

In this example, the various investors will hold 43%, 14% and 4% of the final shareholding at year 5, depending on the round that they participated in.

So what does this mean to the investor at the time of the investment?

Because the second and third round investors hold 18%, the allocation required by the first round investor will need to be higher than the 43% if dilution is to be avoided.

The first round investors will require a 52% shareholding at the time of their investment to avoid any dilution, while the second round investors will require a 15% ownership level to avoid dilution by the third round investors.

With these ownership levels, the number of shares and the share prices can be calculated for each of the rounds.

Some of the assumptions may vary, in terms of earnings projections, earnings multiples and the size and timing of capital raisings. Each of these variations will drive different terminal values and different ownership levels.

It is important to perform scenario analysis with the different assumptions and determine what the impact will be before you embark on your capital raising.

The above example shows in fairly broad terms the benefit of raising capital in stages and the dilutionary impact for investors.

By raising capital in stages, more value can be retained by the founders and management.

It also allows the company to benefit from declining discount rates as the risk profile of the company improves with more sustainable earnings.

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