Industry Canada Industrie Canada

Self-Study Guide

STEP 3:
Show Your Investment Potential

Canada

STEP 3:

Show Your Investment Potential

Table of Contents

3.1 Show Your Investment Potential - Introduction

You know how much money you need, you know how you'll use it, and you've got an idea of the types of investors who might be interested. But how do you make your company and your growth plan attractive to risk capital investors? After all, they're looking for ways to invest their money intelligently and profitably; why should they invest it in your business? We'll help you to demonstrate your investment potential and attract those investors.

In this Step, you'll learn how to demonstrate and measure your company's potential for growth. You have to prepare to meet the needs and expectations of risk capital investors. We'll help you look at your business from their point of view, and analyse its strengths and weaknesses. And, you must be prepared to demonstrate that your company is a good risk. We'll show you what kinds of information to gather to prove your point. A critical part of this Step is putting a value or price on your business. You will be introduced to various techniques used to value businesses, and you will learn how to address the investor's "exit strategy" and "exit value" in your proposal.

In This Step

You'll learn how to assess your company, internally and externally, with business valuation methods.

- What Investors Want
- Prove Your Potential for Growth
- Analyse Your Company
- Analyse the Business Environment
- Put a Price Tag on Your Business
- Discounted Cash Flow Value
- Calculating Discounted Cash Flow
- Exit Strategies and Exit Values
- Action Items

The New Tech Story

Follow the fictional company New Tech Distributors Corp. (New Tech) as it pursues venture financing. This case example gives you a feeling for the "real" data and strategic decisions you'll be facing.

3.2 What Investors Want

The experience of the venture capital industry is very clear. Investors are looking for three things: excellent profit potential, a high rate of return and a way to get their money out. If these conditions don't show up in your investment proposal, your pitches and your presentations, potential investors will walk away.

Think of yourself as someone *offering an investment opportunity*. To make your investment seem attractive, you'll need to provide information that is solid and convincing for each of the investor's key conditions. This information can also serve as the foundation of your business plan and investment proposal.

What investors look for	What you need to demonstrate and how to do it
1) Investors are looking for **excellent profit potential**.	You must demonstrate that you: • understand your industry and your market; • run a company that's ready to grow; and • have a viable plan for growth. Conduct an analysis of your company's strengths, weaknesses, opportunities and threats. Take this analysis as the foundation of your plan for growth profit.
2) They want an **exceptional return on investment (usually 25% to 40%)**.	You have to show them: • the value of your business, now and in the future; and • the rates of return they can expect. Determine how much your business and your growth opportunity are worth. This valuation will help set the price you want investors to pay; how much equity they will get; and ultimately what return on investment they can expect.
3) Investors need **a way to get their money out**.	You have to provide: • a workable exit strategy. Consider the different options for exit strategies and develop a clear plan with fixed time lines for investors to recoup their investment and draw profit.

Plan for Growth: Prove Profit Potential

Investors will expect to see information that supports your plan. They will look for quantitative and qualitative information on your industry and your company. You have to have that information ready. So, you should conduct an analysis of your business environment and your company. One way of doing that is to use a situation analysis to assess your current situation and opportunities. This is discussed in the next section of this Step.

Valuation: The Basis for Return on Investment

Risk capital investors want to help you launch your idea or expand your operations. But, in exchange, they expect a high financial payback (or return) on their investment. Investors want evidence that your investment opportunity will generate a return that will compensate for their risk. You'll have to prove to them that your company can generate an exceptional return: usually 25% to 40% compounded and adjusted for inflation.

To predict return on investment, you've got to start with a valuation of your business. The valuation will be the basis for a number of key parts of the deal you offer investors:

- how much investors will pay to invest in your company;
- how large a share of the company they will get in exchange; and
- how much they are expected to make from the investment.

Valuation methods are covered in detail later in this Step.

Exit Strategies

Investors usually want to cash in their shares somewhere between three and seven years after making their investment. It's up to you to assure them that you've thought about how to comply with their wishes. Put another way, you've got to have an "exit strategy" for them. Will the company go public? Will it be sold? How? Will current business owners buy out the investors? The exit strategy is often the only way that risk capital investors can secure a 25% to 40% return on their investment.

Exit strategies include initial public offerings, sale of all of the shares of the company, sale of the investor's shares to a third party, buyback of the investor's shares by the company, and debt repayment. Later in this Step, we cover how to determine exit values for different exit strategies. (For more on exit strategies themselves, see “What’s on the Table” in Step 8: Negotiate the Deal.)

Tip

Investers want: Confidence in Management

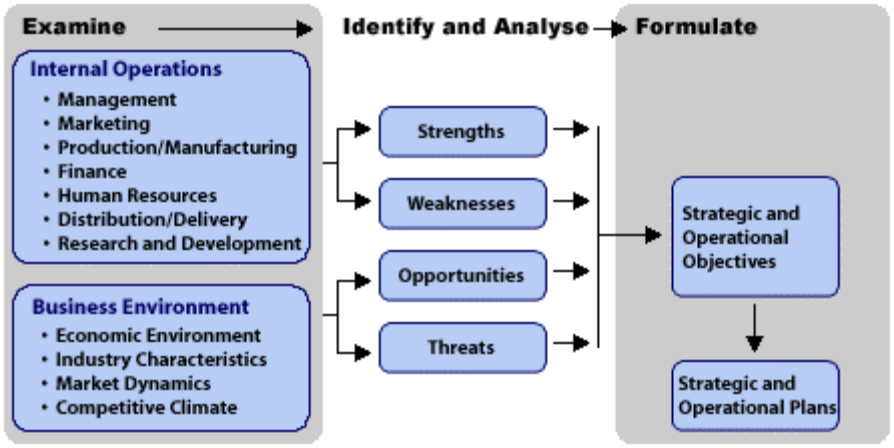
Most risk capital investors claim that management is the single most important aspect of a business opportunity. Your industry analysis and your plan for growth are key elements in conveying the capabilities of your management team. If these elements are convincing to investors, they will begin to have confidence in the management. (Step 4: Demonstrate Your Management Capabilities covers this topic in greater depth.)

3.3 Prove Your Potential for Growth

You've got to provide investors with a realistic and convincing story that supports your argument that an exciting, viable opportunity exists out there. The key to telling that story and proving your potential growth and profitability is three-fold: it calls for a solid analysis of current conditions that pinpoints the opportunity; a cold, hard look at how

your business runs; and a plan that shows how your company can capitalize on the opportunity.

Situation Analysis



Situation Analysis: Good for You and Good for the Investor

One useful way to examine and demonstrate your potential is to do a situation analysis that diagnoses the external environment (industry, competitors, etc.) and your internal operations (marketing, production, etc.). In the next few sections we'll give you some help in conducting this kind of analysis.

A situation analysis has two benefits:

- it helps you formulate strategic objectives and plans for how your business can realize its potential; and
- it can help convince risk capital investors that your company's new venture will have a "good fit" in its environment and competitive arena.

This process is sometimes called a "SWOT" analysis because it looks at the Strengths and Weaknesses within your company and the Opportunities and Threats outside your company.

Objectives and Plans

Once you've assessed your company's internal and external environment, you're in a good position to develop informed strategic objectives and plans. Risk capital investors will want to see these objectives and plans to get a better sense of where your business is going and how it's going to get there. The plans and objectives you develop can form the basis of your business plan and investment proposal.

The objectives you set should be measurable and have a clear time frame. As well, they need to be backed by specific plans that demonstrate the steps you will follow to capitalize on your business opportunity. Your plan must address the expected timing of

activities and resources that you'll need — such as staff, investments in additional assets, and financing.

One reason a situation analysis is so powerful is that it helps you develop plans and specific actions that:

- minimize identified threats to your company;
- help you take advantage of opportunities;
- let you capitalize on your company's strengths; and
- minimize or eliminate your company's weaknesses.

Take a Closer Look

How do risk capital investors think?

If you can answer these investor questions you'll be on your way to assembling an attractive investment pitch.

Questions Potential Investors Will Ask

Before deciding to invest money, investors will ask many questions about your business venture's viability and profitability. Start gathering the information you need to answer these questions. And put your answers down in black and white - in the investment proposal.

- What are the characteristics of this company? This industry? What are the industry realities and practices? Is this the kind of industry I want to invest in?
- What evidence is there of customer acceptance for the product or service? Has the product or service been tried or used? Is it being tested on a trial basis?
- What is the historical financial structure (balance sheet) of this business? The financial performance (income statement)? The projected financial profile?
- Does the business possess exclusive rights to the product or process (i.e. patents, copyright or trademark protection)?
- What is the calibre of the people managing this business? Are they focussed?
- What are the terms of this deal or investment (i.e. percentage of the company being sold, the minimum investment, number of investors, total market value of the business)?
- Does this company match my vision and interest as an investor? Is it too big? Is it located too far away?
- Does the entrepreneur understand my needs?

3.4 Analyse Your Company

Investors will want to analyse your company to identify its strengths and weaknesses. They will want to look at specific details about your business so they can measure its true potential. You've got to do the same analysis not only to be ready for their questions, but also to:

- help you leverage your company's strengths; and
- find solutions to overcome your company's weaknesses.

Strengths are simply things you are good at and that give you an edge over competing firms. Weaknesses are things that put your business at a competitive disadvantage.

How to Analyse Your Company's Internal Operations

Look at your own business, say, over the past two to five years. For each key business function, ask yourself how well it's run. Analyse the strengths and weaknesses, and identify which functions you can exploit for competitive advantage and which ones need to be reinforced.

Rate yourself on each of these operating functions and provide specific examples of each strength and weakness. See the *list of questions on your business function* in the Appendix, it can help you analyse each of these functions.

Management weakness 1 2 3 4 5 strength

Key strengths: _____

Key weaknesses: _____

Marketing weakness 1 2 3 4 5 strength

Key strengths: _____

Key weaknesses: _____

Production/Manufacturing weakness 1 2 3 4 5 strength

Key strengths: _____

Key weaknesses: _____

Finance weakness 1 2 3 4 5 strength

Key strengths: _____

Key weaknesses: _____

Human Resources weakness 1 2 3 4 5 strength

Key strengths: _____

Key weaknesses: _____

Distribution/Delivery weakness 1 2 3 4 5 strength

Key strengths: _____

Key weaknesses: _____

Research and Development weakness 1 2 3 4 5 strength

Key strengths: _____

Key weaknesses: _____

3.5 Analyse the Business Environment

As with the analysis of your company's internal strengths and weaknesses, analysing the business environment will help you build a solid plan for growth and provide you with information that investors will want to know. You and the investor will need to identify all opportunities for growth and profitability, and any threats that jeopardize the well-being of your business.

There are four major dimensions to the business environment, each presenting its own threats and opportunities:

- economic environment
- industry characteristics
- market dynamics
- competitive climate

Economic Environment

General economic conditions will affect your company's performance, and that, in turn, affects the valuation of your business. Investors will want to know how you anticipate key economic trends will affect your industry, markets and corporate results. The typical issues that you might explore are:

- growth rate of the gross national product;
- rate of inflation;
- level of capital investments;
- state of financial markets (cost of capital); and
- exchange rates (strength of the Canadian dollar).

Industry Characteristics

Investors want to be knowledgeable about the industries they invest in. To assess the potential of an investment, they'll want to know about industry trends.

- Is this industry profitable? Is it growing? How fast?
  – If it is growing, will it pull in new entrants? How many and what will be the impact on the industry?

- What are the barriers to new entrants?
  – Does this industry require big investments, specialized technologies or expertise?
- Is this industry competing against other industries (substitute products)?
  – What are they? Are they real threats? How do consumers regard these substitute products?
- Is a large volume of production required to be cost competitive in this industry (economies of scale)?
  – What is the optimal cost structure or operating leverage (fixed versus variable costs)?
- What is the relationship between supply and demand?
  – Will surpluses push prices and profit margins down? Will shortages pull them up?
- To what extent is the industry regulated?
  – What impact does this have on industry growth and profitability?

Market Dynamics

If you understand the market you compete in and the factors that affect your company's ability to sell products or services, you'll know your growth potential. Investors will want proof of your capacity for sustained growth. To build an effective plan and to convince investors, you'll need to be able to answer these questions:

- Can you define the markets in which your company competes?
- What are these different markets? How big are they?
- How will you attract and keep these markets?
- What percent of the market do you have now and what percent will you have if you pursue your growth plans?
- What is the market's growth potential?
- What is the market segmentation of your customer base (e.g. purchasing habits and preferences)?

Competitive Climate

Risk capital investors will want to learn about your competitive advantage over others. They need to know your company's current competitive position, your staying power and your ability to outperform and acquire competitors. Investors will ask the following:

- How many competitors do you have? How do they compare in size, market share and strategy?
- Why do your customers buy from you and not from your competitors?
- Can you list your key competitors in each market you compete in?
- Can you demonstrate how your company differentiates itself from your competitors?
- What are your key areas of competitive advantage?
- Is your price competitive? How did you arrive at your price structure?
- Are new competitors entering the market? Who are they? Where are they from?
- How do you get your products and services to your end users?
- How will your operations be better than those of your competitors?

Entrepreneur Stories

Bfound.com of B.C saw that it had to demonstrate its market opportunity to conserve investors.

Bfound.com Answers the Question: Where is Your Market?

Many entrepreneurs focus on proving that their product or technology will work, but even more important in the investor's mind is the question of who will buy it. A marketing plan with information on target markets, competition and product positioning is critical.

Bfound.com, a B.C.-based business, had a good product; but as a high-tech company in a sector with large, deep-pocketed companies, the company had several points it wanted to demonstrate. The company wanted to show that its product was vastly superior to what was out there, that it would service a profitable market niche and that it had strategic alliances with powerful players in the market.

The company achieved these goals by focussing its product development on the most marketable applications for its technology, focussing its sales strategy on finding "lighthouse clients" to demonstrate product superiority and making strategic alliances through consulting to other companies. As a result, Bfound.com was able to demonstrate to investors that it had not just a good technology, but a product that would sell.

Tip

Third-party evidence makes your analysis more convincing.

Third-Party Sources

Using third-party sources will make your analysis more convincing and will validate your industry information. So be sure to gather and include in your investment proposal:

- reports prepared by independent parties (business associations, government studies, etc.); and
- information from industry surveys.

Economic environment information can be obtained from:

- forecasts provided by chartered banks and the Conference Board of Canada; and
- forecasts and economic assumptions contained in federal and provincial/territorial government annual budgets.

Information on industry characteristics can be found in:

- corporate and industry association Web sites;
- corporate annual reports;
- specific industry surveys and studies;
- industry association information; and
- research reports prepared by brokerage firms.

3.6 Put A Price Tag on Your Business

Before you approach potential investors, you, and any other existing shareholders, need to have an idea of the value of your company. Prospective investors will also assess the value of your business when they consider your proposal. The process of determining the value is called "valuation."

You and the investor both need to determine what you think is the value of the business because the value will be the basis for negotiating:

- how much of the company the investor will buy (how many shares);
- how much the investor will invest (the price of those shares); and
- the return the investor can expect to earn.

An Example

Here's a simplified example: if you feel your company is worth $10 million and you're asking for a $2.5-million dollar investment, then the investor will get 25% of the shares. But what if the investor feels the company is only worth $5 million? He will expect 50% of your shares for an investment of $2.5 million. You and the investor will each use valuation methods you think are right to determine the price and the equity share. And then the negotiations will begin.

Ways of Valuing a Business

Valuation is not an exact science, and there are a variety of ways to do it. These methods use different assumptions and different financial information and typically result in different values. For instance, you could base a valuation on a company's assets (how much it owns). Another approach is to use projected revenues or cash flows. Investors prefer methods based on cash flows, and we will cover them in more detail here. But it's important to know about a variety of methods because they can be useful as benchmarks to check the validity of the value and the price you determine.

Earnings and Cash-Flow Based Methods

- **Discounted cash flow:** From the investor's perspective, this is usually the most accurate and effective way to estimate a company's value because it is based on future cash flows. And future cash flows, the money that will come in to the company, will ultimately determine the investor's return on investment. Essentially, discounted cash flow calculations try to answer this question: Taking into account the ups and downs of revenues and expenses and new investment, how much will today's investment yield tomorrow?
- **Going concern value:** The going concern value, like discounted cash flow, compares the current investment to the future receipts (cash inflows). This method uses the revenues of previous years to project future revenues, and it assumes those revenues will not change. If the company had revenue of $500,000 in each of the last five years, this method assumes that future revenues will also be $500,000 per year. But investors and entrepreneurs prefer the discounted cash flow method because it accounts for changes in revenue, expenses and investment; in other words, the discounted cash flow method tries to be a more accurate and realistic

forecast of cash flows. (Take a Closer Look in the Appendix, *Going Concern Value*)

Asset-Based Methods

- **Book value:** This value is simply the company's net worth or shareholders' equity, as shown in its financial statements. At its most simplified, subtracting liabilities from assets gives net worth or book value. Obviously entrepreneurs may feel that their exciting new invention is worth much more than the current value of their equipment, buildings, receivables and other assets. So this method is usually used as a reference point only. (Take a Closer Look in the Appendix, Book Value)
- **Liquidation value:** Liquidation, like book value, is based on a company's assets. It's the amount you would get from selling all of a company's assets. Equipment and land would typically yield something close to their market value, while things like inventory and receivables will usually be discounted and yield less than the value on the books. The liquidation value obviously doesn't represent the company's potential; it's a most pessimistic, rock-bottom value calculation. (Take a Closer Look, Liquidation Value.)

Tip

"*Your company is only worth what someone is willing to pay for it*." Remember that in matters of price, the market rules.

There is a truism in the venture capital industry that "the value of a company is only what someone is willing to pay for it." In other words, in the end, the market — and your ability to attract investors and negotiate with them — will determine the value or selling price.

Each investor will have a different view of the value of your business. This view will be based on each investor's perceptions of the future risks of your business and the returns to be derived. And other factors will enter their calculation of your business's value (and therefore the price they are willing to pay):

- their level of knowledge of your business's strengths, weaknesses, opportunities and threats;
- how strong their desire is to make a deal; and
- your relative negotiating positions and strengths.

3.7 Discounted Cash Flow Value

The prevalent method for valuing firms for investment purposes is the discounted cash flow approach. This complex accounting procedure is used to answer three critical questions:

- **Value:** How much is a company worth today, based on what it will earn in the future?
- **Rate of return:** What is an investor's expected rate of return, given the amount invested and the company's financial projections?

- **Equity share:** How much equity will the investor receive for the investment?

The discounted cash flow method is preferred because it can be more accurate than other methods. Its accuracy and complexity are due to the fact that it:

- uses **cash flows** — which are the projected ups and downs of revenue over a period of time; and
- **discounts** the cash flows — in other words, it adjusts the cash flows by a rate that is acceptable to the investor to account for risk and the time the investor must wait for a return.

Why Discount?

In this method, cash flow predictions are discounted, or reduced, to adjust for the risk the investor faces and to make up for the fact that the investor could invest the money in something else.

The underlying idea of a discounted cash flow is that $100 today is worth more than $100 a year from now. In fact, $100 today is equal to $110 next year or $161 in five years, if you accept an interest rate of 10% per year. One hundred dollars in the present is equivalent to $161 in the future because the $100 you have today can be invested to earn interest and there is no risk you may not receive it. This idea is called the "time value of money", and it is the basis of the discounting method.

What Investors Want to Know

Investors will ask you: "Why should I give you $100 today?" Your answer must be that you can offer a return of significantly more than $161 in five years. If you can't do that, the investor is not going to be attracted to your investment, because simply taking compound interest at 10% would yield that much.

Investors are looking to be compensated for their risk, and their benchmark rate — or "discount rate" — will adjust for the time value of money. They will choose a discount rate and compare your proposal against that rate.

The Pluses and the Minuses of Discounted Cash Flow

The discounted cash flow method is very effective because it allows values to be determined even when cash flows are fluctuating. A start-up or new venture may expect to lose money in the first years and then make money in later years. These changes in cash flows are taken into account by the discounted cash flow method.

The method has several disadvantages:

- Its accuracy depends on the accuracy of the cash flow projections. That's why your financial data and assumptions are so critical.
- It's a complex process that requires specialized expertise to perform. This is an area where outside help is almost always needed.

- It produces precise numbers that appear very solid. But these are still just estimates, depending on the underlying assumptions, the discount rate used, etc. Don't be fooled by the definite values of the numbers.

FAQ
Should I seek a financial advisor for help with valuation?

Business valuation is a complex task. If your valuation doesn't consider all factors or if it uses inappropriate valuation methods, this can create significant problems. Understandably, a financial advisor who has experience as a business valuator is critical.

The professional valuator can:

- provide the skills to determine accurately the value of the shares of your company;
- offer an objective view of the company's worth; and
- give investors more confidence in the credibility of your valuation.

3.8 Calculating Discounted Cash Flow

The three key questions in company valuation can all be answered using discounted cash flow methods.

1. **Value**: How much is a company worth today, based on what it will earn in the future? The company's predicted cash flows (or earnings) are discounted to give a present value.
2. **Rate of return**: What is an investor's expected rate of return, given the amount invested and the company's financial projections? Investors will calculate their rate of return by: discounting the cash flow and the value they will take out of the company; and comparing this amount to what they invested at the beginning.
3. **Equity share**: How much equity will the investor receive for the investment? Dividing the investment by the value of the company will give the percentage of ownership shares the investor will get. But first you need to know the value.

1. How Much is This Company Worth Today?
Let's say investors are considering an investment in your company and plan to take their money out in five years. To them, your company is worth today what it can earn during the five years, plus their share of the value of the company at the end of the five years. This is like saying, the value of a five-year 10% Canada savings bond is the interest it will earn each year plus the principal amount paid back at the end of the term. The interest is equivalent to cash flows, and the principal is equivalent to the value of the company at the end of the year. The big difference is that the cash flows and the value at the end of the term are known for certain with a savings bond, but for investments in active businesses, these are unknowns. The discounted cash flow method applies adjustments or "discounts" to account for those unknowns.

Using this method, the value is the total of the cash flows, adjusted or discounted, plus the value remaining (or residual value), also discounted.

discounted cash flow value = discounted cash flows + discounted residual value

A Simplified Example

A company is projected to have fluctuating cash flows (e.g. losses of $200,000 in the first two years, a gain of $300,000 in the third, etc.) that total $1 million over five years. How much is it worth today?

a) Discount the cash flows.

The cash flows are discounted at a rate acceptable to the investor - say 20% (see chart). This leaves a present value of $0.4 million. In other words, the calculation indicates that getting $1 million in five years is the same as having $0.4 million today, using a discount rate of 20%. (This rate is used to calculate a discount factor for each year; the first year's cash flows are only discounted for one year, by about 80%; but the fifth year's cash flow must be discounted for five years, so it's discounted by much more, about 40%.)

	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
Projected cash flows (000s)	-$100	-$100	$300	$400	$500	$1,000
Discounted cash flows (@ 20%)	-$83	-$69	$174	$192	$200	$414

b) Find the residual value of the company and discount it.

The company's value at the end of the five years is calculated as being $10 million. This "residual value" is then adjusted by a discount factor (based on the 20% rate the investor finds acceptable), leaving a value of $4 million. You can think of the "residual" as an estimate of how much someone would pay to buy the whole company at the end of the investment period.

c) Add the discounted cash flow and the discounted residual value.

The cash flow value and the residual value are then added together. The estimated value of the firm using the discounted cash flow model is $0.4 million + $4 million or $4.4 million.

	Projected	**Discounted to present value**	**Notes:**
Cash flows	$1 million	$0.4 million	• Discounted at 20% over five years.
Residual value	$10 million	$4.0 million	• Capitalized and discounted based on 20% discount rate over five years.
Discounted cash flow value		$4.4 million	• Estimated fair market value today.

This example is very simplified. For a more detailed explanation, see *Calculating New Tech's Discounted Cash Flow Value*, used by New Tech was conducted by its financial advisor. Further discussion can be found in the *Valuation Methods tool*. (Both can be found in the Appendix.)

2. Investors' Rate of Return

Investors want to calculate their rate of return. To do that they must compare the amount of the investment to the amount they will earn at the end of the investment period. But how can they know what they will earn in the future? Again, they must use the discounted cash flow projections to estimate the future value of their investment.

A Simplified Example

If investors had invested $500,000 and received 35% of the company's shares, how much will their return be at the end of the investment?

a) Take estimated cash flow for the final year.

The cash flow in the final year is used as a basis to decide the value of the company. Imagine that the company is projecting earnings of $500,000 in the final year.

b) Estimate the value or sale price of the company based on the cash flow.

How much will someone pay for this company in five years? Perhaps companies will be selling for 5 times or 10 times their earnings. Investors must decide what they think the market will be like and choose a multiple to multiply the cash flow by to convert it to a value for the company. Let's say the investors choose 8 times earnings. Then the value of the company when the investors will exit should be 8 times $500,000 or $4 million.

c) The value of the investors' share is calculated.

If the investors have purchased 35% of the shares of the company, they can expect to take away $1.4 million when the business is sold.

d) The investors determine their rate of return.

The investors' original investment of $500,000 is then compared to the return of $1.4 million. The return is the equivalent of a return of 23% compound interest for five years (see the table below).

Projected final year's cash flow	$500,000
Multiplied by 8 to find estimated selling price of the company	$4 million
Divided by 35% to represent the investor's share	$1.4 million
Calculated as a rate of return on original investment of $500,000 (compounding the interest)	23%

3. How Much of the Company do the Investors Get?

The valuation information you get from discounted cash flow also allows you to consider the percentage of shares the investors receive in return for their investment. In the example above, the investors' share was assumed to be 35%. At that proportion, and given a value of $4 million at the end of the investment period, the investors would make $1.4 million, or 23% on the initial $500,000 investment.

If the investors feel that isn't an adequate return, then one way to increase the return is to give them a greater equity share for the same investment. So, for example, if their $500,000 investment bought them 45% of the company, instead of 35%, they would get

45% percent of the $4 million exit value — or $1.8 million. And that is equivalent to a 29% return on their investment.

Investors' share	35% share	45% share
Exit value of company	$4 million	$4 million
Divided by investors % share	$1.4 million	$1.8 million
Calculated as a rate of return on original investment of $500,000 (compounding the interest)	23%	29%

Value, Return and Exit Strategy

The way the values and rates of return are calculated depend on the specific exit strategy used. In the next section, the implications of different exit strategies on exit values are discussed.

3.9 Exit Strategies and Exit Values

Your growth plan, and your investment proposal, must address how investors will get their investment out and how much their investment will be worth when they do. Because if investors can't recover their investments and profit, then your promising valuation is just numbers on paper.

The mechanism the investors will use to get their money out is called the "exit strategy." And the amount you expect they will be able to recover is the "exit value."

The way the exit value is calculated depends on the exit strategy used. There are five basic strategies available, and the calculation of estimated exit value is different for each:

- initial public offering
- sale of all the shares of your company
- sale of the investor’s shares to a third party
- buyback of the investor’s shares by your company
- debt repayment

Here we'll discuss the value calculations used for each type of strategy. (For more on exit strategies themselves, see “What’s On the Table" in Step 8: Negotiate the Deal.)

As you've seen, estimates of the value of the investment at exit time are based on discounted cash flow projections, the discounted residual value of the company. In practice there are many more factors that must be taken into account, such as which values to use for earning (e.g. before or after interest, tax, depreciation and amortization). The way that value is determined must match the exit strategy.

Initial Public Offering (IPO)

If the exit strategy is to take your company public, then you will need to know how to calculate the residual value of the company at the time of the offering.

- **Choose a multiple based on IPOs and public trading of similar companies.** As we saw, the value is determined by multiplying after-tax cash flow by a multiple of the cash flow that is similar to the multiples for comparable companies. If companies like yours are being bought and sold, or if their shares are trading at a value 10 times their cash flow, then you would use 10 as your multiple. (You can figure out the multiples for publicly traded companies by dividing the stock price by their earnings per share.)
- **Adjust the multiple subjectively to account for your unique situation.** But there are no companies exactly like yours, so this "market determined" multiple should be adjusted to reflect the perceived difference between public companies. The exit multiple should be based on current IPO and public market multiples for comparable companies.
- **Use the after-tax earnings and the earnings before interest, income taxes, depreciation and amortization (EBITDA) in your calculations.**

Sale of All the Shares of Your Company

If your exit strategy calls for the sale of all the shares of the company, and the planned exit date is close to the date used to calculate the company's residual value, you can use the residual value as a the exit value. But if the exit date isn't close to the residual value date, a separate calculation must be made. The exit value can then be determined by applying the multiples or capitalization rates used in the residual value calculation to the estimated maintainable discretionary after-tax cash flow at the exit date.

A word of caution: The estimated exit value associated with the sale of your company may depend on the existence of a viable purchaser.

Sale of the Investor's Shares to a Third Party

In most cases, the exit value is subject to the sale of the investor's shares to a third party and that may be lower than the investor's prorated portion of the total value. That is, if the investor has 40% of the shares and the company is valued at $1 million, the investor will usually get less than $400,000 for his or her share of the company. Why? There are two reasons. First, the new shareholder will want to pay less because he or she will not have control over operations (assuming less than 50% of the shares are bought). Second, minority shares in privately held company can be difficult to sell (i.e. they aren't very "liquid").

Buyback of the Investor's Shares by Your Company

In this exit strategy the exit value would be similar to the value determined for a sale of all the shares of your company, as described above. But it may be appropriate to reduce the purchase price to reflect the fact that your company will have to finance the transaction. The value of your company will be reduced because the financing capacity you use to acquire the investor's shares won't be available to invest in future growth. The

amount of the reduction will depend on the cost of the investor's shares and the extent to which your company will require capital to finance future growth at the exit date.

Debt Repayment

What happens if the investor has invested through subordinated debt as well as the purchase of shares? In this case, the funds the investor receives upon exit will have two parts: debt repayment and equity value. The principal of the debt will be repaid at the exit date and participation in the equity value will follow whatever terms were originally negotiated. The equity value portion should be determined in accordance with the appropriate exit strategy, as described above.

3.10 Action Items

In this Step, you looked at the analysis and financial valuations you will need to do to demonstrate your company's investment potential. Building on your financial forecasts, you've got to make the financial case that your company can return the levels of investment a risk capital investor is looking for. You've also got to do a solid analysis of your company and the market it operates in. The investor will be looking for any advantages and opportunities your firm may have; it's up to you to demonstrate them.

The checklist on page 21 will help you to:

- assess your understanding of the ideas covered in this Step;
- gauge your progress; and
- plan your company's approach.

Checklist

	Status?	Target Date?	Responsibility?
1. Review the key conditions investors are looking for.			

2. Conduct a situation analysis of your company and its environment.
 	
• Examine your internal operations to identify strengths and weaknesses.
• Consider all key operational areas:
  o management
  o marketing
  o production/manufacturing
  o finance
  o human resources
  o distribution/delivery
  o research and development
• Examine your business environment to identify opportunities and threats.
• Consider:
  o economic environment
  o industry characteristics
  o market dynamics
  o competitive climate			

3. Determine the value of your business for purposes of attracting investors. • Calculate the discounted cash flow value. • Determine the investor's expected rate of return. • Consider the equity share you'll be selling.			
4. Determine the exit value for the type of exit strategy you've chosen.			

Appendix

Key Questions – List of questions on your business functions (see section 3.4)

Management

- What is the profile of your key executives? What is their leadership style?
- What is your management philosophy? What is the CEO's vision of the business?
- What are your management team's technical and professional skills? Are they complementary?
- What salaries and remuneration do you offer (i.e. bonuses, commissions, stock options)?

Marketing

- What is the profile of your customers? How many do you have?
- What is your product's position in the marketplace?
- What is your pricing strategy?
- What are your promotional strategies?
- How effective is your sales force?

Production/Manufacturing

- What is your capacity? What is your existing output?
- What is the state of your production/manufacturing technology?
- What is your break-even point? What is your profit break-even?
- What is your cost of raw materials and key inputs? Who are your suppliers?
- Did you obtain your ISO 1900 certification? Are you in the process of getting it?

Finance

- What are the trends of the company's financial structure (balance sheets) and financial performance (income statements)?
- Who are the company's external financial auditors?
- What are your accounting principles regarding depreciation, research and development, taxes, inventories, etc.?
- What is your cash flow position? How much cash is generated internally? Externally?
- What is the financial health of your business? What is your sustainable growth rate?

Human Resources

- Can you describe the quality of your employees? What is their experience and education?
- What is the employee turnover rate?
- How are your employees evaluated? How are they remunerated?
- How much money do you invest in training on a per employee basis?
- Do your employees work in teams? How effective are your teams?
- What is your employee benefit package? What are the costs as a percentage of salaries?
- What are the general conditions of your union agreements and issues?

Distribution/Delivery

- How does your product reach your end users?
- What is the nature of your company's distribution network (i.e. wholesalers, retailers)?
- What is the composition of your company's sales distribution network?
- How much does it cost to distribute your products or services?
- How many warehouses do you have? Where are they located? What is their size?

Research and Development

- What about your company’s R&D objectives and programs? Do they have strategic significance?
- What is your current budge for research?
- What percentage of your operating income or sales revenue is allocated to R&D?
- How many employees work in your R&D department? What are their qualifications?
- What percentage of your current sales is generated by past R&D?
- Is your company affiliated with independent or government laboratories, research institutions, consultants, captive suppliers of equipment?

Take a Closer Look – Valuation Methods Explained (see section 3.6)

Going Concern Value

The going concern value method calculates a company's value based on its capacity to produce a stream of cash flow in the future. The greater the cash flow it will produce in the future, the higher the value today.

How It Works

The going concern method determines the value of the business by working backwards: starting with the cash flows expected, choosing an acceptable rate of return and then calculating the value required to yield those returns. For example, suppose you know that your savings bond will earn $100 per year and it's paying 5% interest. What is the value of the bond? You can divide $100 by 5% to find that it must be a $2,000 savings bond. You're probably more accustomed to thinking of it as: $2,000 @ 5% yielding $100 per year. But reversing the calculation gives you the value of the initial investment.

Example

Assume XYZ Inc. will be a viable company generating a stable and maintainable cash flow of $40,000 per year forever. What is the value to investors today? The going concern value of XYZ is calculated this way:

Cash flow from operations	$ 40,000
Less income tax @ 42% ($40,000 x 0.42)	$ -16,800
After tax cash flow	$ 23,200
Divided by the capitalization rate	÷18%
Going concern value (present value)	$ 128,888

Based on future cash flows, and using a capitalization rate of 18%, the present value of the company XYZ Inc. is $128,888.

Capitalization Rate

You may wonder what the capitalization rate is and where it comes from. It's the rate used to translate a cash flow, or a stream of income, into "capital" value. In practice, it's the rate of return required by the investors. This rate is based on a number of subjective factors and conditions at the time of the valuation. One of the main factors affecting the rate is the amount of risk involved in the investment: the greater the risk, the greater the expected reward.

For example, a person who has $100,000 to invest could put the money into Canada savings bonds to earn future cash receipts in the form of interest payments. On the other hand, the person may invest $100,000 in a business venture. In both cases, the investor compares the future receipts (cash inflow) to the original investment (cash outflow). But the investor also takes into account the relative risks.

Canada savings bonds have lower risk and, therefore, a lower expected yield than investments in growing companies. So an investor might be prepared to accept a 5% return on the relatively risk-free Canada savings bonds investment, but no less than 25% in a revenue-generating business that is riskier. Risk affects the price tag of the sought-after economic return. The going concern value, therefore, looks at future cash flow expectations and the relative risk associated with the investment.

Book Value

Book value is what is shown on the financial statements as net worth, or shareholders' equity, based on generally accepted accounting principles. Technically speaking, book value can be described as the historical value of an asset that, at a given time (the day it was purchased), represented the economic or market value of the asset, less its accumulated depreciation.

How It Works

To determine the book value, subtract the liabilities from the book value of the assets. The difference gives you your net worth or shareholders' equity. In practice, book value is seldom used in the process of securing venture capital, although it is widely believed to be a realistic approach to measuring a small company's net worth.

Example

Here is an example of the book value calculation for XYZ Inc.

	Book Value
Assets	
Cash	$ 10,000
Accounts receivable	$ 25,000
Inventory	$ 40,000
Fixed assets	$ 50,000
Total assets	$ 125,000
Liabilities	
Bank debt	$ 40,000
Accounts payable	$ 20,000
Total liabilities	$ 60,000
Shareholders equity	$ 65,000
Total liabilities and shareholders equity	$ 125,000

Liquidation Value

A liquidation value is assigned to a business being sold in order to satisfy its creditors. Tangible assets, such as land, usually have a liquidation value close to their market value. Inventories and accounts receivable, on the other hand, are usually valued at less than what is shown in the books.

How It Works

To determine the liquidation value, all assets are assigned distressed values, and all debts are totalled at book value. Most assets sold under duress are discounted from their fair market value. The difference between the distressed value of the assets and the actual or book value of the liabilities is referred to as the liquidation value.

The liquidation value doesn't reflect the real worth of an asset or a business; in most cases, it is substantially below the market and book values. This method is typically used only if a company is in serious financial trouble.

Example
Here is an example of the liquidation value calculation for XYZ Inc., compared to the book value calculation.

	Book Value	**Liquidation Value**
Assets		
Cash	$ 10,000	$ 10,000
Accounts receivable	$ 25,000	$ 15,000
Inventory	$ 40,000	$ 20,000
Fixed assets	$ 50,000	$ 25,000
Total assets	$ 125,000	$ 70,000
Liabilities		
Bank debt	$ 40,000	$ 40,000
Accounts payable	$ 20,000	$ 20,000
Total liabilities	$ 60,000	$ 60,000
Shareholders equity	$ 65,000	$ 10,000
Total liabilities and shareholders equity	$ 125,000	$ 70,000

Take a Closer Look – New Tech's Discounted Cash Flow Calculations (see section 3.8)

There are four steps in the calculation of New Tech's discounted cash flows. The first three give the company's value and the last one the return on investment.

1. Determining Discounted Cash Flow
2. Calculating Discounted Residual Value
3. Determining the Estimated Market Value
4. Calculating the Investor's Return

1. Determining Discounted Cash Flow

Here are the basic tasks New Tech's financial advisor went through to calculate the discounted cash flows:

- Start with the forecasted cash flows.
- Choose a discount rate based on the estimated rate of return investors will expect, and economic, industry and company-specific risks.
- Discount the cash flows to their present value using the discount rate factor for each year.

New Tech's Numbers

As you can see in the table below (New Tech's after-tax cash flow), New Tech's after-tax cash flow from operations increases from $530,000 in 2000 (the year the new product line is introduced) to $2,308,000 by 2005. After adding the investments in capital assets and working capital to the after-tax cash flow from operations, New Tech would show:

- a negative $695,000 cash flow in 2000; and
- positive cash flow between 2001 ($83,000) and 2005 ($468,000).

These discretionary after-tax cash flows are then discounted to their present values using the discount rate of 20%. (See the discount factors used for each year to calculate the present value amounts between years 2002 and 2005.) As shown, the projected cash flow loses more value as we reach the end of the forecast period because it is discounted for a longer time.

Present Value for the Five-Year Forecast

The present value of the cash flow for each year is then added to determine present value over the five years. The present value for the five-year forecast, using a 20% discount rate, will be (-579,000 + 58,000 + 87,000 + 99,000 + 188,000) = -$147,000.

New Tech Distributors Corp. After-tax Cash Flow

($000s)	2000 Actual	2001 Forecast	2002 Forecast	2003 Forecast	2004 Forecast	2005 Forecast
Sales revenue	3,000	3,900	4,700	5,800	6,700	7,700
Cost of goods sold	1,185	1,465	1,625	1,855	2,048	2,275
Gross margin	1,815	2,435	3,075	3,945	4,652	5,425
Operating expenses						
Selling expenses	857	1,320	1,320	1,380	1,475	1,545
Administrative expenses	555	690	765	820	890	960
Total operating expenses	1,412	2,010	2,085	2,200	2,365	2,505
Operating income	403	425	990	1,745	2,287	2,920
Other expenses	90	109	147	145	150	150
Income before taxes	313	316	843	1,600	2,137	2,770
Income taxes	109	111	295	554	736	952
Income after taxes	204	205	548	1,046	1,401	1,818
Add back: depreciation and amortization		325	375	400	430	490
Interest[1]		-	-	-	-	-
Cash flow from operations		530	923	1,146	1,831	2,308
Capital spending		-1,100	-740	-785	-1,100	-1,600
Incremental working capital[2]		-125	-100	-210	-525	-240
Total additional investments		-1,225	-840	-995	-1,625	-1,840
Cash flow with additional investments		-695	83	151	206	468
Discount rate factor (20%)		0.83333	0.69444	0.57870	0.48225	0.40188
Annual discounted cash flows		**-579**	**58**	**87**	**99**	**188**
Total present value for the five years		**-147**				
Incremental working capital						
Accounts receivable	450	550	650	750	900	1,050
Inventory	350	425	475	560	700	790
Total	800	975	1,125	1,310	1,600	1,840
Less: Accounts payable	550	600	650	625	390	390
Net increase in working capital for year	250	375	475	685	1,210	1,450
Previous year's working capital		250	375	475	685	1,210
Incremental working capital		125	100	210	525	240

1.No interest add back as it is assumed no adjustment for leverage is required.
2. Working capital increment is made up of (accounts receivable + inventory) — accounts payable. See detailed calculation of the net working capital increments in the lower portion of the exhibit.

2. Calculating the Discounted Residual Value

Here are the basic tasks New Tech's financial advisor went through to calculate the company's residual value at the end of the forecast period and convert that value to current or present value:

- Use the cash flow from the final year of the forecast period. (Assume that this level of earnings can be sustained into the future.)
- Capitalize this cash flow (cash flow divided by capitalization rate) at a rate of 18%.
- Then, discount the cash flow back at 20% to determine its present value.

New Tech's Numbers

The calculations consider the cash flow for the last year of the forecast period (after any taxes and capital spending) to be a maintainable after-tax cash flow. It's assumed here that New Tech will remain at the 2006 level of operations, generating a steady yearly cash flow from operations of $2,308,000. When income tax and ongoing capital spending is deducted, the maintainable cash flow is $1,308,000.

The residual value is calculated by dividing the maintainable after-tax cash flow ($1,308,000) by the capitalization rate of 18% (20% discount rate minus 2% adjustment for inflation, growth and risk). From this calculation, we see that New Tech's residual value amounts to $7,267,000. This is equivalent to saying that, assuming an 18% rate of return, a company with cash flows of $1.3 million is worth $7.3 million - a cash flow is transformed into a capital value.

The present, or discounted, value of the $7,267,000 is calculated by using the same 20% discount rate as before. The present value of the residual value would be $2,920,000.

New Tech Distributors Corp. Projected Residual Value

($000s)	**2005 Forecast**
Sales revenue	7,700
Total cost of goods sold	2,275
Gross margin	5,425
Operating expenses	
Selling expenses	1,545
Administrative expenses	960
Total operating expenses	2,505
Operating income	2,920
Other expenses	150
Income before taxes	2,770
Income taxes	952
Income after taxes	1,818
Add back: depreciation and amortization	490
Interest[1]	-
Cash flow from operations	2,308
Sustainable capital spending[2]	-1,000
Incremental working capital[3]	-
Total additional investments	-1,000
Cash flow with increased investments	1,308
Divided by capitalization rate (20% - 2%)[4]	18%
Residual value	7,267
Present value factor at 20%	0.40188
Present value of residual value	2,920

Shaded figures are drawn from After-tax Cash Flow calculations.

1.No interest add back necessary as it is assumed that no adjustment for leverage is required.
2. Capital spending represents the amount New Tech would have to spend each year to maintain operations at levels equal to the last year of the forecast.
3. No increase in working capital is required as it is assumed that the company will remain at this level of operations, generating a steady cash flow of $2,308,000.
4. Capitalization rate is equal to the discount rate used in Exhibit 2.4, less an estimated 2% adjustment for long-term rate of inflation.

3. Determining the Estimated Market Value

To calculate New Tech's estimated market value, its financial advisor simply does the following:

- Adds the discounted cash flow to the discounted residual value.
- Makes any adjustments required (such as adding back redundant assets and tax shields on existing assets on hand at the end of the forecast period).

New Tech's Numbers

As the table below indicates, New Tech's estimated market value is $2,773,000, which reflects:

- New Tech's five-year after-tax discounted cash flow (- $147,000 drawn from the after-tax cash flow table); plus
- its estimated residual value ($2,920,000 drawn from the projected residual value calculation).

As shown in the exhibit, tax savings on existing assets and adjustments for existing debt and redundant assets are not applicable in the case of New Tech.

New Tech Distributors Corp. Projected Residual Value

($000s)	2005 Forecast
Present value of cash flow from operations	-147
Add residual value	2,920
Add estimated present value of tax savings on existing assets[1]	—
Add present value of losses carried forward	—
Total cash flow value	2,773
Less existing debt[2]	—
	2,773
Add redundant assets[3]	—
Estimated fair market value	2,773

1.Tax savings is based on capital cost allowance, which may be claimed on the existing assets in the final year of the forecast period.
2. No adjustment required as capital structure assumed to be optimal.
3. Redundant assets refer to those assets that are not required in the day-to-day operation of the business.

4. Calculating the Investor's Return

Here's how New Tech's financial advisor calculated an investor's rate of return:

- Assume the investment will be realized by an initial public offering (IPO) of New Tech shares.

- Determine the total value of the company at exit (IPO) by multiplying the final year's cash flow by a multiple. (This multiple is subjectively determined based on the expected market conditions.)
- Find the investor's share of the exit value.
- Calculate the rate of return using the initial investment and the cash flow to the investor at exit.
- Perform similar calculations to determine after-tax return.

New Tech's Numbers
As the table below indicates, the risk capital investor has invested $600,000 in New Tech. (It is assumed here that the $600,000 would be injected during the early part of 2002, say in January.)

The advisor judges that, given expected market conditions in five years, a 12.5% multiple is appropriate. So he takes the inverse of 12.5%, which is 8, to be used as the earnings multiple. By using the 8 times earnings multiple, the company's expected $1,308,000 cash flow is estimated to be $10,464,000 at exit.

It is assumed that the risk capital investor will have a 40% share in the company, which represents $4,186,000.

Before Tax
A present value of $4,186,000 with an initial investment of $600,000 is calculated to be a 47.5% return to the investor. This discount rate would therefore be considered the investor's before-tax internal rate of return (IRR). This is equivalent to the compound interest rate the investor would earn. This return can be increased to satisfy the investor if the business owner is willing to relinquish more ownership to the risk capital investor. For example, in the case of New Tech, the 40% participation could be increased to perhaps 45%.

After Tax
Similar calculations are done to determine the investor's return on an after-tax basis. The original $600,000 investment is deducted from the cash proceeds, which would leave the investor with a capital gain on the investment of $3,586,000. If the investor's taxable portion is estimated at 75%, this means that the taxable portion would be $2,689,000. If the investor is in the 50% tax bracket, an after-tax amount of $2,842,000 would be received. By using a 36.5% discount rate, the present value of the $2,842,000 would be equivalent to the $600,000 investment made by the risk capital investor. This discount rate would therefore be considered the investor's after-tax IRR.

New Tech Distributors Corp. Return on Invest. Calculations to Investor Before Tax

($000s)	2001 Forecast	2002 Forecast	2003 Forecast	2004 Forecast	2005 Forecast
A. Before-tax rate of return					
Initial investment	-600	—	—	—	—
Cash distributions to shareholders[1]	—	—	—	—	—
Total value at exit					
After-tax cash flow[2]					1,308
Multiple[3]					8.0
Total value at exit					10,464
Investor's required share (40%)		—	—	—	4,186
Initial investment	-600				
Total cash flows	-600				4,186
Before-tax return to investor[4]	**47.5%**				

1.Assumes that the investor will receive no other cash payments over the life of the investment.
2. Based on the after-tax cash flow from operations used for the residual value calculation in Exhibit 2.5.
3. Subjectively determined by the investor based on the expectation of market conditions at the time of exiting the investment (equivalent to capitalization rate of 12.5% give 1/8 times multiple).
4. Represents the before-tax internal rate of return (IRR) of the cash flows received by the investor.

New Tech Distributors Corp. Return on Invest. Calculations to Investor After Tax

($000s)

B. After-tax rate of return	
Proceeds received on exit	4,186
Initial investment	-600
Capital gain on investment	3,586
Taxable portion (75%)[1a]	2,689
Investor's tax payable (50%)	1,344
Gross proceeds received on exit	4,186
Investor's tax payable[2a]	1,344
Net after-tax proceeds to investor	2,842

	2001 Forecast	2002 Forecast	2003 Forecast	2004 Forecast	2005 Forecast
Initial investment	-600	—	—	—	—
Net after-tax proceeds to investor		—	—	—	2,842
Total cash flows	-600				2,842
After-tax return to investor[3a]	**36.5%**				

1a.Assumes that the investor will have full capital gains treatment of sale of shares at the time of the initial public offering.
2a. Assumes that the investor's marginal tax rate is 50%.
3a. Represents the after-tax internal rate of return (IRR).

Tool – Valuation Methods (see section 3.8)

Executive Summary
This addendum to Demonstrate Your Investment Potential is intended to provide additional theory and background information on valuation. This material is presented as a discussion of basic valuation principles and concepts as well as discussion of the various methodologies and approaches used in the valuation of the common shares of a private company.

The addendum will describe the following:

- Fundamental Principles of Valuation;
- Valuation Concepts
    - tangible asset backing
    - goodwill;
- Fair Market Value; and
- Valuation Methodologies and Approaches.

Details/Content
VALUATION METHODS
This material is presented on the assumption that you will be assisted by a professional financial advisor. It focuses on fundamental valuation principals and various valuation methodologies.

FUNDAMENTAL PRINCIPALS OF VALUATION
There are a number of principals of business valuation which apply when a transaction is contemplated:

- value is relative to future expectations;
- the value of an asset is a function of its future cash flow; and
- a higher tangible asset backing supports a higher going concern value.

Value is Relative to Future Expectations
Value is based on future expectations if the potential investor does not have access to historical cash flows. The return on investment (i.e., the investment being the purchase price) an investor will receive is wholly dependent on the future benefits received from the acquisition. While past earnings may indicate future earnings potential, they do not guarantee future earnings and should not be the only source of information used to predict a company's future cash flow.

Value is Relative to Future Cash Flow
The benefit an investor will receive from an acquisition is typically measured in terms of cash flow. While several benefits may not directly pertain to cash flow, typically they can be assessed by converting these amounts to cash equivalents.

A Higher Tangible Asset Backing Supports a Higher Going Concern Value

The tangible asset backing of the company is calculated as the difference between the fair market value of all tangible and identifiable intangible assets. The value of intangible assets and the fair market value of the company's liabilities can be determined separately. Tangible assets represent the assets required in operations such as fixed assets and working capital net of operating liabilities such as bank debt. Identifiable intangible assets are assets such as patents, trademarks and licences. Tangible asset backing is determined based on a going concern assumption. This means the estimated value of net assets should be determined based on the assumption of continued use and would, therefore, include installation costs but not taxes or other costs which would result from disposition of the net assets. Therefore, contingent liabilities and cost of disposition (e.g., recapture, capital gains tax, sales commissions, etc.) are specifically excluded.

Tangible asset backing provides insight into the risk associated with the particular investment because, in a worst case scenario, the net tangible assets of the company could be sold. The proceeds realized could then be used to relieve the liabilities of the company and recoup shareholder investment. The tangible asset backing also provides an indication of the capital investment required to enter the market. In this case, the tangible asset backing provides an indication of the potential financial barrier to entry for new competitors.

Story/Example

> Bob and Doug McKenzie were brothers who owned identical manufacturing businesses. The companies were identical in all respects except Bob's company owned its manufacturing equipment while Doug's company leased its equipment. Doug completed a sale and lease back of the equipment in 1996 with the funds generated on the transaction paid to Doug as a dividend used to finance his personal acquisition of a very expensive sports car. Both Bob and Doug decided to expand operations to take advantage of the increasing demand for their products. Operations required an additional $500,000 to finance new product development. At dinner one evening, Doug stated that investors considered his company to be high risk due to the lack of supporting assets. Investors told Doug if results did not unfold as expected, they could lose all of their investment due to the company's lack of assets. On the other hand, the investors approached by Bob believed his company to be low risk. They said even in the worst case of business failure, proceeds from the sale of the company's underlying net assets would repay most of their investment. Not surprisingly, Bob received financing while Doug did not.

VALUATION CONCEPTS

Tangible Asset Backing

As stated previously, the tangible asset backing is the fair market value of all operating assets less all operating liabilities. Most of the information gathered to calculate the liquidation value is also necessary to calculate the tangible asset backing.

Tangible asset backing differs from liquidation value in three ways.

- Tangible asset backing often reflects fixed assets at their value in use (depreciated replacement value or realizable
  value plus installation costs), while liquidation value often reflects fixed assets at fair market value (net realizable value).
- Tangible asset backing excludes redundant assets (it relates only to net operating assets).
- Tangible asset backing does not include liquidation costs and taxes.

Goodwill
The tangible asset backing must be known before goodwill can be determined. The formula for calculating the value of goodwill is:

Value of Goodwill = Going concern value of operations - Tangible asset backing

Where the analysis is based on an assessment of the company's cash flow (i.e., based on the assumption the company is a going concern), the calculated fair market value of the company will typically exceed the fair market value of its underlying net assets. The excess value is referred to as goodwill. Goodwill is an intangible asset and represents the incremental benefit accruing from a successful assemblage of assets.

Goodwill is a valid inclusion in the value analysis to the extent it possesses the following attributes:

- goodwill must be of an enduring nature;
- goodwill is attributable to cash flows expected from future business activity; and
- goodwill must have commercial value (i.e., must be transferable to a third party).

While goodwill is an intangible asset, a basis for goodwill can often be attributed to one or more factors particular to the company. In general, goodwill can be derived from one or more of the following:

Location — based on the notion that a company's success is, to some extent, based on the physical location of the premises;

Product/Service — where a particular product/service offered by the company has developed name brand recognition/reputation in the market place, the favourable attitude of consumers often results in incremental cash flow to the company; and

Operations — a company which has fostered a superior working relationship with its employees and lenders, investors, suppliers and customers, or has assembled a superior management team, etc. is at a competitive advantage vis-à-vis other companies in the industry. This competitive advantage often results in incremental cash flow to the company.

In general, goodwill is classified as commercial or personal.

Commercial Goodwill — Commercial goodwill refers to goodwill which is sellable and which will provide the investor/purchaser with future economic benefits (measured in terms of cash flow). Since the economic benefit supporting the calculation of commercial goodwill is transferable to third parties, commercial goodwill is a valid consideration in the determination of value.

Personal Goodwill — Personal goodwill pertains to the favorable attitudes of customers, suppliers, etc., which are derived from the efforts of a particular individual in the business. In many cases, personal goodwill can be transferred to a potential purchaser through client introductions, and so on. This is a common operating model for the sale of service businesses, including medical practices and accounting practices. In some cases, goodwill associated with a particular individual may also be secured using non-compete contracts, management contracts or other prudent business arrangements. In these cases, personal goodwill may be a valid inclusion in the value determination.

FAIR MARKET VALUE

In a transaction-oriented valuation, the determination of fair market value is the first step in the pricing process. After fair market value is determined, adjustments are made to reflect the potential benefits realized by the seller and each prospective investor or purchaser.

Definition of Fair Market Value

There is general consensus on the underlying attributes of the definition of Fair Market Value. In general, Fair Market Value can be defined as:

> *…the highest price available, expressed in terms of money or money's worth, in an open and unrestricted market between informed, prudent parties acting at arm's length and under no compulsion to transact.*

VALUATION METHODOLOGIES AND APPROACHES

There are two main approaches to the determination of value: the empirical approach and the investment approach. The empirical approach suggests that value is best determined by reference to open market transactions involving similar companies. Value can be determined by referring to value relationship implied in the stock price of similar publicly traded companies.

The main advantage of the empirical approach is that it uses information directly from the market. Therefore, more economic factors are considered. In most cases, the empirical approach should not be used as the primary valuation approach in Canada. In the United States, the empirical approach is more widely used. The differences are due to the relatively small number of companies in Canada, the lack of publicly available information, and differences between an investment in a publicly traded company and a privately held business. In addition, an investment in a publicly traded company typically has greater liquidity than an investment in a privately held company. If the company is

not truly comparable, how would you adjust the purchase price to derive a meaningful value relationship which can be applied to determine the value of your company? Instead, the empirical approach should be used as a secondary technique to test the reasonableness of conclusions reached through the investment approach.

Information related to transactions involving companies which may be somewhat comparable to your company can be obtained from the following sources:

- *Mergers and Acquisitions Digest*;
- *Mergers and Acquisitions in Canada published by Crosbie and Company*;
- Brokerage reports issued by securities firms;
- Industry and association publications; and
- Newspaper and financial magazine articles.

The investment approach suggests value should be determined by reference to a detailed investment analysis using the techniques of financial statement analysis and risk measurement theory. The investment approach is used by sophisticated buyers and sellers in open market transactions.

There are two basic approaches to valuing a business: earnings/cash flow-based approaches, and asset-based approaches. The use of a specific approach is generally determined by the operations of a business and whether or not it is a going concern.

Going Concern Analysis

The assessment of fair market value begins with the determination of the economic viability of the company. Economic viability can be assessed by determining if the company has realized a reasonable return on investment in the past. This assessment is based on the inherent risk associated with the industry and the particular company. Economic viability should also be based on whether a reasonable rate of return is expected in the foreseeable future. Consider the circumstance where a company is earning a fair return on employed capital (i.e., the return to owners resulting from continued operation is expected to exceed the proceeds which would be received on the liquidation of the net assets). In this case, fair market value can be determined using one of several methodologies based on future expected cash flows. In some cases, this will be based on the fair market value of the underlying employed assets.

Now, consider the case where a company is not earning a fair return on capital employed. The prospects for earning a fair return in the foreseeable future are remote. Fair market value will now be based on the liquidated value of the company's net assets, based on the assumption this value will exceed the value calculated on a going concern basis (i.e., based on cash flow). The liquidation approach to value focuses on a determination of the net realizable value of the company's net assets and, therefore, includes costs associated with winding up the company (e.g., latent tax costs, sales commissions, severance packages, etc.). Assuming entrepreneurs would not seek investment capital for a business which should be wound up, the information as set out in this course will concentrate on going concern methodologies. A description of the liquidation approach and examples of its application can be found in the *Canada Valuation Service* published by DeBoo.

Asset-Based Approach

An asset-based approach is appropriate under the going concern assumption where the underlying value of the company relates to its assets (as opposed to operating cash flow). An example of this type of company would be a real estate holding company, which not only derives cash flow from rents, etc., but also realizes value from capital appreciation of the buildings it owns. The asset-based approach requires the calculation of the fair market value of the company's individual assets and liabilities. Fair market value of the company is calculated as follows:

Fair market value of the company
=
Fair market value of the assets
-
Fair market value of the liabilities

Capitalization of Earnings Method

The capitalization of earnings method is based on a simple premise. The future benefits derived from the acquisition of a particular company can be measured based on the after-tax maintainable earnings expected to be realized by the company in the future. Maintainable earnings represent the average level of earnings expected to be achieved in the future. This approach is appropriate in circumstances where the future financial performance of the company is expected to be relatively stable and can therefore be estimated by a single earnings figure. The capitalized earnings approach assumes the earnings are distributed to the shareholders each year (not reinvested in the business).

The following general formula calculates the fair market value of all issued and outstanding shares of the company:

Maintainable after-tax earnings from operations
×
Multiplier
=
Going concern value of the operations
+
Non-operating/redundant assets
=
Fair market value of the shares

Note: This formula may require modification depending on your circumstances.

Assessment of Indicated Value

To assess the reasonableness of the calculated fair market value using the above methodology, a common approach is to calculate the number of years of after-tax maintainable earnings that will be required to pay back the indicated value of goodwill. Goodwill pay back is a relevant consideration since goodwill represents an intangible asset which would not be recoverable in the worst case scenario where the purchaser has to wind up the company's operations. Therefore, the purchase price pertaining to

goodwill represents a higher risk than the purchase price pertaining to fixed assets and other tangible assets. The following is a general formula:

Going concern value of the operations (i.e., fair market value)
-
Tangible asset backing
=
Goodwill
÷
Annual future maintainable earnings from operations
=
Number of years of earnings in goodwill

The "number of years of earnings in goodwill" calculation is then assessed relative to the nature of the business. In certain industries (e.g., pharmaceuticals), a high degree of goodwill may be evident given the relatively low tangible asset backing typical in this industry. However, in other cases, the calculated amount may indicate an unusually high value in which case the value calculations/assumptions employed in the analysis should be revisited. The calculated "number of years of earnings in goodwill" can also be viewed in relation to the general business risk in the industry.

Calculation of Maintainable After-Tax Earnings
The maintainable after-tax earnings is determined as follows.

- Assess historical pre-tax earnings realized by the company. Depending on the circumstances, the number of years to review will vary. However, as a general rule, five years of historical results is a useful benchmark. Clearly, this analysis will not be available if the company is in the start-up phase.
- The review of historical information is only useful to the extent it provides insight into the expected future financial performance. Therefore, consider whether or not each of the historical years is relevant to determine future maintainable earnings. This analysis may be influenced by the stage the business is in (e.g., start up) and the industry in which it operates (e.g., cyclical industries such as real estate). The years prior to a change in operations may not be relevant if the change did not have a material impact on profitability.

Past earnings are only a guide to determining future maintainable earnings. View them in combination with earnings projections to achieve optimal results.

- Historical financial results and those projected for the future of the company may include unusual and non-recurring expenses. These should be excluded for purposes of determining annual future maintainable earnings. Examples of such items include one-time fees, start-up costs or property damage relating to floods/fires, etc. Adjustments should also be made for revenue and expense amounts which do not reflect fair market value. Examples of such expenditures

would include favourable terms provided or given to a non-arm's length party and other items which, although they provide economic benefit, will not be available indefinitely in the future. Examples of such items include salaries paid to relatives, guaranteed supply contracts from related parties at favourable prices, etc. Furthermore, historical results may be adjusted to reflect the inflationary effects between the date the financial results were reported and the valuation date.

- Determine the future maintainable pre-tax earnings based on past and projected adjusted earnings. A simple average or weighted average can be used to determine the maintainable pre-tax earnings based on the use of judgment after analysing earning trends and future expectations. In some situations, the most current year, or forecast earnings, may be the most appropriate indicator of future maintainable pre-tax earnings. The ultimate objective of this analysis is to project the annual earnings which probably will be realized by the company in the future.
- Apply the appropriate tax rate to determine the after-tax maintainable earnings.

Story/Example

The following is an example of the determination of maintainable after-tax earnings.

Historic Financial Information

Year	1996	1995	1994	1993	1992
Earnings	$305,000	$260,000	$280,000	$340,000	$380,000

Other Information

- The president used to pay his wife a salary of $20,000 per year, although she performed no corporate function. This practice was stopped in 1995.
- Pre-tax income for 1995 included a severance payment of $30,000. Further severance payments are not anticipated.
- The income tax rate is 40%.
- In 1992 and 1993, the company's primary competitor was experiencing labour problems. Labour relations are now excellent and no further work stoppages are expected.
- No forecast has been prepared for 1997, but management does not anticipate significant growth in sales.

Determination of Maintainable After-Tax Earnings

	2000	1999	1998	1997	1996
Reported pre-tax income	$305,000	$280,000	$260,000	$340,000	$380,000
Add back:					
Wife's salary	—	20,000	20,000	20,000	20,000
Severance payment	—	30,000			
Total adjustments	0	50,000	20,000	20,000	20,000
Adjust pre-tax income	$305,000	$310,000	$300,000	$360,000	$400,000
Weighting factor	3	2	2	1	1
Average $335,000					
Weighted average	$321,000				
Maintainable pre-tax earnings	$300,000	to	$300,000		
Income tax @ 40%	$120,000	to	$128,000		
Maintainable after-tax earnings	**$180,000**	**to**	**$192,000**		
Rounding off to -	**$180,000**	**to**	**$190,000**		

Notes:

- The president's wife's salary and severance payment are considered non-recurring and have been added back to reported income.
- Results for 1996 and 1997 have been weighted less heavily due to the belief that labour problems at the main competitor during 1996 and 1997 make these results less representative of future earnings.
- 2000 results weighted most heavily due to recency.

Strengths and Weaknesses of the Earnings Method

Strengths

- It has greater acceptance and is better understood than cash flow methods.
- It is easier to obtain information on comparable earnings multiples than for cash flow multiples.

Weaknesses

- Earnings do not reflect the actual benefits to the owners (i.e., cash flow).
- Net income often fluctuates significantly from the indicated cash flow amounts due to such items as depreciation expense and other non-cash expenses.
- Depreciation, particularly in inflationary environments, is an inadequate measure of the asset's usage.

Cash Flow-Based Approaches

In general, cash flow-based approaches are the preferred methodology where the company is viewed as a going concern. In general, there are two cash flow-based methodologies - the capitalized cash flow approach and the discounted cash flow approach.

Capitalized Cash Flow Approach

The capitalized cash flow is similar to the capitalized earnings approach, except it capitalizes cash flows as opposed to earnings.

The capitalized cash flow approach is a more precise methodology than the earnings approach, particularly in cases where the company is capital-intensive, and depreciation and other accounting estimates may not accurately reflect cash flow expenditures.

Capitalized Cash Flow Formula

The following formula calculates the fair market value of all issued and outstanding shares of the company:

Maintainable net income before tax
+
Non-cash expenses
=
Cash flow before taxes
-
Taxes based on cash flows
-
Sustaining capital reinvestment
=
Maintainable future cash flows
×
Multiplier
=
Capitalized cash flows
=
Going concern value of operations
+
Tax shield on available UCC
+
Non-operating/redundant assets
=
Fair market value of shares

This methodology is very similar to the capitalized earnings approach. The main difference is the substitution of estimated average sustaining capital reinvestment for depreciation.

The key components of this methodology are described below.

1. **Maintainable Future Cash Flows**

   The adjustments made to normalize earnings also apply to this cash flows methodology.

   Non-cash items (e.g., depreciation) are added back to earnings to determine the company's cash flow.

2. Sustaining Capital Reinvestment

As indicated previously, the cash flow methodology requires an add back for non-cash items including depreciation. However, the company will incur capital expenditures on fixed assets necessary to maintain the viability of the company. To reflect this cash outflow, an estimate of the required sustaining capital reinvestment is made and deducted from the cash flow calculated above. Depending on the jurisdiction, these capital expenditures may have preferential tax treatment which should be reflected as a reduction to the expenditure on these items. While sustaining capital reinvestment may fluctuate from year to year, the capitalized cash flow methodology requires one estimate of the annual expenditures; it is assumed this expenditure will be incurred on an annual basis in perpetuity.

3. Tax Shield on Available Undepreciated Capital Cost

The income taxes calculated to arrive at maintainable future cash flow were based on cash flows without adjustment for the deductions available from existing undepreciated capital cost (UCC) balances (i.e., tax depreciation). Accordingly, the present value of the tax shield arising from the existence of available UCC must be added to the capitalized cash flow value prior to arriving at the fair market value of the shares.

The present value of the tax shelter provided by existing UCC balances can be calculated using the following formula:

$$\frac{\textbf{UCC x Rate of income tax x Rate of capital allowance}}{\textbf{Rate of return + Rate of capital cost allowance}}$$

Story/Example
In calculating the capitalized cash flow value, you have assembled the following information:

UCC	250,000
Rate of income tax	45%
Rate of capital cost allowance	20%
Rate of return	15%

The present value of the tax shelter provided by existing UCC balances is approximately $64,000 calculated as follows:

$$\frac{\textbf{250,000 x 45\% x 20\%}}{\textbf{15\% + 20\%}}$$

= $64,285

say, $64,000

Strengths and Weaknesses of the Capitalized Cash Flow Approach

Strengths
The capitalized cash flow approach is based on your company's cash flows and, therefore, is a more relevant analysis since potential purchasers assess the future expected cash flows (as opposed to earnings).

This methodology is more precise than the earnings methodology because cash flows pertaining to capital reinvestment are quantified. The earnings approach assumes depreciation is an appropriate estimate of the required capital reinvestment.

This methodology provides a better measurement of cash return on capital.

Weaknesses
Annual fluctuations in cash flow are not considered.

Irregular required capital reinvestment is also not considered specifically.

Discounted Cash Flow Approach
The discounted cash flow (DCF) approach requires the projection of cash flows for a specified number of years in the future. The DCF then discounts these amounts by an appropriate discount rate (based on an assessment of the risk associated with realizing the projected future cash flows). Future cash flows are discounted to determine the value today of amounts which will be received at some point in the future. Discounting future cash flows recognizes that a dollar received today is worth more than a dollar received at some point in the future. A dollar received today can be invested, earn income and grow. Furthermore, a dollar received today has greater value. There is a risk a dollar received in the future will not be received. The dollar received today, by definition, does not have this risk of realization.

The DCF approach is based on a projection of the company's future cash flows. You should base projected future financial performance on an analysis of the economy in general, the industry in which the company operates and the particular attributes of the company itself.

In determining the number of years to project future cash flows (the projected period), an assessment of the reliability of the projections is performed. The projected period is limited to the period for which reliable projections are available. For years subsequent to the projected period, a maintainable annual cash flow is estimated and assumed to be realized on an annual basis in perpetuity. This annual amount is discounted back to the valuation date and is referred to as the residual value of the company.

The DCF methodology is generally viewed as the most accurate methodology in cases where a company is considered as a going concern and value is based on future cash flows. A benefit of this methodology is that it allows for annual fluctuations in cash flows which may occur in the future. In contrast, the capitalized cash flow methodology is based on an average cash flow to be received in perpetuity. In many cases, the future

annual cash flows of a company are not expected to fluctuate significantly. The added level of precision offered by the DCF methodology may not be required. The DCF methodology does require a more in-depth analysis, and this level of precision may not be worthwhile in certain circumstances.

Discounted Cash Flow Formula
The DCF methodology is based on the following formula:

Step #1	Calculate units sold.
Step #2	Calculate gross revenues.
Step #3	Calculate gross margin.
Step #4	Deduct cash outlays per income statements.
Step #5	Deduct other future costs.
To Determine Net Operating Cash Flow	
Step #6	Deduct income taxes at stipulated rate.
To Determine After-Tax Cash Flow	
Step #7	Deduct capital expenditures (net of tax benefits).
Step #8	Deduct working capital requirements.
To Determine Net Cash Flow in Each Year	
Step #9	Apply discount factor to each year of projected cash flows and a multiple to the last year of projected cash flow which is then discounted to the valuation date.
Step #10	Add redundant assets.

Components of the Discounted Cash Flow Formula

1. **Projected cash flow from operations**

   Projecting future financial performance is a speculative process which becomes less precise as the projection period is increased. In general, financial projections beyond a five year forecast period are not typically used in the DCF methodology. However, the projection period will depend to a large degree on the industry in which the company operates and the ability to develop reliable projections. For example, in a regulated industry such as utilities, cash flow may be accurately projected for up to 10 years or more. Financial projections can include consideration of inflation or can be stated in constant dollars (i.e., excluding inflation). The methodology employed in either case should be clearly stated and will have a significant impact on the discount rate which is described below.

2. **Working capital changes**

   Working capital is defined as the current assets less current liabilities of the company. The analysis should include a determination of additional investments required in working capital because the DCF methodology permits cash flows to be estimated on a year by year basis during the projected period. As a company continues to grow, it will be required to reinvest some of the cash flow in current assets such as inventory and a larger accounts receivable balance. Part of these

investments can be funded through increased debt (e.g., accounts payable and operating loans). This represents a cash outflow, to the extent cash flow generated by the business is used for this purpose. You should then reduce the projected cash flows of the company accordingly.

3. Capital additions

As previously discussed, capital additions may be required to maintain the ongoing viability of the company. To the extent capital acquisitions are required, these expenditures should be reflected as deductions to the company's cash flow in the year in which you expect to incur them. In certain circumstances, capital additions may have a beneficial tax advantage which will reduce the ultimate taxes payable by the company. In such circumstances, this tax benefit should also be reflected in the cash flows as a reduction to the taxes payable.

4. Debt Repayments

Debt principal payments are a cash outflow to the company. However, principal repayments are typically excluded from the DCF valuation. This deduction is based on the assumption the principal repayment can be replaced by new debt. Therefore, the net effect on cash flows is nil.

5. Taxes Payable

Income taxes are applied to the cash flows based on the prevailing income tax rates. This analysis is based on the assumption income tax rates will continue into the future. If the government announces income tax changes which will affect the future taxes payable in a given year, you should reflect these adjustments in the cash flows in that particular year.

6. Discount Rate

The discount rate is similar to the capitalization multiple discussed in the capitalized cash flow methodology described above. In essence, the discount factor recognizes the fact that a dollar received today is worth more than a dollar received a year from now. A dollar received today can be invested, earn interest and grow. Therefore, a dollar received in the future must be discounted (i.e., reduced) to reflect its value today. The determination of the appropriate discount rate (and capitalization rate) are discussed in a later section.

7. Redundant Assets

In many circumstances, a company will accumulate various assets which are not essential to the ongoing operations of the core business. For example, successful corporations may have large cash balances or investments in marketable securities. In most circumstances, these assets can be removed from the company

without adversely affecting the operations of the business. These assets are commonly referred to as redundant assets.

How do you determine the fair market value using a cash flow approach? The cash flows of the company will exclude consideration of any income/expenses earned on these redundant assets. Therefore, you must then adjust the calculated fair market value based on cash flow to reflect the value of these redundant assets which have been assumed to be removed from the company. The fair market value of a redundant asset should reflect the fair market value of the asset less any costs associated with removing it from the corporation. For example, cash is easily valued and removed from the corporation so that the fair market value may be the face value reported in the company's financial statements. However, marketable securities are typically recorded at historical costs and there may have been a significant fluctuation in the value of these investments. The fair market value of the marketable securities should reflect the current market value less any costs of disposition (i.e., sales commissions, etc.).

You should be cautious to ensure the assets which appear to be redundant are in fact not necessary for the operations of the business. For example, large cash balances may be required by the business if the business is seasonal and the large cash balance has been set aside to invest in inventory. Furthermore, marketable securities and other investments may be required due to debt covenants, etc.

8. Hidden Redundant Assets

A review of the company's balance sheet may indicate a hidden redundant asset if the company does not fully use available financial leverage. Many companies operate with a very low level of debt financing. Basic valuation principals assert that due to tax benefits being afforded interest expense, it is advantageous to introduce some level of debt financing into a company's operations. By doing this, the fair market value of the company will be maximized. If a company does not have debt financing, you should adjust the cash flows and balance sheet to reflect the appropriate level of imputed debt financing. The net effect is to reduce the cash flows by the imputed interest expense and to introduce additional cash available for distribution to the balance sheet. The amount borrowed (imputed) is treated as a redundant asset. Therefore, it is added to the fair market value calculated based on a cash flow methodology.

Strengths and Weaknesses of the Discounted Cash Flow Approach

Strengths

- This method focuses solely on the future (see principles of valuation).
- It takes into account fluctuations in annual cash flows.
- It offers the highest level of precision.

Weaknesses

- This method is generally not well understood and is more difficult to apply than other methods.

Multipliers, Capitalization Rates and Discount Rates

The selection of a discount rate is required to calculate the risk adjusted present value of expected future cash flows of your company. The rate selected is based on an assessment of general and prevailing economic market conditions, trends and conditions within the industry, the financial condition and prospects of the company, and the overall risk attached to the cash flow of the business.

In this regard, the discount rate is composed of the following:

- risk free rate of return;
- risk associated with equity investments;
- risk associated with the industry in particular; and
- risk associated with the company in particular.

In general, a premium is added to the risk free rate of return to reflect an investor's required rate of return from that investment. The investor's required rate of return is based on the perceived risk of realizing the projected cash flows and the security of the investment.

The risk free rate of return can be estimated by long-term government bonds based on the assumption the risk of default is virtually nil. This risk free rate of return has two components:

- a real rate of return (excluding inflation); and
- an inflation premium to reflect future expectations concerning changes in prices.

If the market anticipates increases in future inflation, the risk free rate of return would increase accordingly. Investors view investments in companies as longer term. You should then base the risk free rate on long-term government bonds. The rate of return on these instruments represent the market's expectation regarding long-term inflation.

An equity risk premium is the premium return an investor in equities will require over and above the rate of return which that investor would realize from a risk free investment. The equity risk premium is typically determined relative to historical market return relationships. Recent studies indicate after-tax equity risk premiums are generally in the range of 4% to 5%.

After determining the required rate of return on equity investments in general, the analysis then focuses on the risk pertaining to the industry in which the company operates. The analysis also focuses on the risk associated with realizing the cash flows of the company in particular. In general, this is a qualitative analysis and the specific considerations will depend on the specific circumstances of the case under review. In general, the analysis may consider the following:

Size of the business — generally, larger businesses will have lower business risk since they are more diversified and well established in the marketplace.

Economic considerations — uncertainty regarding the market in which the company operates will lead to higher business risk and increase the risk the investor will not realize the projected cash flows.

Earnings trends — as previously indicated, historical earnings can provide an indication of future financial performance. However, the value determination will be based on an assessment of future financial performance. To the extent financial projections are speculative, the risk of realizing future cash flows is increased. The relative risk associated with financial projections will depend on the company and the industry in which it operates.

Industry assessment — companies operating in high technology industries or other industries with significant and rapid changes in products/services are more vulnerable to downturn, and therefore, the investor faces an increased risk the company will not attain future financial performance. However, these industries also represent opportunity since market leaders can significantly outperform companies is more stable industries.

In general, the financial projections should reflect the best estimate of future financial performance. The discount rate can then be adjusted to reflect qualitative factors (in addition to the risk free rate of return) - an equity risk premium. An example of the qualitative analysis used to determine the premium over the return on equity investments is provided here.

	Positive	Negative
1. The company was entering a period marked by several new product introductions and significant growth opportunities.		
2. The financial forecasts predict significant growth in cash flows.		
3. The financial forecasts do not reflect additional opportunities the company may realize, which have not been specifically identified.		
4. Many of the company's product lines have relatively small sales volumes and may not attract competition.		
5. The company is projecting an increased diversification of its product line, reducing its reliance on its current product line.		
6. The company has a low tangible asset backing, which is not uncharacteristic of companies operating in the industry.		
7. There is a trend toward increasing price sensitivity among customers.		
8. The general outlook for the industry is relatively positive.		
9. The company has exhibited a willingness and desire to undertake research and development, a critical success factor in the industry.		
10. The industry is fragmented with no dominant competitors (in terms of market share).		
11. Product introduction can be delayed due to government regulation, etc.		

12. Given the nature of the industry, it is difficult to assess comparable transactions.		
13. Corporate management has exhibited the ability to adapt to change, and there appears to be no dependence on one or two key individuals.		
14. There are significant barriers to entry in the marketplace.		

This required rate of return should be consistent with the cash flow forecast in terms of inflation — both should either include or exclude inflation.

Investor Rates of Return

The investor will want to ensure the project or business will provide a sufficiently high level of return on investment to compensate for the perceived risk the investor will assume. The required rate of return will vary greatly depending on the nature of the opportunity and on the structure of the investment (i.e., debt or equity). The higher an investor perceives the risk to be, the higher the rate of return the investor will require. Your investor may be looking for a rate of return of 15% to 25% on a subordinated debt instrument and as much as 25% to 40% on an equity investment. These high rates of return are driven by the substantial risks associated with private equity investment. These risks include high rates of business failure, long periods of time before capital is returned to the investor, the investor's likely inability to control or influence the operations of the company, and the general lack of liquidity associated with an investment in a privately held company.

Rules of Thumb

Closely related to the "comparable transaction" methodology is an analysis involving rules of thumb in the industry. Rules of thumb pertain to quick and general analyses which apply a basic multiple to a measure of cash flows or asset values. For example, a general valuation rule of thumb within the industry may be a multiple of revenues, multiple of the number of repeat customers, gross margin or book value. In general, rules of thumb are not a primary valuation technique but can provide useful insight into how the industry views a particular company. In this case, it can provide a useful reasonableness check on the value determined using a primary valuation technique. The analysis is further complicated by the fact that rules of thumb are not regularly adjusted to reflect the fluid nature of value (recall that value reflects a particular point in time). Furthermore, rules of thumb do not provide insight into the specific characteristics of a particular company, and therefore, should be considered general estimates only.