

piracy, the Apple chief believed digital theft was becoming more complicated and more risky.

If legal purchases became simple and cheap, Caputo wondered if music fans would overwhelmingly migrate to legitimate services? He found these new developments in the entertainment industry extremely troubling. This was not quite the 'order' that he had expected to emerge in the chaotic and random P2P market. If Apple was just the first of a new breed of legitimate services that sold music affordably, conveniently, and legally, how would this affect Sandvine?

Conclusion

Despite significant progress since the company's formation, Caputo was worried. Product development had taken longer than expected, and while he was confident that Sandvine would retain its first mover advantage he wondered if the bottom was now falling out of the P2P market. If this occurred, what would be the implications for Sandvine's marketing strategy of using this product as a 'foot in the door' to build credibility and relationships in the industry? And on the subscriber services side,

would ISPs be able to persuade their customers of the value of Internet-based value-added services?

What would Sandvine do if the music industry made music cheap, affordable, and conveniently available through their Web sites? Would ISPs bother with Web-based services without the P2P broadband cost savings? Would consumers buy into the concept of Web-based value-added services? Sandvine's P2P software development had now been stopped and most of the engineering staff was concentrating their efforts on the subscriber services cluster. But any more changes to the strategic plan would have wide-ranging implications for all the functional areas, as well as for the firm's organization structure, staffing, leadership, and culture. For example, how important to the future success of the firm was the "Sandvine Way," and would it be possible to stay true to its key precepts in the face of possible reversals of fortune? "Well", Caputo thought, "I have a week to think about this before the next management meeting. One thing's for sure, though, the next 12 months are going to be an interesting ride!"



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10

THE DEAL: VALUATION, STRUCTURE, AND NEGOTIATION

*When one door closes another door opens; but we so often look so long and so
regretfully upon the closed door that we do not see the ones which open for us.*

Alexander Graham Bell

RESULTS EXPECTED

Upon completion of this chapter, you will be able to:

1. Describe methods used by venture capitalists and professional investors to estimate the value of a company.
2. Discuss how and why equity proportions are allocated to investors.
3. Understand how deals are structured, including critical terms, conditions, and covenants.
4. Appreciate key aspects of negotiating and closing deals.
5. Characterize good versus bad deals and identify some of the traps entrepreneurs face in venture financing.

RESULTS EXPECTED

THE ART AND CRAFT OF VALUATION

The entrepreneur's and private investor's world of finance is very different from the corporate finance arena where public companies jostle and compete in well-established capital markets. The private company and private capital world of entrepreneurial finance is more volatile, more imperfect, and less accessible than corporate capital markets. The sources of capital are very different. The companies are much younger, more dynamic, and the environment more rapidly changing and uncertain. The consequences, for entrepreneurs and investors alike, of this markedly different context are profound. Cash flow is king, and beta coefficients and elegant corporate financial theories are irrelevant. Also, liquidity and timing are everything, and there are innumerable, unavoidable conflicts between users and suppliers of capital. Finally, the determination of a company's value is elusive and more art than science.

WHAT IS A COMPANY WORTH?

The answer: It all depends! Unlike the market for public companies, where millions of shares are traded daily and the firm's market capitalization (total shares outstanding times the price per share) is readily determined, the market for private companies is very imperfect.

Determinants of Value

The criteria and methods applied in corporate finance to value companies traded publicly in the capital markets, when cavalierly applied to entrepreneurial companies, have severe limitations. The ingredients to the entrepreneurial valuation are cash, time, and risk. In Chapter 9 you determined the burn rate, OOC, and the TTC for your venture, so it is not hard to infer that the amount of cash available and the cash generated will play an important role in valuation. Similarly, Exhibit 9.5 showed that time also plays an influential role. Finally, risk or perception of risk contributes to the determination of value. The old adage, "The greater the risk, the greater the reward" plays a considerable role in how investors size up the venture.

Long-Term Value Creation versus Quarterly Earnings

The core mission of the entrepreneur is to build the best company possible and, if possible, to create a great company. This is the single surest way of generating long-term value for all the stakeholders and society. Such a mission has quite different strategic imperatives than one aimed solely at maximizing quarterly earnings to attain the highest share price possible given price/earnings ratios at the time. More will be said about this in Chapter 15.

Psychological Factors Determining Value

Time after time companies are valued at preposterous multiples of any sane price/earnings or sales ratios. In the best years, with the bull market charging ahead, equities trading on the Toronto Stock Exchange were trading at nearly 20 times earnings. The stocks of many of these companies were being traded at 50 or more times earnings and several were at 95 to 100 times earnings and six to seven times sales! Even more extreme valuations were seen during the peak of the so-called dot-com bubble from 1998 to early 2000. Some companies were valued at 100 times revenue and more during this classic frenzy. High multiples did come back down but then pressed into 2005 and beyond until the rude awakening of late 2008 and early 2009. In mid-2005, the TSX composite index was at nearly 20 times earnings but by Fall 2008, the P/E ratio for the Toronto Stock Exchange index was at half its former glory.

Often, behind extraordinarily high valuations is a psychological wave, a combination of euphoric enthusiasm for a fine company, exacerbated by greed and fear of missing the run up. The same psychology can also drive prices to undreamed of heights in private companies. The Bre-X fiasco is one such story that did not end well.

A Theoretical Perspective

Establishing Boundaries and Ranges, Rather than Calculating a Number Valuation is much more than science, as can be seen from the examples just noted. As will be seen shortly, there are at least a dozen different ways of determining the value of a private company. A lot of assumptions and a lot of judgment calls are made in every valuation exercise. In one instance, for example, an entrepreneur consulted 13 experts to determine how much he should bid for the other half of a \$10 million in sales company. The answer ranged from \$1 to \$6 million. He subsequently acquired the other half for \$3.5 million.

Tom Culligan and Frank O'Dea started Second Cup in 1975 in a shopping mall in the outskirts of Toronto. The venture grew and eventually Frank O'Dea delivered a shotgun clause to his partner (an offer to buy out the partner at a specified price; the partner must either sell or buy out the other partner at that offer price) and Tom Culligan decided to buy rather than sell.

It can be a serious mistake, therefore, to approach the valuation task in hopes of arriving at a single number or even a narrow range. All you can realistically expect is a range of values with boundaries driven by different methods and underlying assumptions for each. Within that range, the buyer and the seller need to determine the comfort zone of each. At what point are you basically indifferent to buying and selling? Determining your point of indifference can be an invaluable aid in preparing you for negotiations to buy or sell.

Investor's Required Rate of Return

Various investors will require a different rate of return (ROR) for investments in different stages of development and will expect holding periods of various lengths. For example, Exhibit 10.1 summarizes, as ranges, the annual rates of return that venture capital investors seek on investments by stage of development and how long they expect to hold these investments. Several factors underlie the required ROR on a venture capital investment, including premiums for systemic risk, illiquidity, and value added. Of course, these can be expected to vary regionally and from time to time as market conditions change, because the investments are in what are decidedly imperfect capital market niches to begin with.

Investor's Required Share of Ownership

The rate of return required by the investor determines the investor's required share of the ownership, as Exhibit 10.2 illustrates. The future value of a \$1-million investment at 50 percent compounded is $\$1 \text{ million} \times (1.5)^5 = \$1 \text{ million} \times 7.59 = \7.59 million . The future value of the company in Year 5 is profit after tax \times price/earnings ratio = $\$1 \text{ million} \times 15 = \15 million . Thus, the share of ownership required in Year 5 is:

$$\frac{\text{Future value of the investment} = \$7.59 \text{ million}}{\text{Future value of the company} = \$15.00 \text{ million}} = 51\%$$

One can readily see that by changing any of the key variables, the results will change accordingly.

If the venture capitalists require the RORs mentioned earlier, the ownership they also require is determined as follows: In the start-up stage, 25 to 75 percent for investing all of the required funds; beyond the start-up stage, 10 to 40 percent, depending on the amount invested, maturity, and track record of the venture; in a seasoned venture in the later rounds of investment, 10 to 30 percent to supply the additional funds needed to sustain its growth.

EXHIBIT 10.1 Rate of Return Sought by Venture Capital Investors

Stage	Annual Rate of Return (%)	Typical Expected Holding Period (years)
Seed and start-up	50–100% or more	More than 10
First stage	40–60	5–10
Second stage	30–40	4–7
Expansion	20–30	3–5
Bridge and mezzanine	20–30	1–3
LBOs	30–50	3–5
Turnarounds	50	3–5

EXHIBIT 10.2 Investor's Required Share of Ownership under Various ROR Objectives

Assumptions:
 Amount of initial start-up investment = \$1 million
 Holding period = 5 years
 Required rate of return = 50%
 Calculating the required share of ownership:

Year 5 After-tax profit = \$1 million
 Year 5 Price/earnings ratio = 15

Price/Earning Ratio	Investor's Return Objective (Percent/Year Compounded)			
	30%	40%	50%	60%
10x	37%	54%	76%	106%
15x	25	36	51	70
20x	19	27	38	52
25x	15	22	30	42

THE THEORY OF COMPANY PRICING

In Chapter 9, we introduced the concept of the food chain, which we have included here as Exhibit 10.3. This chart depicts the evolution of a company from its idea stage through an initial public offering (IPO). The appetite of the various sources of capital—from family, friends, and angels, to venture capitalists, strategic partners, and the public markets—varies by company size, stage, and amount of money invested. We argue that entrepreneurs who understand these appetites and the food chain are better prepared to focus their fundraising strategies on more realistic sources, amounts, and valuations. Economic conditions too play a role. Gregory Smith, president of Canada's Venture Capital and Private Equity Association believes, "It is not surprising that the buyout industry's investment and fundraising levels have subsided in the first quarter. The worldwide economic crisis that began in Q4 2008 continued in Q1 2009 and our industry, in common with most economic sectors, has not been immune from its effects."¹ But Smith remains optimistic, Canadian financial institutions are strong, with most still having "considerable capital available for deployment." They are just choosing to cautiously remain on the sidelines. However, the harsh reality was not encouraging; half as many deals in Q1 2009 compared to Q1 2008 and the average buy-out was for less than one-quarter of the value of the average deal a year prior.

The Theory of Company Pricing is simplistically depicted in Exhibit 10.4. In the ideal scenario, a venture capital investor envisions two to three rounds, starting at a \$1.00 per share equivalent, then a four to five times mark-up to Series B, followed by a double mark-up to Series C, and then doubling that \$8.00 round at an IPO. This generic pattern would characterize the majority of deals that succeeded to an IPO, but there are many variations to this central tendency. In truth, many factors can affect this theory.

THE REALITY

The past 25 years have seen the venture capital industry explode from investing only \$5 to \$10 million per year to nearly \$6 billion in 2000 before things slowed precipitously. Exhibit 10.5 on p. 276 shows how the many realities of the capital marketplace are at work, and how current market conditions, deal flow, and relative bargaining power influence the actual deal struck. Exhibit 10.6 on p. 277 shows how the dot-com explosion and the plummeting of the capital markets led to much lower values for private companies. The S&P/TSX Composite Index fell from nearly 11,500 in September 2000 to half that by October 2002. The market rebounded and record levels were seen again, breaking 13,000 in 2006, breaking 14,000 in 2007, and 15,155 in June 2008 before landing at 7,647 in November 2008—nearly a 50-percent drop!

EXHIBIT 10.3 The Capital Markets Food Chain for Entrepreneurial Ventures

	Stage of Venture			
	R&D	Seed	Launch	High Growth
Enterprise Value at Stage	Less than \$1 million	\$1–\$5 million	\$1–\$50 million-plus	More than \$100 million
Sources	Founders High net worth individuals FFF* SR&ED	FFF* Angel funds Seed funds SR&ED	Venture capital Series A, B, C... [†] Strategic partners Very high net worth individuals Private equity	IPOs Strategic acquirers Private equity
Amount of Capital Invested	Less than \$50,000–\$200,000	\$10,000–\$500,000	\$500,000–\$20 million	\$10–\$50 million-plus
% Company Owned at IPO	10–25%	5–15%	40–60% by prior investors	15–25% by public
Share Price and Number‡	\$.01–\$.50 1–5 million	\$.50–\$1.00 1–3 million	\$1.00–\$8.00 3–5 million	\$12–\$18-plus 5–10 million

*Friends, families, and fools

[†]Venture capital series A, B, C, ... (average size of round)

Round { "A" @ \$3–5 million—start-up
 "B" @ \$5–10 million—product development
 "C" @ \$10 million—shipping product

Valuations vary markedly by industry

Valuations vary by region and VC cycle

‡ At post-IPO

EXHIBIT 10.4 Theory of Company Pricing

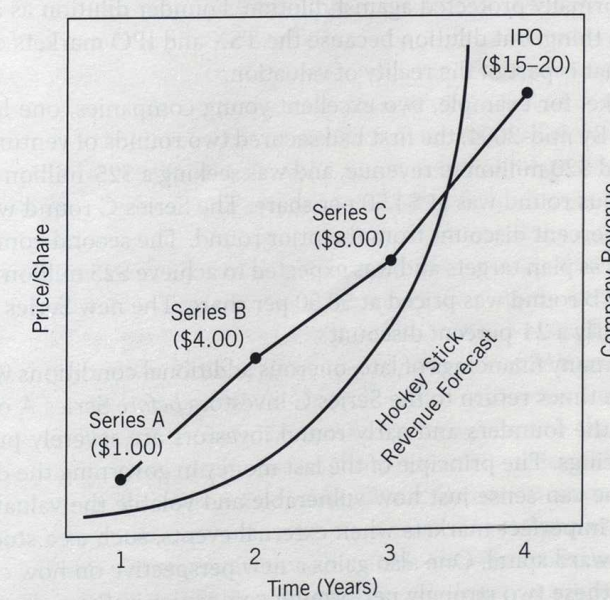
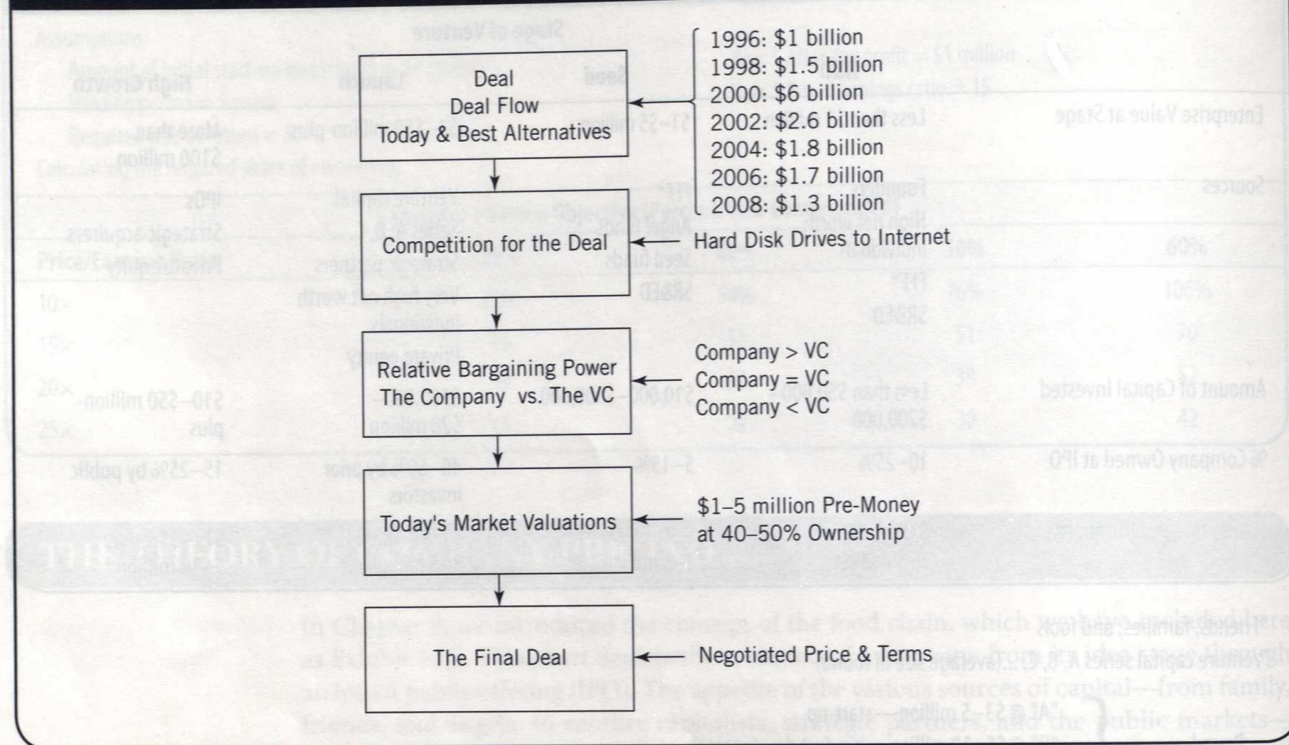


EXHIBIT 10.5 The Reality



The Down Round or Cram Down

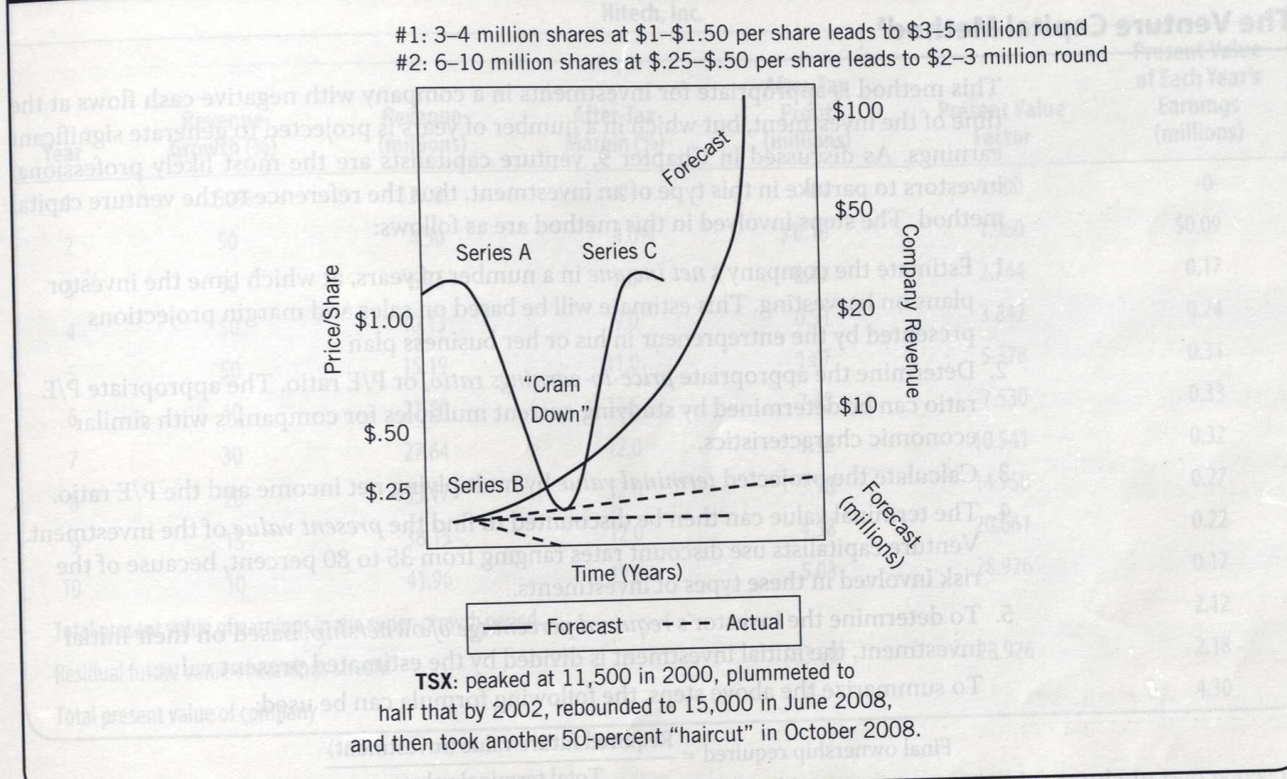
In this environment, which existed after the October 1987 stock market crash, after the dot-com bubble burst, and after the economic meltdown in late 2008, entrepreneurs face rude shocks in the second or third round of financing. Instead of a substantial four or even five times increase in the valuation from Series A to B, or B to C, they are jolted with what is called a "cram down" round: The price is typically one-fourth to two-thirds of the last round, as shown in Exhibit 10.6. This severely dilutes the founders' ownership, as investors are normally protected against dilution. Founder dilution as a result of failing to perform is one thing, but dilution because the TSX and IPO markets collapse seems rudely unfair. But that is part of the reality of valuation.

Take, for example, two excellent young companies, one launched in 2002 and one in 2003. By mid-2004, the first had secured two rounds of venture financing, was on target to exceed \$20 million in revenue, and was seeking a \$25-million round of private equity. The previous round was at \$4.50 per share. The Series C round was priced at \$2.88 per share, a 36-percent discount from the prior round. The second company met or exceeded all its business plan targets and was expected to achieve \$25 million of EBITDA in 2004. Its prior Series B round was priced at \$8.50 per share. The new Series C was set at \$6.50 per share, or nearly a 24-percent discount.

In many financings of late, onerous additional conditions were imposed, such as a three to five times return to the Series C investors before Series A or B investors receive a dime! Both the founders and early-round investors are severely punished by such cram-down financings. The principle of the last money in governing the deal terms still prevails.

One can sense just how vulnerable and volatile the valuation of a company can be in these imperfect markets when external events, such as a stock market collapse, trigger a downward spiral. One also gains a new perspective on how critically important timing is. Even these two strongly performing companies in the preceding example were crammed down. Imagine those companies that didn't meet their plans: They were pummeled, if financed at all. What a startling reversal from the dot-com boom in 1998-1999 when companies at *concept stage* (with no product, no identifiable or defensible model of how they would make money or even breakeven, and no management team with proven experi-

EXHIBIT 10.6 The Reality: The Down Round



ence) raised \$20, \$50, \$70 million, and more and had an IPO with multibillion-dollar valuations. History asks: What is wrong with this picture! History also offers the answer: Happiness is still a positive cash flow!

Improved Valuations or Bouncing Back

As we saw in the last chapter, both the number of deals and average investment per deal slowly increase following a downturn. Valuations were rising, and the punishing cram down rounds with severe preferential returns had become the exception rather than the norm. There was a general sense that the capital climate was improving. One of the laws of physics, is that for every action there is an equal and opposite reaction. We hope that the same holds true in the financial world and that rebounds, such as following the late 2008 to 2010 economic turmoil, prove to be strong and sustained. Gregory Smith, president of the CVCA, gives a rallying cry: "We are at a crisis point in Canada's venture industry. At several levels, the data conclusively demonstrate that there is a venture capital financing 'gap' in Canada, and this means Canada's ability to drive innovation will weaken and we will see the overall economy suffer. Time is critical and we must act now. After all, the impact of venture-backed companies on the Canadian economy is significant, they generate jobs, contribute to the GDP and... they grow 5 times faster than the overall economy."² The CVCA and Thompson Reuters reported that "New commitments of capital going to domestic venture capital funds totalled a mere \$149 million, which is 74.4 percent lower than the \$418 million committed during the same period in 2008. These numbers are in stark contrast to the situation in the U.S. where a total of US\$4.3 billion was raised in Q1 2009, 39 percent below the US\$7.1 billion raised in Q1 2008."³ Gregory Smith indicates, "This fundraising gap with the U.S. must be addressed if Canada is to compete in the knowledge-based economy of the future. Venture capital is the lifeblood of Canada's industries of tomorrow and the shortage of venture capital will have a profound impact on our ability to take a leadership role in those industries ranging from information technologies to cleantech upon which a prosperous future depends."⁴

VALUATION METHODS

The Venture Capital Method⁵

This method is appropriate for investments in a company with negative cash flows at the time of the investment, but which in a number of years is projected to generate significant earnings. As discussed in Chapter 9, venture capitalists are the most likely professional investors to partake in this type of an investment, thus the reference to the venture capital method. The steps involved in this method are as follows:

1. Estimate the company's *net income* in a number of years, at which time the investor plans on harvesting. This estimate will be based on sales and margin projections presented by the entrepreneur in his or her business plan
2. Determine the appropriate *price-to-earnings ratio*, or P/E ratio. The appropriate P/E ratio can be determined by studying current multiples for companies with similar economic characteristics.
3. Calculate the projected *terminal value* by multiplying net income and the P/E ratio.
4. The terminal value can then be discounted to find the *present value* of the investment. Venture capitalists use discount rates ranging from 35 to 80 percent, because of the risk involved in these types of investments.
5. To determine the investor's *required percentage of ownership*, based on their initial investment, the initial investment is divided by the estimated present value.

To summarize the above steps, the following formula can be used:

$$\text{Final ownership required} = \frac{\text{Required future value (investment)}}{\text{Total terminal value}}$$

$$= \frac{(1 + \text{IRR})^{\text{years}} (\text{investment})}{\text{P/E ratio (terminal net income)}}$$

6. Finally, the number of shares and the share price must be calculated by using the following formula:

$$\text{New shares} = \frac{\text{Percentage of ownership required by the investor}}{1 - \text{Percentage of ownership required by the investor} \times \text{old shares}}$$

By definition, the share price equals the price paid divided by the number of shares. This method is commonly used by venture capitalists because they make equity investments in industries often requiring a large initial investment with significant projected revenues; in addition, the percentage of ownership is a key issue in the negotiations.

The Fundamental Method

This method is simply the present value of the future earnings stream (see Exhibit 10.7).

The First Chicago Method⁶

Another alternative valuation method, developed at First Chicago Corporation's venture capital group, employs a lower discount rate, but applies it to an expected cash flow. That expected cash flow is the average of three possible scenarios, with each scenario weighted according to its perceived probability. The equation to determine the investor's required final ownership is:

$$\text{Required final ownership} = \frac{\text{Future value of investment} - \text{Future value of non-IPO cash flow}}{\text{Probability (of success) (Forecast terminal value)}}$$

EXHIBIT 10.7 Example of the Fundamental Method

Hitech, Inc.						
Year	Revenue Growth (%)	Revenue (millions)	After-Tax Margin (%)	After-Tax Profit (millions)	Present Value Factor	Present Value of Each Year's Earnings (millions)
1	50%	\$3.00	-0-	-0-	1.400	-0-
2	50	4.50	4.0%	\$ 0.18	1.960	\$0.09
3	50	6.75	7.0	0.47	2.744	0.17
4	50	10.13	9.0	0.91	3.842	0.24
5	50	15.19	11.0	1.67	5.378	0.31
6	40	21.26	11.5	2.45	7.530	0.33
7	30	27.64	12.0	3.32	10.541	0.32
8	20	33.17	12.0	3.98	14.758	0.27
9	15	38.15	12.0	4.58	20.661	0.22
10	10	41.96	12.0	5.03	28.926	0.17
Total present value of earnings in the super-growth period						2.12
Residual future value of earnings stream				\$63.00	28.926	2.18
Total present value of company						4.30

This formula⁷ differs from the original basic venture capital formula in two ways: (1) the basic formula assumes there are no cash flows between the investment and the harvest in Year 5; the future value of the immediate cash flows is subtracted from the future value of the investment because the difference between them is what must be made up for out of the terminal value; and (2) the basic formula does not distinguish between the forecast terminal value and the expected terminal value. The traditional method uses the forecast terminal value, which is adjusted through the use of a high discount rate. The formula employs the expected value of the terminal value. Exhibit 10.8 is an example of using this method.

EXHIBIT 10.8 Example of the First Chicago Method

	Success	Sideways Survival	Failure
1. Revenue growth rate (from base of \$2 million)	60%	15%	0%
2. Revenue level after 3 years	\$8.19 million	\$3.04 million (liquidation)	\$2 million
3. Revenue level after 5 years	\$20.97 million (IPO)	\$4.02 million	
4. Revenue level after 7 years		\$5.32 million (acquisition)	
5. After-tax profit margin and earnings at liquidity	15%; \$3.15 million	7%; \$.37 million	
6. Price-earnings ratio at liquidity	17	7	
7. Value of company liquidity	\$53.55 million	\$2.61 million	\$.69 million
8. Present value of company using discount rate of 40%	\$9.96 million	\$.25 million	\$.25 million
9. Probability of each scenario	.4	.4	.2
10. Expected present value of the company under each scenario	\$3.98 million	\$.10 million	\$.05 million
11. Expected present value of the company		\$4.13 million	
12. Percentage ownership required to invest \$2.5 million		60.5%	

Ownership Dilution⁸

The previous example is unrealistic because in most cases, several rounds of investments are necessary to finance a high-potential venture. Take, for instance, the pricing worksheet presented in Exhibit 10.9 in which three financing rounds are expected. In addition to estimating the appropriate discount rate for the current round, the first-round venture capitalist must now estimate the discount rates that are most likely to be applied in the following rounds, which are projected for Years 2 and 4. Although a 50-percent rate is still appropriate for Year 0, it is estimated that investors in Hitech, Inc., will demand a 40-percent return in Year 2 and a 25-percent return in Year 4. The final ownership that each investor must be left with, given a terminal price/earnings ratio of 15, can be calculated using the basic valuation formula:

$$\frac{\text{Future value (Investment)}}{\text{Terminal value (Company)}} = \frac{1.50^5 \times \$1.5 \text{ million}}{15 \times \$2.5 \text{ million}} = 30.4\% \text{ ownership}$$

Round 1

$$(1.40^3 \times \$1 \text{ million}) / (15 \times \$2.5 \text{ million}) = 7.3\%$$

Round 2

$$(1.25^1 \times \$1 \text{ million}) / (15 \times \$1.5 \text{ million}) = 3.3\%$$

Round 3

Discounted Cash Flow

In a simple discounted cash flow method, three time periods are defined: (1) Years 1–5; (2) Years 6–10; and (3) Year 11 to infinity.⁹ The necessary operating assumptions for each period are initial sales, growth rates, EBIAT/sales, and (net fixed assets + operating working capital)/ sales. While using this method, one should also note relationships and trade-offs. With these assumptions, the discount rate can be applied to the weighted average cost of capital (WACC).¹⁰ Then the value for free cash flow (Years 1–10) is added to the terminal value. This terminal value is the growth perpetuity.

EXHIBIT 10.9 Example of a Three-Stage Financing

Hitech, Inc. (numbers in thousands)						
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Revenues	500	1,250	2,500	5,000	8,100	12,800
New income	(250)	(62)	250	750	1,360	2,500
Working capital at 20%	100	250	500	1,000	1,600	2,560
Fixed assets at 40%	200	500	1,000	2,000	3,200	5,120
Free cash flow	(550)	(512)	(500)	(750)	(440)	(380)
Cumulative external financial need	500	1,653	1,543	2,313	2,753	3,133
Equity issues	1,500	0	1,000	0	1,000	0
Equity outstanding	1,500	1,500	2,500	2,500	3,500	3,500
Cash balance	950	436	938	188	748	368
Assume: long-term IRR required each round by investors	50%	45%	40%	30%	25%	20%

Source: William A. Sahlman, "A Method for Valuing High-Risk, Long-Term Investments," Harvard Business School Note 9-288-006.

Other Rule-of-Thumb Valuation Methods

Several other valuation methods are also employed to estimate the value of a company. Many of these are based on similar, most recent transactions of similar firms, established by a sale of the company, or a prior investment. Such comparables may look at several different multiples, such as earnings, free cash flow, revenue, EBIT, and book value. Knowledgeable investment bankers and venture capitalists make it their business to know the activity in the current marketplace for private capital and how deals are being priced. These methods are used most often to value an existing company, rather than a start-up, since there are so many more knowns about the company and its financial performance.

TAR PITS FACING ENTREPRENEURS

There are several inherent conflicts between entrepreneurs or the users of capital and investors or the suppliers of capital.¹¹ While the entrepreneur wants to have as much time as possible for the financing, the investors want to supply capital just in time or to invest only when the company needs the money. Entrepreneurs should be thinking of raising money when they do not need it, while preserving the option to find another source of capital.

Similarly, users of capital want to raise as much money as possible, while the investors want to supply just enough capital in staged capital commitments. The investors, such as venture capitalists, use staged capital commitments to manage their risk exposure over 6- to 12-month increments of investing.

In the negotiations of a deal, the entrepreneur sometimes becomes attracted to a high valuation with the sentiment "My price, your terms." The investors will generally attempt to change this opinion because it is their capital. The investors will thus focus on a low valuation, with the sentiment, "My price and my terms."

This tension applies not only to financial transactions but also to the styles of the users versus the styles of the suppliers of capital. The users value their independence and treasure the flexibility their own venture has brought them. However, the investors are hoping to preserve their options as well. These options usually include both reinvesting and abandoning the venture.

These points of view also clash in the composition of the board of directors, where the entrepreneur seeks control and independence, and the investors want the right to control the board if the company does not perform as well as was expected. This sense of control is an emotional issue for most entrepreneurs, who want to be in charge of their own destiny. Prizing their autonomy and self-determination, many of these users of capital would agree with the passion Walt Disney conveyed in this statement: "I don't make movies to make money. I make *money* to make movies." The investors may believe in the passions of these users of capital, but they still want to protect themselves with first refusals, initial public offering rights, and various other exit options.

The long-term goals of the users and suppliers of capital may also be contradictory. The entrepreneurs may be content with the progress of their venture and happy with a single or double. It is their venture, their baby; if it is moderately successful, many entrepreneurs believe they have accomplished a lot. The investors will not be quite as content with moderate success, but instead want their capital to produce extraordinary returns—they want a home run from the entrepreneur. Thus, the pressures put on the entrepreneur may seem unwarranted to the entrepreneur, yet necessary for the investor.

These strategies contradict each other when they are manifested in the management styles of the users and providers of capital. While the entrepreneur is willing to take a calculated risk or is working to minimize or avoid unnecessary risks, the investor has bet on the art of the exceptional and thus is willing to bet the farm everyday.

Entrepreneurs possess the ability to see opportunities and, more importantly, to seize those opportunities. They possess an instinctual desire to change, to adapt, or to de-commit in order to seize new opportunities. Yet the investors are looking for clear steady progress, as projected in the business plan, which leaves little room for surprises.

Finally, the ultimate goals may differ. The entrepreneur who continues to build his or her company may find operating a company enjoyable. At this point, the definition of success both personally and for the company may involve long-term company building, such that a sustainable institution is created. But the investors will want to cash out in two to five years, so that they can reinvest their capital in another venture.

STAGED CAPITAL COMMITMENTS¹²

Venture capitalists rarely, if ever, invest all the external capital that a company will require to accomplish its business plan; instead they invest in companies at distinct stages in their development. As a result, each company begins life knowing that it has only enough capital to reach the next stage. By staging capital, the venture capitalists preserve the right to abandon a project whose prospects look dim. The right to abandon is essential because an entrepreneur will almost never stop investing in a failing project as long as others are providing capital.

Staging the capital also provides incentives to the entrepreneurial team. Capital is a scarce and expensive resource for individual ventures. Misuse of capital is very costly to venture capitalists but not necessarily to management. To encourage managers to conserve capital, venture capital firms apply strong sanctions if it is misused. These sanctions ordinarily take two basic forms. First, increased capital requirements invariably dilute management's equity share at an increasingly punitive rate. Second, the staged investment process enables venture capital firms to shut down operations. The credible threat to abandon a venture, even when the firm might be economically viable, is the key to the relationship between the entrepreneur and the venture capitalists. By denying capital, the venture capitalist also signals other capital suppliers that the company in question is a bad investment risk.

Short of denying the company capital, venture capitalists can discipline wayward managers by firing or demoting them. Other elements of the stock purchase agreement then come into play. For example, the company typically has the right to repurchase shares from departing managers, often at prices below market value, and vesting schedules limit the number of shares employees are entitled to if they leave prematurely. Finally, non-compete clauses can impose strong penalties on those who leave, particularly if their human capital is closely linked to the industry in which the venture is active.

Entrepreneurs accept the staged capital process because they usually have great confidence in their own abilities to meet targets. They understand that if they meet those goals, they will end up owning a significantly larger share of the company than if they had insisted on receiving all of the capital up front.

Learn the VC's Buttons and Push Them

Avrio Ventures looks for growth stage industrial bio-products, nutraceutical ingredients, and food technology enterprises. In 2009 Avrio closed a Series A round investment into Manitoba Harvest in order to support Manitoba Harvest's rapid growth in channels of distribution, research, and new product development. Manitoba Harvest needed the capital to realize market opportunities and broaden their line of hemp-based nutraceuticals and natural foods.

Avrio looks for particular attributes in ventures it is considering and lists its investment criteria as:

- An experienced growth-oriented management team
- A sustainable competitive advantage either through proven science, proprietary intellectual property, or a strong brand franchise
- A large addressable market opportunity or a high-growth niche market segment
- A sound business model
- An entrepreneurial desire to build an enduring, world class organization

Avrio Ventures "focuses on commercialization and growth stage investments. Typically, the use of proceeds is to commercialize products, initiate product rollouts, expand distribution and market presence, or fund growth (organically or through acquisitions). Avrio will invest up to \$10 million over the life of any single portfolio company. The Avrio team is patient, recognizing that successful companies require support over at least five years to realize their potential value. If your company meets these criteria, please submit a business plan."¹³

STRUCTURING THE DEAL

What Is a Deal?¹⁴

Deals are defined as economic agreements between at least two parties. In the context of entrepreneurial finance, most deals involve the allocation of cash flow streams (with respect to both amount and timing), the allocation of risk, and hence the allocation of value between different groups. For example, deals can be made between suppliers and users of capital, or between management and employees of a venture.

A Way of Thinking about Deals over Time To assess and to design long-lived deals, William Sahlman of the Harvard Business School suggests the following series of questions as a guide for deal makers in structuring and in understanding how deals evolve:¹⁵

- Who are the players?
- What are their goals and objectives?
- What risks do they perceive and how have these risks been managed?
- What problems do they perceive?
- How much do they have invested, both in absolute terms and relative terms, at cost and at market value?
- What is the context surrounding the current decision?
- What is the form of their current investment or claim on the company?
- What power do they have to act? To precipitate change?
- What real options do they have? How long does it take them to act?
- What credible threats do they have?
- How and from whom do they get information?
- How credible is the source of information?
- What will be the value of their claim under different scenarios?
- How can they get value for their claims?
- To what degree can they appropriate value from another party?
- How much uncertainty characterizes the situation?
- What are the rules of the game (e.g., tax, legislative)?
- What is the context (e.g., state of economy, capital markets, industry specifics) at the current time? How is the context expected to change?

The Characteristics of Successful Deals¹⁶ While deal making is ultimately a combination of art and science, it is possible to describe some of the characteristics of deals that have proven successful over time:

- They are simple.
- They are robust (they do not fall apart when there are minor deviations from projections).
- They are organic (they are not immutable).

- They take into account the incentives of each party to the deal under a variety of circumstances.
- They provide mechanisms for communications and interpretation.
- They are based primarily on trust rather than on legalese.
- They are not patently unfair.
- They do not make it too difficult to raise additional capital.
- They match the needs of the user of capital with the needs of the supplier.
- They reveal information about each party (e.g., their faith in their ability to deliver on the promises).
- They allow for the arrival of new information before financing is required.
- They do not preserve discontinuities (e.g., boundary conditions that will evoke dysfunctional behaviour on the part of the agents of principals).
- They consider the fact that it takes time to raise money.
- They improve the chances of success for the venture.

The Generic Elements of Deals A number of terms govern value distribution, as well as basic definitions, assumptions, performance incentives, rights, and obligations. The deal should also cover the basic mechanisms for transmitting timely, credible information. Representations and warranties, plus negative and positive covenants, will also be part of the deal structure. Additionally, default clauses and remedial action clauses are appropriate in most deals.

Tools for Managing Risk/Reward In a deal, the claims on cash and equity are prioritized by the players. Some of the tools available to the players are common stock, partnerships, preferred stock (dividend and liquidation preference), debt (secured, unsecured, personally guaranteed, or convertible), performance conditional pricing (ratchets or positive incentives), puts and calls, warrants, and cash. Some of the critical aspects of a deal go beyond just the money:¹⁷

- Number, type, and mix of stocks (and perhaps of stock and debt) and various features that may go with them (such as puts) that affect the investor's rate of return.
- The amounts and timing of takedowns, conversions, and the like.
- Interest rates on debt or preferred shares.
- The number of seats, and who actually will represent investors, on the board of directors.
- Possible changes in the management team and in the composition of the board.
- Registration rights for investor's stock (in the case of a registered public offering).
- Right of first refusal granted to the investor on subsequent private placements or an IPO.
- Employment, non-compete, and proprietary rights agreements.
- The payment of legal, accounting, consulting, or other fees connected with putting the deal together.
- Specific performance targets for revenues, expenses, market penetration, and the like, by certain target dates.

Understanding the Bets

Deals, because they are based on cash, risk, and time, are subject to interpretation. The players' perceptions of each of these factors contribute to the overall valuation of the venture and the subsequent proposed deal. As was described earlier, there are a number of different ways to value a venture, and these various valuation methods contribute to the complexity of deals. Consider, for instance, the following term sheets:¹⁸

- A venture capital firm proposes to raise \$150 to \$200 million to acquire and build an enterprise. The venture capital firm will commit between \$15 and \$30 million in equity and will lead in raising senior and subordinated debt to buy licences. Licensees will have to claim about 30 percent of the future equity value in the new company, the

venture capital firm will claim 60 percent (subordinated debt claim is estimated at 10 percent), and management will get 5 to 10 percent of the future equity but only after all prior return targets have been achieved. The venture capital firm's worst-case scenario will result in 33 percent ROR to the firm, 9 percent ROR to licensees, and 0 percent for management. The non-compete agreements extend for 12 years, in addition to the vesting.

- An entrepreneur must decide between two deals:
Deal A: A venture capital firm will lead a \$3-million investment and requires management to invest \$1 million. Future gains are to be split 50-50 after the venture capital firm has achieved a 25-percent ROR on the investment. Other common investment provisions also apply (vesting, employment agreements, etc.). The venture capital firm has the right of first refusal on all future rounds and other deals management may find.
Deal B: Another venture capital firm will lead a \$4-million investment. Management will invest nothing. The future gains are to be split 75 percent for the venture capital firm and 25 percent for management on a side-by-side basis. Until the venture achieves positive cash flow, this venture capital firm has the right of first refusal on future financing and deals management may find.
- A group of very talented money managers is given \$40 million in capital to manage. The contract calls for the managers to receive 20 percent of the excess return on the portfolio over the government bond return. The contract runs for five years. The managers cannot take out any of their share of the gains until the last day of the contracts (except to pay taxes).

While reading and considering these deals, try to identify the underlying assumptions, motivations, and beliefs of the individuals proposing the deals. Following are some questions that may help in identifying the players' bets.

- What is the bet?
- Who is it for?
- Who is taking the risk? Who receives the rewards?
- Who should be making these bets?
- What will happen if the entrepreneurs exceed the venture capitalists' expectations? What if they fall short?
- What are the incentives for the money managers? What are the consequences of their success or failure to perform?
- How will the money managers behave? What will be their investing strategy?

Some of the Lessons Learned: The Dog in the Suitcase

A few years ago a friend, living in an Edmonton, Alberta high-rise, called in great distress. Her beloved barkless dog had died in the middle of the night. She wanted a decent burial for the dog, but since it was the dead of winter, she did not know what to do. It was suggested that she contact a pet cemetery in nearby St. Albert and take the dog there. It would be frozen until spring, at which time it would be properly buried.

She gathered her courage, placed the dog in a suitcase, and headed down the elevator to the outdoors. As she struggled toward the nearest intersection to catch a cab, a young man noticed her struggle and offered to help. Puffing by now, she sized up the young man quickly and accepted his offer to carry the bag. In no time, she turned to find the young man sprinting down the street with her suitcase. Imagine the look on the faces of the young man and his buddies when they opened the suitcase and discovered the loot!

The moral of this story is that raising capital can have all the surprises of a dog in the suitcase for the entrepreneur. The following tips may help to minimize many of these surprises:

- Raise money when you do not need it.
- Learn as much about the process and how to manage it as you can.
- Know your relative bargaining position.

- If all you get is money, you are not getting much.
- Assume the deal will never close.
- Always have a backup source of capital.
- The legal and other experts can blow it—sweat the details yourself!
- Users of capital are invariably at a disadvantage in dealing with the suppliers of capital.
- If you are out of cash when you seek to raise capital, suppliers of capital will eat you for lunch.
- Start-up entrepreneurs are raising capital for the first time; suppliers of capital have done it many times, everyday, for a living.

NEGOTIATIONS

Negotiations have been defined by many experts in a variety of ways, as the following examples demonstrate. Herb Cohen, the author of *You Can Negotiate Anything*, defines negotiations as “a field of knowledge and endeavor that focuses on gaining the favor of people from whom we want things”¹⁹ or similarly, as “the use of information and power to affect behavior within a ‘web of tension.’”²⁰ Other experts in the field of negotiations, Roger Fisher and William Ury, assert that negotiations are a “back-and-forth communication designed to reach an agreement when you and the other side have some interests that are shared and others that are opposed.”²¹

What Is Negotiable?

Far more is negotiable than entrepreneurs think.²² For instance, a normal ploy of the lawyer representing the investors is to insist, matter of factly, that “this is our boilerplate” and that the entrepreneur should take it or leave it. It is possible for an entrepreneur to negotiate and craft an agreement that represents his or her needs.

During the negotiation, the investors will be evaluating the negotiating skills, intelligence, and maturity of the entrepreneur. The entrepreneur has precisely the same opportunity to size up the investor. If the investors see anything that shakes their confidence or trust, they probably will withdraw from the deal. Similarly, if an investor turns out to be arrogant, hot-tempered, unwilling to see the other side’s needs and to compromise, and seems bent on getting every last ounce out of the deal by locking an entrepreneur into as many of the “burdensome clauses” as is possible, the entrepreneur might want to withdraw.

Throughout the negotiations, entrepreneurs need to bear in mind that a successful negotiation is one in which both sides believe they have made a fair deal. The best deals are those in which neither party wins and neither loses, and such deals are possible to negotiate. This approach is further articulated in the works of Fisher and Ury, who have focused neither on soft nor hard negotiation tactics, but rather on principled negotiation, a methodical approach. This method asserts that the purpose of negotiations is “to decide issues on their merits rather than through a haggling process focused on what each side says it will and won’t do. It suggests that you look for mutual gains wherever possible, and that where your interests conflict, you should insist that the result be based on some fair standards independent of the will of either side.”²³ They continue to describe principled negotiations in the following four points:

- ✓ **People:** Separate the people from the problem.
- ✓ **Interests:** Focus on interests, not positions.
- ✓ **Options:** Generate a variety of possibilities before deciding what to do.
- ✓ **Criteria:** Insist that the result be based on some objective standard.

Others have spoken of this method of principled negotiation. Generally the adage holds to treat others as you would like to be treated. For example, Mario Lemieux states, “One thing I hate is people screaming at me. If you want me to do something, talk to me. When someone screams at me to hurry up, I slow down.”

The Specific Issues Entrepreneurs Typically Face²⁴

Whatever method you choose in your negotiations, the primary focus is likely to be on how much the entrepreneur’s equity is worth and how much is to be purchased by the investor’s investment. Even so, numerous other issues involving legal and financial control of the company and the rights and obligations of various investors and the entrepreneur in various situations may be as important as valuation and ownership share. Not the least of which is the value behind the money—such as contacts and helpful expertise, additional financing when and if required, and patience and interest in the long-term development of the company—that a particular investor can bring to the venture. The following are some of the most critical aspects of a deal that go beyond “just the money”:

- Number, type, and mix of stocks (and perhaps of stock and debt) and various features that may go with them (such as puts) that affect the investor’s rate of return.
- The amounts and timing of takedowns, conversions, and the like.
- Interest rate on debt or preferred shares.
- The number of seats, and who actually will represent investors, on the board of directors.
- Possible changes in the management team and in the composition of the board of directors.
- Registration rights for investor’s stock (in case of a registered public offering).
- Right of first refusal granted to the investor on subsequent private or initial public stock offerings.
- Stock vesting schedule and agreements.
- The payment of legal, accounting, consulting, or other fees connected with putting the deal together.

Entrepreneurs may find some subtle but highly significant issues negotiated. If they, or their attorneys, are not familiar with these, they may be missed as just boilerplate when, in fact, they have crucial future implications for the ownership, control, and financing of the business. Some issues that can be burdensome for entrepreneurs are:

- **Co-sale provision.** This is a provision by which investors can tender their shares of their stock before an initial public offering. It protects the first-round investors but can cause conflicts with investors in later rounds and can inhibit an entrepreneur’s ability to cash out.
- **Ratchet anti-dilution protection.** This enables the lead investors to get for free additional common stock if subsequent shares are ever sold at a price lower than originally paid. This protection allows first-round investors to prevent the company from raising additional necessary funds during a period of adversity for the company. While nice from the investor’s perspective, it ignores the reality that, in distress situations, the last money calls the shots on price and deal structure.
- **Washout financing.** This is a strategy of last resort, which wipes out all previously issued stock when existing preferred shareholders will not commit additional funds, thus diluting everyone.
- **Forced buyout.** Under this provision, if management does not find a buyer or cannot take the company public by a certain date, then the investors can proceed to find a buyer at terms they agree upon.
- **Demand registration rights.** Here, investors can demand at least one IPO in three to five years. In reality, such clauses are hard to invoke because the market for new public stock issues, rather than the terms of an agreement, ultimately governs the timing of such events.
- **Piggyback registration rights.** These grant to the investors (and to the entrepreneur, if he or she insists) rights to sell stock at the IPO. Since the underwriters usually make this decision, the clause normally is not enforceable.
- **Key-person insurance.** This requires the company to obtain life insurance on key people. The named beneficiary of the insurance can be either the company or the preferred shareholders.

The Term Sheet

Regardless of whether you secure capital from angels or venture capitalists, you will want to be informed and knowledgeable about the terms and conditions that govern the deal you sign. Many experienced entrepreneurs will argue that the terms and who your investor is are more important than the valuation. Today, the technical sophistication in deal structures creates an imperative for entrepreneurs and their legal counsel: if you don't know the details you will get what you deserve—not what you want.

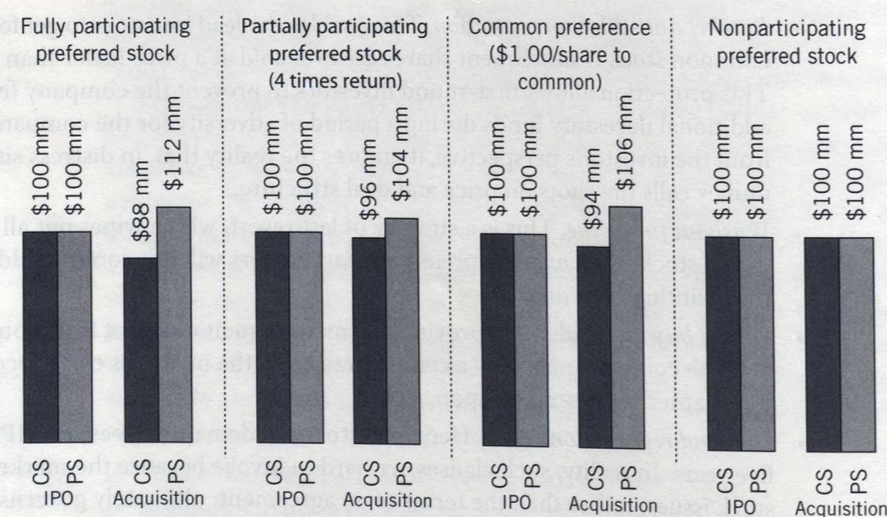
To illustrate this point, consider the choice among four common instruments: (1) fully participating preferred stock, (2) partially participating preferred stock (4× return), (3) common preference (\$1.00/share to common), and (4) non-participating preferred stock. Then, consider a \$200-million harvest realized either through an IPO or an acquisition by another company. Why does any of this matter? Aren't these details better left to the legal experts?

Consider the economic consequences of each of these deal instruments under the two harvest scenarios in Exhibit 10.10. The graph shows there can be up to a \$24-million difference in the payout received, even though, in the example, there are equal numbers of shares of common stock, typically owned by the founders, and preferred stock, owned by investors. The acquisition exit is more favourable to investors, especially since periodically the IPO market is closed to new companies.

Black Box Technology, Inc., Term Sheet

The best single presentation and discussion we have seen of the deal structure, term sheet contents, and their implications for negotiating the deal is presented in Black Box Technology, Inc.—Term Sheet (available on the Online Learning Centre at www.mcgrawhill.ca/olc/timmons). This was developed by the former Boston law firm of Testa, Hurwitz & Thibault, LLP. We highly recommend its careful reading before any negotiations with private investors and selecting very experienced counsel. "Getting a term sheet

EXHIBIT 10.10 Considering the Economics: \$200 Million IPO or Acquisition?



TESTA, HURWITZ & THIBEAULT, LLP

CS = Common stock PS = Preferred stock

Source: Testa, Hurwitz & Thibault, LLP, presentation by Heather M. Stone and Brian D. Goldstein at Babson College, October 3, 2001.

from an investor is like getting an invitation to the Prom in January—you've got a long way to go before you dance" according to start-up lawyer Ryan Roberts.²⁵ "VCs love to be the first to be second. They don't want to be the first to issue a term sheet, but will issue one quickly once someone else has," observes Mark Davis of DFJ Gotham Ventures.²⁶

TRAPS

Strategic Circumference

Each fund-raising strategy sets in motion some actions and commitments by management that will eventually scribe a strategic circumference around the company in terms of its current and future financing choices. These future choices will permit varying degrees of freedom as a result of the previous actions. Those who fail to think through the consequences of a fund-raising strategy and the effect on their degrees of freedom fall into this trap.

While it is impossible to avoid strategic circumference completely, and while in some cases scribing a strategic circumference is clearly intentional, others may be unintended and, unfortunately, unexpected. For example, a company that plans to remain private or plans to maintain a 1.5 to 1.0 debt-to-equity ratio has intentionally created a strategic circumference.

Legal Circumference

Many people have an aversion to becoming involved in legal or accounting minutiae. Many believe that since they pay sizeable professional fees, their advisors should and will pay attention to the details.

Legal documentation spells out the terms, conditions, responsibilities, and rights of the parties to a transaction. Because different sources have different ways of structuring deals, and because these legal and contractual details come at the end of the fund-raising process, an entrepreneur may arrive at a point of no return, facing some very onerous conditions and covenants that are not only very difficult to live with, but also create tight limitations and constraints—legal circumference—on future choices that are potentially disastrous. Entrepreneurs cannot rely on lawyers and advisors to protect them in this vital matter.

To avoid this trap, entrepreneurs need to have a fundamental precept: "The devil is in the details." It is very risky for an entrepreneur *not* to carefully read final documents and very risky to use a lawyer who is *not* experienced and competent. It also is helpful to keep a few options alive and to conserve cash. This also can keep the other side of the table more conciliatory and flexible.

Attraction to Status and Size

It seems there is a cultural attraction to higher status and larger size, even when it comes to raising capital. Simply targeting the largest or the best-known or most-prestigious firms is a trap entrepreneurs often fall into. These firms are often most visible because of their size and investing activity and because they have been around a long time. Yet, as the venture capital industry has become more heterogeneous, as well as for other reasons, such firms may or may not be a good fit.

Take, for example, an entrepreneur who had a patented, innovative device that was ready for use by manufacturers of semiconductors. He was running out of cash from an earlier round of venture capital investment and needed more money for his device to be placed in test sites and then, presumably, into production. Although lab tests had been successful, his prior backers would not invest further because he was nearly two years behind schedule in his business plan. For a year, he concentrated his efforts on many of the largest and most well-known firms and celebrities in the venture capital business, but to no avail. With the help of outside advice, he then decided to pursue an alternative fund-raising strategy. First,

he listed firms that were most likely prospects as customers for the device. Next, he sought to identify investors who already had investments in this potential customer base, because it was thought that these would be the most likely potential backers since they would be the most informed about his technology, its potential value-added properties, and any potential competitive advantages the company could achieve. Less than a dozen venture capital firms were identified (from among a pool of over 700, at the time), yet none had been contacted previously by this entrepreneur. In fact, many were virtually unknown to him, even though they were very active investors in the industry. In less than three months, offers were on the table from three of these and the financing was closed.

It is best to avoid this trap by focusing your efforts toward financial backers, whether debt or equity, who have intimate knowledge and first-hand experience with the technology, marketplace, and networks of expertise in the competitive arena. Focus on those firms with relevant know-how that would be characterized as a good match.

Unknown Territory

Venturing into unknown territory is another problem. Entrepreneurs need to know the terrain in sufficient detail, particularly the requirements and alternatives of various equity sources. If they do not, they may make critical strategic blunders and waste time.

Douglas Cumming of the University of Alberta observes that in Canada "there is no single unique optimal form of venture finance." This is in contrast to the United States where tax laws lead to convergence on only one security. Canada's mix of financing instruments match up with the entrepreneurial firm depending upon its unique attributes and needs. Cumming finds that in Canada, "seed stage firms are more likely to be financed with either straight preferred equity than convertible preferred equity. Seed stage firms were also less likely to be financed with straight debt, convertible debt, or mixes of debt and common equity"—nascent firms without cash flows are simply less suited for debt finance. Whereas, high-tech firms are likely to be financed through convertible preferred equity.²⁷

For example, a venture that is not a "mainstream venture capital deal" may be overvalued and directed to investors who are not a realistic match, rather than being realistically valued and directed to small and more specialized funds, private investors, or potential strategic partners. The preceding example is a real one. The founders went through nearly \$100,000 of their own funds, strained their relationship to the limit, and nearly had to abandon the project.

Another illustration of a fund-raising strategy that was ill conceived and, effectively, a lottery—rather than a well-thought-out and focused search—is a venture in the fibre optics industry we'll call Opti-Com.²⁸ Opti-Com was a spin-off as a start-up from a well-known public company in the industry. The management team was entirely credible, but members were not considered superstars. The business plan suggested the company could achieve the magical \$50 million in sales in five years, which the entrepreneurs were told by an outside advisor was the minimum size that venture capital investors would consider. The plan proposed to raise \$750,000 for about 10 percent of the common stock of the company. Realistically, since the firm was a custom supplier for special applications, rather than a provider of a new technology with a significant proprietary advantage, a sales estimate of \$10 to \$15 million in five years would have been more plausible. The same advisor urged that their business plan be submitted to 12 mainstream venture capital firms in the immediate vicinity. Four months later, they had received 12 rejections. The entrepreneurs then were told to "go see the same quality of venture capital firms in New York." A year later, the founders were nearly out of money and had been unsuccessful in their search for capital. When redirected away from mainstream venture capitalists to a more suitable source, a small fund specifically created in the area to provide risk capital for emerging firms that might not be robust enough to attract conventional venture capital but would be a welcome addition to the economic renewal of the province, the fit was right. Opti-Com raised the necessary capital, but at a valuation much more in line with the market for start-up deals.

Opportunity Cost

The lure of money often leads to a common trap—the opportunity cost trap. An entrepreneur's optimism leads him or her to the conclusion that with good people and products (or services), there has to be a lot of money out there with "our name on it!" In the process, entrepreneurs tend to grossly underestimate the real costs of getting the cash in the bank. Further, entrepreneurs also underestimate the real time, effort, and creative energy required. Indeed, the degree of effort fund-raising requires is perhaps the least appreciated aspect in obtaining capital. In both these cases, there are opportunity costs in expending these resources in a particular direction when both the clock and the calendar are moving.

For a start-up company, for instance, founders can devote nearly all their available time for months to seeking out investors and telling their story. It may take six months or more to get a "yes" and up to a year for a "no." In the meantime, a considerable amount of cash and human capital has been flowing out, rather than in, and this cash and capital might have been better spent elsewhere.

One such start-up began its search for venture capital and within 12 months the founders had exhausted \$100,000 of their own seed money and had quit their jobs to devote themselves full time to the effort. Yet they were unsuccessful after approaching more than 35 sources of capital. The opportunity costs are clear.

There are opportunity costs, too, in existing emerging companies. In terms of human capital, it is common for top management to devote as much as half of its time trying to raise a major amount of outside capital. Again, this requires a tremendous amount of emotional and physical energy as well, of which there is a finite amount to devote to the daily operating demands of the enterprise. The effect on near-term performance is invariably negative. In addition, if expectations of a successful fund-raising effort are followed by a failure to raise the money, morale can deteriorate and key people can be lost.

Significant opportunity costs are also incurred in forgone business and market opportunities that could have been pursued. Take, for example, the start-up firm noted above. When asked what level of sales the company would have achieved in the year had it spent the \$100,000 of the founders' seed money on generating customers and business, the founder answered without hesitation, "We'd be at \$1 million sales by now, and would probably be making a small profit."

Underestimation of Other Costs

Entrepreneurs tend to underestimate the out-of-pocket costs associated with both raising the money and living with it. There are incremental costs after a firm becomes a public company. The Canadian regulatory bodies require periodic audited financial statements and various reports, there are outside directors' fees and liability insurance premiums, there are legal fees associated with more extensive reporting requirements, and so on. These can add up quickly, often to \$100,000 or more annually.

Another "cost" that can be easily overlooked is of the disclosure that may be necessary to convince a financial backer to part with his or her money. An entrepreneur may have to reveal much more about the company and his other personal finances than he or she ever imagined. Thus, company weaknesses, ownership and compensation arrangements, personal and corporate financial statements, marketing plans and competitive strategies, and so forth may need to be revealed to people whom the entrepreneur does not really know and trust, and with whom he or she may eventually not do business. In addition, the ability to control access to the information is lost.

Greed

The entrepreneur—especially one who is out of cash, or nearly so—may find the money irresistible. One of the most exhilarating experiences for an entrepreneur is the prospect of raising that first major slug of outside capital, or obtaining that substantial bank line needed for expansion. If the fundamentals of the company are sound, however, then there is money out there.

Being Too Anxious

Usually, after months of hard work finding the right source and negotiating the deal, another trap awaits the hungry but unwary entrepreneur, and all too often the temptation is overwhelming. It is the trap of believing that the deal is done and terminating discussions with others too soon. Entrepreneurs fall into this trap because they want to believe the deal is done with a handshake (or perhaps with an accompanying letter of intent or an executed term sheet).

A masterful handling of such a situation occurred when an entrepreneur and a key vice president of a company with \$30 million in sales had been negotiating with several venture capitalists, three major strategic partners, and a mezzanine source for nearly six months. The company was down to 60 days' worth of cash, and the mezzanine investors knew it. They offered the entrepreneur \$10 million as a take-it-or-leave-it proposition. The vice president, in summarizing the company's relative bargaining position, said, "It was the only alternative we had left; everything else had come to rest by late last month and the negotiations with the three major companies had not reached serious stages. We felt like they were asking too much, but we needed the money." Yet the two had managed to keep this weakness from being apparent to the mezzanine. Each time negotiations had been scheduled, the entrepreneur had made sure he also had scheduled a meeting with one of the other larger companies for later that afternoon (a two-hour plane ride away). In effect, he was able to create the illusion that these discussions with other investors were far more serious than they actually were. The deal was closed on terms agreeable to both. The company went public six months later and is still highly successful today.

Impatience

Another trap is being impatient when an investor does not understand quickly, and not realizing each deal has velocity and momentum.

The efforts of one management group to acquire a firm in the cellular phone business being sold by their employers provides an example. As members of the management team, they were the first to know in May that the company was going to be sold by its owners. By early July, the investment bankers representing the sellers were expected to have the offering memorandum ready for the open market. To attempt to buy the company privately would require the team to raise commitments for approximately \$150 million in three to four weeks, hardly enough time to put together even a crude business plan, let alone raise such a substantial sum. The train was moving at 200 kilometres per hour and gaining speed each day. The founders identified five top-notch, interested venture capital and leveraged buyout firms and sat down with representatives of each to walk through the summary of the business plan and the proposed financing. One excellent firm sent an otherwise very experienced and capable partner, but his questioning indicated just how little he knew about this business. The team knew they had to look elsewhere.

Had the group been too impatient simply because the train was moving so quickly, they would have exposed themselves to additional risk. That potential investor had a serious lack of elementary knowledge of the industry and the business model, and had not done his homework in advance. If they had waited for this investor to become knowledgeable about the business, it would have been too late.

Take-the-Money-and-Run Myopia

A final trap in raising money for a company is a take-the-money-and-run myopia that invariably prevents an entrepreneur from evaluating one of the most critical longer-term issues—to what extent can the investor add value to the company beyond the money? Into this trap falls the entrepreneur who does not possess a clear sense that his or her prospective financial partner has the relevant experience and know-how in the market and industry area, the contacts the entrepreneur needs but does not have, the savvy and the reputation that adds value in the relationship with the investor—and yet takes the money.

As has been said before, the successful development of a company can be critically affected by the interaction of the management team and the financial partners. If an effective relationship can be established, the value-added synergy can be a powerful stimulant for success. Many founders overlook the high value-added contributions that some investors are accustomed to making and erroneously opt for a "better deal."

Tables Turn in Times of Turmoil

In 2009, the tables were turning on the VCs and they were begging hard for money. Upstream from VC money exists a variety of institutional and other investors. The venture funds were simply dry, all tapped out and upstream was nervous and sitting tight. At that point, two of Canada's biggest firms, VenturesWest and Celtic House, were stalled in their own fundraising and had to suspend venture-funding activity.²⁹

For Brightspark it has meant a reversal for new life. Brightspark was founded in 1999 with two parts: a software start-up incubator and VC. The VC arm invested in what came out of the other half. The incubator half (Brightspark Labs) was disbanded in 2002 having placed its employees and ideas in the real world while the other half (Brightspark Ventures) was going strong. In 2009, under dire economic conditions Brightspark was forced to start building software and launching—rather than funding—new ventures. Mark Skapinker, co-founder of Brightspark, said "We decided to go back to basics." The firm launched three Web-based businesses, all of which share a common architecture. Why would a VC firm launch its own businesses? "While it might seem counterintuitive for a VC firm to dream up, develop, fund, and launch its own companies, for the entrepreneurial veterans at Brightspark it's merely a case of doing what comes naturally."³⁰ "We hope that we are showing the market that great tech companies can be created and grown in the face of a brutal VC and financial market."³¹

Sources: Timothy Hay, "O Canada VC, We Stand On Guard for Thee," *Wall Street Journal*, April 3, 2009; Mark Skapinker, "Say It Like You See It," www.blog.brightspark.com (accessed April 4, 2009); Canadian Venture Capital Association, "Venture Capital Investment Continued to Fall in Q1 2009," Press Release, May 12, 2009.

INTERNET IMPACT: RESOURCES

Real Estate Marketing and Sales

The Internet enables buyers and sellers of real estate to bypass agents whose function has been to collect data from many sources and make it available to end-users. In that way, online resources are quickly changing the basis for competing and creating value in the real estate industry. Gone are the days where local agents—armed with the latest proprietary Multiple Listing Service (MLS) data—were the gatekeepers and purveyors of up-to-date information on available properties, community aspects, and comparative pricing.

Instead of spending weekends with a broker—or driving around town looking for "for sale" signs and open houses—buyers can now conduct detailed searches on MLS portals like www.realtor.com, and on sale-by-owner sites like www.bytheowner.com. For buyers looking to relocate or purchase secondary properties far from their current home, the Internet has become a powerful resource.

Despite many dire predictions in the early days of the Internet, it is unlikely that these online capabilities will ever do away with the need for professional intermediaries in the complex—and often emotional—purchase of real estate. However, as their commissions shrink along with the scope of the services they are being expected to provide, the success factor for real estate agents will be in taking on a value-added consultative role in the overall process.

Chapter Summary

1. There is rarely a “fair fight” between users (entrepreneurs) and suppliers (investors) of capital. Entrepreneurs need to be prepared by learning how the capital markets determine valuation risk.
2. Several valuation methods are used to arrive at value for a company, the venture capital method being the most common.
3. Investors prefer to stage their capital commitments, thereby managing and containing the risk, and preserving their options to invest further or cease.
4. Numerous potential conflicts exist between users and suppliers of capital, and these require appreciation and managing. The economic consequences can be worth millions to founders.
5. Successful deals are characterized by careful thought and sensitive balance among a range of important issues.
6. Deal structure can make or break an otherwise sound venture, and the devil is always in the details.
7. Negotiating the deal is both art and science, and also can make or break the relationship.
8. The entrepreneur encounters numerous strategic, legal, and other traps during the fund-raising cycle and needs awareness and skill in coping with them. And advisors (Chapter 8) can help.

Study Questions

1. Why can there be such wide variations in the valuations investors and founders place on companies? What are the determinants of value? What is a company worth: explain the theory and the reality of valuation.
2. Define and explain why the following are important: long-term value creation, investor's required IRR, investor's required share of ownership, discounted cash flow, and deal structure in fund-raising.
3. Explain five prevalent methods used in valuing a company and their strengths and weaknesses, given their underlying assumptions.
4. What is a staged capital commitment, and why is it important?
5. What is a “cram down” or “down round”?
6. What are some of the inherent conflicts between investors and entrepreneurs, and how and why can these affect the venture's odds for success?
7. What are the most important questions and issues to consider in structuring a deal? Why?
8. What issues can be negotiated in a venture investment, and why are these important?
9. What are the pitfalls and traps in fund-raising, and why do entrepreneurs sometimes fail to avoid them?

Mind Stretchers *Have you considered?*

1. Who should and should not have outside investors in their companies?
2. It is said that a good deal structure cannot turn a bad business into a good one, but many a good business has been killed by a bad deal structure. Why is this so? Find an example of each.
3. What beliefs and assumptions are revealed by the “bets” made in different deals?
4. What is a good deal? Why?
5. Is venture capital always structured to the advantages of the money lenders? Why?

CASE TERRACYCLE INC.

Preparation Questions

1. Is TerraCycle “VC-able”?
2. Is Carrot Capital the right fit for TerraCycle?
3. Should they take the deal anyway? Do they have a choice?

There was a bright burst of flashbulbs as Tom Szaky signed the electronic screen and pushed the button to signal the start of the NASDAQ's trading day. With his tousled bedhead, wearing a blazer over a T-shirt, the 21-year-old was visibly different from the CEOs, celebrities, and statespeople that usually preside over the market opening.

Szaky was a student on a leave of absence from Princeton University. He had put his studies on hold to found Terracycle, a New Jersey-based start-up that manufactured organic plant fertilizer from worm excrement. A week earlier, he'd pitched the concept to a panel of venture capitalists as part of the Carrot Capital Education Foundation Business Plan Challenge. His top performance in that competition earned him the right to ring the opening bell.

But it didn't stop there. Taking top honours also put Terracycle in line for up to US\$1 million in seed funding from Carrot Capital, a New York-based venture capital company. Szaky next met with Carrot's managing director, setting up sessions for both companies to start conducting due diligence. While the judges had been enthusiastic about Terracycle's business model, an offer of VC funding was contingent on a closer inspection of the company's plans.

Szaky knew the stakes were high. With just \$500 in the bank and \$5,000 coming in from another business-plan competition, Terracycle had barely enough cash to stay alive for another month. With no other venture capital deals on the horizon, Szaky and his six fellow staffers had only a few short weeks to either proceed with financing from Carrot—or find another way ahead with only their scarce bootstrapped cash to rely on.

“Worm Poop”

Just over a week later, Szaky found himself in more familiar, but less glamorous, surroundings. His brow glistening with sweat, he grunted with exertion as he shovelled compost from a metal biocomposter into a platformed worm gin in Princeton, N.J. Beside him was Bill Gillum, a former Bell Labs scientist with a Ph.D. in inorganic chemistry, who alternated between shovelling and adjusting settings on the biocomposter's computer.

The biocomposter and gin were two parts of a prototype system for producing nutrient-rich vermicompost on a large scale. The prototype was the latest step in a grand vision that had begun years earlier when Szaky took a road trip to Montreal. There, he had been impressed by the wriggling fertilizer factory installed under his Montreal friend's kitchen counter—a miniature vermicompost operation, where a bucket of red worms converted the house's kitchen waste into nutrient-rich plant food for the garden.

Now Szaky and Gillum were tinkering with an industrial-scale version of that same concept. A far cry from the kitchen-cupboard bucket, Terracycle's system used tens of thousands of worms, capable of producing thousands of pounds of fertilizer. Raw organic waste—from coffee grounds to paper sludge—was first heated and oxygenated to eliminate any harmful bacteria; then it was fed into a biotransformer, where red worms would chew through it, excreting nutrient-rich vermicompost castings in the process.

The final step saw these castings—“worm poop,” in the candid language of Terracycle's founders—separated to remove any worms or undigested waste. The product could be bagged directly as a solid, or brewed and packaged as a liquefied plant food. This innovative separation and brewing process allowed the fertilizer to retain its nutrients on the shelf for years—a considerable improvement over the kitchen-cupboard system, whose output would lose its nutrients after only weeks.

Their working prototype could produce and bottle up to 80 half-litre containers per week—if Terracycle's staff chipped in enough manual labour. Often, they would spend their mornings in meetings, and then spend afternoons shovelling organic waste into the gin. The end product was bottled in spartan containers—the company had yet to settle on packaging design or a product name. Based on Bill's own anecdotal experience, the company's plant food was at least as effective as its chemical counterparts, such as Miracle-Gro.

Terracycle badly needed capital to turn the prototype into a working production facility. To convert a warehouse space in Trenton, N.J., into a fully functional production facility capable of producing 100,000 750-millilitre bottles per week would require \$300,000; to scale up to 215,000 bottles per week, they would need \$850,000 in facility upgrades and bottling and brewing equipment. The company also needed to undertake rigorous product testing—a process that, for each product, would take six months and cost \$60,000 at Rutgers, the state university of New Jersey.

Terracycle had been focused on producing a liquid indoor plant food, but a number of other products were possible. Once the earthworm castings had been produced, they could be packaged in their solid form to be used as pellet fertilizers or growth media (soil substitute). Alternately, the castings could be brewed in distilled water to produce a sprayable liquid. Products for specialty applications such as rose bushes could be developed with small changes to the composition of the worms' organic-waste diet. And the company had a range of bottling options, from a spray applicator on small bottles for indoor use to a hose applicator affixed to a large jug for lawns and outdoor plants.

This case was written by Lukas Neville, Ph.D. student, Queen's School of Business, and Professor Elspeth J. Murray, CIBC Teaching Fellow in Entrepreneurship, Queen's School of Business, Queen's University. This case was developed with the support of the CIBC Curriculum Development Fund at the Queen's Centre for Business Venturing, for purposes of classroom discussion.

First Product

Responsibility for setting product lines fell to Robin Tator. Tator, the company's vice-president of marketing and sales, had given Szaky one of his very first jobs as a teen. Tator had joined the firm early in its development and had been dividing his time between Ontario and New Jersey ever since, steering sales and distribution efforts on both sides of the border.

Terracycle had already tentatively selected its first product: a sprayable, all-purpose indoor plant food aimed at the consumer market. Pricing was designed to match larger competitors like Miracle-Gro. While Terracycle couldn't match the scale economies of its competitors, the production process for its vermicompost was far less expensive than the energy-intensive production of chemical fertilizer products.

The size of the fertilizer and media market was appealing—in the United States alone, it was a US\$6-billion segment of the US\$37-billion lawn and garden market. But the segment was beset by sluggish growth—no more than 5 percent annually—and dominated by a handful of industry Goliaths. Scotts' Miracle-Gro controlled at least 35 percent of the consumer lawn and garden market—and had an even tighter grip on the all-purpose fertilizer market.

Tator considered the organic market a green field of opportunity: The market was small—perhaps \$400 million—for “designer” soils and premium plant food, but it was growing at a rate of 16 percent per year. Sales of organic products, which made up at best 10 percent of the overall lawn and consumables market, had grown well over 400 percent between 1997 and 2002. Though one competitor, Schultz, had made tentative steps into the market and Scotts was planning an organic line, the organic market was still dominated by small, regionally focused competitors.

Tator advocated a consumer focus, even though the agricultural and commercial markets offered higher margins. First, he expected indoor home users to respond positively to the product's safe, non-chemical formulation. Second, he anticipated that consumers would more readily try out the Terracycle product—while agricultural users, whose livelihood depended on the product's efficacy, would take longer to experiment with and adopt the product.

Terracycle vs. Carrot

While Terracycle refined its production process and planned for its product rollout, however, the relationship with its potential financier began to sour. The discussions were conducted by Szaky, CFO Doug Feltman, and interim CEO Thomas Pyle. Feltman had joined the team after serving as CFO of market-

ing firm Grey Worldwide. Pyle's career in banking included senior roles at Deutsche Bank, Chase Manhattan, and Skandinaviska Enskilda Banken.

Despite their resumes, the financial projections they presented reflected both the company's embryonic stage of development and the fact that the leadership was balancing dozens of competing priorities. Their submissions included neither detailed cash-flow projections nor a proposed use of proceeds for the financing round.

Carrot wanted more. It needed a clear picture of what stage of development the young company would reach with its round of financing. Szaky and partners soon discerned that the financing would be tranches—delivered in stages—based on set metrics for sales, development, and hiring. Having attributed their survival thus far to their adaptability, the Terracycle team worried that set metrics would limit their flexibility in the face of unpredictable change.

Terracycle and its prospective investors also clashed on spending priorities. The company had budgeted relatively modest amounts for marketing, preferring to build sales through guerrilla marketing and a network of unpaid student interns. They also planned to place the management team—who had been sleeping at the office and drawing meagre, infrequent paycheques—on salary. Carrot expected, by contrast, investments into professional branding and marketing. They considered the intern program an unacceptable distraction.

The VC also wanted to rethink the management line-up. In a letter, Carrot allowed that the management members were smart and capable, but argued they were the wrong people for the company. Carrot wanted to hire start-up veterans with deeper experience in consumer products and retail marketing. Those who were left, Carrot made clear, would be expected to continue working at modest salaries or for equity alone.

Carrot, as an act of good faith, was willing to keep the company afloat with a \$20,000 bridge loan and agreed to give it additional time to work out a deal. But Terracycle's managers were skeptical, sensing a gulf between their vision and Carrot's aims. On top of those substantive challenges, Szaky felt uneasy with Carrot on a gut level, as if he was being cloistered from his team during the high-intensity negotiations with the VC.

Butting heads with Carrot over both strategy and spending, Terracycle was in an unenviable position. It would be months before they had a saleable product ready. Their coffers were empty. The company had some embryonic relationships with individual investors—enough, perhaps, to cobble together enough funding to survive a few more months—but there was still a very good chance that it would not survive if they rejected the venture capital deal.



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C H A P T E R

11

OBTAINING DEBT CAPITAL¹

Leveraging a company is like driving your car with a sharp stick pointed at your heart through the steering wheel. As long as the road is smooth it works fine. But hit one bump in the road and you may be dead.

Warren Buffet

Upon completion of this chapter, you will be able to:

1. Identify sources of debt and how to access them in today's capital markets.
2. Describe the lender's perspective and criteria in making loans, how to prepare a loan proposal, and how to negotiate a loan.
3. Understand the key aspects of managing and orchestrating the acquisition of debt capital.
4. Discuss how lenders estimate the debt capacity of a company.
5. Identify tar pits entrepreneurs need to avoid in considering debt.

Market cycles impact credit availability—often creating a lack thereof—for emerging companies. After a market meltdown (such as in 2000 and again in 2009), many old rules disappeared and a harsher banking climate once again appeared. This chapter aims at preparing you to cope better with those realities in the debt capital markets. And as debt markets improve, and they always do, lessons learned here will provide important competitive advantages.

A CYCLICAL PATTERN: THE GOOD OLD DAYS RETURN BUT FADE AGAIN

For entrepreneurs and their investors, the punishing credit crunch and stagnant equity markets give way to robust capital markets and once again are beaten down. Interest rates fluctuate and the credit environment turns from friend to foe in a short timeframe. The availability of bank loans and competition among banks changes dramatically from pursuer of entrepreneurs to playing hard to get. And as Jean-Etienne de Bettignies and James